

What Micro Processes Lead to Organic Solidarity When the Level of Categorical Diversity is High in a Workforce?*

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The current study uses the social network approach to examine social exchange network configuration that minimizes the adverse effects of workgroup diversity thereby integrating and examining the leader-member exchange (LMX) theory, and team-member exchange (TMX) network. Analysis of the extant literature seems to suggest that formal leaders may benefit from the integrated social exchange network structure by providing quality exchange with central (core, emergent leaders) members in different workgroups thereby maximizing both group, and individual social capital. Based on this exchange network structure, five specific propositions are made, and finally the conceptual framework is presented and the implications for theory, practice and future research are discussed.

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I . INTRODUCTION

Leadership is vital in maintaining organic solidarity, a social integration that arises out of the need of individuals for one another's services,* particularly when there is high categorical diversity, which refers to dividing lines that may split a society into subgroups based on the alignment of demographic attributes (e. g., ethnicity, religion, gender, etc.) (Thatcher, 2013). Leadership, as the process of influence, involves the interaction between the leader and the follower(s) that cooperate toward accomplishing a common goal (Yukl, 2002). Leader-member exchange (LMX) theory explains the dyadic relational exchange between a leader and a follower. According to this theory, leaders provide differentiated quality of exchange (high or low) with their followers (Gerstner & Day, 1997). The assumption is that when employees receive high quality LMX such as training, assignment of challenging tasks, promotion, and the like from their supervisor, they would reciprocate by engaging in extra role activities (activities beyond contractual obligations)(Emerson, 1976). Studies have argued that LMX positively affects employee organizational behavior (OCB), intentions to stay, productivity and so on (Gerstner & Day, 1997; Harris, Li, & Kirkman, 2014; Ilies, Nahrgang, & Morgeson, 2007).

However, this theory is not free from critics. Firstly, researchers argue that LMX differentiation may be perceived negatively by employees as unfair discrimination (Liden, Erdogan, Wayne, & Sparrowe, 2006). According to social comparison theory (cf. Festinger, 1954), for instance, peers compare their own LMX with other members of the same group and use that as a cue for evaluating the procedural justice and equity in the organizations. For example, if the leader is neutral while allocating exchanges among group members (Adams, 1965). Psychological contractual

* *Encyclopædia Britannica Online*, s. v. "mechanical and organic solidarity", accessed April 15, 2016, <http://www.britannica.com/topic/mechanical-and-organic-solidarity>.

agreement, when not fulfilled, is negatively related with OCB, and positively related with turnover (Ilies et al., 2007). Hence, according to this line of argument, the extent of the variability of LMX relationships may cause formation of sub-groups within a group (in-groups (high LMX recipient), and out-groups (low LMX recipients)) that hampers group organizational citizenship behavior (Choi, 2009).

The second critics of LMX theory is related to level of analysis. LMX studies are based on the dyadic level of analysis, the exchange relation between a leader and a member. However, according to this line of argument, LMX cannot happen in isolation because in addition to the interaction with their leader, members do interact among themselves and with others outside their own group (Seers, 1989). In addition, researchers state that LMX theory does not clearly explain how the quality of dyadic exchange between a leader and a member may affect the quality of exchange between peers within the group (Bowler & Brass, 2006). Group performance, however, does not only depend on the quality of the exchange relationship between the leader and members, but also on the quality of the interaction between and among peers, for instance on the extent of one is willing to help or seek help from the other (Sherony & Green, 2002).

Furthermore, LMX is formed based on followers' characteristics such as individual competence (human capital), which does not take in to account the social capital of individuals in the group because social capital is not an individual characteristics or a personality trait but a resource that resides in the networks and groups to which people belong (Mouw, 2006). The relationship between LMX and OCB, for example, might not clearly explain helping behavior among group members since the helping behavior in the OCB is directed toward the organization (Bowler & Brass, 2006). As a result, an alternative helping behavior, directed toward the level of helping between peers, called interpersonal citizenship behavior (ICB) was developed by (Bowler & Brass, 2006) emphasizing the importance of team-member exchange (TMX) (Seers,

1989). Previous studies suggested that better understanding of leadership process requires knowledge of the exchange dynamics among group members (also known as team-member exchange (TMX) (Seers, 1989), coworker exchange (CWX) (Sherony & Green, 2002)) beyond the dyadic leader-member exchange (LMX) relationships (Bowler & Brass, 2006). Nevertheless, despite a great deal of research on both LMX and TMX theories, research dealing with their integrated effect is still limited thereby confining our understanding of how such combined social exchange transactions influence individual behavior.

