

INTERNAL AND EXTERNAL NETWORKING DIFFERENTIALLY PREDICT TURNOVER THROUGH JOB EMBEDDEDNESS AND JOB OFFERS

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Although the career benefits associated with professional networking are relatively well established, the repercussions of this highly regarded career management activity for voluntary turnover have rarely been examined. Given the potential costs associated with voluntary turnover, this study sought to clarify the roles of networking behaviors in relation to voluntary turnover by focusing on the distinction between internal and external networking. Based on survey responses of industrial and organizational psychology professionals, we found that internal and external networking behaviors differentially predicted decisions to voluntarily leave employers 2 years later: The likelihood of voluntary turnover was negatively predicted by internal networking and positively predicted by external networking. Furthermore, to shed light on the reasons why employee networking behaviors differentially predicted turnover decisions, this study also examined 4 turnover antecedents (job satisfaction, job embeddedness, perceived employment opportunities, and job offers) as potential mediating mechanisms. Results revealed that the relationships of internal and external networking with voluntary turnover were mediated by job embeddedness and job offers, respectively. We discuss the implications of these findings for understanding and managing employee networking and retention.

Although organizational research has recognized the benefits of networking for individual career success (Forret & Dougherty, 2004; Wolff & Moser, 2009), it has rarely considered the implications of this practice for increasing employees' chances of leaving their employers (Wolff & Moser, 2010). Voluntary turnover has the potential to incur substantial costs to organizations both indirectly (e.g., loss of human capital,

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organizational knowledge) and directly (e.g., recruitment, selection, training), which can range from 90% to over 200% of a leaver's annual salary (Allen, Bryant, & Vardaman, 2010; Cascio, 2006; Woo & Maertz, 2012). Yet, few attempts have been made to delineate the conditions under which employee networking increases the risk of turnover (i.e., when) nor is there evidence of the psychological process through which networking affects employees' decisions to leave (i.e., why). In light of this, this study answers the questions of *when* and *why* employees' networking behaviors relate to voluntary turnover.

To address the "when" question, we distinguish between networking with coworkers within one's organization (i.e., internal networking) and networking with colleagues across different organizations (i.e., external networking) as two conditions under which networking may differentially affect the likelihood of voluntary turnover. Prior research by Wolff and Moser (2010) has laid an important foundation for this investigation. Based on a sample of working adults in Germany, they found some support for the suggestion that external (as opposed to internal) networking positively predicts change of employer 2 years later. However, only one type of external networking behavior (i.e., maintaining existing contacts) was positively associated with change of employer, whereas other types of external networking were either unrelated or negatively related to change of employer, necessitating further research to clarify these relationships. At the very least, as suggested by the authors themselves (Wolff & Moser, 2009, 2010), their findings regarding the relationships of networking with job mobility within the German context should be replicated in other national and cultural contexts, considering that differences in labor markets and economic conditions influence job mobility (e.g., higher job security and stability in Germany compared with the United States). Furthermore, our study extends Wolff and Moser's theoretical arguments by also considering the potential influence of internal networking behavior in deterring voluntary turnover.

To address the "why" question, we propose and test a set of psychological mechanisms through which internal and external networking behaviors may differentially relate to turnover decisions. To do so, we integrate the emergent body of research on networking (e.g., Forret & Dougherty, 2001; Wolff & Moser, 2010) with the deep-rooted tradition of turnover research, which has identified key turnover antecedents (e.g., Hom, Caranikas-Walker, Prussia, & Griffeth, 1992; Hom, Mitchell, Lee, & Griffeth, 2012; Mobley, Griffeth, Hand, & Meglino, 1979; Price & Mueller, 1981). Specifically, we argue that internal and external networking behaviors differentially influence voluntary turnover through employees' *desires to remain* with their employers, which are closely associated with job satisfaction and job embeddedness, and

opportunities to exit, represented by perceived alternatives and job offers. These turnover antecedents are included in both traditional models of voluntary turnover (e.g., Mobley et al., 1979; Price & Mueller, 1981) as well as more contemporary theories of turnover and withdrawal (e.g., Hom et al., 2012; Mitchell & Lee, 2001), and their predictive validities have received extensive empirical support (Griffeth, Hom, & Gaertner, 2000; Jiang, Liu, McKay, Lee, & Mitchell, 2012). Thus, taking into account networking behaviors with these turnover antecedents affords a more integrative and informative investigation of the unique roles of networking behaviors in explaining employee turnover.

Overall, this study makes three contributions to the networking and turnover literatures. First, it highlights the topic of voluntary turnover as an important (yet understudied) consequence of employees' networking behaviors by explicating *when* and *why* employee networking may increase the risk of turnover for organizations. As employees take greater responsibility for their career management (Arthur & Rousseau, 1996), knowledge of how proactive career-oriented behaviors (e.g., networking) influence employees' work attitudes and behaviors (e.g., job satisfaction, turnover) is necessary for organizations to develop strategies for effectively managing and retaining their employees. Second, this study clarifies the respective roles of internal and external networking behaviors in predicting employees' decisions to stay or leave their employers, which offers practical insights into how organizations may manage employees' internal or external networking behaviors. Third, our research represents one of the very first attempts to integrate networking and turnover literatures to propose and test a theory-driven explanation for why internal and external networking behaviors may deter or promote voluntary turnover. By simultaneously testing multiple, theoretically plausible mediating mechanisms, this study sheds light on which commonly acknowledged turnover antecedents actually account for the predictive effects of networking on voluntary turnover. Before introducing our theory and hypotheses, we first clarify what we mean by "networking behaviors" and discuss how networking is distinct from other relational constructs.

What Are Networking Behaviors?

In this article, we define networking as "behaviors aimed at building, maintaining, and using informal relationships that possess the (potential) benefit of facilitating work-related activities of individuals by voluntarily granting access to resources and maximizing common advantages" (Wolff & Moser, 2009, pp. 196–197). Building on this definition, we take a psychological perspective on networking in which we consider networking behaviors to consist of interpersonal interactions that involve the exchange of resources between networking partners. Resources in this

context are best construed as information, socioemotional support (e.g., friendship), services, or influence that networking partners may provide to and receive from one another (Foa, 1971). Drawing from the logic of social exchange theory (Blau, 1964; Gouldner, 1960), we suggest that the continual exchange of resources (via networking behaviors) between two or more networking partners has the potential to advance each partner's work-related goals and to develop a professional network relationship. We also note that all networking behaviors (or networkers) are not equally effective: Networking behaviors may be performed differently or exchange different resources depending on the characteristics of the networking partners and the stage of their network relationship (Porter & Woo, 2015). More importantly, network contacts offer access to different resources depending on whether they are internal or external to one's employing organization (e.g., internal contacts more often offer information about organizational culture whereas external contacts more often offer information about best practices in the field). Therefore, the distinction between internal and external networking is important to consider, as it is the different resources accessible through networking with each set of network contacts that drives the differential relationships of internal and external networking with employee outcomes.

