

A Leader-Network Exchange Theory

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Author post-print (accepted) deposited by Coventry University's Repository

Original citation & hyperlink:

Soares, A, Lopes, MP, Glińska-Noweś, A & Geremias, R 2020, 'A Leader-Network Exchange Theory', Journal of Organizational Change Management, vol. (In-Press), pp. (In-Press).

<https://dx.doi.org/10.1108/JOCM-09-2019-0283>

DOI 10.1108/JOCM-09-2019-0283

ISSN 0953-4814

Publisher: Emerald

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Journal:	<i>Journal of Organizational Change Management</i>
Manuscript ID	JOCM-09-2019-0283.R4
Manuscript Type:	Research Paper
Keywords:	LMX theory, leadership, social networks, LNX theory, multi-level issues

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Abstract

Purpose

We propose an integrative model of how leaders (individual level) effectively relate to their social networks as a whole (network level). Additionally, we focus both on the leader constructs and the followers shared constructs about those networks.

Design/methodology/approach (required)

Our conceptual paper uses the integration of literature from two main bodies of knowledge: individual and shared cognitions, fundamentally from psychology, and a structural perspective, mainly from sociology, organisational studies and social network analysis. We take a psycho-structural approach which allows the emergence of new perspectives on the study of leadership, and more specifically on the study of relational leadership.

Findings (required)

We propose a leader-network exchange (LNX) theory focused on the behaviours and cognitions of leaders and followers as well as the relations between them.

Research limitations/implications

Our model represents a new perspective on leader-followers relationship by stressing the importance of both followers and leaders' cognitions. We highlight the importance of the relationships between followers on the creation of shared meaning about the leader.

Practical implications

Our model helps leaders and managers make sense of the cognitions and behaviours of their teams. By considering the teams characteristics, i.e. cognitions and network

structure, it allows leaders to adopt the most appropriate behaviours for effective leadership. Leadership and Management development programmes designed around our model will enhance the use of networking skills

Originality/value (required)

Contrary to the traditional view of LMX, our approach considers the social context of leaders and followers. It also adds a new layer of knowledge going beyond what members think of their leaders by considering the social networks of leaders and followers.

Keywords: LMX theory, leadership, social networks, LNX theory; multi-level issues

1. Introduction

Leadership has been studied through different lenses with authors addressing the issue of leadership as a personality trait (Stogdill, 1948), a behavioural repertory (Yukl, 1998; Blake and Mouton, 1964), a situational-contingent strategy (Hersey and Blanchard, 1988), or a transformational capability (Bass, 1999). However, in these approaches the scholars have generally opted to focus on the ability of leaders to overcome employees' resistances, fears and other obstacles that impede workers to achieve the desired performance standards.

Within the growing literature on leadership, emphasis has been given to the characteristics of a leader (traits, behavioural styles, transformation capability) or the situation-contingent strategy. Theoretical developments have extended research in the field to aspects other than the individual or situational features, namely to the "relationship" level between leaders and followers (Graen and Uhl-Bien, 1995). In this

stream of research, one particular theory has gained prominence: leader-member exchange (LMX) theory (e.g., Gerstner and Day, 1997; Graen et al., 1982; Graen and Schiemann, 1978; Liden et al., 1997).

LMX was grounded in previously established theories, including role theory (Katz and Kahn, 1978) and social exchange theory (Blau, 1964), and rests on the assumption that effective leadership depends on the *dyadic* interaction between a leader and a follower, particularly those reflected in formal organizational charts (Dansereau et al., 1975; Sparrowe and Liden, 1997, Matta and Van Dyne; 2020). In the last three decades, research based on the LMX paradigm has been prolific and has progressed through different stages. Graen and Uhl-Bien (1995), have suggested that the last of these stages should address LMX as a system of interdependent dyadic relationships or a network of dyads, but until now, most of the work developed within this last stage has been vague and underdeveloped (Gerstner and Day, 1997; Matta and Van Dyne, 2020). More recently, most of the research focused on the impact of these dyadic relationships on other organisational dimensions such as performance (Martin et al., 2016), employee engagement (Breevaart et al., 2015) and team performance (Manata, 2020).

