Individuals' power and their social network accuracy: A situated cognition perspective

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ABSTRACT

Individuals differ in how accurately they perceive their social environment, but research and theory provide conflicting predictions on whether powerful people are more or less accurate than others. Drawing on social network theory and the situated cognition theory of power, we examine the relationship between individuals' formal and informal power and their perceptual accuracy of social network relationships. We propose that individuals' perceptual accuracy is related to: 1) their formal and informal power in the organization; 2) the type of relationship being perceived (positive/negative valence) and its relevance to task and goal completion; and 3) the dependence relationship with the target of perception (i.e., whether the perceiver is dependent on the perceived to get their work done). Predictions were tested using cognitive social structure data collected from a technical call center. Results showed that power was generally linked to increased perceptual accuracy, particularly for the types of relationships most relevant for task and goal completion. We further demonstrated that social network accuracy was related to employees' outcomes, including subsequent transfer, promotion, and exit from the organization.

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Social network theory views organizations as a nexus of formal and informal social relationships among a set of organizational actors (Borgatti et al., 2009). These social ties are viewed as key sources of benefits for individuals, including nonredundant information, social support, and status, as well as liabilities, including negative gossip and undermining (e.g., Borgatti et al., 2009; Brass et al., 2004; Duffy et al., 2002; Ellwardt et al., 2011; Kilduff and Brass, 2010; Labianca and Brass, 2006; Mehra et al., 2001). The predominant approach to studying social networks assumes that the network exists independent of each actor, and that the network is either a set of "pipes" through which resources flow or "prisms" through which others make judgments about each actor's status (Podolny, 2001).

However, many of the mechanisms suggested to underlie the benefits or liabilities of networks presume that network members *perceive* these relationships accurately. A tie is most useful as a pipe when people can accurately perceive the network and its flows (e.g.,

a friend who might provide social support), which allows for the greatest likelihood of successfully tapping into the resource flows. As a prism, being socially tied to a prestigious actor is unlikely to convey reflected status if observers don't perceive the relationship exists. A cognitive or perceptual view of relational ties is, thus, an important addition to understanding the full complexity of social networks (Brands, 2013). This cognitive perspective assumes that each individual forms mental maps or cognitive social structures (Krackhardt, 1987) of both their own social ties and the surrounding relationships in the broader social network. Cognitive social structures are the relationships that a person perceives to exist or not exist among network members (e.g., Kilduff et al., 2008; Krackhardt and Kilduff, 1999). For example, individuals hold perceptions of who interacts with whom and who is friends with whom in a network, and these beliefs and perceptions can be unique for each individual in the network (e.g., Freeman et al., 1987). These mental maps are integral to how individuals interpret, experience, and interact with the social environment, and possibly influence their attitudes, decisions and subsequent behaviors.

Given the enormous amount of information individuals are exposed to in their social environment, it is reasonable to believe

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that not all information is processed or perceived equally accurately (Fiske and Taylor, 1991; Kenny and West, 2010). Thus, individuals' perceptions of the social relationships among actors can vary greatly, with some people having more accurate perceptions than others. Indeed, prior research finds that individuals' cognitive maps are prone to error (e.g., Bondonio, 1998; Casciaro et al., 1999), which is not surprising when considering that even a small network of only 25 individuals has 600 (N*(N − 1)) potential dyadic relationships to track cognitively.

This potential for complication and cognitive overload makes errors highly likely, and these errors can have consequences. The degree to which individuals are accurate about or aware of the relationships in the social network might be a vital resource unto itself, potentially providing the cognitively accurate individual an information advantage over others. This might be particularly important for powerful individuals in the organization who can better leverage their social knowledge in pursuit of their personal goals. For example, individuals with informal power derived from their advantageous position in a social network can use their social knowledge to maintain or improve their influence in the organization by, for example, building supporting coalitions to further their careers (Marineau, 2017; Janicik and Larrick, 2005; Mintzberg, 1983; Pfeffer, 1981). Accurately perceiving social relationships can also be important for those with formal power, such as managers, who have the authority to direct others' behavior in pursuit of organizational goals (French and Raven, 1959; Keltner et al., 2001). For example, if a manager needs to assign employees to a work team, but is unaware of which employees have conflictual or negative relationships, this can likely create a less effective team than if the manager can select team members with more positive relationships or with less relationship conflict (Jehn and Mannix, 2001; Jehn et al., 2008; Shaw et al., 2011).

