Gee…He Has So Many Connections, He Might Be A Good Leader: Examining the Link Between Social Networks, Leadership, and Workplace Deviance

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Abstract

It is common knowledge that networking plays a crucial role in our daily lives, reflected in job searching, and career advancement, among other endeavors. Many TV programs and books also seem to send out the message that networking is important to leaders (Grayson & Baldwin, 2007). However, surprisingly, there is scarcely any empirical research in management that has explicitly examined whether networking behavior does predict outstanding leaders. Whereas a number of recent studies have focused on the human capital of leaders, very few have placed emphasis on the role of the social relationships of leaders. This project tries to solve this piece of the puzzle by investigating the link between connectedness in a social network and leadership. Moreover, this study examines the propensity of an individual to engage in counterproductive behaviors given the number of social connections that he/she might have.

Using data collected from seven large fraternal organizations at a large Midwestern university, we found that connectedness in social networks predicts both perceptions of transformational leadership and organizational deviance. These results have both theoretical and practical implications. Theoretically, it extends on current management research by examining two under-researched outcomes of social networks---leadership and workplace deviance. Practically, it will not only increase the capabilities of organizations to identify individuals with outstanding leadership potential, but it will also help them to realize tremendous cost savings, through the reduction of counterproductive behaviors.

INTRODUCTION

It is common knowledge that networking plays a crucial role in our daily lives, reflected in job searching, and career advancement, among other endeavors. Many TV programs and books also seem to send out the message that networking is important to leaders (Grayson & Baldwin, 2007). However, surprisingly, there is scarcely any empirical research in management that has explicitly examined whether networking behavior does predict outstanding leaders. The current study attempts to address this by investigating the links between the characteristics of one's network position and their rated leadership. Beyond this, the current study also addresses another social behavior important to the successful functioning of an organization, counterproductive behaviors. Counterproductive behaviors refers to "any intentional behavior on the part of an organization member viewed by the organization as contrary to its legitimate interest" (Sackett & DeVore, 2001).

While positive leadership behaviors have been demonstrated to have positive effects on organizational functioning (Judge & Piccolo, 2004), counterproductive behaviors by members of organizations has been shown to have substantial negative effects on organizations and have been estimated to cost significantly the US economy every year (Spector & Fox, 2005). For example, in 2007, an annual survey of over 2000 employees across all job levels conducted by salary.com found that as many as 63% of respondents answered in the affirmative to the question of whether they wasted time at work. The survey also revealed that the average amount of wasted time totaled 1.7 hours in a typical 8.5 hour day, including surfing the internet, socializing with their co-workers, and conducting personal business. These counterproductive behaviors can cost employers a significant sum of money, even reaching figures in the billions of dollars for large companies in some industries.

Although scholars argue that there is no single or all-encompassing social network theory (Kilduff & Tsai, 2003), the study of the structure and the connections between social parties have become central concepts in the study of interpersonal relationships. The basic premise of social network theory is that the connections (or ties) are the channels through which the interpersonal resources flow. Thus, if we can understand the network, we can gain a better understanding of the nature of the organization or group that is defined by it and how it functions.

The structure of a social network is based on the patterns of social connections among the membership of group that has been defined by particular boundaries. Each member of this network is represented as a node in that network and social connections are represented by lines between them (Nadel, 1957). These connections can represent any type of social connection from whether or not the person knows another person in the network to the degree to which they like or respect one another or whether or not they solicit advice from one another. The pattern of relationships in the social network has important implications for each node in the network as well as the network as a whole. The extent to which nodes are interconnected can dictate the flow of information and other resources through the network. For example, in a close-knit group of friends, it would be expected that all members would share similar information with one another, trust the others members, and share a similar mental model or attitudes (Krackhardt, 1999). In a similar fashion, in a group of individuals who have not formed a close network and

have few ties with one another, it would be expected that the members of that network will have difficulty exchanging resources and information in an efficient manner because there is no established pattern of exchange.

One important aspect of understanding the nature of a social network is to investigate the characteristics of particular nodes in that network. One particularly important characteristic for each node is its degree of *centrality* in the network (Scott, 2000). Centrality is defined by the number of connections that any particular node has in the network. Thus, one individual who has numerous connections to other members of the group is said to be central in the social network. It has been argued that individuals with a high degree of centrality should have greater access to informational, resources, and social support from the social network (Adler & Kwon, 2002).