Our conceptual paper aims to advance the knowledge not only on leader-member exchange dynamics, but also on relational leadership in general. We do so by developing an integrative model that addresses two main limitations of LMX literature.

Firstly, LMX research has been criticised for not considering the social context of leaders and followers (Avolio et al., 2009). Research focuses almost exclusively on the dyadic relations between the leader and each follower with very little work examining

these relations at the group level (Henderson et al., 2008; Avolio et al., 2009; Markham et al., 2010). Therefore, research fails to acknowledge that each dyadic relationship occurs within a system of other relationships (Avolio et al., 2009).

Despite early calls for theory to go beyond dyadic relations (e.g. Graen and Uhl-Bien, 1995) and focus on the relationship between the leader and their collective network, most of the literature still centres on leader-follower dyads. A recent systematic review by Kim et al. (2020), found a growing body of literature on leader-follower dyads across five different theories (vertical dyad linkage, individualised leadership, LMX, relational leadership, leader-follower congruence) thus highlighting the concentration of literature in this area.

To address this critique, we intend to change the focus from dyadic relations to the whole network dynamics. Previous research indicates that follower social networks can influence the emergence and effectiveness of leadership (Avolio et al., 2009). Additionally, universal network perception has been positively associated with behavioural intention, contrary to dyadic perceptions (Hatjidis and Parker, 2017). By focusing on the whole network dynamics we can have a better understanding of leader/follower behaviour.

Secondly, most of the LMX research considers the follower perception of relationship quality with their leader as the main component of LMX theories (Riggs and Porter, 2016). By considering social networks and the interactions between leader-member and member-member, we add a new layer of knowledge that goes beyond of what members think of their leaders, consistent with the view that followers' expectations, values and attitudes have an impact on the leader's behaviour (Avolio et al., 2009).

We specifically propose a leader-network exchange (LNX) theory that results from the integration of literature from two main bodies of knowledge: individual and shared cognitions (e.g. Morgeson and Hofmann, 1999; Molleman, 2005; Kilduff and Krackhardt, 2008), fundamentally from psychology, and organisational social networks (Borgatti and Li, 2009; Brass, 2011; Burt, 1997; Kilduff and Tsai, 2003), mainly from sociology and organisational studies. This represents a shift in focus from the dyadic relationships to networks as a whole. Although research has already investigated the implications of analysing leadership from social network (Balkundi and Kilduff, 2006) or group (Mehra et al., 2006) standpoints, an integrative model of how a leader relates to his/her surrounding networks has yet to be developed.

2. Strategy for the development of the conceptual model

Three common types of non-empirical articles can be commonly found in the literature a) theory articles that seek to propose a new conceptual model; b) substantive review articles that seek to summarise and explain existing literature, and c) critiques that seek to explain why an area of study is moving in the wrong direction (Cropanzano, 2009). We situate our paper in the first category as we aim to develop an integrative conceptual model of leadership that captures both leaders and followers' cognitions and leaders and followers' relationships (i.e. social networks).

According to Gilson and Goldberg (2015, p. 127) conceptual papers "seek to bridge existing theories in interesting ways, link work across disciplines, provide multi-level insights, and broaden the scope of our thinking.". In this case, we bring together theory on organisational social networks and individual and shared cognitions to advance knowledge on relational leadership, with the aim of contributing to the

development of LMX theories. This bridge or link between different concepts and bodies of literature is common in the management field and has been an important exercise to advance in the knowledge (Gilson and Goldberg, 2015).

Our conceptual model presented here follows the analysis of the literature using a conjectural strategy. The criteria by which each conjecture was selected or rejected is a result of our judgements on interestingness, plausibility, consistency, or appropriateness (Weick, 1989). The outcome of this cognitive process is a conjecture that is retained or rejected by themselves (Weick, 1989).

Finally, the conceptual model resulted from the development of concurrent propositions of a relationship between at least two properties and contingent proposition whose truth or falsity can be determined by experience as proposed by Homans (1964).

