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Behind the Scenes: Perceptions and Management of Conflict in Teams with Varying Levels of Virtuality and National Diversity

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Abstract

This study explores how individuals perceive and manage conflict in various team settings employing different degrees of virtuality and national diversity through a mixed-methods approach using 223 surveys and 23 semi-structured interviews of participants who completed a computer-based simulation. Utilizing the model of individualized conceptualization of conflict, the study found that individual and contextual factors play crucial roles together and shape team dynamics and conflict. The quantitative findings indicate that virtuality negatively influences team performance scores and highlight that individuals in fully virtual, highly diverse teams report the highest perceptions of conflict presence compared to other teams. The qualitative examination supports such findings by demonstrating that individuals in virtual team settings engaged in self-censorship behaviors that may contribute to conflict-related challenges. It also found that individual differences in cultural awareness, previous experience, personalities, leadership, and conflict management skills interplay with contextual factors, influencing and shaping how individuals perceive, conceptualize, and manage conflict. These interactions were discussed in relation to the study's statistically insignificant findings and their potential implications for the inconsistent findings of previous studies examining the role of virtuality and national diversity in team dynamics and conflict. This study advances the current understanding of conflict in multinational virtual teams by highlighting the importance of including individual-level data in understanding team conflict. It also makes a unique contribution by showing the benefits of employing the mixed-methods experimental design that provides a complete picture of team conflict and allows for a comparison of the varying degrees of virtuality and national diversity.

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Introduction

Teams have been considered a critical component of many successful organizations. During the past 30 years, communication technologies have become more sophisticated and numerous (Gibbs et al., 2017). These technological advances have led to new work teams, such as virtual and multinational teams (Schmidtke & Cummings, 2017). The outbreak of the COVID-19 pandemic increased the use of communication technology and virtual collaboration in organizations (Xie et al., 2020). During the pandemic, 22 percent of all private sector jobs in the U.S. were either hybrid or fully remote (Dalton & Groen, 2022). Further, globalization brought about the rise of multinational corporations and active immigration. 18.1 percent of the U.S. civilian labor force comprises foreign nationals (Bureau of Labor Statistics, 2023). Teams nowadays are not only increasingly virtual (Meluso et al., 2020) but also diverse, comprising members from many national backgrounds. To be successful, individuals in teams need to be fluent in working in various team settings with different degrees of virtuality and national cultural differences.

Scholars have increasingly paid attention to conflict due to its roles in teams (Nesterkin & Poterfield, 2016). Conflict is an interactive process between at least two interdependent parties who perceive incompatibility, disagreement, or dissonance (Rahim, 2002; Wilmot & Hocker, 2010). When it is constructively managed, conflict fosters open and honest communication and creativity by highlighting different perspectives (Esquivel & Kleiner, 1996). It also encourages team members to find the optimal decision, which may lead to higher team effectiveness (Bradley et al., 2015). Thus, it is crucial in the effectiveness and success of teams as one of the stages of team development (Pazos, 2012; Tuckman, 1965).

Many scholars note that virtuality and national diversity pose unique challenges to teams, often leading to conflict (Kramer et al., 2017; Han & Beyerlein, 2016). Conflict often arises from unmet expectations, so it is essential to build shared expectations to prevent destructive outcomes of conflict (Raines, 2023). However, when people work virtually with people from various countries, the use of communication technology alters the way that people are used to communicating and building relationships with each other, making it challenging to build shared expectations and negotiate with each other (Burgoon et al., 2011; Han & Beyerlein, 2016). People also tend to behave verbally and non-verbally in ways that reflect their cultures—"the subjective elements of individual cognitions in the form of perspectives, personality, values, beliefs, and attitudes" (Posthuma et al., 2006, p. 245). Individuals may have a different way of communicating and negotiating that reflects their national culture (Choi, 2016). The different communication styles, stemming from national diversity and virtual interactions, often lead to unmet expectations, contributing to conflicts and resulting in varying approaches to conflict resolution and negotiation. Therefore, both virtuality and national diversity have often been associated with conflict (Friedman & Currall, 2003; Hakonsson et al., 2016; Massey et al., 2003).

Previous literature, however, has found inconsistent effects of virtuality and national diversity on conflict-related challenges and management (Caputo et al., 2023; Peñarroja et al., 2022). Previous studies have found positive, negative, and even no relationships between virtuality and conflict and conflict-related variables (Flus et al., 2023; Peñarroja et al., 2022; Shahzad, 2023; Ortiz de Guinea et al., 2012; Workman, 2007; Staples & Zhao, 2006). They also found inconsistent relationships between national diversity and conflict-related variables (Stephens et al., 2021; Kankanhalli et al., 2006; Stahl et al., 2010; Brandes et al., 2009; Umans et al., 2008; Gibson & Gibbs, 2006). To reconcile such findings, this study utilizes the model of individual conceptualization of conflict, which explains that people base their behavioral choices not solely on the nature and force of environmental influences but also on how they perceive and interpret them (Louis, 1977).

There are two reasons for this research to utilize this model. First, there is a need to explore the individual perceptions of conflict in studying team conflict. Recent studies have demonstrated the need to explore alternative methods to assess behavioral phenomena at a team level (Fisher et al., 2018; Shah et al., 2021; Podsakoff et al., 2014). Podsakoff et al. (2014) discussed potential data aggregation issues surrounding referent and measurement. Similarly, Fisher et al. (2018) have called for individual-level studies in human subject research, finding that the aggregated approach shows the variance in individuals up to four times larger within individuals than within teams. In the context of conflict, Jehn and her colleagues (2000, 2010) argued that individuals often have different perceptions and experiences of the same situation in organizations depending on personality (Bono et al., 2002; Barrick et al., 1998), their levels of power (Smith & Trope, 2006), social values (Liebrand et al., 1986), and one's impressions of others (Van Lange & Hulman, 1994).

Indeed, Jehn and Chatman (2000) found that individuals have asymmetric perceptions about the level of conflict. In the later study, Jehn and her colleagues (2010) coined the term "conflict asymmetry" to describe the degree to which individual group members perceive conflict may differ and how this asymmetry is associated with team functioning. Shah et al. (2021) extended the study of conflict asymmetry and further demonstrated how it is not feasible to aggregate conflict into a single statistical representation. They demonstrated that (1) there is a lack of shared perceptions in team conflict due to individual differences, rater noise, members' conflict roles, and different lived experiences and (2) this traditional approach cannot account for the different origins and trajectories of conflict. Therefore, scholars have called for future scholars to focus on individuals who are behaviorally, affectively, and cognitively involved in conflict (Shah et al., 2021; Korsgaard et al., 2014).

Second, while individual-level understanding is essential, it is also important to account for context in understanding team conflict (Caputo et al., 2023; Gibbs et al., 2017; Foster et al., 2015; Thomas, 1976; Van Knippenberg & Mell, 2016). Many previous studies have actively examined the contextual factors, such as virtuality and national diversity, using both the Input-Process-Outcome (IPO) and Input-Mediator-Outcome (IMO) approaches (Dulebohn & Hoch, 2017; Gupta et al., 2023; Shoaib et al., 2022). They have found various factors, such as conflict management, self-reflection, and feedback, the fit between task and communication channels, physical dispersion, and ingroup integration to influence conflict in virtual teams (He et al., 2017; Klitmoller & Lauring, 2013; Paul et al., 2004; Stahl et al., 2010; Mortensen & Kinds, 2001). Such findings demonstrate the continued importance of accounting for contextual factors in understanding team conflict. Also, people analyze the context and situations to reassess their assumptions about others' intentions and adjust their expectations when perceiving their conflict (Louis, 1977). Therefore, it is vital to understand how internal factors (e.g., personality, experience)

and external factors (e.g., team settings, environment) play crucial roles in conceptualizing and managing conflict.

