The Impact of Team Leader's Simmelian Brokerage on Team Collaboration from a Social Network Perspective

Authors: Cao Man, Shuming Zhao, Zhang Qiuping, Hongjiang Lü, Lü Hongjiang

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Abstract

Subgroups within teams may engender division, conflict, and even precipitate team disintegration. Prior research has overlooked the pivotal individual of team leadership, inadequately explicating the direct coordination processes between subgroups, and further lacking profound analysis of the tripartite relationship among leaders, subgroups, and the team. In response, this paper proposes to introduce the concept of team leader as Simmelian network broker (i.e., the team leader acting as an intermediary between two or more subgroups) from a social network perspective, to investigate the process mechanisms through which team leaders mediate subgroup conflicts to foster team collaboration. This study extends the subgroup literature and offers theoretical insights and practical guidance for enhancing team management and team leadership effectiveness.

Full Text

The Effect of Team Leaders' Simmelian Brokerage on Team Cooperation from the Social Network Perspective

CAO Man[1], ZHAO Shuming[2], ZHANG Qiuping[1], LV Hongjiang[1]
[1]School of Economics and Management, Southeast University, Nanjing 211189, China
[2]School of Business, Nanjing University, Nanjing 210093, China

Abstract
Subgroups within teams can trigger differentiation, conflict, and even team dissolution. Previous research has overlooked the pivotal role of team leaders, failing to fully reveal their direct coordination processes among subgroups and lacking in-depth analysis of the tripartite relationship among leaders, subgroups, and the team. In response, this study adopts a social network perspective to

introduce the concept of team leaders' Simmelian brokerage (i.e., team leaders serving as brokers between two or more subgroups) and explores the process mechanisms through which team leaders reconcile subgroup conflicts to achieve team cooperation. This research extends the literature on subgroups and provides theoretical insights and practical guidance for enhancing team management and leadership effectiveness.

Keywords: team leader, Simmelian brokerage, subgroups, team cooperation
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1. Problem Statement

The ongoing restructuring of the global economic landscape, intertwined with complex political dynamics across nations and the formidable impact of the COVID-19 pandemic, has intensified the external environmental challenges confronting organizations. As teams have become the primary vehicle for addressing complex tasks, fostering effective coordination and cooperation within teams has emerged as critical for organizational success in navigating these challenges. However, the proliferation of subgroups (or subteams) within teams (谢小云等, 2012) can trigger differentiation, conflict, and even team dissolution (倪旭东, 季百乐, 2019), posing a significant barrier to organizational adaptation and competitive advantage. For instance, a senior employee at Kuaishou published a lengthy indictment on the company's internal network, alleging widespread covert rivalry within departments that severely hampered task progress. Similarly, a key reason for Best Buy's closure of all its stores in China—despite being the world's largest home appliance retailer—was the overt factionalism between groups such as the "Lotus Faction" and "Walmart Faction," which created managerial chaos. Consequently, mitigating inter-subgroup conflict to achieve effective team cooperation has become an urgent practical issue for organizations.

Existing research demonstrates that subgroups or subteams can adversely affect team functioning (Thatcher et al., 2003; Li & Hambrick, 2005; Rico et al., 2007; Chiu & Staples, 2013; Ellis et al., 2013; Hutzschenreuter & Horstkotte, 2013; Heidl et al., 2014; 谢小云等, 2012; 陈帅, 2016; 倪旭东, 季百乐, 2019; 孙玥璠等, 2021). For example, subgroup formation may lead individuals to categorize themselves into distinct groups, exacerbating communication barriers between subgroups and impeding effective cooperation (O'Leary & Mortensen, 2010; Ndofor et al., 2015; 周建等, 2015; Meyer et al., 2016). When subgroups exhibit high cohesion, members may prioritize subgroup interests over team-wide benefits (Bezrykova

et al., 2009; 谢小云等, 2012). In the Chinese context, managers often place their "confidants" in dominant positions, and these insiders frequently trigger persistent inter-factional conflicts to advance their own group's interests (Chi, 1996; 罗家德, 郑孟育, 2009). Therefore, investigating mechanisms to mitigate the negative impacts of subgroups has become an important theoretical concern.