Toward understanding the mechanism how exchange network structure affects group solidarity, the current paper integrates the leader-member exchange (LMX) and team-member exchange (TMX), and proposes exchange network configuration that is most relevant for leading diverse* workgroups. Workforce diversity is found to affect negatively the extent of members' communication, trust, knowledge transfer, and other interactions that may take place within a group (Choi & Sy, 2010; Reagans & Zuckerman, 2001). But it is useful for gathering novel and new ideas from diverse views and opinions, thereby contributing to improved group decision making and creativity (Tsui, Egan, & O'Reilly III, 1992). Understanding social network structure of a work team and how it affects workplace behavior may lead us to effective and efficient leadership of a diverse workgroup. Hence, using social network theories, the present paper attempts to explain how the dyadic interaction between leader and followers (LMX) and the interaction among the followers (TMX) can be used to maintain solidarity in a diverse workgroup thereby increasing the possibility of effective team leadership. Theoretically, the current paper would enhance our understanding of the dynamics of leadership process using the social network perspective, and of course, by integrating previously detached areas of research-

* Group diversity refers to group members' differences based on demographic variables such as race, ethnicity, sex, education, religion, tenure, and so on (cf., Williams & O'Reilly, 1998).

LMX, & TMX. Moreover, hopefully, it would inform possible and suitable social exchange strategies that leaders might consider to get the best out of a workgroup they lead- especially when categorical diversity in the workgroup is high.

II. LITERATURE REVIEW

1. Work Force Diversity from Social Network Perspective

The diversity- performance debate in social network studies is founded in the two conceptions of social capital, social relationships that can potentially confer benefits to individuals and groups (Brass, 2001). The two leading conceptions of social capital are the ‘closure’ perspective (Coleman, 1988), and the ‘structural holes’ (Burt, 1992) approach. The former perspective takes the pessimistic view of diversity while the latter is optimistic about diversity. The argument of Coleman (1988) is that social closure or network density within a group increases level of identification within the group, and the level of mutual trust which enhances exchange and collective action. According to this perspective, network density increases group cohesion and coordination which is less likely to occur in diverse teams (Jehn, Northcraft, & Neale, 1999; Reagans & Zuckerman, 2001; Tsui et al., 1992). Hence, Coleman (1988) regards diverse teams as unlikely to assume cohesive, community like characteristics. Previous studies have showed that employee diversity with a group leads to interpersonal and task conflicts, in-group and out-group stereotypes, and mistrust and so on (Williams & O’Reilly, 1998). Other studies have raised their concern in that diverse knowledge is difficult to synthesis in some situations and social skill is required to make use of the knowledge (Lingo & O’Mahony, 2010).

Furthermore, studies showed that network density or social closure was found to positively influence team performance (Reagans & Zuckerman, 2001).

On the other hand, the second network perspective of social capital (Burt, 1992) argues that social capital is a value derived by bridging 'structural holes' or gaps between nodes in a network. This is a value derived by connecting actors that are otherwise unconnected in a given social network. As a result actors who develop ties with disconnected groups gain access to a broader array of ideas and opportunities than those who are restricted to a single one. Unlike the dense network where actors are connected by strong ties, sparse social networks connected by weak ties can access non redundant and novel information, which enhances organizational creativity (Bae & Koo, 2008; Burt, 1992; Reagans & Zuckerman, 2001). Studies found that network heterogeneity improves team performance (Reagans & Zuckerman, 2001). Because leadership involves accomplishing goals through others, social capital is essential to good leadership (Burt, 1987). Leaders can acquire social capital via gaining centrality by building large networks with direct contacts (social closure)(Coleman, 1988), and building connections with individuals or groups who are not themselves connected (Burt, 1992).