As such, previous research highlights the need to account for both individual and contextual factors in understanding conflict. The model of individual conceptualization of conflict, discussed in the next section, integrates both dimensions to clarify inconsistencies in previous research and deepen our understanding of team conflict. Therefore, applying the framework and method, this research answers the following question: ***How do individuals perceive and manage conflict within teams characterized by varying levels of virtuality and national diversity?***

Literature Review

Theoretical Foundation: Model of Individual Conceptualization of Conflict

The model of individual conceptualization of conflict explains an individual's conceptualization and management of a conflict episode through the interplay of individual and contextual factors (Louis, 1977). The current understanding of conflict in virtual multinational teams focuses on the role of background conditions (e.g., virtuality and national diversity) and conflict behaviors (e.g., conflict management) in the development and outcomes of conflict. In this mechanistic view, conflict behaviors are often attributed to external causes (Louis, 1977). However, as these early conflict scholars have noted, what is important in studying conflict is to understand how people think about and attach meaning to the conflict since this makes people behave in a certain way (Killman & Thomas, 1978; Thomas, 1976). People make decisions on their behaviors not only based on the nature and force of environmental influences but also on how they perceive and interpret them (Woodward, 1970). In other words, we need to focus more on how people perceive and manage conflict based on individual and contextual factors in the study of virtual multinational teams.

Noting the importance of individual and contextual factors, Louis (1977) developed a model of individual conceptualization of conflict. The internal factors are the individual's state and value/need set, such as experience, self-insight, self-identity, and needs. The external factors are the background conditions, such as the use of communication technology in virtual teams or nationally diverse team composition (Louis, 1977). These two factors influence how individuals process their initial frustration to more complex attribution and eventually conceptualize conflict. The conceptualization of conflict is characterized by experience symbolization, causal attribution, intentional attribution, context analysis, content analysis, and choice assessment (Louis, 1977). This means that when someone experiences a "feeling of frustration," which is considered part of the "experience symbolization" stage, people often look for the source of this feeling and make a "causal attribution" (Louis, 1977, p. 459). This attribution is intentionally used to explain past and future interactions. People then analyze their context or situational characteristics while adjusting their attributed intentions and building expectations about their outcomes. They also analyze verbal and nonverbal communication, sincerity, consonance, and intention to judge their situation (Louis, 1977). How people will react to the situation is involved throughout these processes. An individual's perception of the situation through their basic orientation of choice or causality determines their interpretation and behaviors. In other words, this model emphasizes the interaction between contextual and individual factors in how individuals conceptualize and manage their conflict.

This model can provide insights into how the exact two dimensions that recent scholars

have called for attention may influence an individual's conceptualization and management of a conflict (Caputo et al., 2023; Gibbs et al., 2017; Korsgaard et al., 2014; Shah et al., 2021). It is particularly useful because it offers explanations of conflict using both individual and contextual factors instead of focusing only on team settings or individual differences like previous studies often have. It can also provide nuanced explanations of conflict through both individual and contextual factors and their potential interactions with each other. Therefore, applying this framework, this research explores how individuals perceive and manage conflict in teams employing varying degrees of virtuality and national diversity.

Resolving Inconsistent Effects of Virtuality and National Diversity on Conflict

What we know from previous studies on the effect of both virtuality and national diversity on conflict is limited since most previous studies have focused on the effect of only virtuality or national diversity on conflict or their impact solely on performance (Caputo et al., 2023). Even among the limited literature that examined both virtuality and national diversity, however, the effect remains unclear—some studies found negative effects of national diversity in virtual teams, while others have not (Caputo et al., 2023; Gibbs et al., 2017; Kankanhalli et al., 2006; Paul et al., 2004; Peñarroja et al., 2022; Stahl et al., 2010; Staples & Zhao, 2006). This research attributes these inconsistent findings to (1) the dichotomous examination of virtuality and national diversity and (2) theoretical frameworks of previous studies that fail to account for both individual and contextual factors.

To begin with, in studying virtuality and national diversity, many previous studies have often looked at virtuality and national diversity in dichotomous ways (Cowan et al., 2022; Furumo & Pearson, 2006; Staples & Zhao, 2006; Anderson & Hiltz, 2001; Takeuchi et al., 2013). They have studied comparisons between the extremes of no virtuality and the highest degree of virtuality (i.e., non-virtual vs. fully virtual teams) (Foster et al., 2015; Globeny, 2023; Schmidtke & Cummings, 2014). They have also studied between homogenous and fully diverse teams (Staples & Zhao, 2006). They have often omitted hybrid virtual (HV) teams or moderately diverse (MD) teams in their studies.

According to faultline theory, however, this omission may mean consolidating the differences among in-person, hybrid virtual, and fully virtual teams, as well as homogeneous, moderately diverse, and highly diverse teams, if the study was conducted as a field study. Faultline theory explains that multiple differences in attributes and configurations, such as ethnicity, gender, language, and nationality, may create a hypothetical dividing line in teams known as a faultline (Lau & Murnighan, 1998). This theory argues that faultlines can lead to subgroup formation, which may become the grounds for unmet expectations and contribute to conflict, ultimately detrimental to team cohesion and performance. An empirical study of this theory found that a moderate level of diversity is prone to more subgroup formation because the limited number of individual attributes increases the chances of alignment for a single but strong faultline that can completely divide a group in half (Lau & Murnighan, 1998). However, previous studies often analyzed virtuality and national diversity in a dichotomous manner, overlooking moderate levels. This oversight may have contributed to inconclusive findings. Therefore, this study includes moderate levels of virtuality and national diversity to examine their impact on conflict. Specifically, it operationalizes virtuality and national diversity in three levels and explores how they influence conflict.

Furthermore, this study identifies another source of inconsistency in the theoretical

frameworks that overlook both individual and contextual factors. However, as previously noted, understanding conflict requires considering individual perceptions alongside broader contextual influences. The model of individual conceptualization of conflict addresses this need. Thus, this study applies it to examine these inconsistencies. Given the nature of this model, a mixed-methods design is particularly necessary to capture both individual and contextual dimensions. It allows researchers to gain individual-level understanding while analyzing contextual variables, as needed (Venkatesh et al., 2023). Additionally, this approach facilitates cross-validation and provides a more comprehensive understanding of the phenomenon, helping to reconcile previous research findings.

Methodology

Study Design

This study employs a mixed-methods design to capture the complex conflict dynamics in teams. The quantitative component enables this study to examine the contextual aspects of conflict, such as virtuality and national diversity, on team performance and individual perceptions of conflict presence. The qualitative component allows it to focus on individual aspects of the framework, such as how virtuality and national diversity influence individual perceptions of conflict and management and how individual differences may also play a role. By integrating these methods, the study not only triangulates the qualitative findings to enhance validity but also provides a comprehensive understanding of the intricate dynamics of conflict (Venkatesh et al., 2023).