To further clarify the networking behaviors construct, we discuss how networking behaviors differ from other conceptually related relational constructs—namely, social networks, social capital, coworker support, and other social effectiveness constructs. We also present common definitions and measurement approaches of these constructs in Table 1 to illustrate how networking behaviors are distinct. First, we distinguish networking behaviors from social networks. *Social networks* refer to the actual dyadic relationships between an individual and each person with whom he or she interacts or the structure of relationships among a group of actors (Tichy, Tushman, & Fombrun, 1979; also see Wasserman & Faust, 1994). Networking behaviors, on the other hand, refer to the activities one performs to build, maintain, and use such professional relationships. Second, we also distinguish networking behaviors from *social capital*, which refers to the “goodwill that is engendered by the fabric of social relations and that can be mobilized to facilitate action” (Adler & Kwon, 2002, p. 17; cf. Coleman, 1988; Lin, 2002; Nahapiet & Ghoshal, 1998). In other words, social capital refers to the intangible, positive feelings personal contacts have for one another that facilitate the exchange of interpersonal resources such as information, influence, and social support (Lin, 2002). In contrast, networking behaviors are activities directed toward developing and sustaining multiple professional relationships (or the “social fabric”) that serve as access points for one to obtain such resources. Thus, networking behaviors have the potential to contribute to the development of

TABLE 1
Comparison of Definitions and Measurement Approaches of Networking Behaviors and Related Constructs

Construct	Definition	Measurement approach
Networking behaviors	<p>“Behaviors aimed at building, maintaining, and using informal relationships that possess the (potential) benefit of facilitating work-related activities of individuals by voluntarily granting access to resources and maximizing common advantages.” (Wolff & Moser, 2009; pp. 196–197)</p>	<p><i>Behavioral Rating Scale (example items):</i></p> <p>I use company events to make new contacts. (<i>internal building</i>)</p> <p>I catch up with colleagues from other departments about what they are working on. (<i>internal maintaining</i>)</p> <p>I receive confidential advice in business matters from my contacts in other departments. (<i>internal using</i>)</p> <p>I develop informal contacts with professionals outside the organization in order to have personal links beyond the company. (<i>external building</i>)</p> <p>For business purposes, I keep in contact with former colleagues. (<i>external maintaining</i>)</p> <p>I exchange professional tips and hints with colleagues from other organizations. (<i>external using</i>)</p>
Social networks	<p>The pattern or structure of associations amongst a set of actors in a network.</p>	<p><i>Sociometric approach:</i></p> <p>Identify <i>existing</i> network contacts and report on relationship and/or contact characteristics; resulting information is used to create variables that represent network or relational characteristics (e.g., network size, degree centrality)</p> <p>(see Burt, 1992; Scott, 2000; Wasserman & Faust, 1994)</p>
Social capital	<p>“Goodwill that is engendered by the fabric of social relations and that can be mobilized to facilitate action.” (Adler & Kwon, 2002, p. 17)</p>	<p>Various approaches including social network measures and subjective evaluations of social networks and/or resources available</p>

(Continued)

TABLE 1 (continued)

Construct	Definition	Measurement approach
Coworker support	Social support received from organizational members.	<p><i>Rating Scale (example items):</i></p> <p>My coworkers really care about my well-being.</p> <p>My coworkers care about my general satisfaction at work.</p> <p>My coworkers show very little concern for me (reverse-scored).</p> <p>(Mossholder, Settoon, & Henagan, 2005)</p>
<i>Social effectiveness</i>		<p><i>Rating Scale (example items):</i></p>
Social skill	<p>“Interpersonal perceptiveness and the capacity to adjust one’s behavior to different situational demands and to effectively influence and control the responses of others.” (Ferris, Witt, & Hochwarter, 2001, p. 1076)</p>	<p>I find it easy to put myself in the position of others.</p> <p>I am keenly aware of how I am perceived by others.</p> <p>In social situations, it is always clear to me exactly what to say and do.</p> <p>I am particularly good at sensing the motivations and hidden agendas of others.</p>
Political skill	<p>“The ability to effectively understand others at work, and to use such knowledge to influence others to act in ways that enhance one’s personal and/or organizational objectives.” (Ahearn, Ferris, Hochwarter, Douglas, & Ammeter, 2004, p. 311)</p>	<p>(Ferris et al., 2001)</p> <p>I spend a lot of time and effort at work networking with others. (<i>networking ability</i>)</p> <p>It is important that people believe I am sincere in what I say and do. (<i>apparent sincerity</i>)</p> <p>I always seem to instinctively know the right thing to say or do to influence others. (<i>social astuteness</i>)</p> <p>It is easy for me to develop good rapport with most people. (<i>interpersonal influence</i>)</p> <p>(Ferris et al., 2005)</p>

social capital (by generating positive feelings between networking partners), but networking behaviors alone are not synonymous with social capital (Thompson, 2005).

Third, networking behaviors are also distinct from *coworker support*, or the social support one receives from other organizational members. Coworker support may be considered a resource that flows from networking interactions with coworkers, as networking behaviors may also be used to exchange various interpersonal resources (e.g., information). Thus, coworkers may use networking behaviors to give and receive support to one another, which may have the result of promoting perceptions of coworker support (among other perceptions; Kirmeyer & Lin, 1987). Networking behaviors are further distinguished from coworker support in that the former can span across internal and external contacts, whereas coworker support is inherently applicable to relationships within organizations. Finally, networking behaviors are also distinct from *social effectiveness* constructs, such as social and political skill (e.g., Treadway, Breland, Adams, Duke, & Williams, 2010). These social effectiveness constructs refer to the talent with which one conducts interpersonal interactions, whereas networking behaviors simply refer to interpersonal interactions with professional colleagues, whether or not they are performed competently.