Regarding the effective integration and coordination of subgroups within teams, prior studies have examined moderating mechanisms from the perspectives of team structure and contextual features (Carton & Cummings, 2013; Homan et al., 2007; Bezrukova et al., 2009; Bezrukova et al., 2012; 潘清泉等, 2015; 倪旭东, 季百乐, 2019). For instance, researchers have reduced subgroup negative effects by intervening in subgroup number, balance, and strength (Gibson & Vermeulen, 2003; Cronin et al., 2011; Meyer et al., 2015; 陈慧等, 2019). In recent years, only a handful of studies have begun exploring how specific leadership styles mitigate subgroup negative effects (Chen et al., 2021), such as inclusive leadership (Du et al., 2021; Qi et al., 2022), humble leadership (Yao et al., 2021), and relational leadership (陈伟等, 2015).

However, extant research suffers from two key limitations. First, studies on mitigating subgroup negative effects have predominantly focused on identifying moderating variables (陈慧等, 2019; Qi et al., 2022), lacking investigation into the specific processes through which these negative effects can be directly reduced or avoided. In organizational practice, mitigating subgroup negative effects represents a critical issue, and the absence of systematic process research severely hinders managers' ability to understand and intervene autonomously. Second, most subgroup research has anchored its analysis of social processes in attribute characteristics (Bezrukova et al., 2009; 倪旭东, 季百乐, 2019), with few studies examining the interaction structures among individuals, subgroups, and teams from a relational network perspective (Homan et al., 2020). Yet individuals, subgroups, and teams are not mere collections of attributes but rather nested, interdependent multi-level relational structures (Thatcher & Patel, 2012). In such structures, the actions and decisions of any actor can influence others. The current overemphasis on attribute analysis has led to a neglect of relational patterns and the role of networks among actors.

To address these gaps, this study draws upon the "Changing Others' Relationships Framework" in social network research (Halevy et al., 2019) to investigate how team leaders, as key actors within teams, leverage their unique relational patterns to reconcile subgroup conflicts and influence team outcomes. The core tenet of this framework is that third-party network brokers can establish and strengthen relationships among other actors. By focusing on dyadic interactions, third parties can employ brokerage behaviors—such as information (e.g., advice and feedback) or incentives—to shape relationships among participants, including creating or terminating relationships and altering relationship valence (from positive to negative or vice versa) (Halevy et al., 2019). Consequently, when team leaders serve as brokers between subgroups—that is, as Simmelian brokers (Krackhardt, 1999)—they may coordinate and mitigate inter-subgroup

conflicts through their brokerage behaviors. Moreover, the embedded nature of Simmelian brokers as third parties suggests that even without intentional conflict coordination, they may alleviate conflict and disagreement through various non-verbal forms, facilitating the transition and mediation of absolute conflicts (Simmel, 1950). Thus, examining team leaders as Simmelian brokers in coordinating subgroup conflicts directly addresses these theoretical limitations. This research not only clarifies how team leaders can leverage their positions or opportunities to directly influence inter-subgroup relationships but also comprehensively reveals the tripartite tuning process among leaders, subgroups, and teams.

Accordingly, this paper adopts a social network perspective to introduce the concept of team leaders' Simmelian brokerage—team leaders acting as brokers between two or more subgroups—and explores the process mechanisms through which they reconcile subgroup conflicts to achieve team cooperation, thereby constructing a theoretical framework for the leader-subgroup-team relationship. To thoroughly analyze this process, the specific approach involves: first, drawing on social network perspectives to define the connotation of team leaders' Simmelian brokerage based on classifications of network content within teams; second, employing the "Changing Others' Relationships Framework" to analyze how Simmelian brokerage across different networks influences inter-subgroup conflict and team cooperation; and third, examining important boundary conditions for these relationships.