From the above discussions it is clear that workforce heterogeneity may enhance or constrain individual and organizational performance, especially in team based work situations, where interaction among dissimilar employees is essential for achieving collective goals (Reagans & Zuckerman, 2001). Scholars argue that diversity constrains performance in that diversity hinders effective team by reducing intergroup interaction(Coleman, 1988; Harrison, Price, & Bell, 1998). For instance, studies show that informal social networks and sense of shared identity take root among individuals who have similar demographic attributes (Jehn et al., 1999). Tsui et al. (1992) found that increasing work unit diversity is associated with lower levels of psychological attachment. Such social categorization based on social identity increases

intragroup communication but constrains intergroup interaction. On the other hand, other scholars argue that heterogeneous groups are expected to perform at higher level than homogeneous ones in that greater demographic diversity entails relationship among people with different sets of contacts, skills, information, and experiences; which enhances creative problem solving (Brass, 2001; Burt, 1992). Nevertheless, the issue of workforce diversity is yet a hot debate.

2 Social Exchange Structure and LMX Theory

Social exchange theory asserts that when employees receive high quality LMX relationships, the employees will reciprocate through the performance of OCB (Henderson, Wayne, Shore, Bommer, & Tetrick, 2008). LMX researchers suggest that leaders may provide differential treatments based on individual characteristics of the subordinates (Henderson, Liden, Glibkowski, & Chaudhry, 2009). That is skilled and competent employees should receive high quality exchange (or strong tie) while less skilled and less competent employees receive low LMX quality (or weak tie). This shapes the dyadic exchange relationship between a leader and a member, the formal hierarchical relationship backed up by positional resources (Liden et al., 2006). However, in the informal network of the exchange structure, group members have a different exchange platform, which is based on informal relationships such as friendship, and acquaintance. This form of exchange among members creates both individual and group social capital that may be impossible through LMX relationships since social capital is not an individual characteristic or a personality trait but a resource that resides in the networks and groups to which people belong (Mouw, 2006).

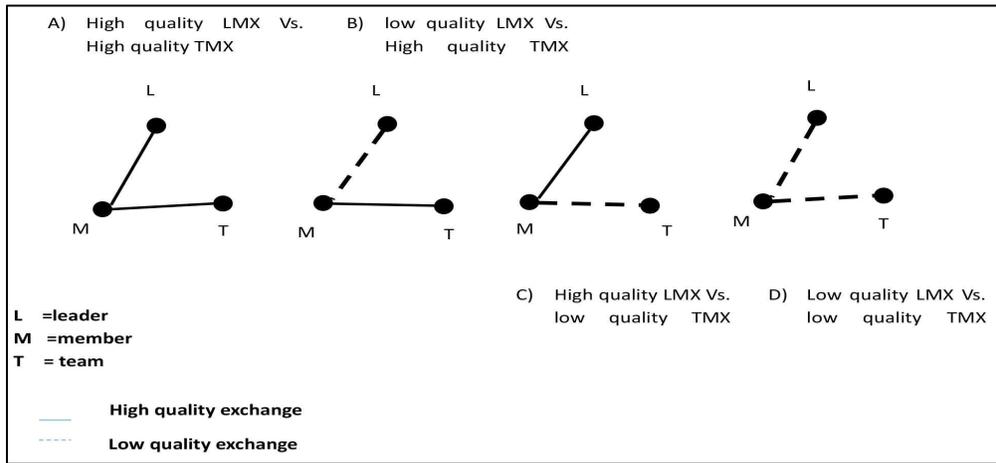
I use the following figure to illustrate the possible exchange structure of a focal member in an exchange network structure when LMX is the only lens used to view