Theory and Hypotheses

As a first step toward clarifying “when” networking behaviors predict voluntary turnover, we integrate our psychological perspective on networking with contemporary and traditional turnover theories to posit that internal networking behaviors primarily increase employees’ desires to remain with their employers, whereas external networking behaviors primarily increase employees’ opportunities to exit (Hom et al., 2012; March & Simon, 1958; Mitchell, Holtom, Lee, Sablinski, & Erez, 2001). Employees’ internal networking behaviors involve positive, mutually beneficial exchanges of interpersonal resources (Wolff & Moser, 2009). If employees value these interactions or the resources they provide, intraorganizational networking behaviors generate constituent forces (i.e., attachments to coworkers or organizational groups; Maertz & Griffeth, 2004) that increase their desires to stay at their organizations (unless employees’ internal contacts prefer to leave; e.g., Felps et al., 2009). On the other hand, employees who perform external networking behaviors tend to have more opportunities to exit their organizations as they build and maintain a professional network of colleagues who are willing or capable of offering interpersonal resources that are useful for retaining or acquiring alternative employment (i.e., increasing alternative forces;

Griffeth, Steel, Allen, & Bryan, 2005; Hom et al., 2012; Maertz & Campion, 2004). If employees have more opportunities to leave, they are likely to exit compared with those who have fewer opportunities for alternative employment, even if they do not have a strong preference for leaving (Lee & Mitchell, 1994; Lee, Mitchell, Holtom, McDaniel, & Hill, 1999). Therefore, we propose the following hypotheses:

Hypothesis 1a: Internal networking behaviors will reduce the likelihood of voluntary turnover.

Hypothesis 1b: External networking behaviors will increase the likelihood of voluntary turnover.

To answer the question of “why” networking relates to turnover, we identified four potential mediating variables that are closely associated with desires to remain (i.e., job satisfaction and job embeddedness) and opportunities to exit (i.e., perceived employment opportunities and job offers) based upon prevailing theories of turnover (Hom et al., 2012; Lee & Mitchell, 1994; Maertz & Campion, 2004; Mitchell & Lee, 2001). We propose that the negative influence of internal networking behaviors on voluntary turnover is carried by two complementary mechanisms, job satisfaction and job embeddedness, which reflect employees’ desires to remain with their employers (Hom et al., 2012). Specifically, we assert that employees’ internal networking behaviors increase desires to remain with their employers by increasing their job satisfaction and embedding them in their employing organizations. In addition, we argue that the positive association between external networking and voluntary turnover is largely explained by its relations with perceived and actual employment opportunities, which prompt employees’ decisions to leave. We present an overarching conceptual model in Figure 1, the rationale for which we discuss in greater detail in the following paragraphs.

To begin, we argue that internal networking behaviors reduce employees’ likelihood of turnover by increasing their desires to stay, which is closely linked to job satisfaction (Holtom, Mitchell, Lee, & Eberly, 2008; March & Simon, 1958). Employees’ internal networking behaviors increase employees’ perceptions of social support, which, in turn, increase or sustain their job satisfaction (and reduce their propensity to exit). More specifically, intraorganizational networking results in the exchange of instrumental resources (e.g., advice on how to handle difficult work tasks) or expressive resources (e.g., emotional support when dealing with a stressful work situation) that increase employees’ perceptions of coworker support (Kirmeyer & Lin, 1987; Vinokur, Schul, & Caplan, 1987), which improves or maintains their job satisfaction (Chiaburu &

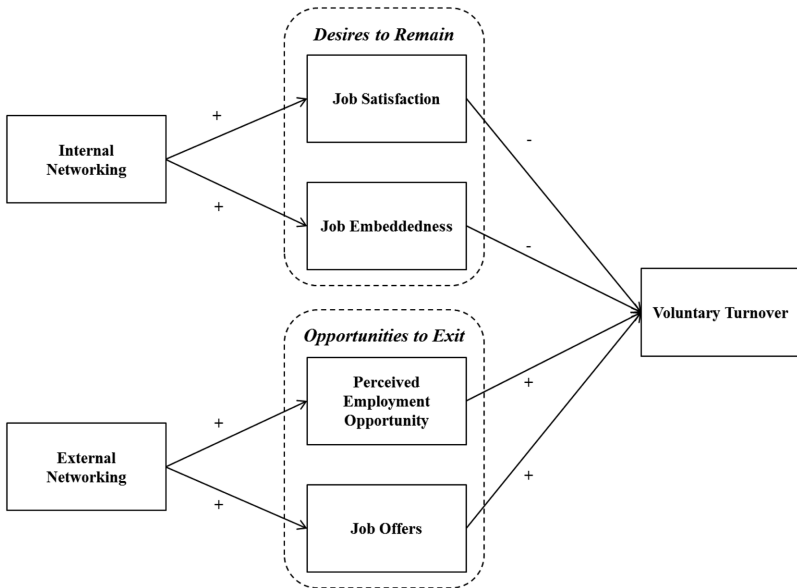


Figure 1: Conceptual Model of Networking Behaviors and Voluntary Turnover.

Harrison, 2008). When employees are more satisfied with their jobs, they are less likely to leave for alternative employment (Griffeth et al., 2000).

We also recognize that, just as internal networking may encourage job satisfaction, job satisfaction may encourage employees to build and maintain relationships with coworkers to sustain a positive and enjoyable work environment (Humphrey, Nahrgang, & Morgeson, 2007). Likewise, job *dissatisfaction* often encourages employees to withdraw from work (Hulin, 1991), which may include eschewing networking interactions with workplace colleagues. Taking these ideas together, internal networking and job satisfaction may reciprocally influence one another. However, we maintain that internal networking behaviors are likely to exhibit a stronger predictive relationship with job satisfaction (as opposed to the reverse causal ordering) because networking behaviors (in general) are primarily driven by the desire to acquire valued interpersonal resources that facilitate work-related activities (Wolff & Moser, 2009). Compared with this impetus, job satisfaction likely plays a lesser role in encouraging internal networking behaviors. Thus, we hypothesize the following:

Hypothesis 2: Job satisfaction partially mediates the relationship between internal networking and voluntary turnover.

Another means by which intraorganizational networking behaviors decrease the likelihood of voluntary turnover is through fostering employees' job embeddedness. Defined as "the extent to which people feel attached, regardless of why they feel that way, how much they like it, or whether they chose to be so attached" (Crossley, Bennett, Jex, & Burnfield, 2007, p. 1032), job embeddedness refers to employees' psychological attachments to their jobs/organizations that arise from three components: links, fit, and sacrifice. Links refer to the connections to people or groups; fit refers to the extent to which one's job fits with other aspects of one's life; and sacrifice refers to the relationships and activities that one would lose by leaving his or her employer (Mitchell et al., 2001).

Drawing from job embeddedness theory, we suggest three ways in which internal networking protects against turnover by engendering psychological attachments to the job or organization (even in the presence of job satisfaction). First, networking behaviors lead to the development of coworker relationships, which represent links within the organization that produce affective (i.e., positive emotional reactions to the organization), constituent (i.e., attachments to coworkers), and normative (i.e., pressure to stay from friends) motivations to remain with the organization (Maertz & Campion, 2004; Mitchell et al., 2001). Second, the exchange of interpersonal resources via networking helps employees develop greater comfort with work-related tasks and their social environments, which increases perceptions of "fit" with the organization (Cable & Parsons, 2001; Morrison, 2002). Finally, the links employees develop through internal networking behaviors represent sacrifices in the form of psychological costs associated with leaving the organization and thus serve as motivational forces that encourage individuals to stay (Maertz & Griffeth, 2004). Taking these ideas together, it is likely that internal networking behaviors encourage employees to remain with their employers via job embeddedness.

