Translating Intentions to Behavior: The Interaction of Network Structure and Behavioral Intentions in Understanding Employee Turnover

James M. Vardaman
College of Business, Mississippi State University, Mississippi State, Mississippi 39762,
jvardaman@business.msstate.edu

Shannon G. Taylor
College of Business Administration, University of Central Florida, Orlando, Florida 32816, sgtaylor@ucf.edu

David G. Allen
University of Memphis, Memphis, Tennessee 38152; and Warwick Business School, West Midlands CV4 7AL, United Kingdom,
dallen@memphis.edu

Maria B. Gondo
College of Business, University of Mississippi, University, Mississippi 38677, mgondo@bus.olemiss.edu

John M. Amis
University of Edinburgh Business School, Edinburgh EH8 9JS, United Kingdom, john.amis@ed.ac.uk

This paper integrates psychological and sociological perspectives to provide a more complete explanation of the link between intended and actual turnover. Findings from two studies suggest that the translation of intentions to leave one's job into turnover behavior is attenuated by centrality in organizational advice and friendship networks. Our results demonstrate that psychological and network factors jointly impact employee turnover, and distinguish the effects of different types of networks (friendship, advice), ties (in-degree, out-degree), and levels (dyadic, triadic) in the turnover process. We discuss the implications of these findings for research and practice, and propose a two-stage model of turnover grounded in temporal construal theory that describes how psychological and structural factors variously influence the turnover decision process.

Keywords: turnover; social networks; network centrality; job embeddedness; Simmelian ties
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Introduction

Organizations have long been concerned with voluntary turnover due to its economic and noneconomic costs, such as replacement costs, diminished organizational memory, and damage to employee morale (Allen et al. 2010). To better understand employee turnover, social scientists have advanced psychological (personality/attitudes) and sociological (network/structural) explanations. The bulk of turnover theory has grown from a psychological perspective, with process models explaining how individual and job characteristics influence key attitudes and, subsequently, turnover intentions (e.g., March and Simon 1958, Mobley 1977). Substantial research demonstrates that behavioral intentions are the best psychological predictors of behavior (e.g., Ajzen 1991), and turnover theory relies heavily on intentions as the key psychological process linking job experiences with behavior (e.g., Holtom et al. 2008). Yet, turnover intentions explain only 15%–20% of turnover variance and even the most comprehensive turnover models leave the majority of variance unexplained (Griffeth et al. 2000).

More recent research suggests that turnover models consider not only the decision process employees go through when contemplating turnover, but also the webs of relationships in which employees are situated (Felps et al. 2009, Mossholder et al. 2005). Such relational webs are comprised of attachments that enmesh individuals within an organization and create a sense of "stuckness" (Mitchell et al. 2001). For example, researchers have invoked sociological perspectives on networks and network structures to consider how factors such as embeddedness, structural equivalence, and relational position help expand knowledge of employee turnover (e.g., Feeley 2000, Krackhardt and Porter 1986, Mitchell et al. 2001, Mossholder et al. 2005).

Despite the advances provided by both perspectives, turnover scholars have disagreed over when prospective leavers consider the potential costs of leaving, including those associated with forfeiting social capital derived from one's position in a social network. Mobley's (1977) model suggests such costs are considered earlier in the process, before turnover intentions are developed, an

assumption that remains prevalent in extant turnover theory (see, e.g., Hom and Kinicki 2001). Other theorists, however, presume that such costs are considered when forming quit decisions, which occurs later in the turnover process (e.g., Rusbult and Farrell 1983). In the present study, we draw on theories of temporal construal (Trope and Liberman 2003) and temporal discounting (Samuelson 1937) to explain why network centrality may be more important later (rather than earlier) in the turnover process. We suggest that individuals who do not yet harbor turnover intentions, such as would be the case for those who are only thinking of quitting, will consider the social capital losses from severing network ties in more abstract terms. However, once individuals develop the intention to quit, the end of the turnover process becomes more proximal. As such, individuals become less likely to discount potential social capital losses derived from the network positions they occupy and instead see the turnover decision in more concrete terms. In this sense, the temporality of the turnover decision makes one's position in a network structure more or less salient.

This idea is particularly important in light of the fact that many individuals who report high turnover intentions do not quit. Meta-analyses also show that only 4% of the variance in observed intentions–turnover relationships is explained by statistical artifacts, with the relationship exhibiting wide credibility intervals, including zero (0.00–0.77; Griffeth et al. 2000). These findings suggest that there are likely key contextual factors explaining when turnover intentions are more or less likely to translate into turnover. Whereas previous research has examined potential psychological moderators of the relationship between intended and actual turnover (e.g., personality, Allen et al. 2005; risk perceptions, Vardaman et al. 2008; transformational leadership, Waldman et al. 2012), we consider the interaction between network characteristics and intentions in explaining turnover behavior. In so doing, we suggest centrality's impact on turnover may be more pronounced when taken in conjunction with turnover intentions, rather than as a predictor of them.

Our theorizing is in line with recent research that differentiates general withdrawal mindsets and actual turnover (Hom et al. 2012, Steel 2002) and with work suggesting network ties may be more salient later in the turnover process (Griffeth et al. 2005). As such, it provides a conceptual point of departure that gives rise to additional network considerations. For example, the influence of dyadic ties may differ when they are further embedded in triads (Simmel 1950; see also Krackhardt 1998). In addition, both the type of network in which an individual is situated (i.e., advice versus friendship) and the psychological perspective from which structural ties are viewed (i.e., self-perceptions versus those of others) may affect centrality's influence in the turnover process. We therefore theorize that in-degree, out-degree,

and triadic (i.e., Simmelian) ties in advice and friendship networks will moderate the degree to which individuals follow through on their intentions to leave.

There are important opportunities to extend research integrating social structures into psychological process models to explain individual turnover in organizations. In testing the joint influences of turnover intentions and network centrality on voluntary turnover, we integrate psychological perspectives on employee behavior with sociological perspectives on structure. By exploring the interactive influence of network centrality on the turnover process, we further explicate how social ties foster retention—namely, by mitigating the likelihood that employees who intend to quit actually do. Although their importance has been alluded to in prior work (Felps et al. 2009, Sekiguchi et al. 2008), the interactive effects of social ties (viz., advice and friendship centrality) have not been systematically examined in empirical turnover research. Doing so elucidates important boundary conditions that facilitate or constrain the translation of behavioral intentions into action and, moreover, addresses the debate concerning when in the turnover process social ties have the greatest impact. Further, our focus on advice and friendship network centrality yields additional insights into the turnover process when these dyadic ties are considered within relational triads. Our exploration of triadic (i.e., Simmelian) ties offers a novel perspective exploring how turnover decisions are variously affected by relationships at different levels (Mitchell et al. 2014). In discussing the implications of our findings, we propose a two-stage model that delineates nuances underlying the decision process individuals go through in (1) developing turnover intentions and (2) determining whether to follow through on those intentions.

Theory and Hypotheses

Network Centrality and the Turnover Process
Extant turnover theory is driven by a series of models underpinned by the idea that most employees engage in some sort of decision process before quitting. For example, Mobley's (1977) intermediate linkages model posits that job dissatisfaction leads to thinking about quitting, which, in turn, may lead to intentions to quit and, ultimately, those intentions may be translated into turnover behavior. Although turnover theory acknowledges the rare circumstances in which employees may quit without resorting to a decision process (e.g., the unfolding model's description of impulsive quits in response to a shock, or leaving according to a script; Lee and Mitchell 1994), almost all conceptualizations propose that employees carefully consider the decision to leave. This consideration may manifest itself in terms of withdrawal cognitions (e.g., Hom and Griffeth 1991), iterative comparisons with labor market information (e.g.,

Steel 2002), or other processes. Regardless of process, though, the penultimate cognitive phenomenon preceding turnover in all of these models is turnover intentions. The translation (or nontranslation) of those intentions is then theorized to be mostly a matter of the control an employee has over the decision, such as having another job in hand, sufficient financial reserves to withstand a period of unemployment, or permission from a spouse to quit without an alternative (Ajzen 2002).

Theory and research suggest this turnover decision-making process is also influenced by one's position in a social network (Krackhardt and Porter 1986, Mossholder et al. 2005). For example, highlighting the notion that employees are situated in various social webs, job embeddedness theory holds that such social connections will be negatively associated with leaving one's organization. Research in this tradition suggests the more centrally located an individual is within an organization's social networks, the more he or she is embedded or stuck in the organization (e.g., Lee et al. 2004). From a network perspective, this is reflected in one's degree centrality, the number of ties one has to others in the organization (Freeman 1979). Highly central individuals are more embedded and, hence, less likely to voluntarily exit the organization because leaving involves forfeiting the associated social capital (Borgatti and Halgin 2011).