This study uses an experimental design for two reasons. First, this design allows examining how different levels of virtuality and national diversity may be responsible for variations in the level of the dependent variable for the quantitative part of this research (Bryman, 2012). Second, to make comparisons, it is also critical to control the goals and tasks of the teams since challenges associated with virtuality and national diversity may vary depending on the goals and tasks of the teams (Staples & Cameron, 2005). The assigned task for participants was a computer simulation called “Leadership and Team Simulation: Everest V3,” released by Harvard Business Publishing (Roberto & Edmondson, 2017). This exercise is designed for five to six people to simulate climbing Mount Everest. It assigns individuals a different role and gives them individual and collective tasks. There are six rounds of exercises in which participants must communicate and analyze relevant information distributed among team members. Three hidden challenges require participants to make collective decisions. To succeed, participants must negotiate and make decisions on how to distribute resources adequately and solve problems. Each round takes approximately 15-20 minutes to complete, totaling approximately 90 minutes of seat time. Including preparation and the time intervals between rounds, participants can take about 120 to 150 minutes to complete. This simulation was chosen because it provides participants with a similar experience to a real workplace and creates similar challenges that virtual teams often face, such as knowledge sharing and information distribution (Han & Beyerlein, 2016). It also does not alienate participants from various backgrounds.

This study defined virtuality as “the extent of face-to-face contact among team members (encompassing amount as well as frequency of contact)” (Fiol & O’Connor, 2005, p. 20). Each team was assigned to a different degree of virtuality from IP, HV, and FV teams. IP teams completed all six simulation rounds in person in the lab environment. HV teams completed three

rounds of exercise virtually and three rounds in person, using their choice of communication methods in the lab environment. FV teams completed all six simulation rounds virtually outside the lab environment without interacting in person with their choice of communication methods. Once this setting was determined, individuals in the same setting were randomly grouped into a team. The roles were also randomly assigned to them, and each had its functions (e.g., doctors could give medicine, marathoners could read the weather, leaders could move to the next round, etc.). However, the leader role seemed to be considered seriously not only because the title carried weight but also because leaders could move everyone to the next round, forcefully if needed. This study allowed virtual team members to choose their preferred communication methods and time because organizations often permit employees to select communication methods according to their preferences (Men, 2015; Vercic & Spoljaric, 2020). However, in the later stage of this research, it was found that most participants chose to communicate via the electronic chatting function built into the simulation program, which allowed them to communicate synchronously both collectively and dyadically. Many did not browse for other communication options, such as videoconferencing and phone calls, although they were encouraged to do so. Thus, the limited choice of communication channels from participants is one of the limitations of this research.

While this study deliberately designated virtuality, it did not address the team composition since it tried to recruit nationally diverse participants to collect its samples. Also, this study measured the degree of diversity as the number of countries in a team as Brandes et al. (2009) and Umans et al. (2008). The team was considered homogenous when composed of individuals from the same country. The team was considered moderately diverse when composed of individuals from two to three countries. The team was considered highly diverse when composed of individuals from four to five countries.

Part 1: Online Survey Questionnaire

Sample

Using convenience and purposive sampling, this study recruited participants from two major Southeast U.S. universities (undergraduate and graduate students, both domestic and international) as well as other interested volunteers, to participate in this research. 230 participants from 29 countries participated in the simulation. They consisted of 44 teams. The average duration of stay in the U.S. for non-US participants was six years and five months. Of 230 participants, 223 (96.96%) participated in the online survey, although only 212 (92.17%) completed the entire survey. The sample consisted of 42.9% males and 56.6 % females, with 0.5% refusing to respond to this question. Young people participated in this survey the most, with 76.3% being between the ages of 18 to 25, followed by 14.7% of those who are aged between 26 and 35, the ages of 36 to 45, the ages of 45 to 55, and the ages of 56 to 65. Race and ethnicity were considered more diverse, with 58 percent identifying themselves as White, followed by 20.8% Blacks or African Americans, 9.4% Asians, and multi-racial. Only 5.2% identified themselves as Hispanic or Latino. As expected from the study setting, 69.2 percent of participants (n = 146) had some college education, with no degree, followed by those who had 12.8% bachelor's degree, 9% associate degree, and master's degree, with the least both professional degree and doctorate.

Variables

The variables investigated by this study were the team performance score and the individual perceptions of conflict presence. This study used team performance scores from the simulation program. The simulation program generated the team performance score based on achieved and total available team goals. This study also used the individual perceptions of the presence of conflict, which captures the participants' perception of the existence or absence of conflict within the team. 4 questions, such as "I did not have any conflict with any of my team members," "My team members did not have any conflict with each other," "Many members engage in "back-stabbing" in this group," "An unhealthy competitive attitude appears to be present among group members," were used to construct this variable. Followed by Dawes (2008) and Colman et al. (1997), the items were rescaled and reverse coded as needed. Cronbach's Alpha was 0.77, which is an acceptable level of internal consistency (DeVellis, 2003; Kline, 2005).

Data Analysis

The effect of virtuality and team diversity on team performance score was analyzed using a linear regression model at the team level, as these variables represent team-level data. Given the sample size, bivariate linear regression was used separately for each virtuality and team diversity variable without considering interactions. Although a one-way Analysis of Variance (ANOVA) could have been conducted, this study opted for bivariate regression to allow the flexibility of adding variables to test the model as needed. The data were aggregated for each team, and one outlier was removed to meet the model's assumptions.

The effect on individual perceptions of the presence of conflict was analyzed using hierarchical linear modeling (HLM). In this analysis, the dependent variable is the ordinal variable, which assumes that a latent variable may exist. However, this method was chosen since it aligns with the theoretical framework of this study, allowing for a nuanced analysis of individual-level perceptions within the context of their teams. HLM is particularly suitable for this analysis as it accounts for the nested structure of the data, where individuals are nested within teams (Woltman et al., 2012). This approach enables the examination of team-level factors on individual-level factors, considering variability both within and between teams, aligning with the study's theoretical framework.

Part 2: Semi-structured Interviews

Sample

Participants who indicated an interest in a follow-up interview and provided their contact information during the online survey were contacted for the follow-up interview. Therefore, this study conducted semi-structured interviews with 23 participants from 16 teams. The interviews had an average duration of approximately 34 minutes. The author of this article conducted all interviews privately, either via phone or in person, in a space chosen by the participants, such as a meeting room or a public area. Table 1 below describes the details of participants with their pseudonyms.

Interview Guide and Procedure

A semi-structured interview guide guided the interviews. The questions included the participant's experiences with the challenges to team collaboration, conflict experiences, and strategies to handle them. It asked questions on norming behaviors, information flow, knowledge sharing, social distance, relationships among team members, comparison with traditional teamwork, feelings of detachment, conflict prevention and management, work time inefficiency, meeting schedules, distractions, and free-rider issues (Dulebohn & Hoch, 2017; Han & Beyerein, 2016; Chou et al., 2013; Gibson & Gibbs, 2006; Isotalo, 2013; Ayoko et al., 2012). These were