At the same time, prior research has shown that job embeddedness actually predicts a *decrease* in the rate of activities directed toward building social capital within the organization, which are akin to networking behaviors (Ng & Feldman, 2010). This finding illustrates that employee networking behaviors do not exist in static isolation but are dependent upon the needs of the employee. Once employees have established "links" at their employer (i.e., are embedded), they may have less of a need to continue *building* relationships, and they may shift their networking efforts toward *maintaining* and *using* their established network relationships so as to more easily access valued resources. Based on this rationale, we argue that internal networking behaviors not only promote job embeddedness but also sustain embeddedness after employees perceive themselves to be embedded. Thus, we propose the following hypothesis:

Hypothesis 3: Job embeddedness partially mediates the relationship between internal networking and voluntary turnover.

Finally, we assert that employees' external networking behaviors increase their likelihood of voluntary turnover by creating more opportunities to exit their organizations for alternative employment, which we represent as both *perceived* and *actual* (i.e., job offers) employment opportunities. We argue that employees' external networking increases their perceived employment opportunities by providing access to information about alternative job opportunities (i.e., informational resources). Indeed, research has shown that extraorganizational networking often allows the exchange of job-related information across firms (Van Hoye & Lievens, 2009), which leads to a greater awareness of alternative employment opportunities (Griffeth et al., 2005; Steel, 2002). The reverse may also be true; perceived employment opportunities may encourage individuals to engage in external networking behaviors in order to maintain alternative employment options or validate their perceptions of their employment opportunities. Despite this possibility, we maintain that external networking behaviors are an initial determinant of perceived employment opportunities, as networking is a fundamental career competency that contributes to people's perceptions of their abilities to find and retain employment (Eby, Butts, & Lockwood, 2003). With increased perceptions of alternative employment opportunities, employees' propensities to exit their employing organizations also increase (March & Simon, 1958; Mobley et al., 1979).

We also propose that employees' external networking behaviors increase the likelihood of voluntary turnover because they contribute to the attainment of job offers (Granovetter, 1995). In fact, external networking has been posited as an effective job search strategy (e.g., Wanberg, Kanfer, & Banas, 2000), and networking behaviors focused on job search activities have been shown to positively predict the number of subsequent job offers received (Van Hoye, Hooft, & Lievens, 2009). In addition, just as those who network with extraorganizational colleagues receive information about alternative job opportunities, they may also provide information about their competencies or desire for movement to their external contacts. In turn, employees' external contacts may use their influence with third-party contacts (i.e., a friend of a friend) to recommend the employee for a job. Indeed, research has shown that individuals often acquire jobs through third-party contacts (Bian, 1997) and that individuals are more likely to be offered a job when a friend refers them (Fernandez & Weinberg, 1997). Once a job offer is in hand, one is likely to accept it depending upon its attractiveness and perceived usefulness (Griffeth et al., 2000; Mobley et al., 1979). Based on these arguments, we propose the following hypotheses:

Hypothesis 4a: Perceived employment opportunities partially mediate the relationship between external networking and voluntary turnover.

Hypothesis 4b: Job offers partially mediate the relationship between external networking and voluntary turnover.

Method

Participants and Procedure

To increase the probability that the study sample participated in both external networking and internal networking behaviors, we contacted members of a professional association (Society for Industrial and Organizational Psychology or SIOP) registered in a professional recruitment database to participate in two waves of data collection via online survey. The first survey included measures of demographic information, networking behaviors, job satisfaction, job embeddedness, perceived employment opportunity, job search, and job offers. Of the 2,936 professionals contacted, 540 completed the first survey for a response rate of about 18.4%. From this initial sample, we selected 371 individuals who had been working in applied settings for at least 2 years. The remaining respondents either were not working in applied settings or had left their employing organization within the past 2 years. This 2-year time frame allowed us to control for potential socialization effects and changes in work attitudes that are commonly found in early employment stages, which could potentially affect turnover decisions in addition to networking efforts (e.g., Boswell, Boudreau, & Tichy, 2005; Fisher, 1986). Two years later (Time 2), we requested that these respondents fill out a second online survey, and 266 participants responded (a continued response rate of 72%). The second survey assessed whether participants had voluntarily left their employers in the past 2 years.

Both nonresponse bias and attrition bias could potentially influence the validity of study findings. To investigate nonresponse bias, we compared early survey responders with late survey responders, who may be considered a proxy for nonrespondents (Rogelberg & Stanton, 2007). We found no significant differences between early and late responders on study variables, suggesting that nonresponse bias is not present in our data. To evaluate the potential for attrition bias, we followed the recommendations of Goodman and Blum (1996). First, we regressed a dichotomous indicator of participant attrition at Time 2 (0 = *left the study*; 1 = *stayed in the study*) on our study variables using logistic regression; we found that participants were more likely to remain in the study when they were less embedded in their jobs ($B = -.49$, $p = .07$, $OR = .61$), were more

satisfied with their jobs ($B = .44$, $p = .06$, $OR = 1.55$), and did not perceive alternative employment opportunities ($B = -.18$, $p = .08$, $OR = .83$). These findings indicate that nonrandom sampling is present at Time 2. Second, we examined whether the study variable means of Time 2 respondents differed from nonrespondents. Compared to nonrespondents, Time 2 respondents were less likely to perform internal networking behaviors ($t(344) = -2.12$, $p < .05$), less likely to perceive that they had alternative employment opportunities available to them ($t(359) = -2.20$, $p < .05$), and less likely to search for alternative employment ($t(365) = -2.71$, $p < .05$). Finally, we compared the variances of study variables for the full sample (i.e., Time 1) and the final sample (i.e., Time 2) to evaluate whether attrition influenced variances of study variables, and we found that the variance of job search was restricted at Time 2 ($z = -2.46$, $p < .01$). Taken together, these findings reveal that attrition may bias study findings; we discuss the implications of attrition bias for this study in the Discussion section.

Measures

Below, we describe how the criterion variable (i.e., voluntary turnover) was measured followed by a list of predictors included in the study. All measures were assessed using a 1 = *strongly disagree* to 5 = *strongly agree* scale unless otherwise noted.

Voluntary turnover. Voluntary turnover was assessed at Time 2 by asking participants if they had voluntarily left their employer within the past 2 years. If they answered “Yes,” they were classified as voluntary leavers ($n = 25$).