Advice (or instrumental) networks are comprised of relationships through which individuals share information, assistance, and guidance related to the completion of work tasks. Degree centrality in instrumental networks comes in the form of advice giving (in-degree) and advice seeking (out-degree). As such, advice centrality reflects an organization member's involvement in exchanging insight with coworkers and engaging in mutual problem solving. Central individuals possess (advice giving), or have access to (advice seeking), stores of knowledge about work- and task-related problems and solutions (Baldwin et al. 1997). This accumulated proficiency serves as a valuable resource for future exchanges with other organization members. Conversely, those on the periphery of the network often find it more difficult to accumulate or access social capital (Cook and Emerson 1978).

Friendship (or expressive) networks consist of interactions that are used predominantly for social and emotional support. Friendships often involve rich interactions (e.g., gossip, storytelling) that foster open communication. Such relationships are associated with higher levels of social support because centrality in an organization's expressive network provides access to friends and opportunities to seek out others during times of instability or personal hardship (Vardaman et al. 2012). Conversely, individuals who occupy peripheral positions in the network are isolated and may lack a strong sense of belonging (Williams 2007). Like with an advice network, centrality in a friendship network also has in-degree and

out-degree forms. The former reflects the extent to which an individual is cited by coworkers as a friend, whereas the latter reflects the number of coworkers an employee cites as friends.

Although theory and research suggest network centrality negatively impacts withdrawal outcomes (e.g., Feeley et al. 2008, Mossholder et al. 2005, Soltis et al. 2013), questions remain about where in the turnover process centrality has the most impact. We draw on temporal construal theory (Trope and Liberman 2003) to explain why networks may play a more important role as a structural moderator of the psychological process linking intentions to behavior than as a direct predictor of intended or actual turnover.

The Moderating Role of Network Centrality: Incorporating Abstract and Concrete Construals

Temporal construal theory holds that the way individuals construe some future event depends on its temporal distance (Liberman and Trope 1998, Trope and Liberman 2003). Events perceived as farther away in time are construed more generally and in abstract terms, whereas events viewed as being nearer in time are construed in more concrete terms (Trope and Liberman 2010). Accordingly, temporally distant decisions are more idealized; temporally proximal decisions are more pragmatic (Kivetz and Tyler 2007). Given their unfolding nature, employee turnover decisions should be similarly influenced by temporal construal, because temporal construals have implications for how individuals weigh the costs associated with leaving their jobs. Temporal construal theory suggests the forfeiture of social capital associated with leaving a central position in an organization's social networks should become more salient as the temporal distance to the quit decision decreases (i.e., in translating intentions to behavior).

From a temporal construal perspective, developing the intention to quit requires significantly less consideration of turnover costs because actual departure remains in the psychologically distant future. As intentions develop and the decision draws nearer, however, the costs associated with leaving become more salient and, hence, require deeper consideration. Thus, as turnover intentions make the decision to quit more proximal and transform turnover from an idealized decision to a pragmatic one (Trope and Liberman 2003), central individuals who develop intentions to quit will be less likely to follow through than their peripheral counterparts because the potential loss of specific network ties and resources becomes more concrete. In this way, temporal construal theory augments embeddedness theory by explaining why advice and friendship network centrality might serve as boundary conditions influencing what happens at different points in the turnover process (see Holtom et al. 2008).

Temporal construal theory suggests that an individual who views the possibility of turnover to be in the distant future will consider social capital losses in more abstract terms (e.g., "I'll have to make sacrifices"). However, turnover process models (e.g., Mobley 1977; see also Steel and Lounsbury 2009) indicate that individuals with intentions to leave have just one step remaining: deciding whether to follow through on their intentions. This proximity moves turnover from an abstract construal of departure to one that includes specific, tangible considerations. As network ties are key contextual attributes with concrete implications, social capital losses associated with the forfeiture of one's central position in a network weigh more heavily because they loom in the near future (Martin et al. 2009).

Relatedly, network centrality may moderate the relationship between turnover intentions and voluntary turnover because of a tendency to temporally discount losses (Samuelson 1937). Temporal discounting refers to the tendency to undervalue the costs of future events. Substantial empirical research demonstrates temporal discounting is involved in many types of decisions (e.g., spending, investing, drug use; Bickel et al. 2011, Estle et al. 2006). Early in the turnover process, individuals are likely to discount social capital losses derived from centrality. As Steel and König (2006, p. 893) observed, "because of temporal discounting...what is planned today does not always turn into tomorrow's actions." Temporal construal theory likewise recognizes that outcomes are discounted as their temporal distance increases because individuals often fail to fully account for what will be lost by pursuing a particular course of action (Trope and Liberman 2003). Due to this discounting, centrality in networks is likely a more powerful embedding force later in the turnover decision process (i.e., as a moderator of the turnover intentions–turnover link).

Given the embedding forces reflected in both forms of advice centrality (i.e., advice giving and advice seeking), surrendering access to knowledge-based resources and the associated social capital entails greater costs for highly central individuals than for those in more peripheral network positions. Central individuals in the advice-giving network, for instance, might face greater tangible sacrifices to the extent they are rewarded for their value as a key possessor or source of advice and information. Central advice givers are perceived to have knowledge and information power within the organization (Settoon and Mossholder 2002), which gives them greater control in the work unit and broader organization (Brown 1978). Having dependent coworkers could also be a source of social capital. Dependent individuals tend to feel obliged to reciprocate the advice they receive with acts of goodwill, creating social capital for the advice giver. Forfeiting such social capital would involve significant losses for a central advice giver, and thus reduce

the likelihood of translating turnover intentions to behavior. Advice-seeking centrality also provides social capital, because the central individual has a larger pool of sources to draw upon for information and knowledge (Sparrowe et al. 2001). Because advice ties involve the exchange of resources (viz., information and expertise), feelings of felt obligation toward coworkers are more likely to develop among individuals centrally located in an advice-seeking network (Mossholder et al. 2005).

Based on these arguments, we expect both forms of advice centrality will discourage individuals from following through on their turnover intentions. Individuals located in central positions within an organization's advice network have more to lose (e.g., knowledge, access to knowledge, task assistance, power over knowledge-dependent coworkers), and will feel greater obligation to others in the organization. Conversely, those on the periphery of advice networks have less to lose and feel fewer obligations to coworkers. Moreover, as turnover intentions shift the turnover decision from an abstract representation to a more concrete one, temporal construal theory suggests that advice network ties become more important as an embedding force because they can no longer be discounted by the potential leaver (Frederick et al. 2002). As such, the sacrifices and trade-offs associated with organizational exit will be more salient, suggesting that employees centrally located in advice-giving and advice-seeking networks will be less likely to follow through on their intentions to quit.

HYPOTHESIS 1 (H1). (a) *In-degree and* (b) *out-degree advice centrality will moderate the turnover intentions–turnover relationship such that the relationship will be weaker for individuals with higher centrality and stronger for those with lower centrality.*

Friendship centrality may likewise influence the degree to which turnover intentions lead to actual separation, for several reasons. First, friendships allow individuals to call upon others for reassurance and encouragement, and this social support protects them from the effects of aversive work events (Cohen and Wills 1985, Coyne and DeLongis 1986). Second, central individuals with intentions to leave might feel greater obligation to remain in the organization to fulfill those friendships. Social support garnered through friendship ties conveys to individuals that they are a valued member of "a network of mutual obligation" (Cobb 1976, p. 300). Accordingly, when care is extended by coworkers, individuals feel obliged to reciprocate with similar expressions of concern (Rhoades and Eisenberger 2002). Given that people use concrete construals to represent information about near future events (Trope and Liberman 2003), the value associated with friendship centrality should be influential in preventing the translation of turnover intentions because friendship ties represent specific, concrete features of the organizational

context. Consistent with this view, research has found that fair and respectful interactions with others are more salient in the near (versus distant) future (Cojuharenco et al. 2011). Temporal construal theory implies that central organization members who develop intentions to leave may have difficulty translating those intentions into behavior because the severing of friendship ties becomes a salient tangible consideration. Moreover, the principle of temporal discounting suggests such losses will become more germane to individuals as the temporal distance of their turnover decision decreases (Trope and Liberman 2003). We therefore anticipate that intentions to quit are more likely to affect turnover behavior among individuals with lower friendship centrality than among those with higher friendship centrality.

HYPOTHESIS 2 (H2). (a) *In-degree and* (b) *out-degree friendship centrality will moderate the turnover intentions–turnover relationship such that the relationship will be weaker for individuals with higher centrality and stronger for those with lower centrality.*

From Dyads to Triads: The Role of Simmelian Ties
Additional theoretical purchase can be gained by considering dyads as relationships embedded in a broader social structure. Shared third parties that form a triad are the most elemental manner of doing so. A triadic, or Simmelian, tie exists when two people are reciprocally tied to each other and they are each reciprocally tied to at least one common third party (Krackhardt 1998). These ties are fundamentally different from dyadic ties in character and quality (Krackhardt 1998, 1999). Particularly relevant to the present study is Krackhardt's (1999) observation that Simmelian forces strengthen ties, suggesting that social relationships may influence the turnover process differently when they move from being dyadic to triadic in nature. Thus, it is possible that broadening focus beyond the isolated dyad will reveal further differences in the turnover process when "super strong" Simmelian ties are considered in the context of a social triad (Krackhardt 1998, p. 24).