3. Developing a conceptual model of Leader-Network Exchange (LNX)

3.1 Social network analysis: Levels of analysis

A network consists of a set of actors or nodes along with a set of ties of a specified type (such as friendship) that link them (Borgatti and Halgin, 2011). In social networks, actors can assume many different forms such as individuals, groups, organisation, a product etc. Equally, the ties can assume different forms, such as communication, friendship, who likes whom, among others. In this paper, we consider the leader and the followers as the actors and the interaction between followers as the ties.

Research using social network analysis focus on three different levels of analysis: node, dyad and network. The node-level research focuses on the study of network characteristics taking into consideration the position of the individual in the network.

Examples of concepts at the node level include centrality, which reflects the importance of an actor in the network according to their position (Kilduff and Tsai, 2003) and network constraint, i.e. the extent to which an actor's contacts are redundant and do not interact with each other (Burt, 1992).

Studies at the dyadic level focus on the study of pairs of actors within the network. Most of the research that assumes leadership as a relational process focus on the dyadic relationships between the leader and each of the followers, including the research on LMX (e.g. Dansereau et al., 1975; Sparrowe and Liden, 1997, Matta and Van Dyne; 2020). According to Dansereau (1995), a dyadic approach to Leadership has developed across four different stages, from 1972 until 1995; allowing for more than traditional average leadership style (ALS) view (1972-1977), development of the vertical dyad linkage (VDL) (Dyad-group) approach (1978-1983), development of the individualized leadership approach (1984-1989) and source of linkages in the individualized leadership approach (1990-1995). LMX theory is one of the theories that emerged in the first stage of the development of a dyadic approach to leadership and emerged as opposing to the traditional view that leaders treat followers equally (Dansereau, 1995).

Research at the whole network level focuses on the structural characteristics of the network that result from the interactions between all nodes of the network. In other words, "network data consists of archival, observational, or informant reports of all nodes and ties within a specified network" (Brass, 2011).

3.2 The position of the leader in the network and network characteristics

Leader's network position

One of the most common network measures at the node level is centrality. Centrality is a characteristic related to the position of a node in a network which indicates the structural importance of that node (Borgatti et al., 2013). Theory on organisational network analysis suggests that central individuals or those who have high values of centrality are in a better position to have knowledge of and access to those few powerful others whose words and deeds control resource flows and business opportunities (Kilduff and Krackard, 2008). When applied to leader-follower relationships this means that leaders who are more central in their networks will more easily influence and be influenced by followers.

Social networks can explain a manager's influence and help them to be considered as leaders or not by their followers (Chiu et al., 2017). Managers who are more centrally positioned tend to be more influential and to be in a better position to mobilise resources and manage competing goals within the company (Wong and Boh, 2014). This includes the increased influence on followers making these leaders more effective when mobilising their teams. As an example, a central position will be crucial to the successful implementation of innovation as leaders will be in a better position to use appropriate tactics to garner support from followers for those innovations (Wong and Boh, 2014).

By positioning themselves in central positions or establishing relations with followers that occupy central positions, leaders can increase their influence and power over the network, which ultimately will result in positive outcomes. Some of the outcomes from the influence and power of a central leader include better objective team

performance, increased leadership reputation among the members of the group, increased reputation among peer group leaders and increased reputation of the leader among high ranking supervisors (Mehra *et al.*, 2006).

Social contagion theory explains how influence occurs within the networks through individuals tending to adopt attitudes and/or behaviours of others with whom they contact in their social networks (Scherer and Cho, 2003). This theory attempts to explain the knowledge, attitudes and behaviours of individuals as a function of information, attitudes and behaviour of others within the network to which they are linked (Monge and Contractor, 2001). Therefore, the social network will have a key role in the contagion process as it exposes individuals to the influence of each other. Central members are those with a shorter distance to or from all other network members (Freeman, 1979) which places them in a privileged position to influence social contagion. Additionally, by being those with the shortest path to all other members, the information they will send to the network will be less exposed to the interference generated by the interactions with several members (Soares and Lopes, 2014).

According to social contagion theory, a leader's network is a medium of self-disclosure which can help followers create an image of the leader (Chiu, Balkundi and Weinberg, 2017). More specifically, it is expected that central leaders will be in a better position to influence the ideas, attitudes and behaviours of others. However, this may be more frequent in smaller networks than in large ones due to the difficulty for the leader to assume a central position in large networks. For instance, the CEO of a company with 3,000 employees will struggle to be in the centre of a communication network.