Table 1. *Details of Semi-Structured Interview Participants*

#	Pseudonyms	Country of Origin	Age	Gender	Role	Team	Degree of Virtuality	Degree of Diversity	Team Performance Score
1	Adam	USA	31	Male	Member	A	In person	Moderate	2
2	David	USA	28	Male	Member	A	In person	Moderate	2
3	Frances	USA	50	Female	Member	A	In person	Moderate	2
4	Benjamin	USA	19	Male	Leader	B	In person	Moderate	72
5	Chris	Cameroon	36	Male	Member	C	In person	High	69
6	Eric	Peru	46	Male	Leader	C	In person	High	69
7	Penny	USA	36	Female	Member	C	In person	High	69
8	Gregory	India	32	Male	Member	D	In person	High	63
9	Henry	USA	40	Male	Leader	E	Fully Virtual	High	44
10	Isabelle	USA	58	Female	Leader	F	In person	Homogeneous	33
11	Kelly	USA	50	Female	Member	F	In person	Homogeneous	33
12	Liam	USA	59	Male	Member	F	In person	Homogeneous	33
13	James	USA	21	Male	Member	G	Hybrid	Homogeneous	44
14	Matt	USA	21	Male	Member	H	Hybrid	Homogeneous	50
15	Nicole	South Korea	27	Female	Leader	I	Fully Virtual	High	63
16	Oliver	China	21	Male	Member	J	In person	High	19
17	William	Egypt	18	Male	Member	J	In person	High	19
18	Queenie	Cameroon	18	Female	Member	K	In person	High	72
19	Rick	USA	23	Male	Member	L	Hybrid	Homogeneous	48
20	Scott	Canada	24	Male	Leader	M	Hybrid	Moderate	35
21	Tom	UK	24	Male	Member	N	Hybrid	Moderate	30
22	Unique	USA	22	Female	Member	O	Fully Virtual	Moderate	24
23	Victor	USA	27	Male	Member	P	Hybrid	Homogeneous	48

the challenges that virtuality and national diversity pose in team collaboration, which this research identifies as associated with conflict. These questions were posed so that participants could focus on the contextual aspects of conflict for this study, emphasizing how these aspects were perceived as conflict episodes. The questionnaire was reviewed by a few experts in the field and is attached in Appendix A. As the nature of semi-structured interviews allows researchers to be more flexible, the order of the questions was changed depending on the interview, and some additional probe questions were asked. Each participant was interviewed once. It was audio recorded for transcription under the participants' agreements. The notes were taken during the interviews as well. The audio was transcribed by both the author and a professional transcription company, and analyzed by the author, without returning to the participants for verification.

Data Analysis

Adopting a constructionist epistemology with a critical orientation, this study used reflexive thematic analysis (Braun & Clarke, 2019; Bryne, 2022) to identify and analyze patterns or themes in the data. Considering this epistemological stance, reflexive thematic analysis that emphasizes the active role of the researcher was deemed most appropriate (Braun & Clarke, 2021). This research took the recursive and iterative six-phase analytical process suggested by Braun and Clarke (2012). The process began with immersion in the data. Data was coded in relation to conflict and contextual aspects of conflict, following an inductive approach. Both semantic and latent coding were utilized. Semantic coding was utilized to present meaningful content communicated by participants. Latent codes were produced to identify the underlying assumptions or hidden meaning in relation to virtuality and national diversity. As Byrne (2022) describes, codes were created to capture the context and iterated to answer the research questions based on the model of individual conceptualization of conflict. These codes were gathered to build categories. Each category was contextualized, compared, and related to each other to integrate them (Bazeley, 2009). The recursive process of reviewing themes and defining and naming themes was followed. In doing so, constant comparisons were made among teams with differing degrees of virtuality and national diversity to identify patterns related to these two dimensions, as well as to examine how conflict was described and managed. The case initial code and iteration processes are presented in Table 2.

Table 2. *Sample Quote and Coding Process*

Illustrative Quote	Preliminary coding	Iteration 1	Iteration 2
We d[i]n't want to offend [each other] because, like, having this diverse group helped, but at the same time, . . . maybe people are from different cultures, so we try to be very sensible. I don't want to ask you too many questions.	[1] Acknowledging cultural differences [2] Confusion between cultural awareness and cultural assumptions [3] Balancing frustration and intercultural sensitivity [4] Cultural assumptions leading to reduced communication	[1] Respecting cultural differences [2] Lack of understanding in cultural differences [3] Impact of cultural assumptions on communication [4] Cultural assumptions leading to conflict avoidance	[1] Embracing diversity benefits [2] Interplay of cultural awareness and assumptions [3] The role of cultural assumptions on communication and conflict management
I don't wanna look like I'm arrogant or something. Since it was a virtual setting, I didn't tell them what to do, but just kind of encouraged them to do it, like "Hey, we can do it and so on…" Like a good message or like checking up on other's health.	[1] Different expectation for virtual team [2] Motivation and encouragement [3] Concern for perceived arrogance	[1] Different expectation of leadership in virtual team [2] Lateral authority leadership [3] Underlying concern for miscommunication	[1] Different expectation in virtual team leadership [2] Influence of underlying concern for miscommunication in behaviors [3] Lack of psychological safety

Results

Part 1: Quantitative Study

Table 3 presents the results of the bivariate regression model and HLM. The result indicates a statistically significant difference in team performance scores based on the level of virtuality. The average team performance score for in-person teams is 58.077. The average team performance score for hybrid virtual teams was 18.744 points less than in-person teams at a statistically significant level ($p = 0.002$). Also, the average team performance score for fully virtual teams was 15.855 points lower than in-person teams at the statistically significant level ($p = 0.027$). To compare the difference between HV and FV teams' scores, further analysis was

Table 3. *Summary of Bivariate Regression and HLM*

Team Performance Score				Individual Perceptions of Conflict Presence			
	Estimates	SE	p		Estimates	SE	p
In-person[a]	58.077***	4.430	<0.001	FV-HD[a]	2.433***	0.289	<0.001
Hybrid Virtual	-18.744**	5.636	0.002	FV-MD	-0.806*	0.377	0.034
Fully Virtual	-15.855*	6.926	0.027	FV-H	-0.817*	0.356	0.023
				HV-HD	0.289	0.485	0.552
				HV-MD	-0.370	0.328	0.262
				HV-HD	-0.843**	0.312	0.007
				IP-HD	-1.067**	0.409	0.010
				IP-MD	-0.883**	0.325	0.007
				IP-H	-0.553	0.363	0.129
				Random Effects			
				σ^2			0.486
				$\tau 00_{TeamName}$			0.070
				ICC			0.126
				$N_{TeamName}$			44
Observations	43						212
R^2 / R^2 adjusted	0.224 / 0.186			Marginal / Conditional R^2			0.141 / 0.249

[a] reference category

conducted to calculate the difference between their coefficients and tested for significance. This analysis indicated no statistically significant difference in team performance scores between HV and FV teams. Team diversity was also analyzed using the same model. However, the adjusted R^2 indicated that it did not have explanatory power for team performance scores ($R^2 = 0.030$, Adjusted $R^2 = -0.018$). Therefore, this variable was omitted from the table. This result suggests that higher levels of virtuality are associated with a lower level of team performance, while diversity alone does not significantly influence team performance in this dataset.

The results of the hierarchical linear modeling (HLM) indicate that different levels of virtuality and diversity influence individual perceptions of the presence of conflict. Individuals in fully virtual and homogeneous and middle diverse, hybrid virtual homogeneous, and non-virtual highly diverse reported significantly lower perceptions of conflict than those who participated in fully virtual highly diverse teams ($p < 0.05$). However, people from hybrid virtual highly diverse, hybrid virtual moderately diverse, and in-person homogeneous teams did not perceive more or less

conflict than those from fully virtual teams. The findings reveal that individuals in teams with higher virtuality may experience more challenges to team performance. These findings highlight that contextual factors are essential, indicating that virtuality and national diversity and its random effect in this model explain a moderate portion of the variability in the individual team members' conflict perceptions (Ozili, 2023). However, as the residual variance presents, there is notable variability in the perceptions of conflict between teams. The conditional R^2 also suggests that other unaccounted predictors may explain this variability in conflict. These indicate that substantial variability remains unexplained, suggesting it is worth exploring other influential factors, such as individual characteristics and specific team context, as suggested by the model of individualized conceptualization of conflict.