Simmelian ties are more than strong ties; they are especially "sticky" (Krackhardt 1998). Simmelian tie theory holds that such ties change dyadic relationships in three important ways: they reduce individuality, bargaining power, and conflict (Simmel 1950; see also Krackhardt 1999). As such, these triadic forces have unique implications for the turnover process. For instance, it may be that dyadic ties associated with being central in an advice network become stronger when embedded in triads, and thus more powerfully mitigate the translation of intentions into turnover. After all, individuals with common third-party ties in an advice network are more willing to share knowledge with each other (Reagans and McEvily 2003). Because of the positive expectation that such cooperative efforts will be

reciprocated in the future (Gouldner 1960), organization members with Simmelian advice ties should be less likely to quit than individuals not embedded in such triads. Strong Simmelian advice ties also improve knowledge flows by enhancing shared understanding and the coordination of actions required to exploit diverse knowledge sources (Tortoriello and Krackhardt 2010). When located within a Simmelian structure, individuals can rely on not just an individual expert, but a group of experts with whom to associate (cf. Krackhardt 1998). Thus, when individuals are immersed in such communities of practice (i.e., closed-advice triads), those who intend to quit should be less likely to do so because these instrumental advantages would be particularly difficult to sacrifice.

In an organization's friendship network, a Simmelian tie reflects three individuals who are all connected by reciprocal friendship bonds. A Simmelian structure increases the stability of relationships by reducing disagreements and encouraging thoughtful conflict resolution (Simmel 1950, Tortoriello and Krackhardt 2010). With an increased willingness to cooperate, members of a triad are more likely to remain in the group or organization (Jehn 1995). Krackhardt (1998) likewise notes that members of strong triads are less free and more constrained than are members of a dyad.

From a temporal construal perspective, the severing of strong relationships with other organization members becomes more salient as individuals contemplate whether to follow through on their turnover intentions (Trope and Liberman 2003), and individuals who have reached this point in the turnover process are less likely to temporally discount the social capital losses (e.g., social support, reciprocal cooperation) associated with these "sticky" ties. As such, individuals with more Simmelian ties should be less likely to convert their intentions into (turnover) behavior than those in fewer triadic relationships.

HYPOTHESIS 3 (H3). (a) *Simmelian advice ties and* (b) *Simmelian friendship ties will moderate the turnover intentions–turnover relationship such that the relationship will be weaker for individuals with more Simmelian ties and stronger for those with fewer Simmelian ties.*

Overview of Studies
To test our hypotheses, we conducted two studies. In Study 1, we tested our predicted relationships with data from public school teachers. In Study 2, we sought to constructively replicate Study 1 by testing our hypotheses among nurses employed at a hospital. As such, Study 2 triangulates Study 1 results across different work contexts, and it also rules out alternative explanations that might account for results obtained in Study 1. Because we were unable to collect advice network data in Study 2, hypotheses were empirically tested only for friendship networks in the latter study.

Study 1

Sample and Procedures

The Study 1 sample consisted of 145 teachers employed in four public schools in the southeastern United States. Participants voluntarily completed a paper-and-pencil survey during work time. To ensure confidentiality, participants sealed their completed survey in an envelope and returned it directly to the first author, who spent significant time in each school. Response rates by school were as follows: School 1, 92% (22/24); School 2, 96% (46/48); School 3, 95% (36/38); and School 4, 96% (44/46). Thus the overall response rate for the survey was 95% of the network population from the four schools ($n = 148$). Approximately 2.5 years after survey completion, turnover data were collected. Because three individuals separated from the organization involuntarily, they were excluded from analysis, reducing the sample to 145. The participants included in the analysis were 65% female, and the average age was 41 years. The sample was 77% White, 18% African American, and 5% other races.

Measures

Turnover Intentions. Turnover intentions were assessed on a five-point scale (1 = "definitely no''; 5 = "definitely yes'') with a three-item ($\alpha = 0.92$) measure adapted from Hom and Griffeth (1991) that asked about an individual's intent to leave his or her job. A sample item is "I intend to quit my present job.''

Network Centrality. Advice and friendship networks were operationalized through answers to a close-ended sociometric questionnaire. Participants were provided with a full list of teachers in their respective schools and asked whom they considered a friend and from whom they sought advice. This approach allowed us to gather data from the full network. From these responses, we calculated in-degree and out-degree centrality within the advice and friendship networks using UCINET software (Borgatti et al. 2002). We used Freeman's (1979) notion of relative centrality to control for different school sizes. Greater in-degree centrality scores indicate that more coworkers chose a particular employee as a source of advice or as a friend, whereas greater out-degree scores indicate the focal individual chose more coworkers as people from whom they sought advice, or as a friend.

Simmelian Ties. Simmelian ties were also calculated using UCINET. A Simmelian tie exists when individual i and individual j have a symmetric tie, and both have a symmetric tie in common with at least one other individual (Dekker 2006). The raw number of Simmelian ties was divided by the size of each network, thus providing the relative number of Simmelian ties for each individual.

Turnover. Turnover was assessed via organizational records 2.5 years after surveys were administered. Participants were coded 0 for *stayers* and 1 for *voluntary leavers*.

Control Variables. Because job satisfaction is one of the best attitudinal predictors of turnover (Griffeth et al. 2000), we included it as a control variable. Participants indicated their extent of agreement (1 = "strongly disagree''; 7 = "strongly agree'') with three items ($\alpha = 0.70$) adopted from Cammann et al. (1983). Previous research suggests that perceived control and personality may play a role in translating intentions into behavior (e.g., Allen et al. 2005); thus, we controlled for locus of control's moderating effect by assessing it with six items adapted from Rotter (1966). We also controlled for self-reported age, gender, and tenure to account for the natural clustering of individuals with similar others in the organization. Finally, we controlled for organizational membership through the use of $k - 1$ dummy variables (1 = "member of organization''; 0 = "otherwise'').

Study 1 Results

Because Study 1 participants were nested within different schools, we calculated intraclass correlations (ICC1) to estimate the proportion of variance in scores on our measures attributable to school membership (James 1982). Results indicated significant ICC1 values for some measures (e.g., turnover intentions, locus of control), suggesting the potential for nonindependence; thus, we tested our hypotheses with hierarchical linear modeling (HLM) (Raudenbush et al. 2011). The pattern of results was the same as those obtained from the regression analyses, so we report the regression results for clarity and consistency with Study 2. Given the dichotomous nature of the turnover outcome, hypotheses were tested with logistic regression. For each model, we entered control variables and main effects in Step 1, followed by the multiplicative interaction terms in a second step. To demonstrate the nature of the interactions, we conducted simple slope analyses and used Dawson's (2014) technique to plot the relationship between turnover intentions and turnover at one standard deviation above and below the means of each network centrality measure.

Means, standard deviations, and correlations among Study 1 variables appear in Table 1. Twenty-four percent of study participants voluntarily quit. Hypotheses 1(a) and (b) predicted, respectively, that in-degree (advice giving) and out-degree (advice seeking) centrality in the advice network would moderate the relationship between turnover intentions and voluntary turnover. As shown in Table 2, the in-degree centrality ($\beta = -0.04$, $p < 0.05$) but not the out-degree centrality ($\beta = -0.03$, ns) interaction term entered in Step 2 was significant. Simple slope analyses revealed that the positive relationship between intended and actual turnover was significant

Table 1 Correlations and Descriptive Statistics for Study 1 Variables

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. *Job satisfaction*	5.86	1.13												
2. *Locus of control*	4.27	1.84	−0.03											
3. *Age*	41.18	11.74	0.14	−0.03										
4. *Gender*	1.65	0.48	−0.07	0.00	0.02									
5. *Tenure*	12.40	6.61	0.10	0.06	0.74**	0.00								
6. *Advice-giving centrality*	0.50	0.22	0.08	0.34**	−0.03	−0.06	−0.06							
7. *Advice-seeking centrality*	0.50	0.09	−0.09	0.11	0.00	0.03	−0.02	0.19*						
8. *Friendship in-degree centrality*	0.26	0.12	−0.03	0.17*	0.01	0.09	−0.01	0.13	0.10					
9. *Friendship out-degree centrality*	0.26	0.10	0.04	0.23**	0.03	0.02	0.07	0.09	0.01	0.49**				
10. *Turnover intentions*	2.08	1.19	−0.39**	0.07	0.01	−0.06	0.00	0.06	0.04	−0.10	0.02			
11. *Simmelian advice ties*	0.26	0.15	0.02	0.31**	−0.02	−0.03	−0.09	0.88**	0.45**	0.14	0.09	−0.03		
12. *Simmelian friendship ties*	0.05	0.06	−0.00	0.14	0.00	0.09	0.02	0.12	0.09	0.66**	0.66**	0.02	0.13	
13. *Turnover*	0.24	0.42	0.02	0.05	−0.01	−0.12	−0.04	−0.11	−0.12	−0.38**	−0.24**	0.30**	−0.11	−0.25**

Notes. $N = 145$. Gender is coded $1 =$ male, $2 =$ female.
$^*p < 0.05$; $^{**}p < 0.01$.

for individuals with low ($B = 1.39$, $p < 0.01$) but not high ($B = 0.33$, ns) levels of in-degree advice centrality (see Figure 1). These findings support Hypothesis 1(a) but not Hypothesis 1(b). Relative importance analysis (LeBreton et al. 2013, Tonidandel and LeBreton 2011) revealed that of the variance in turnover explained by the two interaction terms above and beyond the control variables and main effects, a majority (81.4%, $\varepsilon = 0.05$)

was accounted for by the in-degree interaction, whereas relatively less was explained by the out-degree interaction (18.6%, $\varepsilon = 0.01$).