Networking behaviors. In order to measure internal and external networking behaviors, we used 18 items selected from the 44-item scale developed by Wolff and colleagues (Wolff & Moser, 2006; Wolff, Schneider-Rahm, & Forret, 2011). The original 44-item scale is based upon two structural dimensions of *internal* and *external* networking and three functional dimensions of *building*, *maintaining*, and *using* contacts. Each item represents a networking behavior that captures one structural dimension and one functional dimension. Participants rated the frequency with which they engaged in each behavior on a four-point scale ranging from 1 = *never/very seldom* to 4 = *very often/always*. We used various item analysis techniques to identify 18 items that best represented the constructs of internal and external networking behaviors—nine items for each construct. Details of the item selection procedure and psychometric properties of the reduced scale are reported in Appendix A. To account for the underlying theory of the networking behaviors measure, we adopted a measurement model that contains two factors, *internal* and

external networking, each with three indicators—*building*, *maintaining*, and *using* scale scores, which showed acceptable fit ($\chi^2(8, N = 349) = 36.29, p < .001$, Comparative Fit Index [CFI] = .97, Tucker-Lewis Index [TLI] = .95, Root Mean Square Error of Approximation [RMSEA] = .10, Standardized Root Mean Square Residual [SRMR] = .05). We provide a more detailed rationale for the theoretical distinctions between internal and external networking behaviors in Appendix B as suggested by the action editor and an anonymous reviewer.

Job satisfaction. Job satisfaction was measured with the eight-item Abridged Job in General scale (Russell et al., 2004). Participants rated how “good” or “undesirable” their jobs were.

Job embeddedness. Participants’ job embeddedness was assessed using Crossley et al.’s (2007) seven-item global job embeddedness scale, which measures individuals’ attachment to their employers, regardless of the reasons they are attached. An example item is, “I feel tied to this organization.”

Perceived employment opportunity. Perceived employment opportunity was measured using the three-item “Ease of Movement” subscale from the Employment Opportunity Index which captures perceived availability of job alternatives on a 1 = *strongly disagree* to 7 = *strongly agree* scale (Griffeth et al., 2005). A sample item is, “Given my qualifications and experience, getting a new job would not be very hard at all.”

Job offers. Whether or not participants received one or more job offers from alternative employers was assessed using the following question: “Within the past 12 months, have you received one or more job offers?” (1 = *yes*, 0 = *no*). Sixty-six participants (19%) indicated that they had received at least one job offer.

Control variables. When predicting voluntary turnover, we controlled for age and organizational tenure because they have been shown to relate to voluntary turnover (Griffeth et al., 2000), and we controlled for firm size and education (0 = *master’s degree*; 1 = *professional or doctorate degree*) because they were related to networking behaviors in this sample. We assessed firm size using the following scale: 1 (1–50), 2 (51–100), 3 (101–250), 4 (251–500), 5 (501–1,000), 6 (1,001–3,000), 7 (3,001 or more employees). Age, organizational tenure, and firm size variables were transformed using either the square root or inverse transformation to ensure that the variable distributions approximated normality. We also controlled for job search effort because researchers have suggested that networking may be used as a job search strategy (e.g., Wanberg et al., 2000), and job search is a recognized turnover antecedent (Blau, 1993; Lee, Gerhart, Weller, & Trevor, 2008). Thus, controlling for job search provides more conceptual clarity in understanding the unique role of networking in predicting study outcomes. We measured job search effort using Blau’s (1993) four-item

measure in which participants rated items about the time and effort they devoted to job search during the prior 12 months. A sample item is, "Spent a lot of time looking for a job alternative."

Evaluating Common Method Variance and Discriminant Validity

We attempted to mitigate the influence of common method variance through our study design by assessing the dependent variable at a different time point. However, as all Time 1 variables were assessed using only one method (self-report), common method variance (CMV) may pose a threat to the empirical relationships between networking behaviors and job satisfaction, perceived employment opportunities, and job embeddedness.

We used the unmeasured latent method factor (ULMF) approach to assessing CMV, which is commonly used in studies with a similar research design as this study (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). We used confirmatory factor analytic techniques to compare a baseline model containing variables assessed using the self-report method at Time 1 (i.e., external networking, internal networking, job satisfaction, job embeddedness, perceived employment opportunities, and job search effort) with a ULMF model that includes the Time 1 variables as well as an unmeasured latent method factor (that was uncorrelated with the other latent variables). The ULMF model did not converge because of problems with identification. As an alternative model, we set all of the factor loadings of the method factor to equality, which has been adopted by some researchers as a means for achieving a convergent solution in these circumstances (cf. Podsakoff et al., 2003). The change in χ^2 statistic ($\Delta\chi^2(2, N = 370) = 19.87, p < .001$) revealed that the alternative ULMF model ($\chi^2(723, N = 370) = 1,539.74, p < .001$; CFI = .92; TLI = .91; RMSEA = .06; SRMR = .06) exhibited better fit compared to the baseline model ($\chi^2(725, N = 370) = 1,559.61, p < .001$; CFI = .92; TLI = .91; RMSEA = .06; SRMR = .06), which suggests that CMV is present in our data.

Similar to previous research (e.g., Boswell, Olson-Buchanan, & Harris, 2014), we conducted additional analyses, which suggested that CMV was unlikely to influence study results. First, we found that the variance attributable to an ULMF (8%) was below the amount typically found in similar studies (Carlson & Kacmar, 2000; Williams, Cote, & Buckley, 1989). Second, we found that the differences between the standardized factor loadings of the baseline and ULMF models were minimal (average difference was .058; largest difference was .126) and comparable to previous research (Boswell et al., 2014). Finally, we found that the RMSEA values of each model had overlapping confidence intervals, providing evidence that the baseline model is more parsimonious. Taking these findings together, we concluded that common method variance posed a limited threat to our study results. Nonetheless, we note that this

procedure only accounts for CMV attributable to a common correlation across all variables within a single method and does not address CMV caused by other factors, such as respondents' active information processing and self-generated validity (Feldman & Lynch, 1988).

In addition, we investigated distinctiveness of the six variables measured at Time 1 by running a series of confirmatory factor analytic models (Brown, 2006). The results of these analyses are reported in Table 2. We found that a six-factor model, where all Time 1 variables were modeled separately, fit better than theoretically plausible alternative models, which provides some evidence that the Time 1 variables are empirically distinguishable.