the network structure. That means when the leader does not take into account when deciding LMX. For instance, fig. 1A shows that an employee who is highly rated by a supervisor is also happens to be occupying a central position in the group network because the focal members exchange relationship is strong in both exchange network structure. When this is the case, other members of the group may positively perceive the LMX decision since central people in a network are perceived to be competent, liked, trusted and skilled (Brass, 2001; Brass & Burkhardt, 1992). When employees agree that the supervisor's decision is acceptable and fair, employees develop positive attitude toward the leader, and the group member who is rated high in the LMX network. Researchers refer to this kind of focal member as an emergent leader (cf. Chaturvedi, Zyphur, Arvey, Avolio, & Larsson, 2012). Fig. 1B indicates the case where a focal person who is highly central in the team exchange network, is rated as low or receives low quality LMX. This form of exchange combination might be unacceptable from the side of other employees because the LMX decision did not match their expectation, which may hamper the relationship between the leader and group members subject to violations of psychological contracts. The central members (or emergent leader), when they are not in a good relationship with the leader, can easily mobilize employees against the formal leader. Fig. 1B and fig. 1C are similar except in the latter, a member who is a periphery in the team exchange network (low social capital) is rated high by a supervisor. The consequence of such exchange combination, when group members perceive that high quality LMX recipients are less qualified from their perspective, they may question the neutrality of the supervisor. Finally, as can be seen from fig. 1D, a focal member who is perceived to be incompetent and less skilled is found to be recipient of low LMX, high agreement between the leader and group members regarding equity and fairness perceptions. Hence, even though LMX may enhance or constrain within group interaction, coordination, and collaboration based on how it is integrated to TMX. From the

illustration, it seems clear that fig. 1A represents relatively the best configuration because it enhances members' trust on the formal leader, and among themselves. In the forthcoming discussions, I will explain how this type of configuration can be the best social exchange structure in detail.

From this illustration, I can argue that differentiated leader-member exchange is a desirable leadership process to the extent it does not go against equity and fairness perceptions of its LMX candidates. To understand employees' fairness and justice perceptions, leaders may change their traditional lens of LMX theory and see beyond the dyadic LMX exchange relationship. In other ways, by extending the LMX theory, leaders not only consider employee's individual human capital, but also his/her social capital in the group during employee feedback, and other exchange decision processes. Furthermore, understanding group social environment by examining the team-member exchange dynamics may create suitable platform for effective and efficient leader-member exchange management, especially when group solidarity specifically is important.

When LMX differentiation is accompanied with group categorical diversity, even little perception of unfairness may be exaggerated and lead to social categorization which may hamper both exchange relationships (Tajfel & Turner, 2004). Researchers argue that diversity increases the chance of intragroup conflict and reduces trust when compared to demographically homogeneous groups (Williams & O'Reilly, 1998). It seems that leaders can avoid intra-group conflict by increasing group homogeneity, but two things are important to be aware of. First, diverse groups are more creative than homogenous groups. Second, it is not easy for managers to manipulate demographic characteristics of their workgroup (Reagans & Zuckerman, 2001). Hence, the question here is what social mechanism or intervention may lead us to the efficient and effective leadership of a diverse group? Using the social network theory perspective, the present paper demonstrates how individual and group social capital



<Figure 1> A focal member's (M) exchanges composition in the LMX and TMX exchange networks under different situations

can be useful mechanism in leadership process, in addition to individual characteristics (skill, knowledge, and others).

Social capital is a value derived from social relationships (Coleman, 1988). From the perspective of Coleman (1988), social capital constitutes a particular kind of resource available to an actor. Like other forms of capital, social capital is productive, making possible the achievement of certain ends that in its absence would be impossible. Unlike other forms of capital, social capital inheres in the structure of relations between actors and among actors. The function identified by the concept of “social capital” is the value of these aspects of social structure to actors as resources that they can use to achieve their interests (Coleman, 1988, p. 101). For instance, a group within which there is extensive trustworthiness and extensive trust is able to accomplish much more than a comparable group without that trustworthiness and trust. So according to Coleman (1988) close interaction among actors, called social closure, enhance the creation of social capital which in turn increases trust and reciprocity in the social structure. According to this view, leaders may loosen the

blocking effect of diversity in a group by increasing individual and collectivistic social capital. Researchers argue that in cohesive groups where social capital is high, members' OCB and satisfaction is high compared to less cohesive ones.