In Hypothesis 2, we predicted that in-degree (H2a) and out-degree (H2b) friendship network centrality would moderate the intentions–turnover relationship. Table 2 shows that the interaction terms entered in Step 2 were significant for both forms of friendship centrality

**Table 2 Logistic Regression Analyses Predicting Turnover (Study 1)**

Variable	Step 1[a]		Step 2[b]	
	B	Exp(β)	β	Exp(β)
Job satisfaction	0.43	1.60		
Locus of control	0.23	1.26		
Age	−0.01	0.99		
Gender	−0.29	0.75		
Tenure	0.04	1.04		
Turnover intentions	0.89**	2.42		
Advice-giving centrality	−0.01	0.99		
Advice-seeking centrality	−0.01	0.99		
Friendship in-degree centrality	−0.09**	0.96		
Friendship out-degree centrality	−0.04	0.95		
Locus of control × Intentions			−0.06	0.94
Advice-giving centrality × Intentions			−0.04*	0.97
Advice-seeking centrality × Intentions			−0.03	0.98
Friendship in-degree centrality × Intentions			−0.08*	0.93
Friendship out-degree centrality × Intentions			−0.11**	0.90
Intercept	−1.91	0.15	−15.92	0.00
Nagelkerke R^2	0.41		0.61	
ΔNagelkerke R^2	—		0.20	

Notes. $\beta =$ log odds; Exp(β) = odds ratio. Network variables scaled to aid interpretation of log odds. Dummy variables (1, 0) for all four organizations are included in the model; none were significantly associated with turnover.
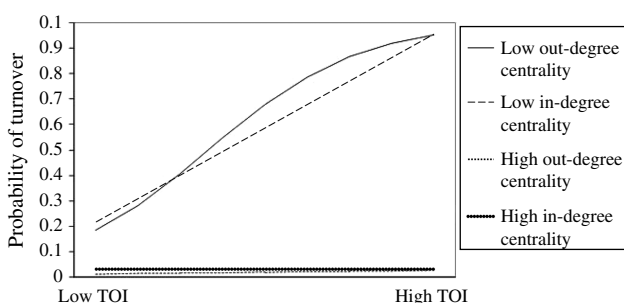[a]Step 1: -2 log likelihood $= 112.07$; $\chi2(13, n = 145) = 47.69$, $p < 0.01$.
[b]Step 2: -2 log likelihood $= 82.66$; $\chi2(5, n = 145) = 27.24$, $p < 0.01$.
$^*p < 0.05$ $^{**}p < 0.01$.

Figure 1 Probability of Turnover for Low and High Advice-Giving Centrality (Study 1)
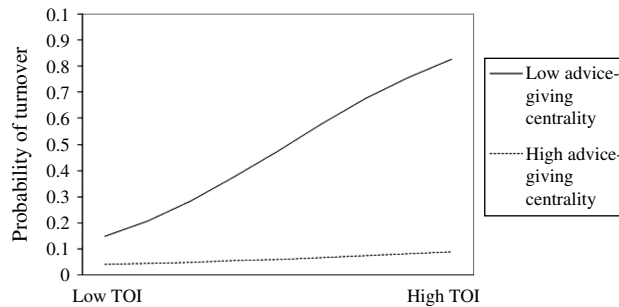
(in-degree $\beta = -0.08$, $p < 0.05$; out-degree $\beta = -0.11$, $p < 0.01$). As expected, the positive relationship between intended and actual turnover was significant for individuals with low ($B = 1.48$, $p < 0.01$) but not high ($B = 0.01$, ns) levels of in-degree centrality, and for individuals with low ($B = 1.87$, $p < 0.01$) but not high ($B = 0.02$, ns) levels of out-degree centrality (see Figure 2). Moreover, relative importance analysis revealed that of the variance in turnover explained by the two interaction terms above and beyond the control variables and main effects, a majority (62.0%, $\varepsilon = 0.09$) was accounted for by the out-degree interaction, whereas relatively less was explained by the in-degree interaction (38.0%, $\varepsilon = 0.06$).

Hypothesis 3 stated that Simmelian advice ties (H3a) and Simmelian friendship ties (H3b) would moderate the intentions–turnover link. Results presented in Table 3 indicate that the Simmelian advice tie interaction term was nonsignificant ($\beta = -0.03$, ns) and that Simmelian friendship ties were a significant moderator ($\beta = -0.19$, $p < 0.01$). Consistent with our expectations, simple slope analysis revealed that the positive relationship between intended and actual turnover was significant for individuals with low ($B = 1.98$, $p < 0.01$) but not high ($B = -0.27$, ns) levels of Simmelian friendship ties (see Figure 3). Thus, only Hypothesis 3(b) was supported. Relative importance analysis demonstrated that of the variance in turnover explained by the advice in-degree and Simmelian interaction terms, more (54.5%, $\varepsilon = 0.03$) was accounted for by the former than the latter (45.5%, $\varepsilon = 0.02$). When the interactive effects of

Table 3 Logistic Regression Analyses Predicting Turnover with Simmelian Ties (Study 1)

| Variable	Step 1[a]		Step 2[b]	
	B	Exp(β)	β	Exp(β)
Job satisfaction	0.45	1.57		
Locus of control	0.15	1.16		
Age	−0.03	0.97		
Gender	−0.26	0.77		
Tenure	0.05	1.05		
Turnover intentions	1.00**	2.73		
Simmelian advice ties	−0.01	0.99		
Simmelian friendship ties	−0.19**	0.83		
Locus of control × *Intentions*			−0.23	0.80
Simmelian advice *ties × Intentions*			−0.03	0.97
Simmelian friendship *ties × Intentions*			−0.19**	0.84
Intercept	−5.44	0.00	−11.16	0.00
Nagelkerke R^2	0.33		0.49	
ΔNagelkerke R^2	—		0.16	

Notes. β = log odds; Exp(β) = odds ratio. Network variables scaled to aid interpretation of log odds. Dummy variables (1, 0) for all four organizations are included in the model; none were significantly associated with turnover.

[a]Step 1: −2 log likelihood = 122.27; $\chi 2(11, n = 145) = 36.20$, $p < 0.01$.

[b]Step 2: −2 log likelihood = 100.84; $\chi 2(3, n = 145) = 21.54$, $p < 0.01$.

**$p < 0.01$.

out-degree advice centrality and Simmelian ties were compared, the Simmelian interaction (82.0%, $\varepsilon = 0.04$) contributed more to the prediction of turnover than the out-degree interaction term (18.0%, $\varepsilon = 0.01$). It should be noted, however, that none of the three advice ties were significantly more important than the others. In comparing friendship network effects, results showed that the Simmelian interaction term contributed more to the prediction of turnover (66.1%, $\varepsilon = 0.09$) than did the in-degree interaction term (33.9%, $\varepsilon = 0.05$). The Simmelian interaction term also explained relatively more variance in turnover than did the out-degree interaction term (Simmelian $\varepsilon = 0.08$, 53.2%; out-degree $\varepsilon = 0.07$,

Figure 2 Probability of Turnover for Low and High Friendship Centrality (Study 1)

Figure 3 Probability of Turnover for Low and High Simmelian Friendship Ties (Studies 1 and 2)
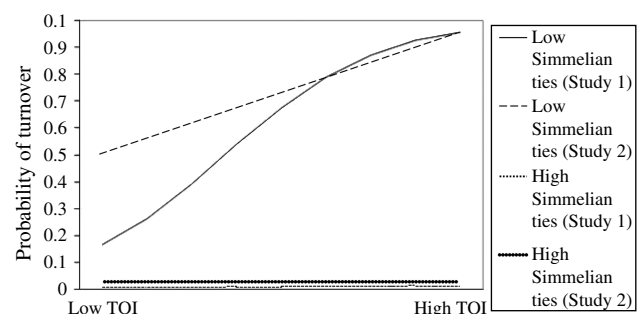
46.8%). The Simmelian interaction was not significantly more important, however, than either of the dyadic ties' interactive effects.