Subgroups are likely to emerge from large groups creating more difficulty for leaders to position themselves in the centre of the network. In this context, to influence others more effectively through social contagion leaders must assume a central position or, at least, to be linked to those central members.

Network characteristics

Many measures are used to characterize the network at the whole network level, Carpenter et al. (2012) mentioned four main concepts: network density, network cohesion, network size and small worlds. However, for this paper, we will focus only on network cohesion and density as interrelated concepts. Network density refers to the ratio of the number of actual ties in a network divided by the number of all possible ties (Scott, 2000) and indicates the degree of connectivity within a network (Carpenter, Li and Jiang, 2012). This concept has been associated with positive group outcomes, such as a positive relationship between density in friendship networks and group performance (Mehra et al., 2006). The concept of density also suggests importance in leadership networks, i.e. in ties that involve leadership influence (Carson et al., 2007).

Network cohesion is measured by “the ratio of the average tie strength in a subgroup divided by the average strength of ties from subgroup members to outsiders” (Carpenter et al., 2012, pp. 1337). Cross et al. (2008) define network cohesion simply as the average number of ties from any member of the group to other members. For instance, in a communication network cohesion indicates the flow of information across the network, which can help managers to identify potential issues when trying to communicate with their teams. Network cohesion may also explain the process by which social contagion occurs. Contagion by cohesion is explained via people adopting

attitudes and behaviours of those with whom they are directly connected (Monge and Contractor, 2001).

3.3 Leader's and Followers Cognitions

Follower's shared image of the leader

Social reality is constructed by particular social actors, in particular places, at precise times (Harrison and Laberge, 2002). Different approaches to social construction can be identified on the literature, however all of them focus on the methods of producing or constructing facts that can be observed through human negotiations (Harrison and Laberge, 2002).

The idea of leadership as socially constructed is not new. According to Meindl et al. (1985), leadership is a social construction that is dependent on the psychological processes of followers. According to this perspective, the leader is the focal point of the groups attention and because of that individuals will tend to attribute the outcomes of the group to them, both positive and the negative (Meindl et al., 1985). Through this causal attribution process, followers will develop a perception of the leader based on group outcomes.

The process of making sense of the leader through an interpretation of the environment is consistent with the social information processing theory; individuals develop attitudes, behaviours and beliefs by processing information from their social context and building on their own past and present behaviour and situation (Salancik and Pfeffer, 1978). According to this perspective, followers create meaning about their leaders not only through a fundamental attribution error (Meindl, 1985) but also by an interpretation of cues provided by their social environment (Salancik and Pfeffer,

1978). Therefore, in order to understand how information is processed, it is important to understand how leaders influence and how leadership is socially constructed (Lord and Dinh, 2014).

As followers tend to be exposed to the same behaviours and attitudes from the leader, it is expected that information processing also occurs at the group level. Information processing at the group level can be considered as the “degree to which information, ideas, or cognitive processes are shared, and are being shared among the group members and how this sharing of information affects both individual and group-level outcomes” (Hinsz et al., 1997, pp.53). Group information processing is considered a second-order factor that includes two components: information exchange and information use (Deeter-Schmelz and Ramsey, 2003). Information exchange occurs when the members of a group share, discuss and evaluate the information they have acquired from the context (Deeter-Schmelz and Ramsey, 2003). The focus of information exchange is on the interaction between the group members that will generate shared perceptions and meanings. Considering the leader as the focal point, followers will share, discuss and evaluate information about them promoting the emergence of shared perceptions and meanings about the leader. Information use relates to the use of information in the information processing that has been changed by the team. The utilisation of the information that emerges in the group will then influence the attitudes and behaviours of the followers. For instance, if there is a shared perception that the leader follows an “open door” policy, followers will more easily go to the leader to discuss new ideas, to ask for support or to discuss an issue.