2.1. Research on Mitigating Subgroup Negative Effects

Subgroups are spontaneously formed small clusters within teams based on specific relational attributes, characterized by relatively direct and close ties among members (Wasserman & Faust, 1994). The presence of subgroups within teams can generate multiple negative consequences. Social categorization theory, for instance, posits that subgroups trigger intergroup bias and corresponding negative cognitions that hinder team processes (Tajfel et al., 1971). Similarly, distance theory (Brewer, 1991) suggests that subgroup members experience psychological distance from members of other subgroups, reducing their willingness to cooperate. Specifically, individuals prefer to associate with similar others, leading team members to favor and trust ingroup members while distrusting outgroup members (Carton & Cummings, 2012; Bezrukova et al., 2009). This effect is particularly pronounced in strong subgroups, where members perceive high similarity with ingroup members and high dissimilarity with outgroup members (van Knippenberg et al., 2004), creating fertile ground for inter-subgroup conflict.

Existing research on mitigating subgroup negative effects has predominantly focused on moderating mechanisms, with scarce attention to directly reducing or avoiding these effects. Current investigations of moderating mechanisms concentrate on three areas: subgroup structural attributes, individual member attributes, and team contextual factors. Regarding structural attributes,

subgroup number, balance, and evenness moderate subgroup effects (Carton & Cummings, 2013; Antino et al., 2019; 倪旭东等, 2016; 倪旭东, 贺爽爽, 2018; 田莉等, 2021; 张新星, 刘新梅, 2021). In terms of individual attributes, equal member status (Ely & Thomas, 2001), diversity beliefs (Meyer & Schermuly, 2012), and team-member exchange (倪旭东, 季百乐, 2019) facilitate communication and learning across subgroups. Members in egalitarian contexts better understand interdependent tasks and existing differences, enhancing mutual learning. Concerning team context, specific leadership styles can attenuate the negative effects of team diversity or subgroups. Transformational leadership may enhance goal clarity and sharedness across the team, reducing subgroup negative effects (Schippers et al., 2008). Inclusive leadership can suppress subgroup negative effects while promoting employee engagement (Du et al., 2021; Qi et al., 2022). Additionally, positive team climate (Gilson & Shalley, 2004), team task characteristics (Xie et al., 2020), team collectivism (Ma et al., 2022), and team identification (孙玥璠等, 2021) can regulate inter-subgroup interactions and guide them toward common goals.

While prior research offers valuable insights into alleviating subgroup negative effects, it has neglected how team leaders—as key actors—directly integrate and coordinate subgroups, and lacks in-depth exploration of the multi-party tuning process between leaders and subgroups. In reality, team leaders are pivotal individuals primarily responsible for team goals, and their actions undoubtedly exert significant influence on both subgroups and the team. Unfortunately, research on direct leader coordination remains scarce, preventing comprehensive revelation of the leader-subgroup interaction process. Therefore, this paper proposes to draw upon the concept of Simmelian brokerage from social network research to investigate the mechanisms through which team leaders influence subgroups.

2.2. Breakthroughs from Simmelian Brokerage in Subgroup Negative Effect Mitigation Research

Simmelian brokerage refers to brokerage between cliques in a social network sense (Krackhardt, 1999) (as shown by A in Figure 1 [Figure 1: see original paper]). Cliques are graphs of three or more nodes that are directly connected, with all ties being reciprocal. Notably, cliques here represent small groups formed based on graph theory in social network analysis.

The concept of Simmelian brokerage originated from Krackhardt's (1999) extension of Simmel's (1950) exposition on triadic relationships. Simmel (1950) proposed that triadic relationships involving a third party differ fundamentally from dyadic relationships in terms of relationship quality, dynamics, and stability. Compared to dyadic relationships, triadic relationships diminish individuality, reduce individual bargaining power, and enhance conflict resolution. On one hand, the third party's presence facilitates the transition and mediation of absolute conflicts (Simmel, 1950). On the other hand, even without intentional conflict coordination, the third party can alleviate conflict and disagreement

through non-verbal means. Building on Simmel's (1950) triadic relationship theory, Krackhardt (1999) advanced the concept of Simmelian brokerage as brokerage between tightly-knit small groups in social networks. As a member of multiple small groups, the Simmelian broker forms highly cohesive structures with other members within each group. As illustrated in Figure 1, A belongs to Small Group 1 with B and C, creating tight connections among them, and simultaneously belongs to Small Group 2 with D and E, forming equally strong ties. Thus, A serves as a Simmelian broker connecting Small Group 1 and Small Group 2.