Study 2

Study 1 established the moderating role of network centrality in the intentions–turnover relationship. We constructively replicate these findings in Study 2, focusing on friendship networks because of the interests and constraints of the sponsoring organization. We consider a different occupational group (nurses) and work setting (hospitals). We also separate measurement of networks and intentions in time and consider a shorter time lag between antecedents and turnover, because there is value in replicating results across varying time lags (Allen et al. 2014). We also incorporate job embeddedness. Much of the research investigating the role of social interrelationships in the study of turnover relies on job embeddedness as an underlying theoretical perspective. In the present study, we suggest that integrating psychological process models of turnover with theory and research on structural networks helps explain the translation of intentions into behavior. The construct of job embeddedness, however, focuses on the psychological interpretation of one's attachment to the organization—in other words, the extent to which an individual perceives him or herself as embedded in the organization. If this psychological interpretation fully accounts for the effects of network structure, there may be little need to incorporate the measurement of actual networks. Thus, there is value in establishing the role of network centrality over and above the effects of job embeddedness. Further, the operationalization of job embeddedness focuses on the number of links, with less attention paid to the content of links or the resources they offer. Part of our theorizing suggests the content of the network is an important force in influencing the translation of intentions into behavior. Thus, incorporating job embeddedness helps us to better determine whether the content (i.e., friendship ties) and perspective (in-degree, out-degree) of network centrality influence the turnover process.

Sample and Procedures

The Study 2 sample consisted of 183 nurses employed in a large metropolitan hospital in the Southeastern United States. Participants voluntarily completed two online surveys during work time. In the initial survey, we obtained social network data and demographic information. Three months later, we measured other control variables, turnover intentions, and job embeddedness. One year after the initial survey was completed, turnover data were collected. One hundred and ninety individuals responded to the initial survey. None of the participants quit before the second survey administration.

Seven individuals, however, did not complete the second survey and were thus excluded from analysis. The final response rate was 85% of the network population. The participants included in the analysis were 99% female, and their average age was 31 years. The sample was 86% White, 11% African American, and 3% other races.

Measures

Turnover Intentions. Turnover intentions were assessed with the scale used in Study 1 ($\alpha = 0.85$).

Network Centrality. Friendship network ties were operationalized through answers to an open-ended sociometric questionnaire. Following Ibarra (1993), a network centrality index was constructed by having each participant provide the names of nurses with whom he or she is friends. Participants were allowed to list as many friends as they wished. In Study 1, we calculated degree centrality with Freeman's (1979) measure, although because all respondents were from the same organization, the raw centrality scores were used in the analysis.

Simmelian Ties. As with Study 1, Simmelian ties were calculated using UCINET. Because all participants were from the same organization, the raw number of triads was used in the Study 2 analysis.

Turnover. Turnover was assessed via organizational records one year after surveys were administered. Participants were coded 0 for *stayers* and 1 for *voluntary leavers*.

Control Variables. As in Study 1, we controlled for job satisfaction ($\alpha = 0.83$), age, gender, and tenure. In addition, we controlled for job embeddedness with the Crossley et al. (2007) seven-item global measure ($\alpha = 0.90$), both as a main effect on turnover and as a moderator of the intentions–turnover relationship. Participants responded on a five-point Likert scale ranging from $1 = $ *Strongly Disagree* to $5 = $ *Strongly Agree*.

Study 2 Results

Means, standard deviations, and correlations among Study 2 variables are presented in Table 4. The table also shows that 9% of participants voluntarily quit. Recall that Hypothesis 2 predicted in-degree (H2a) and out-degree (H2b) friendship network centrality would moderate the intentions–turnover relationship. Table 5 shows that the interaction terms entered in Step 2 were significant for both forms of friendship centrality (in-degree $\beta = -0.76$, $p < 0.05$; out-degree $\beta = -0.93$, $p < 0.01$). As expected, plots of the interaction effects revealed that the positive relationship between intended and actual turnover was significant for individuals with low ($B = 1.40$, $p < 0.02$) but not high ($B = -0.73$, ns) levels of in-degree centrality, and for individuals with low ($B = 2.75$, $p < 0.01$) but not high ($B = -0.81$, ns) out-degree

**Table 4   Correlations and Descriptive Statistics for Study 2 Variables**

Variable	M	SD	1	2	3	4	5	6	7	8	9
1. *Job satisfaction*	3.87	0.60	—								
2. *Job embeddedness*	3.23	0.64	0.30**	—							
3. *Age*	31.18	18.30	0.05	0.03	—						
4. *Gender*	1.01	0.07	0.02	0.06	−0.03	—					
5. *Tenure*	5.67	2.74	−0.01	0.06	0.71**	0.07	—				
6. *Friendship in-degree centrality*	5.07	1.46	−0.12	0.09	0.13	−0.01	0.04	—			
7. *Friendship out-degree centrality*	5.10	1.70	0.00	0.02	0.10	−0.09	0.08	0.34**	—		
8. *Simmelian friendship ties*	2.74	1.03	0.07	−0.07	−0.01	0.02	0.03	0.61**	0.47**	—	
9. *Turnover intentions*	2.41	0.79	−0.04	−0.47**	−0.07	0.06	−0.06	−0.21**	−0.22**	−0.10	—
10. *Turnover*	0.09	0.29	0.05	−0.16*	−0.14	−0.02	−0.05	−0.30**	−0.28**	−0.29**	0.30**

Notes. $N = 183$. Gender is coded $1 =$ female, $2 =$ male.

$^*p < 0.05$; $^{**}p < 0.01$.

centrality (see Figure 4) supporting Hypothesis 2. Relative importance analysis revealed that of the variance in turnover explained by the two interaction terms above and beyond the control variables and main effects, a majority (56.7%, $\varepsilon = 0.14$) was accounted for by the in-degree interaction, whereas relatively less was explained by the out-degree interaction (43.3%, $\varepsilon = 0.11$).

Hypothesis 3(b) proposed that Simmelian friendship ties would moderate the intentions–turnover link. Results presented in Table 6 indicate a significant interaction effect ($\beta = -1.22$, $p < 0.01$). Simple slope analyses revealed that the positive relationship between intended and actual turnover was significant for individuals with

Figure 4   Probability of Turnover for Low and High Friendship Centrality (Study 2)
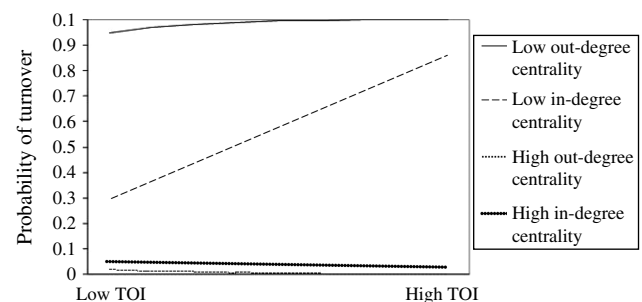
low ($B = 1.69$, $p < 0.01$) but not high ($B = -0.53$, ns) levels of Simmelian friendship ties (see Figure 3), supporting Hypothesis 3(b). Relative importance analysis demonstrated that the Simmelian interaction contributed less (42.4%, $\varepsilon = 0.08$) to the prediction of turnover than the in-degree interaction (57.6%, $\varepsilon = 0.11$). The Simmelian interaction also explained less variance than the out-degree interaction (Simmelian $\varepsilon = 0.09$, 45.2%; out-degree $\varepsilon = 0.11$, 54.8%). However, the differences in relative importance between the three interactive effects were not significant.

Post Hoc Analyses

Whereas our findings give credence to our theoretical proposition that network centrality is salient later in the turnover process (i.e., in shaping how individuals *react* to turnover intentions), they say little about the role network centrality might play earlier in the turnover process (i.e., in shaping the *formation* of turnover intentions). As temporal construal theory maintains that losses associated with forfeiting social capital derived from advice and friendship ties will be discounted early in the turnover process, it suggests network centrality is less likely to be associated with turnover intentions. To examine this possibility in both studies, we regressed turnover intentions on each of the centrality variables examined in our study hypotheses. Indeed, of the six

Table 5   Logistic Regression Analyses Predicting Turnover (Study 2)

	Step 1[a]		Step 2[b]	
Variable	B	Exp(β)	β	Exp(β)
Job satisfaction	0.59	1.80		
Job embeddedness	−0.33	0.72		
Age	0.00	1.00		
Gender	−19.37	0.00		
Tenure	0.03	1.03		
Turnover intentions	0.83†	2.29		
Friendship in-degree centrality	−0.38*	0.68		
Friendship out-degree centrality	−0.34*	0.72		
Job embeddedness × Intentions			1.45**	4.26
Friendship in-degree centrality × Intentions			−0.76*	0.47
Friendship out-degree centrality × Intentions			−0.93**	0.40
Intercept	−2.40	0.09	−9.07	0.00
Nagelkerke R^2	0.32		0.53	
ΔNagelkerke R^2	—		0.21	

Note. $\beta =$ log odds; Exp(β) = odds ratio.