However, other researchers have argued that Coleman (1988)'s social capital increases redundancy of information and resistance to change because of possible formation of strong cliques- densely connected subgroups of reciprocated ties within the network (Brass, 2001). For instance, Burt (1992) claims that social structure with weak ties (holes) are useful for transporting new and novel ideas to the group unlike the social closure where there is no such possibility. The distinction between the two social capital perspectives is that Coleman (1988) emphasis the cooperative benefit of social capital whereas Burt (1992) stresses the informational benefit of social capital (Brass, 2001).

The main problem with the management of diverse workgroups, as far as the present paper is concerned, is related to minimizing intragroup conflict, and increasing intragroup cooperative behavior. Since diverse workgroup, by its very nature, is praised for its ability to bring novel and different new ideas through its members, Coleman's (1988) social capital is useful to integrate and synthesis the diverse knowledge, maintain harmony, build trust, and cultivate helping behavior within a group. When the interaction among members of a group is high, not only individuals' social capital increases, but also their individual and group human capital gets better. Borgatti and Cross (2003) suggested absorptive capacity, the ability to take in and make use of new knowledge, should be framed in a way that accounts for both existing knowledge and the relations that facilitate information exchange in light of new problems. According to the authors, this is the function of 1) knowing what a person knows; 2) valuing what that person knows; 3) being able to gain timely access to that person's thinking; and 4) perceiving that seeking information from that person would not be costly. Borgatti and Cross (2003) predicted knowing,

access, and cost variables mediate the relationship between physical proximity and information seeking. Hence, social capital does not only help us to bring diverse knowledge to make better decision, but also increases individuals human capital by creating a chance for individuals to access one another's knowledge (Borgatti & Cross, 2003).

Nevertheless, the over utilization of Coleman's social capital might have negative consequences over the long run. Hence, the two network exchange structures-LMX and TMX should be integrated in a way the adverse effects of social closure may be minimized. For instance, network scholars argue that densely connected ties may result in the common norms, expectations, and trust that facilitate collective action and individual transaction within group; however, it may prevent individuals from taking advantage of structural holes. The rationale behind LMX theory is that leaders could not maintain the same level LMX quality with every member (cf. Liden et al., 2006). Hence, it is given that not all members should enjoy high exchange relationship with the formal leader. So, how can a leader being strongly connected to few group members (Burt, 1992) be able to maintain solidarity (Coleman, 1988) in diverse workgroup?

3. Network centrality and social exchange structure

In the study of social capital and organizational leadership, Brass (2001) suggested three ways by which leaders can acquire centrality and power in a given social network. Firstly, leaders can acquire social capital and centrality by building large connections of direct contacts (Coleman, 1988). This can simply be effective by making lots of friends by being connected to many others. Secondly, an actor can acquire power and influence in a network by connecting to central others (Burt, 1992). This form of network allows the actor to be central by virtue of a few direct

links to others who have many direct links. Thirdly, actors in a network can acquire centrality and power by connecting others who are not connected by themselves (Burt, 1992). In the third method of acquiring influence, actor plays the role of linking or bridging between different individuals or groups who are otherwise unconnected. The actor playing bridging role in a network has the chance to control information flow between the parties linked through him/her.

Previous studies have indicated that there is relationship between one's position in a network and perceptions of leadership. For example, review of previous studies conducted by Brass (2001) indicated that one's position in social network structure of task-performing groups was a powerful predictor of perceptions of leadership. Subjects were asked, "Did your group have a leader? If so, who?" More than 90% of the subjects listed the same name, and these leaders occupied central position in the network (Brass, 2001). Similarly, other researchers such as Brass and Burkhardt (1992) have consistently found that centrality is related to influence in a variety of settings. Furthermore, Yukl (2002) argues that influence is the essence of leadership. From these premises, we can safely predict that centrality will be significantly related to leadership perception (Brass, 2001).