Figure 1. Simmelian Brokerage
Source: Authors' illustration

From a social capital composition perspective, Latora et al. (2013) view Simmelian brokerage as a combination of closed and open networks. On one hand, the Simmelian broker represents the sole connection between otherwise disconnected groups; on the other hand, within each group, the broker forms highly cohesive, closed networks with other members. Previous social capital research has debated which network structure constitutes social capital. Some scholars argue that closed structures enhance trust and belonging, strengthen cooperative behavior and social norms, and foster shared culture. Others contend that open structures provide access to non-redundant information through network brokers or structural holes. To resolve this debate, Latora et al. (2013) demonstrate that individuals can derive benefits not only from single closed or open structures but also from their integration. Consequently, Simmelian brokerage, as a structural position at the interface between closed and open structures, becomes a crucial focal point for reconciling this controversy (孙笑明等, 2018).

To further clarify the conceptual connotation of Simmelian brokerage, it is necessary to compare it with the widely applied cross-categorization model in subgroup research (Chen et al., 2017). This conceptual comparison reveals that Simmelian brokerage differs from the cross-categorization model in terms of referent object, scope of connotation, and dynamic perspective, possessing unique conceptual meaning and application contexts. The specific differences are as follows:

(1) **Referent Object**: Simmelian brokerage refers to brokerage between subgroups within the same network, whereas cross-categorization model refers to overlap between subgroups formed by different attribute categories. From a social network perspective, subgroups (or cliques) are spontaneously formed small clusters among team members based on specific relational networks (Wasserman & Faust, 1994). For example, multiple subgroups may exist within a team friendship network. Simmelian brokerage mediates between such subgroups. In contrast, cross-categorization models apply multiple dimensions or attributes of social categorization simultaneously to influence individual judgments (Crisp et al., 2003). For instance, in the cross-categorization of gender and race, for a Black female perceiver, other Black females are double ingroup members (coinciding on

both dimensions), Black males and White females are mixed-group members (coinciding on only one dimension), and White males are double outgroup members. Thus, Simmelian brokerage and cross-categorization models differ substantially in their referent objects.

(2) **Scope of Connotation**: Simmelian brokerage encompasses both network brokerage structure and brokerage behavior, whereas cross-categorization models examine structure solely from a configurational perspective. Simmelian brokerage represents a type of network brokerage. Recent research has conceptualized network brokerage not merely as a position or structure but as a behavior—brokerage-related actions (Boari & Riboldazzi, 2014; Quintane & Carnabuci, 2016; Halevy et al., 2019). Correspondingly, this conceptualization focuses on what brokers actually do rather than assuming that occupying a brokerage position automatically generates brokerage behaviors. Therefore, Simmelian brokerage is not limited to structure but involves the specific actions of Simmelian brokers as actors. In cross-categorization models, overlapping membership relationships are examined only structurally from a subgroup configuration perspective, emerging when cross-group similarities exist among subgroups (Bezrukova et al., 2009; Jetten et al., 2004; Chen et al., 2017).

(3) **Dynamic Perspective**: Simmelian brokerage can generate dynamic structural changes, whereas cross-categorization models adopt a static perspective to examine overlapping subgroup configurations. Whether from a behavioral perspective or the "Changing Others' Relationships Framework," third-party brokers can alter other actors' relationships through brokerage actions, thereby achieving dynamic network structural changes. Halevy et al. (2019) posit that brokerage behavior is an influence process whereby third parties use information (e.g., advice and feedback) or incentives to shape dyadic relationships among participants, including the ability to create or terminate relationships and to change relationship valence (e.g., from positive to negative). In contrast, cross-categorization models statically analyze how overlapping membership relationships affect social evaluations of subgroup members (Grigoryan, 2020; Prati et al., 2021), with different cross-categorization configurations leading to different evaluations (Crisp et al., 2003).

Given that Simmelian brokerage involves triadic relationships (i.e., the broker and actors in different small groups), this study proposes that Simmelian brokerage may trigger higher-level social integration processes, thereby generating comprehensive effects on the collective.