Analytic Strategy

To test Hypotheses 1–4, we used a structural equation modeling (SEM) approach with a weighted least squares mean and variance adjusted estimation procedure in Mplus version 7.1, which converts a dichotomous dependent variable (i.e., voluntary turnover) to a latent continuous variable while simultaneously estimating the relationships among a set of variables of interest (e.g., multiple independent and mediating variables). In our specific case, this approach enabled us to evaluate the respective roles of internal and external networking behaviors in the turnover process by simultaneously examining associations among networking, turnover antecedents, and turnover as opposed to examining these links in artificial isolation. Moreover, this approach is advantageous over logistic regression (which is often used to analyze dichotomous outcomes) because it allows for the inclusion of latent internal and external networking behaviors variables that incorporate building, maintaining, and using networking behaviors scale scores as indicators. One potential drawback of this approach is that it does not yield odds ratios, which are a useful metric for evaluating the likelihood of a dichotomous event (e.g., turnover) when a predictor is of a certain value. Thus, when investigating Hypothesis 1, we calculated the odds ratio for each predictor by dividing the odds of turnover when there is a one standard deviation increase in a study variable with all other variables held constant at their means by the odds of turnover when all variables are held constant at their means.¹

¹We calculated the odds for each variable using the following equation: $P = 1 - \text{probability}([\text{threshold} - z]/\sqrt{\theta})$, where threshold = the threshold of the dichotomous event, θ = the residual variance of the dichotomous event, and $z = a*\eta_1 + b*\eta_2 \dots n*x$, where $a, b, \dots n$ = the unstandardized regression coefficient associated with a particular variable; $\eta_1, \eta_2 \dots \eta_N$ = the level of the variable (in this case, we chose the mean for all variables); x = the level of the variable being evaluated (in our case, one standard deviation above the mean; Muthén, 2005).

TABLE 2
Comparison of Measurement Models for Study Variables

Model	Model description	χ^2	df	$\Delta\chi^2$	Δdf	CFI	TLI	RMSEA	SRMR
Baseline six-factor model	Internal networking, external networking, job satisfaction, job embeddedness, perceived employment opportunity, and job search effort as separate factors	1559.61	725			.92	.91	.06	.06
Model 1	Five factors: internal networking and external networking combined into one factor	2158.28	730	598.67**	5	.86	.85	.07	.08
Model 2	Five factors: job satisfaction and job embeddedness combined into one factor	2132.19	730	572.58**	5	.86	.85	.07	.06
Model 3	Five factors: employment opportunity and job search effort combined into one factor	2031.34	730	471.73**	5	.87	.86	.07	.08
Model 4	Four factors: internal networking, job satisfaction, and job embeddedness combined into one factor	3189.10	734	1629.49**	9	.76	.74	.10	.12
Model 5	Four factors: external networking, perceived employment opportunity, and job search effort combined into one factor	4256.02	734	2696.41**	9	.65	.63	.11	.14
Model 6	Two factors: internal networking, job satisfaction, and job embeddedness combined into one factor and external networking, perceived employment opportunity, and job search effort combined into one factor	5858.66	739	4299.05**	14	.49	.46	.14	.17
Model 7	All items combined into one factor	6844.77	740	5285.16**	15	.39	.36	.15	.17

Note. CFI = Comparative Fit Index; TLI = Tucker-Lewis Index; RMSEA = Root Mean Square Error of Approximation; SRMR = Standardized Root Mean Square Residual.
 ** $p < .01$.

We tested the hypothesized model with job search effort included as a statistical control variable; this model fit the data well ($\chi^2(43, N = 365) = 53.71, p = .13$; CFI = .98; TLI = .98; RMSEA = .03). To account for the measurement error in our study variables, we used factor scores based on regression to approximate the underlying factors of the turnover antecedents (i.e., job satisfaction, job embeddedness, perceived employment opportunities, and job search effort). The factor scores represent the shared variance between the underlying factor and the standardized, observed items weighted by regression coefficients; they are standardized with a mean of zero and a standard deviation of one (DiStefano, Zhu, & Mîndrilă, 2009; Grice, 2001). When specifying the structural model, we allowed internal networking to correlate with perceived employment opportunities to account for the associations between internal networking and perceived marketability, which is closely associated with perceived employment opportunities (Eby et al., 2003). In addition, in accordance with turnover theories (e.g., Hom et al., 1992; Mobley et al., 1979), we allowed job satisfaction to correlate with job embeddedness, and perceived employment opportunities to correlate with job offers. When we included demographic variables (i.e., age, education, tenure, and firm size) in the SEM model as statistical controls, they were not associated with voluntary turnover at statistically significant levels, and they did not alter the statistical significance of the substantive results. Therefore, we retained and interpreted a structural model without demographic variables included.

For Hypotheses 2–4, we incorporated the bootstrapping procedure with 5,000 samples and 90% bias-corrected confidence intervals (CI) to test the indirect effects of networking behaviors on voluntary turnover (MacKinnon, Lockwood, & Williams, 2004). The bootstrapping procedure resamples the data with replacement to generate a distribution that is used to estimate model parameters. This technique is well suited for testing mediation because it has higher power to detect effects (the parameter estimates are derived from a distribution based on 5,000 samples), and it is less sensitive to nonnormal distributions (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002; Preacher & Hayes, 2008).

Results

The means, standard deviations, and intercorrelations of study variables are shown in Table 3. To examine the relationships between internal and external networking behaviors and voluntary turnover (Hypotheses 1a and 1b), we tested a path model (with a measurement component included for both *internal* and *external* networking behaviors) where internal and external networking behaviors were directly related to voluntary turnover; path estimates and odds ratios of study variables are shown in Table 4.

TABLE 3
Means, Standard Deviations, Intercorrelations of Study Variables

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11
<i>Time 1</i>													
1. Age (sqrt)	6.37	.76	—										
2. Education	.67	.47	.37**	—									
3. Tenure (sqrt)	2.37	1.11	.43**	.16**	—								
4. Firm size (inv)	.46	.36	.01	-.05	.04	—							
5. Job search effort ^b	.02	1.00	-.07	-.12*	-.26**	-.07	—						
6. Internal networking ^b	—	.52	.10	.07	.09	.03	-.01	—					
7. External networking ^b	—	.55	.15**	.22**	-.03	.04	-.04	.52**	—				
8. Job satisfaction ^a	-.10	.98	.16**	.14**	.07	.08	-.37**	.30**	.17**	—			
9. Job embeddedness ^a	-.14	.92	.14**	.14**	.31**	.16**	-.43**	.32**	.16**	.69**	—		
10. Perceived employment opportunity ^a	-.01	.92	-.01	.08	.07	-.06	-.21**	.22**	.27**	.24**	.19**	—	
11. Job offer	.18	.38	.03	.08	-.12*	.02	.17**	.19*	.30**	-.06	-.12*	.21**	—
<i>Time 2</i>													
12. Voluntary turnover	.09	.29	-.15*	-.10	-.15*	-.07	.29**	-.16	.09	-.19**	-.30**	-.04	.24**

Note. ^aIndicates a standardized factor score. ^bIndicates a latent variable. Sqrt and Inv indicate that the variables were transformed using the square root or the inverse transformation, respectively.
* $p < .05$, ** $p < .01$.