Prior research has found evidence of significant relationships between network positions and individual performance (Kilduff & Tsai, 2003). For instance, Brass (1984) found that centrality in an informal communication network was associated with promotions. Mehra, Kilduff, and Brass (2001) found a positive relationship between centrality in a work flow network and supervisor performance ratings in a high-tech company. This study will attempt to add to the literature on the linkages between social network position and performance by investigating both a positive and negative indicator of performance within a social group. To be more specific, we will investigate the relationship of network centrality to ratings of both leadership and organizational deviance. Thus, the research questions to be addressed are as follows:

1. *Is a centralized individual in the social network more likely to be perceived as having more leadership qualities?*
2. *Is a centralized individual in the social network less likely to be perceived as engaging in organizational deviance behavior?*

THEORETICAL FRAMEWORK

The relationship between social network theory and leadership

Bono and Anderson (2005) have pointed out that little attention has been drawn to the role of social relationships (i.e., social capital; Brass, 2001) in leadership research. To address this oversight, we will attempt to investigate the nature of the link between social network position and leadership.

Balkundi and Kilduff (2005) argue that social network theory is closely related to leadership research. The rationale for this linkage is that network research emphasizes the relations between actors as the relationships define people's identities and creativeness (Kilduff & Tsai, 2003). Likewise, leadership theories, particularly relational leadership theories such as leader-member exchange theory (Graen & Uhl-Bien, 1995), explicitly address the relationships between leaders and their followers. Beyond utilizing relationships as a core construct, Balkundi and Kilduff (2005) have argued that leadership involves building and using social capital which is also a key component in social network theory. Individuals can invest in social relations with others and can reap benefits in terms of individual and organizational performance (Sparrow,

Liden, Wayne, & Kraimer, 2001). Based on the above reasoning, we establish our first hypothesis:

> *Hypothesis 1: An individual's centrality in the social network will be positively related to the extent to which he/she is perceived as having leadership qualities.*

The relationship between social network theory and organizational deviance behavior

Organizational deviance is defined as any "voluntary behavior of organizational members that violates significant organizational norms, and in so doing, threatens the well-being of the organization and/or its members" (Robinson & Bennett, 1995: 556). It is sometimes also called "counterproductive behavior" (Sackett & DeVore, 2001) which is usually categorized into three types of behaviors at work: deviant behaviors (e.g., theft, drug, and alcohol use), absenteeism (e.g., absences, lateness), and unsafe behaviors (e.g., accidents, injuries) (Sackett & DeVore, 2001).

While the antecedents of workplace deviance behaviors have been examined in numerous studies, the relational aspects of antecedents have been largely under-researched (Venkataramani & Dalal, 2007). One of the only studies that addresses this issue is a study by Venkataramani and Dalal (2007). In a sample of 62 members of a college sorority house, they found that centrality in network positions negatively predict one's deviance behavior. Therefore, with an aim to confirm this result, we introduce our second hypothesis here:

> *Hypothesis 2: An individual's centrality in the friendship network will be negatively related to the extent to which he/she is perceived as engaging organizational deviance behavior.*

METHODOLOGY

We collected data from 7 fraternal organizations in some large public universities in the Midwestern United States.

Measures

Transformational Leadership. As in prior research (Judge & Bono, 2000; Lim & Ployhart, 2004), the sixteen items from the five transformational leadership scales from the Multifactor Leadership Questionnaire (Avolio, Bass, & Jung, 1999) were combined to form a single transformational leadership dimension. These scales were: charisma-idealized influence (attributed), charisma-idealized influence (behavior), inspirational motivation, intellectual stimulation, and individualized consideration. Participants rated an average of three peers on how much they agreed that the statement described them on a 5 point scale (*1 = Strongly disagree*, *5 = Strongly agree*). Together, these scales had an alpha reliability coefficient of .93.

Counterproductive behavior. To assess counterproductive behavior in the context of fraternities and sororities, each member of the organization was rated on a 7-item counterproductive behavior measure ($\alpha = .77$) by three random organization members. Examples of items include "This member ignores the rules and guidelines set forward in our

organization's statement of purpose" and "This member pressures other people to engage in unsafe behaviors.

Networks and network centrality

Each individual was requested to rate his/her peers in terms of liking on a scale of 1-7. 1 stands for "strongly dislike", 2 stands for "somewhat dislike"; 3 stands for "slightly dislike"; 4 stands for "neither like nor dislike (indifferent)"; 5 stands for "slightly like"; 6 stands for "somewhat like"; 7 stands for "strongly like". As is commonly done in network research (i.e., Venkataramani & Dalal, 2007), we dichotomized the data by recoding "1", "2", "3" and "4" as "0", meaning this person is not regarded as a friend while recoding "5", "6" and "7" as "1", meaning this person is liked very much by the rater.