In the context of Simmelian brokerage, team leaders serving as brokers across different networks may alleviate and transform friction and conflict between two or more subgroups through their brokerage behaviors, thereby enhancing team cooperation and effectiveness.

Therefore, integrating the aforementioned research on mitigating subgroup neg-

ative effects and introducing the concept of team leaders' Simmelian brokerage to explore the process mechanisms through which leaders reconcile subgroup conflicts and promote team cooperation holds significant value for ultimately constructing a tripartite leader-subgroup-team relationship framework.

3. Research Framework

This paper integrates a social network perspective to investigate the process mechanisms through which team leaders' Simmelian brokerage reconciles subgroup conflicts to achieve team cooperation. The investigation includes theoretically distilling the connotation of Simmelian brokerage under different network contents and empirically examining the mediating and moderating mechanisms linking team leaders' Simmelian brokerage to team cooperation. The paper comprises three main components: Study 1 defines the connotation of team leaders' Simmelian brokerage based on network content classification (instrumental and expressive networks); Study 2 examines how different types of team leaders' Simmelian brokerage (instrumental and expressive) influence inter-subgroup conflict and subsequent team cooperation; and Study 3 explores important boundary conditions for these effects—team leaders' cooperative orientation as brokers and their political skills. These three components collectively construct a theoretical framework for the influence process of team leaders' Simmelian brokerage. The research framework is illustrated in Figure 2 [Figure 2: see original paper].

3.1. Defining Simmelian Brokerage Based on Network Content

Figure 2. Overall Research Framework

This study aims to redefine and reclassify the connotation of Simmelian brokerage based on specific network content categories, thereby providing a more detailed theoretical foundation for subsequent research on how team leaders' Simmelian brokerage across different network contents promotes team cooperation. Specifically: first, it clarifies the classification of social network content; second, it categorizes Simmelian brokerage according to different network contents and defines their respective connotations; and third, it conducts comparative analyses between Simmelian brokerage of different network contents and similar concepts to identify their unique characteristics.

Based on social network content, social networks are divided into instrumental networks and expressive networks. Instrumental networks typically emerge during the fulfillment of work roles and involve exchanges of work-related resources, including information, expertise, advice, and even material resources (Fombrun, 1982; Lincoln & Miller, 1979). Expressive networks primarily involve emotional exchanges such as friendship and social support, representing informal ties that influence individual/organizational identity through socio-emotional support and normative expectations. Theoretically, network content

defines the primary resources being exchanged, and how social network properties function depends largely on the specific resources present in network ties. Empirically, different network contents exhibit significantly different influence processes. Building on this, this study integrates Simmelian brokerage with network content classification, dividing Simmelian brokerage into instrumental Simmelian brokerage and expressive Simmelian brokerage, and compares these concepts with related ideas to clarify their definitions and fundamental characteristics.

3.2. Mediating Mechanisms of Team Leaders' Simmelian Brokerage on Team Cooperation

Building upon the highly applicable "Changing Others' Relationships Framework" in the Simmelian brokerage context, this study further explores how different types of team leaders' Simmelian brokerage (work networks in instrumental networks and friendship networks in expressive networks) influence team cooperation. The "Changing Others' Relationships Framework," proposed by Halevy et al. (2019), describes how third parties alter other actors' relationships through brokerage actions. Halevy et al. (2019) conceptualize brokerage behavior as an influence process whereby third parties use information (e.g., advice and feedback) or incentives to shape dyadic relationships among participants. Brokerage activities include two fundamental aspects: first, third parties creating or terminating relationships between participants; and second, third parties changing the valence of relationships among other participants (e.g., from positive to negative).

In the Simmelian brokerage context, the role and influence process of team leaders as Simmelian brokers across different networks follow the "Changing Others' Relationships Framework." As pivotal actors in the team, team leaders' positional authority endows them with special credibility that supports their efforts to alter relationships or their intensity between subgroups. Therefore, as third parties, team leaders may alleviate and transform friction and conflict between two or more subgroups through their brokerage behaviors, thereby promoting team cooperation.