^{a}Step 1: -2 log likelihood $= 84.05$; $\chi2(8, n = 183) = 29.11$, $p < 0.01$.

^{b}Step 2: -2 log likelihood $= 62.35$; $\chi2(3, n = 183) = 21.70$, $p < 0.01$.

$^\dagger p < 0.10$; $^*p < 0.05$; $^{**}p < 0.01$.

Table 6 Logistic Regression Analyses Predicting Turnover with Simmelian Ties (Study 2)

Variable	Step 1[a]		Step 2[b]	
	B	$Exp(\beta)$	β	$Exp(\beta)$
Job satisfaction	0.85	2.35		
Job embeddedness	−0.45	0.64		
Age	−0.02	0.99		
Gender	−18.51	0.00		
Tenure	0.05	1.05		
Turnover intentions	1.15*	3.15		
Simmelian friendship ties	−1.05**	0.35		
Job embeddedness × Turnover intentions			0.85	2.35
Simmelian friendship ties × Turnover intentions			−1.22**	0.29
Intercept	−4.55	0.01	−3.96	0.02
Nagelkerke R^2	0.34		0.42	
ΔNagelkerke R^2	—		0.08	

Note. β = log odds; $Exp(\beta)$ = odds ratio.
[a]Step 1: −2 log likelihood = 81.85; $\chi2(7, \ n = 183) = 31.31$, $p < 0.01$.
[b]Step 2: −2 log likelihood = 73.65; $\chi2(2, \ n = 183) = 8.09$, $p < 0.05$.
*$p < 0.05$; **$p < 0.01$.

centrality variables, only out-degree friendship centrality was significantly associated with turnover intentions.[1]

General Discussion

The present study examined the role network centrality plays in the turnover process. Specifically, we tested the proposition that individuals' positions within an organization's advice and friendship networks would influence (moderate) the degree to which they translate their turnover intentions into quit behavior. As temporal construal theory suggests individuals who intend to leave are likely to view the turnover decision in more concrete terms, we predicted that the contextual forces binding centrally located individuals would make them less likely than their counterparts in peripheral network positions to act on their intentions to quit. The two empirical studies reported above lend general support to our predictions and enhance understanding of social networks and employee turnover.

Toward a Two-Stage Model of Turnover

Despite references to the possibility of interactive effects, past empirical work has not considered whether such relational forces interact with other turnover antecedents to affect actual separation. Guided by the idea that events and outcomes are discounted as their temporal distance increases (Trope and Liberman 2003), we sought to determine whether advice and friendship network centrality might serve as boundary conditions influencing what happens at different stages in the turnover process. Our primary contribution, then, lies in integrating extant turnover process models with network perspectives on embeddedness to demonstrate that centrality in social networks stifles organizational exit by lessening the probability that individuals actually *follow through* once they develop intentions to leave.

Results across two samples put the accuracy of our temporal construal theory-based predictions in particular relief by offering a striking contrast between the turnover probabilities of individuals with high versus low centrality in various social networks. Our findings support the idea that the prospect of forfeiting social capital associated with network centrality attenuates the translation of intentions to behavior. This is noteworthy because the poor translation of turnover intentions to behavior has been largely thought to be due to a lack of control on the part of the decision maker (Ajzen and Fishbein 1980). We integrated literature on decision making and social networks to identify advice and friendship network centrality as factors that similarly inhibit the translation of turnover intentions.

Our results provide evidence that structural variables have greater impact as moderators of the intentions–turnover relationship than as antecedents of turnover intentions. Whereas network characteristics demonstrated some explanatory power as main effects in both samples, the interaction terms yielded substantial improvements in prediction. Specifically, the network variables contributed 1% and 6% of variance beyond the control variables and turnover intentions, and the interaction terms explained an additional 20% and 21% of turnover variance in Studies 1 and 2, respectively. Taken holistically, the results of our original and post hoc analyses suggest that the decision to follow through on turnover intentions is rife with considerations beyond behavioral control. As such, our findings extend turnover theory by pointing toward a two-stage process model in which psychological factors pushing or pulling individuals out of organizations influence their turnover intentions (Stage 1), and structural factors then mitigate or facilitate the translation of those intentions into turnover behavior (Stage 2). This possibility is substantiated by Mitchell and Lee 2001, p. 211), who observed that the time until an individual quits

> can be meaningfully separated into...two sequential periods that vary in their levels of internal or external control. The first period is the time between an employee's first thoughts of quitting and the subsequent decision to leave. The second period is the time between the decision to leave and actual leaving. Whereas this first period appears primarily, though not exclusively, under the individual's control, the second period appears likely affected by external forces.

Such a two-stage model offers an explanation for the inconsistent relationships found between network centrality and turnover intentions, and it serves as a platform for investigating the poor translation of intentions to behavior. To be sure, the process models that

underpin much of the turnover literature correctly position turnover intentions as an intermediate linkage in the turnover process. The current research suggests, however, that translating those intentions into turnover behavior is more complex than previously thought.

Differential Network Effects

Specific findings from our hypotheses offer additional insights into the effects of centrality in different types of networks. Tests of Hypothesis 1 suggest that advice-giving centrality mitigates the intentions–turnover link, whereas advice-seeking centrality does not. Thus, because we expected advice-giving and advice-seeking centrality to moderate the relationship between intended and actual turnover, results here suggest that a network of people from whom to seek advice is not sufficient to keep those who harbor turnover intentions in the organization. In contrast, the forfeiture of power, access to resources, and other tangible benefits associated with advice-giving centrality is more powerful in preventing the translation of turnover intentions into behavior. Our findings also highlight the embedding role of friendship networks. We found that in-degree and out-degree centrality in the friendship network moderated the relationship between turnover intentions and turnover behavior, suggesting that expressive centrality acts as an embedding force in attenuating the translation of intentions to behavior.

We built on this theorizing by recognizing that Simmelian tie theory maintains dyadic relationships increase in strength when further embedded in triads. Accordingly, we expected Simmelian ties to moderate the relationship between turnover intentions and voluntary turnover. Overall, our findings regarding Simmelian ties suggest that whereas triadic ties exhibit similar effects on turnover as dyadic ties (particularly in friendship networks), their "super sticky" properties may not be wholly effective in retaining potential leavers (Krackhardt 1998). Future studies of this sort would contribute to turnover theory and research by further exploring the effects of Simmelian triads as a unit of analysis distinct from the dyad and representative of larger structures (Krackhardt 1998, Mitchell et al. 2014).

Finally, our analyses make an important contribution by considering the relative impact of global job embeddedness (Crossley et al. 2007) versus sociometric network measures. Embeddedness neither directly nor jointly (with turnover intentions) predicted turnover, and relative weights analyses showed that the interactive effect of embeddedness explained far less variance in turnover than did network centrality measures. That is, supplementary analyses testing the moderating influence of embeddedness relative to in-degree, out-degree, and Simmelian centrality revealed that the embeddedness interaction contributed substantially less to the prediction of turnover than did the interaction terms for the other forms of centrality, though only the in-degree interaction was significantly more important than embeddedness. These results shed light on prior nonsignificant findings regarding on-the-job embeddedness (Lee et al. 2004). In job embeddedness research, links are typically captured by the number of people in one's work group, irrespective of the quality or content of one's relationships with specific colleagues. Our findings, however, suggest that the content of work relationships may be vital for holding individuals in the organization.

Study Limitations and Future Research Directions

Despite replicating some of our findings across two different samples (education and healthcare), the generalizability of our results would be extended through additional tests of our predictions among employees in other industries, organizations, or jobs. Although the observed moderating effects offer support for their presence, the relative influences of in-degree, out-degree, and Simmelian ties remain unclear. The mixed results found in the present study suggest that additional investigations in this regard could increase understanding of the roles that perspective (in-degree versus out-degree) and level (dyad versus triad) play when assessing the relative impact of various network ties in the turnover process.

A related issue concerns our focus on degree centrality when there are other elements of network structure that may influence withdrawal processes (e.g., closeness or betweenness centrality; structural equivalence among actors). We assessed our moderating hypotheses with betweenness and closeness instead of degree centrality, and only betweenness in the Study 1 advice network was a significant moderator of the intentions–turnover relationship. Future research that incorporates these and other elements of network structure may be of value to the turnover literature.