While accurate perceptions of relationships might be particularly important for those with power in organizations, being powerful might in itself affect one's perceptual accuracy of the organization's social structure. Indeed, power has been linked to behavioral and cognitive consequences for those who wield it (Galinsky et al., 2011). For example, in her summation of the current research on the effects of power on individuals, Guinote noted that "power has a fundamental impact on how individuals perceive the world around them and how they behave" (2010: 141). The few studies that have examined the relationship between power and perceptions of social networks have generated consistent results, but these results have been limited in scope—power tends to be related to *decreased* accuracy in perceiving the social network (Casciaro, 1998; Simpson et al., 2011). However, recent theorizing in the social psychology of power suggests that the power-network accuracy relationship might not be so clearly negative.

Our main theoretical contribution is to incorporate recent theorizing about the situated cognition approach to power (Guinote, 2010) into our understanding how formal power (i.e., occupying a managerial position) and informal power (i.e., personal influence in the organization) might relate to employees' accuracy in perceiving networks in the workplace. This perspective suggests that power is related to *increased* flexibility in, attention to, and cognitive processing of social information (Guinote, 2007a) such that the powerful are able to block out peripheral information that is not task- or goal-oriented, while the powerless do not possess the same level of discretion (Guinote, 2010). This body of work suggests that power would lead to *increased* accuracy of the social world in certain task- and goal-oriented contexts, as well as awakening the attention of the powerful toward the less powerful. Specifically, we argue that the powerful will be more accurate than the less-powerful in perceiving ties involving negative affect and possible relationship conflict, which tend to threaten individuals' task and goal oriented outcomes, while there won't be an accuracy differ-

ence with regard to perceiving positive affective relations, which are less directly tied to task- and goal-oriented outcomes. We further argue that the powerful will be more accurate in perceiving for their direct incoming ties compared to the less powerful. We examine individuals' power both as formal position within the organizational hierarchy (i.e., being a manager) and as informal power based on peer influence nominations, each of which has implications for network accuracy in an organizational setting. In particular, we show that those with informal power are more accurate about ties with direct alters than less powerful others, while those with formal power are more accurate both about ties with direct alters as well as with those that are more socially distant in the network. This study answers the call for new research linking employee outcomes and network accuracy (Brands, 2013). We build off of our previous work, which showed that high-performing individuals who were accurate about their incoming trust and distrust ties were more likely to be promoted at work (Marineau, 2017). The current study extends this work in a number of ways: 1. by investigating key organizationally-relevant antecedents to being accurate about network ties – being in positions of formal and informal power; 2. by exploring the importance of being accurate about one's own ties as compared to others' ties in the broader network; and 3. by relating accuracy to a broader set of outcomes. Specifically, we will illustrate the influence of individuals' formal power on whether they will remain in their current organizational position, transfer to another department, receive a promotion, or exit the organization entirely, through their social network accuracy of their dislike and friendship ties.

We begin by articulating a view of the powerful as activating different priorities in cognition and attention in how they perceive their social environment in comparison to the less powerful. Then we compare the powerful and less powerful individuals' accuracy in perceiving the entire constellation of relationships within the workplace – the *whole network* – and in perceiving their *own incoming social network ties*.

Theory and hypotheses

A few social network studies have attempted to relate power with accuracy in perceiving the whole network of relationships in an organization. Krackhardt (1990) controlled for formal power in his field study of network accuracy, but results showed no significant relationship between being a manager and the accuracy of a person's mental map of advice and friendship ties. Casciaro (1998) argued that individuals in higher hierarchical positions would have a greater interest in and access to work-related ties, such as advice ties, than friendship ties. However, in her field study, she found that power was negatively related to both friendship and advice network accuracy. In an experimental study, Simpson et al. (2011) theorized that individuals primed to experience low power would make fewer errors when learning social networks than high power individuals. High- and low-power primed subjects did not differ statistically when considering only ties that were present, but low-power subjects were more accurate about absent ties. Thus, although the evidence is somewhat mixed, these studies suggest that power has some influence on how individuals perceive social information generally, and social networks specifically. Overall, the picture painted is one of powerful individuals being less accurate about networks, perhaps because of inattentiveness or employing automatic processing to rely on cognitive maps that are not updated frequently.

However, there has been a movement in social psychology away from viewing power as leading to more automatic processing, and powerlessness as leading to more controlled processing (Galinsky et al., 2011). For example, the situated cognition perspec-