Information processing helps to explain the source of the leader's influence and demonstrate how leadership is socially constructed (Lord and Dinh, 2014). It does so by explaining how shared constructs emerge among followers. Constructs are notions about the reality that are not directly observable (Morgeson and Hofmann, 1999), thus followers process information that results from the leader's behaviour, attitudes and actions, and will develop constructs about that leader. As an example, followers may assume that the leader has good communication skills (i.e., construct) inferred from several specific behaviours (e.g., a speech given at a meeting). Shared constructs are group attributes that emerge from individuals' perceptions but tend to be shared among the members of a group (Molleman, 2005).

Followers tend to develop a shared image of the leader and that shared image will have an impact on their attitudes and behaviours. Therefore, the leader should manage followers' perceptions to obtain the desired attitudes and behaviours, i.e. to exert direct influence over them. This is consistent with the cognitive network theory perspective which claims that leadership involves social intelligence as the accurate perception of social relations, in addition to the management of others' perceptions (Kilduff and Krackhardt, 2008).

By managing their social networks, leaders will be able to influence followers' perceptions, ultimately having an impact on followers' attitudes and behaviours. We consider two main network dimensions that will have an impact on the influence of leaders on the shared perceptions of their followers. As previously mentioned, we assume that by occupying a central position in social networks, leaders will be in a better position to influence their followers' perceptions. Additionally, network

cohesion will be fundamental to the emergence of a shared image of the leader, e.g. in a network in which the members have a high level of interaction (high network density) the members will tend to discuss the leader and develop a common perception.

This leads to the following propositions:

Proposition 1a: *Network cohesion has an impact on followers' shared image of the leader.*

Proposition 1b: *Leader's network centrality is positively related to the followers' shared image of the leader.*

Leader's network awareness

Assuming that leadership is socially constructed, information processing and social information processing are essential processes in the social construction of leadership. In this process, the interactions between followers will be the vehicle by which leadership group constructs, at a group level, will emerge. The social network composed of the group of followers can explain the emergence of shared constructs about leadership. For instance, a network in which members are more connected with each other will allow for the emergence of shared constructs more easily than a network in which the members barely interact (Soares and Lopes, 2014). Hence, social networks can provide a good explanation for the emergence of a shared image of the leader. Considering the importance of social networks on the emergence of leadership shared constructs, leaders need to be aware of the network characteristics (network characteristics awareness) and their position in the network (network position awareness).

The concept of self-awareness is not entirely new in leadership theory and comes fundamentally from interpersonal relationships theory. Goleman et al. (2002) defined self-awareness as “a deep understanding of one’s emotions, as well as one’s strengths and limitations and one’s values and motives”. However, self-awareness may assume many different forms. For instance, self-awareness as a dimension of authentic leadership occurs when the leader is cognizant both of their existence and of the environment within which they operate over time (Avolio and Gardner, 2005; Silvia and Duval, 2001). In this case, self-awareness is presented as a broader concept, by assuming that a leader is self-aware when they are conscious of the different facets of their environment.

Considering the leader’s network as the leader’s environment, their position in the network is a feature of their existence in that environment. Building upon the concept of self-awareness from Avolio and Gardner (2005), we propose the concept of self-network awareness as the cognizance leaders have of their network (network characteristics awareness) and of their position in that network (network position awareness). Most of the research on self-awareness compares the individual self-ratings of behaviours, attitudes and/or other individual attributes to the ratings of relevant others, including followers (Moshavi et al. 2003). When talking about the position of the leader in the network it is possible to compare the leader’s self-rating with his real position in the network. Through social network analysis as one example, it is possible to gain a measure of centrality (how central the leader is in the network) and compare it with the perceived centrality (how central a leader thinks they are). Hence, self-network awareness can be defined simply as the difference between the self-perceived position of the leaders and their real position in the network.

Different individuals perceive the same network in different ways. Some individuals achieve a high degree of accurate perception, whereas others are further from the actual network of relationships (Kilduff and Krackardt, 2008). Network characteristic awareness is important to enable leaders to use social network ties to influence others. To do so, the leader must be able to perceive the existence, nature and structure of the social network's ties; not only the ones surrounding them but also those that connect the other members of the network (Kilduff and Krackhardt, 2008).