Our findings should also be viewed in light of two additional points. First, turnover scholars have long observed that not all turnover is dysfunctional (e.g., Dalton et al. 1981). A key factor in making this determination is an employee's level of performance (Abelson and Baysinger 1984). Regarding the two-stage model of turnover proposed in the current research, central individuals may question whether their social capital will be directly transferable to another employer, or the extent to which their high performance is a result of having developed many relationships with coworkers (Sekiguchi et al. 2008). Recent research (Bidwell 2011) suggests that external hires receive significantly less favorable performance appraisals than internal hires who are promoted; it may be the case that high performance is context dependent, and that network structures play an important role. In such instances, individuals who have intentions of quitting may be reluctant to leave their current employer when they occupy central positions in the organization's advice or friendship networks. Future

research should examine the complex interplay among performance, networks, and turnover. Second, embeddedness research has demonstrated the impact of nonwork (i.e., off-the-job or community) ties on various employee behaviors, including turnover (e.g., Lee et al. 2004). Thus, it is possible, for instance, that highly embedded individuals might be concerned with taking another job because of fears that they will be unable to replicate their level of network assistance at their future employer. This could create higher "costs" to turnover, which might be even greater when one is embedded in a number of Simmelian ties. We encourage future researchers to explore these possibilities.

Practical Implications

Our findings indicate that high degrees of connectedness decrease the likelihood that employees actually follow through on their intentions to leave. These results are important because efforts aimed at fostering forces that enhance network centrality may look quite different from those intended to increase employees' job satisfaction or organizational commitment. Because centrality reflects socioemotional attachments, focusing on pay and other tangible inducements may be overly simplistic (Rousseau et al. 2006). Instead, our results suggest that managers take steps to cultivate and improve interpersonal relations among employees to create the social attachments and felt obligation important to curbing turnover. Among the various ways that managers could foster mutually supportive relationships are mentoring programs. As Chandler et al. (2011) recently observed, mentoring outcomes are partly determined by the support and structure of people's developmental networks (i.e., others who take an active interest in and action to advance a focal individual's career). Findings that a person's network accounts for more variability in some outcomes than does a particular mentor (e.g., Higgins and Thomas 2001) further underscore the importance of the structural context in studying turnover cognitions and behavior, because developmental networks may function as a form of social capital that can reduce the likelihood of turnover (Lankau and Scandura 2002, Payne and Huffman 2005).

A second opportunity for managerial action centers on targeting retention efforts at specific "pressure points" within an organization's social networks. Our results indicate this strategy is important because they suggest organizational endeavors aimed at fostering supportive workplace relationships will improve retention efforts, particularly among those employees most "at risk" of leaving (i.e., those who contemplate quitting). To do so, organizations could conduct network studies of their own to identify peripheral individuals. Once a network picture emerges, managers might then focus their efforts on enhancing these individuals' centrality, decreasing their turnover intentions, or,

if the employees are marginal performers, on recruiting their replacements. By focusing retention efforts on specific employees within various social networks, managers may reduce turnover more efficiently.

Conclusion

This study underscores the Mossholder et al. (2005, p. 608) assertion that network centrality is "pivotal" in understanding employee turnover. The findings here showed that employees' turnover decisions are influenced by their connections with others in advice and friendship networks. Specifically, we found that individuals located in central network positions are less likely to follow through on their intentions to quit than are individuals in more peripheral network positions. In so doing, we invoked temporal construal theory to explain why some people who develop turnover intentions quit, whereas most do not. Moreover, we identified important boundary conditions for the intentions–turnover relationship. We hope this study provides further impetus for future multidisciplinary research efforts into the interconnections among these behavioral phenomena.

Endnote

[1]Full results of the post hoc analyses are available from the authors.

References

Abelson MA, Baysinger BD (1984) Optimal and dysfunctional turnover: Toward an organizational level model. *Acad. Management Rev.* 9(2):331–341.

Ajzen I (1991) The theory of planned behavior. *Organ. Behav. Human Decision Processes* 50(2):179–211.

Ajzen I (2002) Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior. *J. Appl. Soc. Psych.* 32(4):1–20.

Ajzen I, Fishbein M (1980) *Understanding Attitudes and Predicting Social Behavior* (Prentice-Hall, Englewood Cliffs, NJ).

Allen DG, Bryant PC, Vardaman JM (2010) Retaining talent: Replacing misconceptions with evidence-based strategies. *Acad. Management Perspect.* 24(2):48–64.

Allen DG, Weeks KP, Moffitt KR (2005) Turnover intentions and voluntary turnover: The moderating roles of self-monitoring, locus of control, proactive personality and risk aversion. *J. Appl. Psych.* 90(5):980–990.

Allen DG, Hancock J, Vardaman JM, McKee D (2014) Analytical mindsets in turnover research. *J. Organ. Behav.* 35(1):61–86.

Baldwin TT, Bedell MD, Johnson JL (1997) The social fabric of a team-based M.B.A. program: Network effects on student satisfaction and performance. *Acad. Management J.* 40(6): 1369–1397.

Bickel WK, Yi RY, Landes RD, Hill PF, Baxter C (2011) Remember the future: Working memory training decreases delay discounting among stimulant addicts. *Biol. Psychiatry* 69(3):260–265.

Bidwell M (2011) Paying more to get less: The effects of external hiring versus internal mobility. *Admin. Sci. Quart.* 56(3): 369–407.

Borgatti SP, Halgin DS (2011) On network theory. *Organ. Sci.* 22(5): 1168–1181.

Borgatti SP, Everett MG, Freeman LC (2002) *UCINET for Windows: Software for Social Network Analysis* (Analytic Technologies, Harvard, MA).

Brown BB (1978) Social and psychological correlates of help-seeking behavior among urban adults. *Amer. J. Community Psych.* 6(5): 423–439.

Cammann C, Fichman M, Jenkins GD, Klesh JR (1983) Assessing the attitudes and perceptions of organizational members. Seashore SE, ed. *Assessing Organizational Change: A Guide to Methods, Measures, and Practices* (John Wiley & Sons, New York), 71–119.

Chandler DW, Kram KE, Yip J (2011) An ecological systems perspective on mentoring at work: A review and future prospects. *Acad. Management Ann.* 5(1):519–570.

Cobb S (1976) Social support as a moderator of life stress. *Psychosomatic Medicine* 38(5):300–314.

Cohen S, Wills T (1985) Stress, social support, and the buffering hypothesis. *Psych. Bull.* 98(2):310–357.

Cojuharenco I, Patient D, Bashshur MR (2011) Seeing the "forest" or the "trees" of organizational justice. Effects of temporal perspective on employee concerns about unfair treatment at work. *Organ. Behav. Human Decision Processes* 116(1):17–31.

Cook KS, Emerson RM (1978) Power, equity and commitment in exchange networks. *Amer. Sociol. Rev.* 43(5):721–739.

Coyne JC, DeLongis A (1986) Going beyond social support: The role of social relationships in adaptation. *J. Consulting Clinical Psych.* 54(3):454–460.

Crossley CD, Bennett RJ, Jex SM, Burnfield JL (2007) Development of a global measure of job embeddedness and integration into a traditional model of voluntary turnover. *J. Appl. Psych.* 92(4):1031–1042.

Dalton DR, Krackhardt DM, Porter LW (1981) Functional turnover: An empirical assessment. *J. Appl. Psych.* 66(6):716–721.

Dawson JF (2014) Moderation in management research: What, why, when, and how. *J. Bus. Psych.* 29(1):1–19.

Dekker D (2006) Measures of Simmelian tie strength, Simmelian brokerage, and the Simmelianly brokered. *J. Soc. Structure* 7(1): 1–22.

Estle SJ, Green L, Myerson J, Holt D (2006) Differential effects of amount on temporal and probability discounting of gains and losses. *Memory Cognition* 34(4):914–928.

Feeley TH (2000) Testing a communication network model of employee turnover based on centrality. *J. Appl. Comm. Res.* 28(3):262–277.

Feeley TH, Hwang J, Barnett GA (2008) Predicting employee turnover from friendship networks. *J. Appl. Comm. Res.* 36(1): 56–73.

Felps W, Mitchell TR, Hekman DR, Lee TW, Holtom BC, Harman WS (2009) Turnover contagion: How coworkers' job embeddedness and job search behaviors influence quitting. *Acad. Management J.* 52(3):545–561.

Frederick S, Loewenstein G, O'Donoghue T (2002) Time discounting and time preference: A critical review. *J. Econom. Literature* 40(2):351–401.

Freeman LC (1979) Centrality in social networks conceptual clarification. *Soc. Networks* 1(3):215–239.

Gouldner AW (1960) The norm of reciprocity: A preliminary statement. *Amer. Sociol. Rev.* 25(2):161–178.

Griffeth RW, Hom PW, Gaertner S (2000) A meta-analysis of antecedents and correlates of employee turnover: Update, moderator tests, and research implications for the next millennium. *J. Management* 26(3):463–488.

Griffeth RW, Steel RP, Allen DG, Bryan N (2005) The development of a multidimensional measure of market cognitions: The employment opportunity index (EOI). *J. Appl. Psych.* 90(2):335–349.

Higgins MC, Thomas DA (2001) Constellations and careers: Toward understanding the effects of multiple developmental relationships. *J. Organ. Behav.* 22(3):223–247.