TABLE 4
Path Estimates of Direct Relationships of Networking Behaviors on Voluntary Turnover

	<i>B</i>	<i>SE</i>	β	OR	<i>R</i> ²
Control variables					.20
Age (sqrt)	-.31	.28	-.21	.58	
Education	-.06	.34	-.03	.94	
Tenure (sqrt)	-.02	.18	-.01	.96	
Firm size (inv)	-.30	.36	-.10	.79	
Job search effort ^a	.41**	.12	.32	2.40	
Networking behaviors					.09
Internal	-.78**	.30	-.36	.38	
External	.64**	.24	.32	2.14	
Total <i>R</i> ²					.29

Note. Turnover coded as 1, other responses coded as 0. ^aIndicates a standardized factor score. Sqrt and Inv indicate that the variables were transformed using the square root or the inverse transformation, respectively.

** $p < .01$. * $p < .05$.

Hypothesis 1a proposed that internal networking behaviors would reduce the likelihood of voluntary turnover. This hypothesis was supported: Internal networking behaviors were associated with a reduction in the likelihood of voluntary turnover. To evaluate the extent to which internal networking behaviors contribute to the prediction of turnover, we calculated the odds of turnover for a one standard deviation *decrease* in internal networking behaviors when the remaining predictors are held constant at their respective means. With all else held equal, reducing the frequency of internal networking behaviors by one standard deviation was associated with a 2.40 times increase in the likelihood of voluntary leaving ($OR = 2.40$). In other words, reducing internal networking by one standard deviation was associated with a 140% increase in the likelihood of turnover, *ceteris paribus*. Hypothesis 1b proposed that external networking would increase the likelihood of voluntary turnover. This hypothesis was also supported: External networking behaviors were associated with a rise in the likelihood of voluntary turnover. More specifically, holding the other predictors constant at their means, a one standard deviation increase in the frequency of external networking behaviors was associated with a 2.14 times increase in the likelihood of voluntary turnover or a 114% increase in the odds of turnover.

Hypotheses 2 and 3 proposed that the negative association between internal networking behaviors and voluntary turnover would be partially mediated by job satisfaction and job embeddedness, respectively. Although we did not find support for Hypothesis 2 ($B = .05$, 90% CI $[-.20, .32]$), we did find support for Hypothesis 3; job embeddedness accounted for the relationship between internal networking behaviors and voluntary

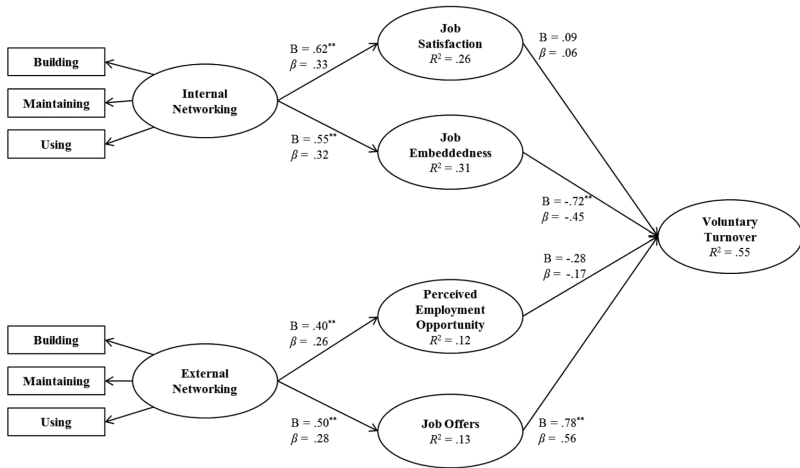


Figure 2: Unstandardized and Standardized Path Estimates for the Hypothesized Model of Networking and Voluntary Turnover.

Note. The unstandardized path estimates are denoted by the capital B, and the standardized path estimates are denoted by the beta symbol.

Statistical control: Job search effort.

** $p < .01$.

turnover, as evidenced by a 90% confidence interval that did not contain zero ($B = -.40$, 90% CI $[-.74, -.14]$). We also note that internal networking behaviors were positively associated with both job satisfaction and job embeddedness, but only job embeddedness exhibited a significant negative relationship with voluntary turnover (see Figure 2).

Finally, we proposed that the positive association between external networking behaviors and the likelihood of voluntary turnover would be partially mediated by perceived employment opportunities (Hypotheses 4a) and job offers (Hypotheses 4b). Although we did not find support for the mediating role of perceived employment opportunities ($B = -.11$, 90% CI $[-.38, .05]$), we did find that job offers partially mediated the relationship between external networking behaviors and voluntary turnover ($B = .39$, 90% CI $[.14, .95]$). Moreover, consistent with our theoretical rationale, external networking behaviors were positively associated with perceived employment opportunity and job offers. However, only job offers were positively associated with voluntary turnover.

Supplementary Analyses

The research design of this study leaves open the potential for reverse causality because the independent variables (i.e., networking behaviors)

and mediators (i.e., job satisfaction, job embeddedness, and perceived employment opportunity) were measured concurrently. Although we addressed this possibility logically when introducing the rationales for these hypotheses and empirically by testing for common method variance, we also examined the potential for reverse causality by evaluating five alternative models where job satisfaction and job embeddedness are positioned as predictors of internal networking and perceived employment opportunities is positioned as a predictor of external networking behaviors both separately and simultaneously. Both the hypothesized and the alternative models fit the data similarly, leaving open the possibility of reverse causality. We discuss the implications of reverse causality for our findings and offer directions for future research to shed light on the causal ordering of these variables in the Discussion section.

Discussion

In an effort to shed light on when and why employee networking behaviors influence voluntary turnover, this study examined the direct and indirect associations between two types of employee networking behaviors—internal and external networking—and voluntary turnover. Specifically, this study clarified how internal and external networking behaviors play distinct roles in deterring and facilitating voluntary turnover processes by linking employees' internal and external networking behaviors to their turnover decisions 2 years later and testing four turnover antecedents as potential mediating mechanisms of the networking–voluntary turnover relationships. Below, we address how this study contributes to the burgeoning literature on networking and to the more mature body of research on voluntary turnover.

To begin, this study accomplishes the goal of clarifying how different types of networking behaviors relate to voluntary turnover. Although previous research has yielded indefinite findings (i.e., Wolff & Moser, 2010), this study reveals that internal networking behaviors are associated with a reduced likelihood of voluntary turnover, and external networking behaviors are associated with an increased likelihood of voluntary turnover. Based on these findings, this study indicates that employees' internal and external networking behaviors have very different organizational implications. Indeed, employee networking, in general, functions as a double-edged sword by simultaneously exerting opposing influences upon one's desire and ability to leave the organization. On the one hand, employees' internal networking behaviors tended to increase their desires to remain, which is closely associated with job satisfaction and job embeddedness. On the other hand, employees' external networking behaviors tended to increase their opportunities to leave. Together, these

results suggest that whether one is networking with colleagues *within* or *outside* of the organization is a critical distinction because each type of networking behavior promotes access to different interpersonal resources and therefore is uniquely associated with voluntary turnover antecedents and decisions.