The learning of these patterns of interpersonal relations is often crucial to predict future behaviour and to adopt the appropriate behaviours in important social contexts (Janicik and Larrick, 2005). Additionally, being aware of the network characteristics is crucial in many different situations such as to form a successful project team, to invite the right people to a gathering or to find critical allies in the organisation. For example, leaders will be more effective in spreading a message over their network if they are aware of who the central members are, as they are in a better position to reach all the others.

If leaders have a low rate of self-network awareness, especially if they overrate their position in the network, they will not proactively nurture their relationships nor establish new ties. In some cases, however, by overrating their position in the network, through a self-fulfilling prophecy process, the leader may transform the illusion of popularity into real links that initially did not exist (Kilduff and Krackardt, 2008). Nevertheless, in these cases, the popularity of the leader increases with no control from them. In other words, those leaders will not consciously manage their relationships to assume a better position in the network. Conversely, if they have a

high rate of self-network awareness they will be able to nurture and establish new relationships, allowing them to place themselves in a position where they can more easily influence their followers.

3.4 Leader's networking behaviours

We expect that the leader's network awareness will allow them to mobilise the right networking behaviours. The literature on social networking has focused mainly on the importance of the activity of networking for personal career management and/or to take advantage in the workplace market (Hoye et al., 2009; King, 2004; Michael and Yukl, 1993; Wolff and Moser, 2009, 2010). Proactive networking behaviours can be considered as individual attempts to establish and maintain relationships with others for mutual benefit in their professional life (Forret and Dougherty, 2001). These include going to lunches, joining the industry or professional associations, take a role in community projects and engaging in activities with clients, bosses and peers (Forret and Dougherty, 2001). Networking can also be seen as the individual actions directed towards contacting friends, acquaintances, and other people to whom the job seeker has been referred for the main purpose of getting information, leads, or advice on getting a job (Wanberg et al., 2000).

A broader definition considers networking behaviours as "behaviours aimed at building and maintaining informal relationships that possess the (potential) benefit of easing work-related actions by voluntarily granting access to resources and by jointly maximizing advantages of the individuals involved." (Wolff and Moser, 2010, pp.196). This view of networking behaviours can be distinguished from the previous ones in two main aspects. First, even though the benefits individuals can get from networking

behaviours are working related, these are not necessarily oriented to career prospects.

Second, most traditional views (e.g., Hoyer et al., 2009; King, 2004; Michael and Yukl, 1993; Wolff and Moser, 2009, 2010) see networking behaviours as a means to take advantage from interpersonal contacts. This second perspective approaches networking behaviours as a way of maximizing advantages for all the individuals involved (Wolff and Moser, 2010).

Whilst most of the literature consider networking behaviours as oriented towards relationships outside the organisation, networking behaviours towards individuals from the same organisation occur (Michael and Yukl, 1993). Therefore, two different kinds of networking behaviours can be identified: external networking behaviours, (when the relationships are established and maintained with individuals from outside the organisation) and internal networking behaviours (when the relationships are established and maintained with individuals from the organisation).

As we take a relational approach to leadership (based on the relationships between leaders and followers) we have focused only on internal networking behaviours. We are not saying that external networking behaviours are not important for leaders, rather we are focusing on the group dynamics that contribute to the leadership process. The scarcity of papers that explicitly study the relationship between internal networking behaviour and the leadership process or the leadership effectiveness suggests this is an area for development in leadership scholarship.

Networking behaviours can also be characterised by the main purpose of those behaviours. One of the most common typologies of networking behaviours presented in the literature considers three types of behaviours: to build the network, to maintain

it, and to use contacts (Forret and Dougherty, 2001). From combining orientation of the networking behaviours (internal vs external) and the objective of those behaviours (to build vs to maintain vs to use contacts) six types of networking behaviours can be identified: building internal contacts, building external contacts, maintaining internal contacts, maintaining external contacts, using internal contacts, and using external contacts (Wolff and Moser, 2010).

Though we can find many different definitions of networking in the literature, there are three components common to all of them: 1) networking is an individual-level construct that involves a set of behaviours; 2) networking behaviours are goal-oriented (e.g. work performance or career success); and 3) network relationships tend to be informal (Wolff, Moser, and Grau, 2008). Based on these three characteristics we define leadership networking behaviours as the leader's individual actions to informally contact followers with the purpose of building, maintaining or using contacts.