3.2.1. Team Leaders' Simmelian Brokerage (Work Network), Inter-Subgroup Task Conflict, and Team Cooperation

When serving as a Simmelian broker in work networks, team leaders possess significant advantages in both the quantity and quality of work-related information they access. With this information and resource advantage, team leaders—motivated to achieve overall team goals—are more willing to coordinate task content and problem-solving approaches across multiple subgroups, thereby reducing inter-subgroup task conflict. Additionally, leaders can leverage their cross-subgroup position to translate one subgroup's behaviors and perspectives into terms understandable to other subgroups, thereby aligning the efforts of

two or more parties and mediating various discomforts and disagreements in work processes to mitigate excessively intense task conflict. However, when team leaders' Simmelian brokerage (work network) exceeds a certain threshold, they face mounting pressure to coordinate multiple parties (Mehra & Schenkel, 2008) and an excessive burden in reconciling task disagreements (Long Lingo & O'Mahony, 2010), potentially preventing them from effectively alleviating and transforming work-related friction and conflict between two or more subgroups.

Proposition 1: Team leaders' Simmelian brokerage (work network) exhibits a U-shaped relationship with inter-subgroup task conflict.

In the Simmelian brokerage context, team task conflict involves not only individuals but also different subgroups. While task conflict between individuals may prompt team members to exchange diverse information and knowledge, thereby enhancing mutual understanding of interdependent tasks and fostering collective learning, task conflict between subgroups is more likely to engender confrontation. Such conflict impedes information exchange and intellectual collision between subgroups, precluding timely task identification and deep understanding, ultimately resulting in lower team cooperation.

Proposition 2: Inter-subgroup task conflict is negatively related to team cooperation.

Proposition 3: Inter-subgroup task conflict mediates the relationship between team leaders' Simmelian brokerage (work network) and team cooperation.

3.2.2. Team Leaders' Simmelian Brokerage (Friendship Network), Inter-Subgroup Relationship Conflict, and Team Cooperation

Friendship is a role with explicit obligations (Henderson & Argyle, 1986), involving providing help, complete openness and honesty, sharing secrets, and not disclosing information to others (Bridge & Baxter, 1992). When serving as a Simmelian broker in friendship networks, team leaders can mitigate emotional contradictions between subgroups through informal relationships, positively influencing team cooperation. As a link between different subgroups, team leaders can adopt various measures to reduce the transmission and contagion of negative emotional information among subgroups for the sake of bilateral or multilateral unity. Moreover, based on their Simmelian brokerage position, leaders can keenly observe conflict points and coordinate or mediate them promptly to prevent escalation.

However, when team leaders' Simmelian brokerage (friendship network) becomes excessive, their relationship conflict buffer may cease to function effectively. Establishing and maintaining friendships typically requires substantial support and attention, which can lead to fatigue (Methot et al., 2016). More importantly, the more team leaders serve as Simmelian brokers in friendship networks, the higher the degree of different friendship relationships they must maintain, potentially intensifying expectations for relationship conflict coordi-

nation and the attendant energy expenditure (Methot et al., 2016).

Proposition 4: Team leaders' Simmelian brokerage (friendship network) exhibits a U-shaped relationship with inter-subgroup relationship conflict.

Relationship conflict can erode trust and intensify confrontation among team members (陶爱华等, 2018), reducing their willingness and ability to solve problems collectively and ultimately undermining team cooperation (De Dreu, 2006). Additionally, the issues arising from relationship conflict dissipate team members' resources, forcing them to divert time and energy to address these problems, further deteriorating team cooperation (De Wit et al., 2012).

Proposition 5: Inter-subgroup relationship conflict is negatively related to team cooperation.

Proposition 6: Inter-subgroup relationship conflict mediates the relationship between team leaders' Simmelian brokerage (friendship network) and team cooperation.

3.3. Moderating Mechanisms of Team Leaders' Simmelian Brokerage on Team Cooperation

According to the "Changing Others' Relationships Framework," network brokerage is a social influence process. After occupying a Simmelian brokerage position, individuals may be driven by different motivations, beliefs, and values, translating into distinct behavioral tendencies that subsequently influence brokerage outcomes. Beyond behavioral tendencies, individuals' ability to leverage opportunities embedded in Simmelian brokerage also depends on their capabilities. Therefore, this study examines the effects of individual behavioral tendencies and capabilities, focusing specifically on team leaders' cooperative orientation and political skill.