Proposition 1: In a workgroup, a member who occupies central position in a group's exchange network will have high power and influence on the group members.

Thus, rather than randomly building lots of exchange relationships (LMX) with several other members, formal leaders may benefit by locating and providing high LMX with a member or members occupying central position in the team-member exchange network. As explained above, central member has relatively much number of positive connections with other members in the group. Such members in a group

can be referred to as emergent leaders, group members who exert significant influence over other members of the group, even though no formal authority has been vested in them (cf. Chaturvedi et al., 2012). Empirical studies have shown that individual in the most centralized position in a network in terms of both “Degree” and “Betweenness” is likely to emerge as leader, to be more satisfied, and to participate more in the task solution (Mullen, Johnson, & Salas, 1991). Hoppe and Reinelt (2010) argued that hubs (cf. Scott, 2012), individuals in a network with the most influence, are highly sought after by other network members. That is central (core) members in a network are popular, or most liked by other members, or sources where members seek help when needed.

Therefore, by strongly connecting to central others in the workgroup, formal leaders may get access to other members more efficiently and effectively. First, central members as emergent leaders are more likely to be trusted by other members in the group than the formal leader. Second, since central member (emergent leader) is believed to be competent, expert, and knowledgeable by the other network members, exchanging high quality LMX with such members increases members’ justice and equity perceptions in the organization which in turn is positively related to members’ OCB, psychological contractual fulfillment, and satisfaction. Third, by maintaining mixed tie structure, whereby the leader is strongly connected with some members and weakly connected with other members, the leader can minimize risks associated with both social closure (Coleman, 1988) and structural holes (Burt, 1992). Finally, formal leaders who exchange high quality LMX with core members in a group may play brokerage role by connecting central members from different groups who are not themselves connected. Researchers argue that transformational leaders by connecting to central players in each clique, or workgroup, can effectively get their visions diffused to others (Brass, 2001). This leads to the following propositions.

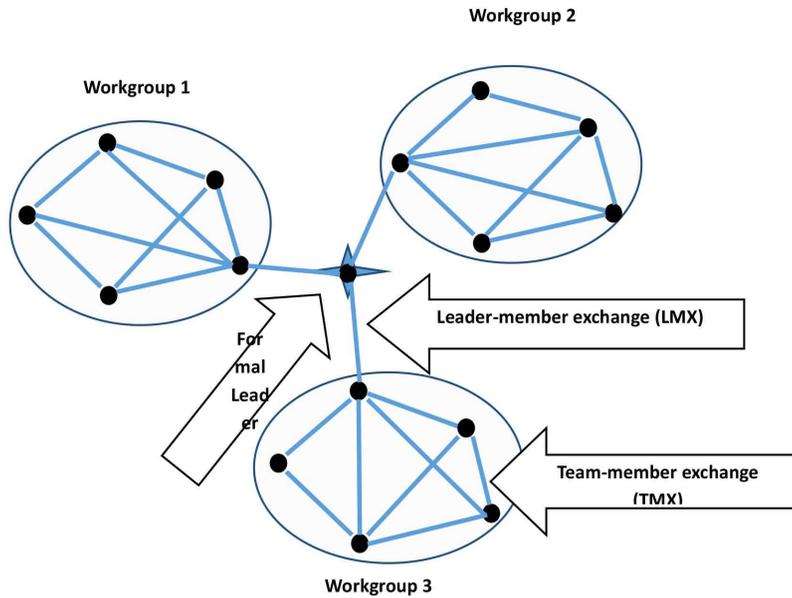
Proposition 2: Group solidarity is enhanced when group members occupying the central position in the TMX also receive high quality LMX.

Proposition 3: When central member(s) in TMX network receive high LMX quality, formal leaders are more likely to effectively and efficiently connect more number of unconnected cliques.

Proposition 4: Increasing workgroup interaction (TMX) and providing high LMX quality to central members in TMX network enhances organic solidarity and overall leadership process of an organization.