By engaging in networking interactions with followers, the leader will expose them to their attitudes and actions that will have an impact on followers' ideas, behaviours and actions through social contagion (Soares and Lopes, 2014). Additionally, as already mentioned, because followers will be exposed to the same behaviours and attitudes from the leader, it is expected that they develop a shared image of the leader through social information processing (Hinsz, Tindale and Vollrath, 1997). It is then expected that the leader's networking behaviours provide cues for followers to develop a shared image of the leader. This leads to the following proposition:

Proposition 2: *Leadership networking behaviours have an impact on followers' shared image of the leader.*

To be effective, leaders must simultaneously understand their position in the network, understand the social network relationships among the members of that network, and promote individuals' relationships within the network (Balkundi and Kilduff, 2006; McCallum and O'Connell, 2009). Considering the concept of self-network awareness presented, for leaders to be effective they must develop an accurate self-network awareness and promote the relationships of the members of the network. Additionally, network cognitions of leaders have an impact on how leaders manage those networks (Krackhardt and Kilduff, 2002) and, thus, on the leaders' networking behaviours. This leads to the following proposition:

Proposition 3: *Leader's self-network awareness (network characteristics awareness and network position awareness) impacts the leader's networking behaviours*

Leader's network awareness influences their cognition and those cognitions will provide the basis for them to manage their networks and establish strategic links with others in the network (Kilduff and Krackhardt, 2008). Those cognitions will also influence the ability of the leaders to promote relationships between the members of the organisation and consequently to enhance their leadership. In this process, network characteristics awareness will play a crucial role as it will be fundamental for leaders in adopting the right networking behaviour to influence their network characteristics; e.g. if leaders are aware of a lack of cohesion, they can choose networking behaviours that aim to promote the relationships between the members of the network.

The same is expected when considering the position of the leader in the network.

Leaders' network position awareness is likely to have an impact on their networking and, in turn, those behaviours will influence the position of the leader in the network.

Therefore, if the leader perceives that they are in a peripheral position in the network they will more easily engage in behaviours oriented to build a network, than if they perceive that they are in a central position.

We can then propose the following;

Proposition 4a: *A Leader's networking behaviour mediates the relationship between network awareness and leader's network's characteristics.*

Proposition 4b: *A Leader's networking behaviour mediates the relationship between network awareness and leader's network position.*

3.5 Conceptual model

The conceptual model we present in this paper results from the integration of two main bodies of knowledge; Individual and shared cognitions (e.g. Morgeson and Hofmann, 1999; Kilduff and Krackhardt, 2008; Molleman, 2005) fundamentally from psychology on the one side, and a organisational social networks (Borgatti and Li, 2009; Brass, 2011; Burt, 1997; Kilduff and Tsai, 2003) mainly from sociology and organisational studies on the other. The result of this integration is a psycho-structural approach with two main dimensions; cognitions and social network features. Thus, we go beyond the traditional focus of LMX on the dyadic relationships between leaders and followers.

In our model, the leadership process and leadership effectiveness result from the interaction between four components from these two dimensions: leader's network

awareness, followers' shared image of the leader (both from the cognitions' dimension), network characteristics and leader's network position (both social network features). Additionally, it assumes that the leader's networking behaviours will be affected by the awareness that the leader has of the network and will affect the network features and the follower's shared image of the leader. A visual representation of our conceptual model, bringing together the propositions introduced previously, is illustrated in Figure 1.

INSERT FIGURE 1 ABOUT HERE

4. Conclusions and Implications

4.1 Conclusions

We used an interdisciplinary perspective to advance the understanding of the leader-follower relationship and increase knowledge about leader-member exchange dynamics.

We moved away from the traditional focus on dyadic relationships between leaders and followers towards a more holistic view that considers not only the relationship between the followers but also the relationship between the leader and the whole network. By doing so we responded to the call in the literature by considering that leadership relationships occur within a system of other relationships (e.g. Avolio et al., 2009).