The above findings are meaningful in two ways. First, it provides a broad overview of how virtuality and national diversity influence team performance and individual perceptions of conflict. While virtuality negatively influenced team performance, national diversity did not influence team performance. However, it was interesting to see that when virtuality was involved together, it influenced individual perceptions of conflict. This means there may be potential for the interaction between virtuality and national diversity to influence team performance, although the limited team-level sample size did not allow for robust analysis in this study. Second, the result of HLM indicates the importance of exploring the influential factors to fully understand team phenomena. The within-team variance (σ^2) represents the potential roles of individual differences. The complex interaction between virtuality and national diversity may influence individual perceptions of conflict in various ways. This finding supports using a mixed-methods design to delve into the behind-the-scenes of team conflict and clarify the "why" and "how" dimensions of such relationships by examining individual-level data. Therefore, this research further explores the research question using the qualitative approach in the next section.

Part 2: Qualitative Study

Roles of Virtuality and National Diversity

Virtuality & Self-censorship Behaviors. Participants across all team settings reported the lack of clarity in team processes (i.e., individual and collective goals, decision-making processes, and communication protocols) as common reasons for conflict. This finding was not unexpected because the simulation was designed to create such conflicts. However, when comparing individuals in teams with different levels of virtuality, different perceptions and behaviors were found between those who participated in the simulation in person and those who participated in virtual teams: self-censorship behaviors.

Participants in hybrid and fully virtual teams often discussed how they changed how they interacted with each other (increased self-censorship) because they were working virtually. This means that participants wanted to say something to their team members or act a certain way but decided not to do so. They shared many incidents: "I could have said/done something, but I [did] not." For instance, Nicole (FV-HD team) stated that she altered her leadership behaviors since she was in virtual teams. She was afraid that she would sound "*arrogant*," so she framed her directions as questions and suggestions. Others also described similar stories of altering their behaviors or biting their tongue, although they felt that something was not going as they wanted.

When asked for the reason, participants shared a perspective that the goal of communication was to complete the simulation efficiently rather than spending time developing

personal connections, understanding each other, and learning from the simulation. Interestingly, they similarly describe the implicit expectations of focused and efficient communication. This perception made them less likely to make small talk and build personal relationships with each other. Even if they wanted to discuss something related to a task, they avoided communication unless they deemed it important or urgent. This implicit interaction rule of efficiency made it hard for them not to "*go with the flow*." Also, this often became the source of intrapersonal conflict about whether to discuss specific issues and interpersonal conflict due to the frustration associated with the lack of communication.

The increase in self-censorship behaviors also appeared to stem from a reduced expectation of future interactions. There was a general agreement among participants from across teams that their interaction focused on tasks and lacked relationship aspects of communication, which could be partly attributed to the short-term simulation. However, while participants from FV teams perceived the simulation activity as a "one-time deal," participants from HV and IP teams often saw the possibility of future interactions. This different perception influenced FV teams' interactions to be *"really strictly just [about] the simulation, and just chatting about that*" (Unique). Once they completed the work, they lauded "*Nice work*" to each other, and "*that was it*" (Henry). Participants did not have any motivation to have relationship-building communications. Their goal was solely to complete the project together with each other. On the other hand, participants in the HV and IP teams stated that they developed a level of rapport to greet each other in the future as someone who shared the simulation experience. Instead of perceiving it as a one-time relationship, they stated that they could not develop rapport due to the time constraints of the simulation exercise.

Those who participated in hybrid virtual teams could describe this different dimension since they both experienced both fully virtual and in-person settings. Victor (HV-H team) stated that people "*have a better sense of how to engage with that person, and you get a better idea of what is going on*" because "*there isn't any lacked communications*." Similarly, Rick (HV-H team) shared this perspective:

> *[In fully virtual settings,] it was just, "Hey, let's just get this done." We're low on time. Let's try and make it as quick as possible. Once we were able to meet each other, and we could understand each other's personalities, I think that's what made it more fun. That's what made it more interactive with each other and that's where we sat down and said, "All right. Now we can breathe. Now we can take our time with this and figure out what we need to do." I think definitely building the rapport came through once we were actually able to get to see each other and get to know each other, meet each other and all that.*

As such, all participants from hybrid virtual teams (Teams G, H, L, M, N, and P) shared difficulties in virtual communication compared to in-person interactions. It was interesting to see that participants from hybrid virtual teams shared their challenges differently than others. They shared similar experiences in the implicit interaction rule of efficiency during their virtual interactions. However, they still left the simulation with a sense of rapport similar to the one described by participants in in-person teams, which highlights the uniqueness of hybrid virtual teams.

Additionally, although it is difficult to consider it a pattern, three participants (Matt, Scott, and Tom) from three hybrid virtual teams (Teams H, M, and N) raised another interesting point. Although all of them agreed that in-person interaction was more effective in terms of social interactions and communication, they believed that this change in modality did not affect their

teams differently. Matt claimed that even after they met in person, everyone followed the same team procedure: "*[Everyone just made] sure that their health was okay, complet[ed] the task, and check[ed] for other things other than messages from the group.*" He thought that "*in-person communication did not change anything*" since his team "*ma[de] sure to communicate as quickly as possible*" whether in person or virtually. Indeed, among the interview participants, Matt's team (Team H) achieved the highest team performance score of all the six hybrid virtual teams. Scott and Tom shared a similar point. Scott argued that since his team members had already made decisions by themselves, even though they met in person, everyone was still confused about what to do, and the frustration continued at the same level. Tom also discussed similarly that it was too late by the time his team met in person since their team's energy level was already down. He said, "*Even when we got together, it was more of just like, 'Let's just go past it and [move onto the] next part.'*" In other words, they all agreed that the in-person interaction felt more personal and engaging. Nevertheless, the interaction rules established in a virtual environment persisted even after meeting in person, regardless of whether they were beneficial or harmful to the teams. This persistence of between-team differences, which will be discussed later, underscores the uniqueness of hybrid virtual teams by suggesting that dynamics established virtually can carry over into in-person interactions.

In conclusion, participants in teams with higher virtuality engaged in self-censoring behaviors that hindered open communication. This could be a potential reason for the statistical finding that virtuality negatively influences team performance. Additionally, participants in hybrid virtual teams displayed interesting team dynamics compared to in-person or fully virtual teams. These unique team dynamics of hybrid virtual teams may explain why the two team compositions from hybrid virtual teams, HV-HD and HV-MD, have not presented statistical differences from the individual perceptions of conflict presence of FV-HD teams.

No Cultural Differences or Not Recognized Differences As indicated by the statistical insignificance, most participants reported no observed cultural differences resulting from nationality, regardless of their team settings. When the question was asked, participants often answered this question by discussing how their team members were similar or dissimilar in their surface-level diversity, such as ethnicity, race, age, gender, and language (Eagleman, 2011; Phillips et al., 2006; Harrison et al., 1998). The only diversity they often reported was language in that they noticed differences in accents among themselves. Yet, they shared a perception that it still did not impact them working as a team or completing the task. In other words, they often discussed how this was not a challenge and did not play a role in their team experience.

For instance, participants in FV teams stated that they did not notice any cultural differences in this simulation despite being in HD and MD teams. Considering that these participants discussed that they preferred using the chat function within the simulation program as their preferred way of communication, it could have been that they might not have noticed the surface-level differences. However, even the interview participants who participated in IP and HV teams also reported that cultural differences did not influence their team dynamics. This study found interesting reasons for this.