Cooperative orientation refers to brokers' tendency to connect other participants, thereby bridging their information gaps and integrating various contributions (Stovel & Shaw, 2012). Such brokers do not exploit information asymmetries in networks for personal gain but instead strive to connect other participants to foster cooperation and mutual adjustment.

When team leaders exhibit higher cooperative orientation as Simmelian brokers, they are more willing to promote information and emotional exchange between two or more subgroups for the sake of overall team goals—for example, by transforming information and value specific to one context into information valuable for another context. This helps the team mitigate both task and relationship conflicts among subgroups, thereby facilitating team cooperation.

Political skill refers to the ability to effectively understand others and, based on this understanding, influence them to achieve personal or organizational goals (Ferris et al., 2005, p. 127). Leaders with high political skill can and will leverage their network capabilities and influence to enhance their trustworthiness and

reputation (Ferris et al., 2005), ultimately improving leadership effectiveness (Snell et al., 2014; Brouer et al., 2013). The authenticity displayed by high-political-skill leaders in interpersonal interactions helps them build trust and supportive relationships while reducing perceptions of manipulation or overt influence attempts (Douglas & Ammeter, 2004). Such team leaders possess the capability to utilize their Simmelian brokerage positions and opportunities to help the team mitigate task and relationship conflicts among subgroups, thereby promoting team cooperation.

Proposition 7: Team leaders' cooperative orientation as brokers moderates the relationship between their Simmelian brokerage (work network) and inter-subgroup task conflict.

Proposition 8: Team leaders' cooperative orientation as brokers moderates the relationship between their Simmelian brokerage (friendship network) and inter-subgroup relationship conflict.

Proposition 9: Team leaders' political skill moderates the relationship between their Simmelian brokerage (work network) and inter-subgroup task conflict.

Proposition 10: Team leaders' political skill moderates the relationship between their Simmelian brokerage (friendship network) and inter-subgroup relationship conflict.

4. Theoretical Contributions and Innovations

The differentiation, conflict, and even dissolution that subgroups may cause within teams have become increasingly significant challenges in organizational management. Yet existing literature has yet to comprehensively reveal and examine how team leaders directly coordinate and integrate subgroups, what intervention methods they employ, and what effects and mechanisms these produce. This study introduces the concept of Simmelian brokerage to explore the process mechanisms through which team leaders reconcile subgroup conflicts to achieve team cooperation. This research not only extends the subgroup literature but also provides theoretical insights and practical guidance for enhancing team management and leadership effectiveness. Specific contributions include the following aspects:

First, by introducing the novel concept of team leaders' Simmelian brokerage and examining its influence processes on subgroup conflict and team cooperation, this paper theoretically advances the existing subgroup literature and offers a new approach for organizations to effectively resolve subgroup coordination and integration issues in practice. The mitigation of subgroup negative effects has become a critical concern for both practitioners and academics. While previous subgroup research has investigated the moderating effects of subgroup structural features (e.g., Carton & Cummings, 2013; Cronin et al., 2011) and specific leadership styles (e.g., Du et al., 2021; Qi et al., 2022) on subgroup negative effects, few studies have explored the direct coordination process among

subgroups from a team leader perspective, and even fewer have employed relational network methods to examine the interaction structures among individuals, subgroups, and teams (Homan et al., 2020). Drawing upon the "Changing Others' Relationships Framework" (Halevy et al., 2019), this paper proposes that team leaders, as Simmelian brokers across different networks, may alleviate and transform friction and conflict between two or more subgroups through their brokerage behaviors, thereby promoting team cooperation. Specifically, when team leaders serve as Simmelian brokers in work networks, they gain significant advantages in accessing both the quantity and quality of work information. With this information and resource advantage, leaders can better coordinate tasks across multiple subgroups for the sake of overall team goals, reducing inter-subgroup task conflict and ultimately achieving team cooperation. When team leaders serve as Simmelian brokers in friendship networks, they can mitigate emotional contradictions between subgroups through informal relationships, adopt various measures to reduce the transmission and contagion of negative emotional information among subgroups, and keenly observe conflict points for timely coordination or mediation, thereby positively influencing team cooperation.