Additionally, we considered followers' perceptions together with the interactions between member-member and leader-member. This goes beyond simply focusing on what members think of the leader as the central premise of LMX and relational

leadership literature. As suggested by Avolio et al. (2009) our model takes into consideration the impact of followers' expectations on the leader's behaviour.

4.2. Implications

This paper introduces a conceptual model of leader-network exchange, which contributes to the development of leader-member exchange theory in at least three ways. First, it adds both the leader and followers' cognitions to the discussion, recognising the importance of the leader's network awareness and followers' shared image of the leader in the leadership process. In this analysis, it combines different bodies of literature including leadership as self-construction (e.g. Meindl et al. 1985), social information processing theory (e.g. Salancick and Pfeffer, 1978; Lord and Dinh, 2014) and self-awareness (e.g. Goleman et al. 2002; Avolio and Gardner, 2005, Silvia and Duval, 2001).

Second, it contemplates a multilevel approach by considering social network measures at the individual level (leader's network position) and the whole network level (network characteristics). It also shows how these two levels impact followers shared image of the leader and how they are impacted by the leader's networking behaviours. By doing so we address the call made by different authors for more integrative strategies for leadership theory-building (Avolio, 2007; Yammarino et al., 2008; Gooty et al., 2012; Wang and Howell, 2012).

Finally, drawing on literature on social networking and social networks, it assumes the leader's internal networking behaviours as central to the leadership process. This importance emerges from the impact that leaders' networking behaviours might have on the characteristics of their network, on their position in that network and on the

followers' shared image of the leader. We have achieved this by recognising the influence that central members exert on the other members of the network (Mehra et al., 2006; Borgatti et al., 2013; Chiu et al. 2017) through social contagion (Scherer and Cho, 2003) and social information processing (Salancick and Pfeffer, 1978; Lord and Dinh, 2014). Future research should provide empirical evidence for these critical propositions.

There is recognition in the literature of the importance of leaders for effective change management (e.g. Gill, 2002; Li et al., 2016). As our model stresses the importance of the leader in managing both their position in the network and the relationships between members, we add to the change management discussion; specifically to systems theory of change (Graetz and Smith, 2010) through highlighting the importance of the relationship of all members of the social system (i.e. network).

Overall, our paper shows the importance for leaders to be aware of their networks so they can mobilise the appropriate networking behaviours (Balkundi and Kilduff, 2006; McCallum and O'connell, 2009). Thus, if the leader becomes aware of a lack of network cohesion they can then mobilise the networking behaviours aimed to build that cohesion.

Another important practical implication is related to the structural position of the leader in the network. Leaders that occupy central positions in their network are in a better position to have knowledge of and access to those few powerful others (Kilduff and Krackard, 2008). In this case, the awareness of the leader of their position in the network will be key for the leader to mobilise the appropriate networking behaviours.

Therefore, a leader who does not occupy a central position but is aware of the

configuration of the network can identify the most central members and establish a relationship with them. By doing so, the leader is increasing their influence over the entire network.

Finally, by recognising the impact of their networking behaviours, network characteristics and leader's network position on followers' shared image of the leader, the leader will be in a better position to more effectively manage their networks and behaviour to increase their influence. This is consistent with the idea that overall network perception is more important to behavioural intention than dyadic perceptions (Hatjidis and Parker, 2017) which have been the focus of LMX theory in the past.

4.3. Future directions

As traditionally happens with theoretical development papers, the first suggestion for future studies is to empirically study the relationships that resulted from this theoretical model. An important starting point is to establish the relationships suggested in the model rather than focus on the model as a whole. One example would be to look more deeply at the relationship between leader's networking behaviours and followers' shared image of the leader.

To guarantee the parsimony of our model, some potential important theories and approaches have been left out; a common limitation of theoretical development studies. Considering that the LNX theory introduced in this paper is relational by nature, it would be important to consider how it links to other theories such as social exchange theory (Blau, 1964; Walumbwa et al., 2011), positive relationships (Mills and Clark, 1982) or the broader literature on interpersonal relationships. Our paper does

not analyse in detail the relational processes by which the leader's networking behaviours impact the follower's image of the leader, providing general ideas only.

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