Respondents were asked to rate those people with whom they know and leave some items blank if the rater does not know the rate at all. Because the analysis technique we used required mutual ratings scores, those with asymmetrical ratings or no ratings were removed from the analysis. In total, our final sample size was 161.

Following Mehra, Kilduff, and Brass (2001), we used betweeness centrality to stand for the network centrality measure. The betweenness centrality of an actor represents the degree to which the actor occupies an intermediary position on the shortest path tying other people and act as a potential liaison for other pairs of actors (Kilduff & Tsai, 2003). A meta-analysis of experimental communication networks found that individuals high-in betweenness centrality are likely to be perceived as leaders by others in the network (Mullen & Salas, 1991).

To calculate the betweenness centrality scores, each organization was sorted into square matrices with complete ratings of "liking" of all the members (participants with incomplete rows or columns were deleted). For instance, in an organization of 10 people with complete ratings, one would form a 10x10 matrix. Those symmetric matrices were then submitted one by one to UCINET 6 (Borgatti et al., 1999) to calculate the betweenness centrality of each individual.

Control Variables

Length of time in organization. This was assessed as the number of semesters since joining the organization.

RESULTS

Descriptive Statistics and Correlations

Means, standard deviations, zero-order Pearson correlations, and Cronbach's alphas of all variables in this study are presented in Table 1.

Tests of the Hypotheses

Impact of betweenness centrality on leadership

Based on linear regression, *network centrality* was found to have a significant and positive effect on *peer-rated transformational leadership* (ß = 0.18, $p < 0.05$, Table 2). Thus, Hypothesis 1 received support. It appeared that an individual's centrality in the social network of a fraternity is positively related to the extent to which he/she is perceived as having transformational leadership qualities.

Impact of network centrality on conflict

In Table 2, *network centrality* was found to be negatively related to pee-rated counterproductive behavior (ß = -0.16, $p <0.05$). This offered support for Hypothesis 2 as it appeared that in the context of the fraternal environment, an individual's centrality in the friendship network is negatively related to the extent to which he/she is perceived as engaging organizational deviance behavior.

FINDINGS AND DISCUSSION

This paper finds that network centrality is significantly and positively related with both others' perception of positive leadership behaviors and negatively with others' perception of engaging in counterproductive behavior. The implications of this paper are multi-fold.

Theoretical Implications

This study contributes to a few streams of literature. Particularly, it links the leadership literature with that of social network and emphasizes the social aspect of leadership. It also adds insight to the counterproductive work behavior literature by investigating the relational perspective. Another strength of the study is that the data comes from different sources. Both leadership and counterproductive behavior were measured by one's peers in the same fraternity. Although it is possible that relationships may have been somewhat increased by common method variance, the magnitude of this problem was lessened by the fact that only a small number of individuals rated each member for the leadership and deviance outcomes while all members rated their relative network connections. Further, the possible methodological confound of socially desirable responding typically found for studies employing self-report measures, particularly for such highly valenced concepts as leadership and deviance, was avoided.

Practical Implications

This study demonstrates that well-connected individual can be perceived as more "leader-like" in addition to being considered less likely to engage in counterproductive behavior. Managers interested in establishing a reputation as an incorruptible or transformational leader might make efforts to encourage greater interactions with followers to facilitate this perception. Moreover, because these effects might reflect more than a perception effect, organizations might encourage leaders to form more relationships on the basis that it encourages them to develop more positive leadership attributes and makes them less likely to engage in counter-productive behaviors.

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TABLE 1 Means, Standard Deviations, and Correlations

Variable	Mean	S.D.	1	2	3	4
1. Length of time in the organization	1.15	0.98				
2. Betweenness centrality	3.43	3.87	-.15			
3. Peer-rated transformational leadership	3.26	0.58	.05	.16*	(.93)	
4. Peer-rated counterproductive behavior	2.05	0.56	-.01	-.14*	-.44*	(.77)

n = 161; alpha reliabilities are given in parentheses.
**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

TABLE 2 Regression Results

	DV= Transformational Leadership	**DV= Counterproductive Behavior**
Control Variables		
Length of time in Organization	-.04	0.05
Independent variables		
Betweenness centrality	0.18**	-0.16**
R^2	0.04	0.03
Adjusted R^2	0.02	0.02
F	2.99*	2.69*

Standardized coefficients (betas) are reported.
* $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$