4. Conceptual framework

The above propositions can be summarized using the social exchange network structure as shown in the following graph (see Fig. 2). The graph demonstrates how two different but related social networks can be combined into one bigger social network structure. The network comprises dyadic exchange network between formal leader and group member (known as leader-member exchange, LMX), and exchange network within group members (TMX). In the dyadic leader-member network, formal leaders exchange with every group member contractual agreements, rewards, training, and so on whereby members also reciprocate in terms of improved performance, satisfaction, cooperation, and so on. On the other hand, the team-member exchange network, which is more informal than the LMX, within-group members exchange friendship, help, and advice, and so on amongst themselves at workplace. When these two exchange networks are integrated, unit/organization level exchanges structure whereby all workgroups are connected to the central formal leader (the star) through their respective central member, a network structure similar to the one below can be formed.



Conceptual Framework

<Figure 2> Social exchange network structure integrating the leader-member exchange and team-member exchange relationships

III. IMPLICATIONS FOR THEORY, PRACTICE, AND FUTURE RESEARCH

The current study has several implications for both social network and leadership literature. For instance, previous network studies, though they have attempted to study the effect of diversity on social networks (e.g., Reagans & Zuckerman, 2001), did not explicitly examine the effects of social networks on diverse workgroups.

The present paper, however, tried to demonstrate the importance of such studies by proposing that social network structure of a group when properly fused with the formal hierarchical network may enhance organic solidarity. Notwithstanding the need for empirical investigations, theoretical analysis indicates that social network theories are promising areas of knowledge where to look for when dealing with leadership of diverse work teams.

Moreover, as indicated in the present review, social network theories can be used to meaningfully integrate the two detached social exchange theories in the leadership literature. In the same way, leadership researchers have devoted much effort studying the effect of dyadic exchange between a leader and a member, without giving much attention to the social exchange structure of workgroups, which may enhance or constrain the effectiveness LMX in several ways. The current paper can be used as a springboard to further examine the combined effect of the two social exchanges theories toward the understanding of the bigger picture of leadership process. One way to approach the problem, as the present paper tried to show, is the social network perspective. Therefore, leadership researchers may use the lens of social network and social exchange theories to understand the dynamics of leadership of diverse workgroups.

As diversity has been one of the most challenges leaders of 21st century are facing, the present study may help, to some extent, to deal with leadership problems especially in organizations where categorical diversity of workgroups is high. Understanding the social network structure of a work group including the dyadic interaction between leader and group members can be a useful means of improving group and individual performance when properly managed.

The present study, as presented in the other section of this paper, has made several propositions based on review of the extant literature. Future researchers may take advantage by empirically testing the propositions using real data. In addition, the

propositions are made based on the assumption that a group can be divided into subgroups because of distinct demographic variables such as ethnicity, religion, gender, etc.. Hence, results of this study are less applicable in situations where groups are homogeneous, and we may need a different perspective from what has been pursued in the current study to better understand the phenomena in such situations.

Furthermore, since societies may differ in culture (e.g., collectivistic, individualistic), the findings of the current study should be understood in light of such differences. In addition to demographic characteristics and culture of a society, organizational culture, size, and objectives and so on may influence leadership effectiveness among others. Whoever takes these and other factors in to account when extending the current study may improve our understanding of how interaction among group members leads to better leadership.

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What Micro Processes Lead to Organic Solidarity When the Level of Categorical Diversity is High in a Workforce?

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요 약

본 논문은 사회연결망 분석을 이용하여 작업집단의 다양성의 부정적 효과를 최소화하는 네트워크 구성을 논의한다. 이를 통하여 리더-멤버 교환이론과 팀 멤버 교환이론의 논의를 통합하고자 한다. 기존 문헌을 살펴보면 공식적 리더는 다양한 작업집단의 핵심멤버와 양질의 교환을 하면서 사회연결망의 이익을 향유한다고 보고 있다. 교환 네트워크 구조에 대한 이러한 입장을 기초로 실무적 이론적 함의를 검증할 개념적 모델을 제시하였다.