To begin with, participants may not have communicated and recognized each other's nationalities. Indeed, although participants of this study were free to communicate their backgrounds with each other, they were not provided with any information about where everyone was from or whether their team was considered homogeneous, moderately diverse, or highly diverse. Therefore, if they had not communicated such background, it could have been difficult to attribute any conflict to nationality and its associated cultural differences, even though it could

have affected their team interactions and conflict. For example, William (IP-HD team) stated that "*the only difference between us was our ability to speak English fluently. . . [this] did [not] affect the clarity of the words.*" When he discussed his team's conflict, he attributed it to a lack of clarity in team processes and that his team members did not listen to him, stating they did not want to "*spend more time trying to solve [his] problem*." However, when he further described his conflict, the conflict seemed to arise due to his biases and stereotypes. He made a wrong assumption about another team member's national origin, and his teammate was offended.

> *The leader became agitated [with] me when I said that her home country is in Africa. I didn't understand her anger since it's okay to make mistakes. . . For the other problem, she was agitated because what I said could be considered stereotypical or racist because I believed it was in Africa, instead of South America. But, I still don't understand her problem because it's okay if people make mistakes about the location of your country. I believe she should benefit from having a more mature mind.*

The team leader was from France. Even at the time of the interview, however, William did not recognize that the conflict resulted from his stereotypes and biases on race. In interpreting the same conflict, Oliver, who was on the same team as William, attributed it to William's personality, describing that William's outspoken and straightforward attitudes about his needs were the reason for their team conflict. While this anecdote strengthens the previous theme on different perceptions and attribution of conflict in the same team, it also suggests that the participants' lack of recognition of each other's nationality could have contributed to the underreporting of associated cultural differences, even though such differences actively influenced team dynamics and contributed to conflict.

On the other hand, there was another group of participants who recognized national diversity in their teams but were mindful of attributing their challenges to cultural differences due to heightened awareness and the influence of social desirability bias. Participating in the simulation in higher education settings emphasizing cultural sensitivity, they appeared cautious about making generalizations. For instance, Adam (IP-MD team) stated, "*I don't know enough about the other cultures to be able to say definitively that culture played a factor.*" Nicole (FV-HD team) also stated, "*I think that was… that could be the personality issue or could be the cultural issue*." Consequently, several participants expressed uncertainty, explicitly stating their inability to discern whether behaviors stemmed from individual personality or cultural backgrounds. This level of cultural awareness might have led them to refrain from attributing conflicts and challenges directly to cultural factors.

While most participants across the team settings did not recognize or report the role of culture in their team dynamics, five participants clearly recognized and reported the impact of national diversity on their teams. Existing literature suggests that conflict in diverse teams often stems from deep-level diversity, such as differences in values and beliefs or from stereotypes and biases (Harrison et al., 1998). These participants displayed a high level of awareness about cultural differences and acknowledged the potential impact of deeper-level diversity on their team dynamics. They referred to some of their team members' behaviors, such as team members' prioritization of individual or collective goals, inclusivity in checking in with everyone, and preferences for direct communication. They shared such observations through cultural dimensions, including individualism vs. collectivism, communication styles (direct vs. indirect), and conflict management strategies (competition vs. avoidance). This deep cultural understanding not only

helped them attribute team conflicts and challenges to these cultural differences but also gave them the insights needed to manage and move forward in conflict situations effectively. Therefore, these participants seemed more confident in attributing their team dynamics to national cultural differences in the interviews.

Consequently, when it comes to national diversity, team-specific levels of communication and individual differences in cultural awareness seemed to play a crucial role in participants recognizing and attributing the other's behaviors to national cultural differences. When unaware of national diversity in teams, these participants might have acted as if they were homogeneous teams, which may be why national diversity alone did not influence team performance scores and individual perceptions of conflict. When aware of such diversity, these participants might have been careful and respectful to each other to prevent culture from creating conflict-related challenges and manage their conflict accordingly, attributing to the cultural differences. Accordingly, the qualitative findings not only provide explanations on the effect of national diversity in the quantitative part of this study but also the importance of accounting for how contextual and individual factors interplay in studying the role of national diversity in team conflict.

Within-Team and Between-Team Differences: The Role of Individual Differences in Conflict Experiences

Perceptions of Conflict Based on Personalities and Previous Experiences. According to the model of individual conceptualization of conflict, it is also crucial to account for the role of individual differences when studying conflict. Therefore, this study also examined how individuals are similar or different in their perceptions of conflict by analyzing 11 individuals in the same teams (Teams A, C, F, and J). It found that while participants similarly perceived "conflict" and topics surrounding such tensions, they showed different perceptions of presence and attributions of conflict depending on individual personalities and experiences.

To illustrate, in Team C, Chris, Eric, and Penny similarly discussed that their team had conflict surrounding the speed of decision-making and differences in communication style. However, they differed in whether it was considered conflict or not. Eric said he did not "*fe[el] any conflict.*" Chris stated that his team had no major conflicts, only conflicting ideas and minor disagreements. On the other hand, Penny perceived a major conflict, discussing that "*there was a point in time where someone got up and walked away, because she was a little miffed about how long we were taking to decide,*" which Chris and Eric did not even discuss. Likewise, Adam, David, and Frances from Team A similarly recognized that their team conflict resulted from assumptions about shared information and misunderstandings. However, in describing the level of conflict, David described his experience as having a "*communication conflict*," while Adam and Frances described it as "*not having one*."

Not only did participants differ in what constitutes a conflict, but they also showed different reasons for their conflict. Again, in Team C, Chris and Eric attributed their conflict to cultural differences. On the other hand, Penny attributed it to team members' miscommunication. Similarly, in Team A, Adam attributed their conflict to a lack of leadership from his team leader and the absence of ground rules. Frances, however, attributed it to the language barrier of their leader and the lack of clarity in their ground rules. Although Adam stated they did not have any ground rules, Frances stated that they had one, although it was not good enough. On the other hand, David attributed their conflict to the structure of the simulation itself, which he saw as a clash of self-interests. Similar patterns were also found in Team F and J in that team members shared similar

observations regarding the conflict and tension surrounding a particular topic. However, they showed different understandings of what constitutes a conflict and what causes it.

Participants' experiences and personalities seemed to play roles in these differences. When discussing his conflict, Chris referred to his background as being from an African country. He shared that he thought the conflict was due to the different values among participants. In his perception, it was nothing personal but just different values. Thus, recognizing that it was the value differences, they "*agree[d] to disagree*," which was why he perceived that they only had a minor disagreement. In the case of Eric, he discussed that he has a professional background that deals with conflict in his daily life. This background seemed to give him confidence in dealing with conflict, which was why he said he did not sense any conflicts. On the other hand, unlike other participants who often discussed their previous experiences or personalities to make sense of their conflict experiences, Penny did not mention her previous experience or personality during the interview. However, her personality and preferences showed as she often stated, "*To me, that doesn't matter*," "*Who cares?*," "*It doesn't matter. You can call it whatever you want in your mind. For now, this is what the job is*." These statements showed her preferences in team efficiency as well as her preferences in conflict avoidance (Thomas & Killman, 1978). This preference could have led her to believe there was indeed conflict in her team, as opposed to Chris and Eric, who discussed moderate to no conflict in their same team. Consequently, the individual differences in previous experience and personalities explained the differences in how people perceived their conflict and causal attribution of the same conflict experience.