By adopting a social network perspective to construct a theoretical framework for the tripartite leader-subgroup-team relationship, this study more finely and deeply examines the processes linking team leaders' Simmelian brokerage, subgroup conflict, and team cooperation, extending existing subgroup research. Moreover, this study provides concrete guidance for coordinating inter-subgroup conflicts in organizational practice. Compared to the selection and cultivation of specific leadership styles—which require lengthy periods to demonstrate effects—team leaders' brokerage roles between subgroups offer more timely and targeted conflict mitigation. During the development of Google+, project team leader Laszlo Bock utilized his role as a senior expert across sub-projects to manage internal factional conflicts. Serving as a connector among sub-projects, he organized a series of meetings and discussions with core members from different sub-projects to promote open process information and transparent work requirements, successfully launching the Google+ product—intended to compete with Facebook—within a mere year.

Second, this paper redefines the connotation of team leaders' Simmelian brokerage based on network relationship content. Existing research has primarily focused on the structural connotation of Simmelian brokerage (Krackhardt, 1999; Latora et al., 2013), lacking systematic examination of its network content. This structural rather than content-based focus has led network researchers to treat different types of network relationships as equivalent, often resulting in the mixing of different relationship types in studies (Burt, 1992) under the implicit assumption that different structural patterns exhibited by the same participants merely represent variants of the true structure. However, different network relationship types may produce different effects. Theoretically, network content defines the primary resources being exchanged (Aral & Van Alstyne, 2011; Kwon et al., 2020), and how social network properties influence

important outcomes depends largely on the resources present in the network. Empirically, different network contents exhibit significantly different influence processes and mechanisms on important outcomes. For example, Porter et al.'s (2019) meta-analysis found that while centrality in both instrumental and expressive networks relates to employee turnover, the mediating processes differ: instrumental network centrality reduces turnover through job performance and organizational commitment, whereas expressive network centrality reduces turnover through job satisfaction and organizational commitment. Therefore, this study integrates Simmelian brokerage with network content classification research, further dividing Simmelian brokerage into instrumental Simmelian brokerage and expressive Simmelian brokerage. Instrumental Simmelian brokerage refers to brokerage between different cliques within instrumental networks, primarily based on work or task-related networks such as workflow or advice networks. Expressive Simmelian brokerage refers to brokerage between different cliques within expressive networks, primarily based on friendship or support-related networks. Consequently, this study's conclusions can provide valuable insights for team managers to integrate different content-based social networks within teams (instrumental and expressive networks) and proactively utilize and occupy key positions (such as brokers between subgroups) to effectively manage subgroups and even entire teams.

Finally, this study examines the influence mechanisms and boundary conditions of Simmelian brokerage on team cooperation as a team-level outcome. Existing research has predominantly focused on exploring the effects on Simmelian brokers themselves (Ashforth et al., 2008; Tasselli & Kilduff, 2018), lacking systematic investigation of effects on other participants and the collective. However, network brokerage inherently involves triadic relationships (Kwon et al., 2020)—the broker, other actors, and even the team. Opportunities within social networks are jointly determined by one's own and other participants' behaviors. Furthermore, individuals' pursuit of brokerage benefits may either promote or diverge from collective interests, and brokerage strategies may trigger higher-level social integration processes that affect the collective. For example, Bizzi (2013) found that when employees are treated as independent individuals, competitive and power-oriented behaviors by brokers may be beneficial, but they create friction and conflict when group efficacy and climate are concerned. In light of this, this study aims to examine social relationship patterns, structures, resources, and cognitions within organizations or teams from a social network perspective, clarifying the influence mechanisms and boundary conditions of team leaders' Simmelian brokerage on team cooperation. The research conclusions can not only extend the Simmelian brokerage research framework from multiple theoretical perspectives but also provide practical insights for managers to effectively resolve network ecological crises within organizations or teams. For example, by occupying important positions within team networks such as Simmelian brokerage and implementing corresponding behaviors, team leaders can more smoothly achieve effective team cooperation.

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Note: Figure translations are in progress. See original paper for figures.