Holtom BC, Mitchell TR, Lee TW, Eberly MB (2008) Turnover and retention research: A glance at the past, a closer review of the present, and a venture into the future. *Acad. Management Ann.* 2:231–274.

Hom PW, Griffeth RW (1991) Structural equations modeling a test of turnover theory: Cross-sectional and longitudinal analyses. *J. Appl. Psych.* 76(3):350–366.

Hom PW, Kinicki AJ (2001) Toward a greater understanding of how dissatisfaction drives employee turnover. *Acad. Management J.* 44(5):975–987.

Hom PW, Mitchell TR, Lee TW, Griffeth RW (2012) Reviewing employee turnover: Focusing on proximal withdrawal states and an expanded criterion. *Psych. Bull.* 138(5):831–858.

Ibarra H (1993) Network centrality, power and innovation involvement: Determinants of technical and administrative roles. *Acad. Management J.* 36(3):471–501.

James L (1982) Aggregation bias in estimates of perceptual agreement. *J. Appl. Psych.* 67:219–229.

Jehn KA (1995) A multimethod examination of the benefits and detriments of intragroup conflict. *Admin. Sci. Quart.* 40(2):265–282.

Kivetz Y, Tyler TTR (2007) Tomorrow I'll be me: The effect of time perspective on the activation of idealistic versus pragmatic selves. *Organ. Behav. Human Decision Processes* 102(2): 193–211.

Krackhardt DA (1998) Simmelian ties: Super strong and sticky. Kramer RM, Neale MA, eds. *Power and Influence in Organizations* (Sage Publications, Thousand Oaks, CA), 21–38.

Krackhardt DA (1999) The ties that torture: Simmelian tie analysis in organizations. *Res. Sociol. Organ.* 16:183–210.

Krackhardt DA, Porter LW (1986) The snowball effect: Turnover embedded in communication networks. *J. Appl. Psych.* 71(1): 50–55.

Lankau MJ, Scandura TA (2002) An investigation of personal learning in mentoring relationships: Content, antecedents, and consequences. *Acad. Management J.* 45(4):779–790.

LeBreton JM, Tonidandel S, Krasikova DV (2013) Residualized relative importance analysis: A technique for the comprehensive decomposition of variance in higher order regression models. *Organ. Res. Methods* 16(3):449–473.

Lee TW, Mitchell TR (1994) An alternative approach: The unfolding model of voluntary employee turnover. *Acad. Management Rev.* 19(1):51–89.

Lee TW, Mitchell TR, Sablynski CJ, Burton JP, Holtom BC (2004) The effects of job embeddedness on organizational citizenship, job performance, volitional absences, and voluntary turnover. *Acad. Management J.* 47(5):711–722.

Liberman N, Trope Y (1998) The role of feasibility and desirability considerations in near and distant future decisions: A test of temporal construal theory. *J. Personality Soc. Psych.* 75(1):5–18.

March JG, Simon HA (1958) *Organizations* (John Wiley & Sons, New York).

Martin BA, Gnoth J, Strong C (2009) Temporal construal in advertising. *J. Advertising* 38(3):5–19.

Mitchell TR, Lee TW (2001) The unfolding model of voluntary turnover and job embeddedness: Foundations for a comprehensive theory of attachment. *Res. Organ. Behav.* 23:189–246.

Mitchell TR, Burch TC, Lee TW (2014) The need to consider time, level, and trends: A turnover perspective. *J. Organ. Behav.* 35(2):296–300.

Mitchell TR, Holtom BC, Lee TW, Sablynski CJ, Erez M (2001) Why people stay: Using job embeddedness to predict voluntary turnover. *Acad. Management J.* 44(6):1102–1121.

Mobley WH (1977) Intermediate linkages in the relationship between job satisfaction and employee turnover. *J. Appl. Psych.* 62(2):237–240.

Mossholder KW, Settoon RP, Henagan SC (2005) A relational perspective on turnover: Examining structural, attitudinal, and behavioral predictors. *Acad. Management J.* 48(4):607–618.

Payne SC, Huffman AH (2005) A longitudinal examination of the influence of mentoring on organizational commitment and turnover. *Acad. Management J.* 48(1):158–168.

Raudenbush SW, Bryk AS, Cheong YF, Congdon RT, du Toit M (2011) *HLM* 7 (Scientific Software International, Lincolnwood, IL).

Reagans R, McEvily B (2003) Network structure and knowledge transfer: The effects of cohesion and range. *Admin. Sci. Quart.* 48(2):240–267.

Rhoades L, Eisenberger R (2002) Perceived organizational support: A review of the literature. *J. Appl. Psych.* 87(4):698–714.

Rotter JB (1966) Generalized expectancies for internal versus external control of reinforcement. *Psychol. Monographs* 80(1):1–28.

Rousseau DM, Ho VT, Greenberg J (2006) I-deals: Idiosyncratic terms in employment relationships. *Acad. Management Rev.* 31(4):977–994.

Rusbult CE, Farrell D (1983) A longitudinal test of the investment model: The impact on job satisfaction, job commitment, and turnover of variations in rewards, costs, alternatives, and investments. *J. Appl. Psych.* 68(3):429–438.

Samuelson P (1937) A note on measurement of utility. *Rev. Econom. Stud.* 4(2):155–161.

Sekiguchi T, Burton JP, Sablynski CJ (2008) The role of job embeddedness on employee performance: The interactive effects with leader-member exchange and organization-based self-esteem. *Personnel Psych.* 61(4):761–792.

Settoon RP, Mossholder KW (2002) Relationship quality and relationship context as antecedents of person-and task-focused interpersonal citizenship behavior. *J. Appl. Psych.* 87(2):255–267

Simmel G (1950) Wolff KH, ed. *The Sociology of George Simmel* (Free Press, Glencoe, IL).

Soltis SM, Agneessens F, Sasovova Z, Labianca GJ (2013) A social network perspective on turnover intentions: The role of distributive justice and social support. *Human Resource Management* 52(4):561–584.

Sparrowe RT, Liden RC, Wayne SJ, Kraimer ML (2001) Social networks and the performance of individuals and groups. *Acad. Management J.* 44(2):316–325.

Steel RP (2002) Turnover theory at the empirical interface: Problems of fit and function. *Acad. Management Rev.* 27(3):346–360.

Steel RP, König CJ (2006) Integrating theories of motivation. *Acad. Management Rev.* 31(4):889–913.

Steel RP, Lounsbury JW (2009) Turnover process models: Review and synthesis of a conceptual literature. *Human Resource Management Rev.* 19:271–282.

Tonidandel S, LeBreton JM (2011) Determining the relative importance of predictors in logistic regression: An extension of relative weights analysis. *Organ. Res. Methods* 13(4):767–781.

Tortoriello M, Krackhardt D (2010) Activating cross-boundary knowledge: The role of Simmelian ties in the generation of knowledge. *Acad. Management J.* 53(1):167–181.

Trope Y, Liberman N (2003) Temporal construal. *Psych. Rev.* 110(3):403–421.

Trope Y, Liberman N (2010) Construal-level theory of psychological distance. *Psych. Rev.* 117(2):440–463.

Vardaman JM, Allen DG, Renn RR, Moffitt KR (2008) Should I stay or should I go? The role of risk in employee turnover decisions. *Human Relations* 61(11):1531–1564.

Vardaman JM, Amis JM, Dyson B, Wright P, Randolph RVDG (2012) Interpreting change as controllable: The role of centrality and self-efficacy. *Human Relations* 65(7):835–869.

Waldman DA, Carter MZ, Hom PW (2012) A multilevel investigation of leadership and turnover behavior. *J. Management*, ePub ahead of print October 5, doi: 10.1177/0149206312460679.

Williams KD (2007) Ostracism. *Ann. Rev. Psych.* 58:425–452.

James M. Vardaman is an assistant professor of management at Mississippi State University. He received his Ph.D. from the Fogelman College of Business and Economics at the University of Memphis. His research interests include employee retention and individual reactions to organizational change, with a particular emphasis on the role of social networks in these areas.

Shannon G. Taylor received a Ph.D. from Louisiana State University and is currently an assistant professor of management at the University of Central Florida. His research focuses on destructive workplace behaviors and temporal issues at work.

David G. Allen is distinguished professor of management in the Fogelman College of Business and Economics at the University of Memphis and distinguished research environment professor at Warwick Business School. His primary research interests include the flow of people into and out of organizations (e.g., retention/turnover, recruitment, talent management).

Maria B. Gondo is an assistant professor of management at the University of Mississippi. She received her Ph.D. from the University of Memphis. Her research interests include organizational and institutional change, with an emphasis on strategy implementation, sensemaking, and routines.

John M. Amis is chair in strategic management and organisation at the University of Edinburgh Business School. He received his Ph.D. from the University of Alberta. His research interests center on issues of organizational and institutional change.