Conflict Management and Reflection Based on Leadership and Conflict Management Skills. While exploring the between-team differences, this study found two types of teams within similar virtual team settings: those who clearly discussed their teams' conflict management processes and those who did not. Participants from the former teams often discussed having a positive account of conflict and how they managed their conflict through the established process. On the other hand, participants from the later teams often discussed that their team could not resolve their conflict and shared a negative account of the conflict. This difference was observed in both in-person (Teams B, C, D, K vs. Teams A, F, J) and hybrid virtual teams (Teams P, L, H vs. Teams G, N, M), although such differences could not be analyzed in the fully virtual teams due to the small sample size. The effective conflict management process was consistently described by participants as follows: (a) building clear expectations, (b) using interest-based communication, and (c) following collective yet efficient procedures.

When participants were asked to describe their decision-making process and conflict, these participants shared that their team spent some time at the beginning of the simulation to discuss their expectations in terms of each other's needs, how to communicate with each other, and how to make decisions together. Even if its duration varied across teams, this discussion gave participants confidence about the expected behaviors from each other and a shared perception that the decisions were collectively made based on the ground rules. This clarification and confidence seemed to benefit their team process tremendously at the later stages of the simulation to prevent destructive conflict and manage conflict when it arose.

Teams with such effective conflict management processes also described their conflict communication as interest-based, aligning with the principled negotiation strategies discussed by Fisher, Ury, and Patton (2011). Interest-based communication emphasizes the "why" aspect of conflict rather than the "what" or the specific positions, allowing participants to uncover information, knowledge distribution, and incompatible goals built into the simulation. In contrast, teams without the process focused their communication on "what" decisions should be made.

Therefore, instead of uncovering the distributed knowledge information that simulation set them up for conflict, they gravitated towards avoidance or confrontation rather than finding the optimum solution, creating frustration toward each other. They ended up with everyone "*doing [their] own things*."

In addition, teams with effective conflict management processes also perceived their teams as making collective decisions efficiently, attributing this to their leaders' behaviors. Interestingly, "good leaders" came into the picture here, although the leader role was assigned randomly. Participants from teams with the process seemed satisfied with their leaders. They described that their leaders initiated the process by asking questions to include everyone's opinions while helping them focus on the agenda. They would gently prompt with questions like, "Okay. What is next?" or invite participation by saying, "Let's do this next." On the other hand, participants from teams without an effective conflict management process often discussed how their leaders' behaviors differed from their expectations. They described their leaders as "*not in the leading mindset*" (James, HV-H team), noting that leaders often made decisions without giving participants a chance to discuss the topic thoroughly. These leaders either imposed their decisions on the team or dwelled on one topic without deciding. The lack of clear and efficient decision-making processes frustrated team members and provoked conflict. Moreover, when conflict arose, no one was able to resolve it. Thus, these participants perceived "good" leaders as those who initiated collective decision-making and as efficient in breaking stalemates.

> Gregory (IP-HD team) statements below briefly describe such an effective process:
> *Before we started, we made sure [that] everyone [would be] on the same page. We [would not] leave anyone behind. We all ma[de] sure [that] we [would] make the decisions [in which] everyone [would be] comfortable with the decisions. That's one of the ground rules. If someone is not so comfortable, we ma[d]e sure why we [we]re making the decisions.*

Their teams discussed their expectations regarding communication and the decision-making process as described. They also focused on understanding "why" certain decisions need to be made rather than just deciding "what" decisions to make. They also ensured everyone was comfortable, meaning they followed collective yet efficient procedures.

A conflict management process not only influenced participants' ways of managing their conflict but also contributed to how participants reflected their conflict during the interviews. When an effective conflict management process was discussed in participants' teams, they did not perceive noteworthy conflict, describing task-related conflict as a "*normal*" team process rather than actual conflict. They also discussed how their team worked well together. On the other hand, participants whose teams did not effectively manage conflict reported "*chaos*," "*communication breakdown*," and poor performance. Team members left the conversation unresolved without understanding where each other was coming from. Thus, this group of participants shared negative conflict narratives with both characteristics of task and relationship conflict (Jehn, 1995; 1997).

Interestingly, Individual differences in leadership and conflict management skills seemed to influence conflict management processes. Participants in teams with effective conflict management processes often discussed the presence of strong leadership and conflict management skills in their teams. On the other hand, participants in other teams shared stories of their leaders lacking such skills. Therefore, this team context appeared to be more influenced by the individual team members comprising the team rather than by the team settings based on virtuality and national diversity.

To synthesize with the theme of individual differences, the individual differences in personality and previous experience seemed to influence the within-team differences in perceiving and attributing conflict. In case teams had a leader who had good leadership and conflict management skills, they seemed to be able to establish a conflict management process comprising shared expectations, communicating with each other based on their interests, and having an effective and efficient decision-making process. Participants in teams with a clear conflict management process were likely to be able to follow this clear process and constructively manage their conflict, which resulted in them reflecting on their conflict positively during the interview. In other words, participants' experience in conflict was carefully shaped through the interplay between individual and contextual factors.

Discussion

This study aimed to explore how individuals perceive and manage conflict within teams characterized by varying levels of virtuality and nationality, employing the model of individualized conceptualization of conflict. Considering the nature of the research question, this study employed a mixed-methods design to examine both individual and contextual factors and provide a deeper understanding of team dynamics and conflict.

The quantitative results reveal that virtuality negatively influences team performance, whereas national diversity alone does not show a significant effect. It found that individuals who participated in FV-HD teams reported a statistically significant higher presence of conflict than those who participated in other levels of virtuality and national diversity, such as FV-H, FV-MD, HV-H, and IP-HD ($p < 0.05$), indicating the interaction between the two contextual factors. These findings highlight the important roles that virtuality and national diversity play in team dynamics and conflict and provide support for previous scholars' approaches in examining the role of contextual factors (Caputo et al., 2023; Gibbs et al., 2017; Foster et al., 2015).

This study clarifies the reasons for statistical results and further answers the research question by analyzing semi-structured interview data for between-team and within-team differences. At the between-team level, participants in teams employing virtuality reported more self-censorship behaviors, which limit open communication and contribute to conflict. This dynamic helps explain why virtuality has a statistically negative impact on team performance. Conflict management processes also varied between teams in the same setting: while some established effective conflict management processes, others did not. These differences were often attributed to individual differences in leadership and conflict management skills, which demonstrates the interplay between individual and contextual influences. Furthermore, at the within-team level, differences in personality, knowledge, past experiences, and leadership and conflict management skills contribute to how conflict is perceived and managed. For example, although participants generally agreed on the topic of disagreement, they varied in whether it actually constituted a conflict and in their interpretations of its underlying causes. Also, participants' cultural awareness and their comfort in acknowledging and reporting such differences influenced how participants perceived the impact of national diversity on team dynamics and conflict. This may explain the insignificant effect of national diversity observed in this study and shed light on the inconsistent findings of diversity's impact in previous research (Caputo et al., 2023). After examining both between- and within-team differences, this study concludes that although virtuality shows a clear negative impact and national diversity appears less straightforward in quantitative measures, their ultimate effects rely on the individuals comprising

each team and the interplay of personal and contextual factors. Such findings align with and extend the model of individual conceptualization of conflict by highlighting the importance of considering contextual and individual factors in studying conflict.

The findings of this study contribute to the current understanding of conflict in nationally diverse virtual team settings in three ways. First, they suggest that inconsistencies in previous literature may stem from a sole focus on external factors, neglecting the internal factors that influence conflict. Although it is meaningful to find that increased levels of virtuality and team diversity negatively impact individual perceptions of conflict presence, the findings did not reveal a consistent pattern across different team settings. These varied relationships can be attributed to individual differences and their interactions with contextual factors. Differences in how individuals perceive, attribute, respond to, and reflect on conflict could have influenced their team dynamics and participants' responses to survey questions. Indeed, the reported effect of national diversity seemed to be influenced by these individual differences. Also, team-specific contexts, such as a conflict management process, seemed to shape participants' conflict behaviors in ways that statistical models could not fully capture. These findings suggest that it is important to recognize that conflict is a multi-faceted phenomenon shaped by external and internal factors. This provides support for using a contingent and contextual approach to study conflict in multinational virtual teams (Caputo et al., 2023; Huang et al., 2010).

Second, the findings also highlight the significant role that moderate virtuality plays in team dynamics, potentially explaining the inconsistent findings in previous literature. The quantitative findings show no significant differences in team performance and conflict between hybrid virtual teams and fully virtual teams, suggesting that both types of teams may face a similar level of challenges. However, qualitative insights reveal that participants in hybrid teams encounter challenges that are sometimes similar to those in fully virtual teams and sometimes similar to those in in-person teams, along with unique issues arising from persistent communication behaviors established during their initial fully virtual interactions. These unique dynamics of hybrid virtual teams underscore the importance of including moderate virtuality as a distinct factor in studying team conflict. The characteristics of hybrid virtual teams may have a statistically significant influence on other variables that were not focused on in this study. This is particularly relevant since previous studies have used broader definitions of virtual teams, including teams with a moderate level of virtuality (Foster et al., 2015). This may be another reason that earlier studies, which often consolidated the differences between hybrid and fully virtual teams, found inconsistent effects of virtuality. Therefore, this study suggests further research to explore moderate virtuality's role in conflict-related challenges and management.

Third, this study finds that the essence of conflict resolution skills and strategies may remain the same regardless of team settings and compositions. Although different levels of virtuality and national diversity were present, the effective conflict management skills shared by participants were those commonly found in the field of conflict resolution (Fisher et al., 2011; Moore, 2014). For instance, it is critical to set clear expectations in preventing conflict since conflict comes from unmet expectations (Lait & Wallace, 2002; Raines, 2023). Interest-based communication is an essential part of the integrative negotiation framework, often used by negotiators (Fisher et al., 2011). The listening and questioning skills that some participants shared are the fundamental communication skills for conflict resolution professionals (Barsky, 2016). This suggests that, despite the different mediums and cultures, the essence of human interactions—setting expectations and respect—remains the same. It also implies that there may be consistent behaviors that prevent destructive conflict and contribute to constructive management of conflict

that can be applied regardless of such situational differences. Therefore, it will be interesting for future scholars to explore the effective conflict management process across different team settings and what contributes to establishing such a process in contemporary organizational settings.

Finally, this study also makes a unique methodological contribution to the current literature by employing a mixed-methods design. The current literature examining conflict in multinational virtual teams often involves a theoretical framework that requires quantitative data and examines the role of contextual factors. However, this study used a theoretical framework requiring both quantitative and qualitative data. Through the meta-inferences of both data, this study was able to provide the full picture of team conflict from both individual and contextual angles. Through such an approach, this study found that sole quantitative results may be limited in examining team conflict due to the complex nature of contextual factors interplaying with individual factors in team dynamics and conflict. It also highlighted how individuals perceive and manage conflict similarly and differently within team settings characterized by various levels of virtuality and national diversity. Therefore, this study not only extends the theoretical boundaries of the model but also advocates future researchers to employ the mixed-methods design to provide readers with such "multiple ways of seeing" and a deeper understanding of the phenomenon (Creswell & Clark, 2018).

Conclusion

With the ongoing changes in organizational settings, there is a growing need to understand how to prevent destructive conflict and manage it constructively across various team environments. This study aimed to address these needs. However, as with many other research studies, it also has its limitations, which present opportunities for future investigation. First, due to its experimental nature, the findings of this study are context specific. While the controlled environment allowed for a focused comparison of the effects of virtuality and diversity, future research should validate these findings in real-world settings to enhance their applicability. Second, the sample size for each team configuration was limited. This study relied on convenient sampling—interviewing survey volunteers—which limited the diversity of interview participants across all nine team settings. Although Boddy (2016) finds that even one sample size can still provide meaningful and informative results that are worthy of publication, larger sample sizes would provide a more comprehensive and generalizable understanding of team dynamics. Third, this study examined contextual factors through an online survey and individual differences via semi-structured interviews but did not integrate individual factors into the statistical models. Future studies should consider including both contextual and individual dimensions in their survey instruments while also exploring these dynamics qualitatively. This approach will offer a deeper insight into the complex interplay of the individual and contextual factors influencing team conflict. Further investigations in these areas will significantly contribute to navigating the uncertainties and challenges associated with conflict in diverse and dynamic environments and increasing our confidence and abilities to manage one of the most fundamental aspects of human interaction, conflict, in organizational settings.

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Appendix A: Semi-structured Interview Question

1. In general, how was your experience with your team members?
2. To what extent do you feel that you developed a rapport with your team members in general and at each round?
3. What could have been done to improve rapport among group members?
4. To what extent do you trust your team members? Why?
5. To what extent do you think your group was getting along? Why?
6. Did your team reach an agreement about ground rules or otherwise build shared expectations?

If so, what were they? How were they established? Can you give an example of one norm?
If not, why do you think that your team did not have ground rules and shared expectations?

7. What was your team's decision-making process like?
8. How efficient was your team at making decisions at each round (e.g., using your time effectively)?
9. How effective were the team decisions at each round?
10. Could you describe your leader's behavior?

If you were a leader, could you describe your behavior as a leader?
11. What kind of challenges have you experienced in sharing knowledge and information with your team members, if any?
12. To what extent did you feel that everyone was aware of what's going on with the operations of the team?
If so, what did it take to ensure that everyone was aware of what's going on?
If not, what would have improved this?
13. Have you experienced any delay in sending/receiving feedback to/from your team members?
If yes, what caused this delay? How did this time affect your performance? How did this time affect your team's performance?
If not, why not?
14. Have you ever noticed any cultural differences while interacting with your team members?
If so, what kind of differences did you have? Did the differences create any challenges working with them?
If so, what kind of challenges did you have?
If not, why not?
15. Did you feel work was fairly distributed across the team?
If yes, how did you ensure this?
If not, why do you think this has happened? What would have resolved this issue?
16. What kinds of conflict did you have in your team, if any?
If yes, what caused these conflicts? How did you deal with them? What could have prevented this conflict?
17. (If participant was assigned to a 0% virtual team) To what extent were you able to focus on completing your exercise in the classroom, not distracted by anything?
18. (If the participant answers that there was a certain degree of distraction) What distracted you?
19. (If the participant was assigned to a hybrid team) In which space did you feel that you were more productive, in the classroom or at home? Why?
20. (If the participant was assigned to a fully virtual team) Have you ever felt distracted while doing this exercise at home?
If yes, what distracted you?
If not, why not?
21. (If the participant was assigned to a hybrid or fully virtual team) Have you experienced any difficulty in scheduling a meeting with the team?
22. Would you have done anything differently if you participated in an online group?
23. Are there any questions or comments to add?