Drawing from both traditional and contemporary turnover models, this study also offers a theoretical explanation and empirical evidence for why internal and external networking behaviors differentially influence voluntary turnover decisions. Extending previous research that has investigated direct relationships between networking and turnover (Wolff & Moser, 2010), study findings suggest that employees' internal networking behaviors reduce their propensity to voluntarily leave by increasing their desires to remain with their employers (represented by job embeddedness), whereas employees' external networking behaviors increase their likelihood of turnover by increasing their opportunities to exit (represented by job offers). By simultaneously investigating multiple mediating mechanisms, this study helps address the question of why internal and external networking behaviors relate to voluntary turnover: through increasing desires to remain and opportunities to leave.

Finally, we present empirical evidence that contributes to researchers' limited knowledge of the antecedents of job embeddedness (cf. Holtom, Mitchell, & Lee, 2006; Lee, Burch, & Mitchell, 2014). Extant job embeddedness research offers few suggestions for what predicts job embeddedness (e.g., leader–member exchange; Harris, Wheeler, & Kacmar, 2011). This study offers some insight on this matter: Our findings suggest that when employees build, maintain, and use their professional relationships within their employing organizations, they are likely to feel embedded in their organizations. Rather than addressing external factors that act on individuals' decisions to leave, we identify a proactive behavior (i.e., networking) within employees' control that is associated with whether or not they prefer to stay. As such, this is one of the few studies that investigates how employees can take an active role in shaping their reactions toward their work surroundings and, therefore, their propensity to turnover (Judge, Hulin, & Dalal, 2011).

Practical Implications

The findings of this study also provide insights into whether and how organizations (and individuals) may promote or manage employee networking behaviors and voluntary turnover. First, our findings suggest that employee networking has both positive and negative implications for organizational functioning: Employees' external networking may lead to higher turnover rates, whereas internal networking tends to be

more beneficial for the organization (higher job satisfaction and job embeddedness and lower likelihood of turnover). In light of these results, organizations may consider the frequency of networking behaviors to be an important indicator of employees' inclinations to turnover. External networking in and of itself does not necessarily indicate that employees desire or plan to leave, but extreme external networking (i.e., one standard deviation above average) may indicate an increased propensity to exit. Likewise, internal networking behaviors at extremely low levels may indicate employees' impending job withdrawal. Thus, organizations may consider identifying, monitoring, and managing employees who engage in extensive external networking behavior (relative to internal networking behavior) or limited internal networking behaviors, which may translate to substantial monetary savings depending on the positions of the employees (e.g., entry vs. mid-level), employees' performance levels, and the size of the organization (Allen et al., 2010; Cascio, 2006).

Moreover, these results suggest that organizations may need to more seriously consider not only whether employees network, but also *with whom* they network. As such, organizations should consider investing more resources in creating networking opportunities among their own employees (e.g., online community for the organization, mentoring programs, company events). As an example, Forret (2013) suggested that organizations implement cross-functional teams, project groups, and job rotation to facilitate the development of extensive intraorganizational networks. Such internal networking opportunities may increase positive work experiences, which contribute to positive workplace evaluations (i.e., job satisfaction) and promote psychological attachments (i.e., job embeddedness; Holtom et al., 2006). As such, internal networking may not only mitigate turnover (by creating reasons to stay) but also improve employees' experience of work (e.g., Weiss & Cropanzano, 1996).

On a related note, given that job embeddedness explained why employee internal networking behaviors reduced the likelihood of voluntary turnover, organizations may also identify human resource management practices that increase employees' inducements to remain with the organization (e.g., generous benefit packages; Batt & Colvin, 2011). Along these lines, Holtom et al. (2006) offer other suggestions for increasing job embeddedness, such as promoting from within (associated with fit), sponsoring social events (associated with links), and providing on-site services (associated with sacrifice). Moreover, given that job offers mediated the relationship between external networking and voluntary turnover, human resources representatives may consider ways of counteracting employees' offers for alternative employment by developing a system for posing competitive counteroffers or investing in competitive retirement investments or securities (e.g., 401K). Finally, our results demonstrate the benefits of

networking for one's perceived and actual ability to get a (better) job, which may behoove vocational and career counselors who may consider recommending networking as an effective practice to increase job search self-efficacy and effectiveness (Boswell, Zimmerman, & Swider, 2012; Van Hoye et al., 2009).

Limitations and Future Directions

The current research design has some limitations that should be considered when interpreting the results of this study. First, we collected data across two time points in order to reduce problems of common method variance, but the study is still correlational and the results should be interpreted accordingly. First and foremost, the current research design is unable to provide conclusive evidence of the causal relationship between networking and the proposed mediators, as they were measured concurrently. Although there is compelling theoretical evidence in support of the direction of the proposed empirical relationships as discussed earlier in this article, it is also possible that job satisfaction and job embeddedness promote one's efforts toward internal networking and that perceived employment opportunities lead to more active engagement in external networking behaviors. Therefore, we encourage future research efforts with a more rigorous, longitudinal design—that is, one that measures networking behaviors and the proposed mediators both concurrently and repeatedly (at least three times; Ployhart & Ward, 2011), which would allow the comparison of the hypothesized causal effects of networking behaviors on the theorized mediators with the reversed causal effects.

Second, the time-separated design of this study also opens up the possibility for attrition bias to influence study findings. Follow-up analyses revealed that participants who remained in this study were more likely to be satisfied with their jobs and were less likely to be embedded in their jobs and to perceive alternative employment opportunities. We also found that study participants who completed the survey at Time 2 were less likely to perform internal networking behaviors and to perceive alternative employment opportunities than their nonresponsive counterparts. In general, attrition bias threatens the validity of research findings by underestimating, overestimating, or generating spurious relationships between study variables (Goodman & Blum, 1996). Given the prior empirical evidence for many of the relationships addressed in this study, it is unlikely that our findings are spurious; rather, the direct and indirect relationships of networking and turnover antecedents with turnover may be either inflated or understated, which limits the generalizability of these findings to all individuals who network and leave their organizations. As such, future research should replicate these findings in another sample.

Third, although we made an effort to include alternative explanatory variables for turnover in our theorizing and as statistical controls, there may still be factors that influence employees' decisions to turnover (e.g., marital status, school-aged children, or financial inducements) for which we were unable to account in our analyses. Thus, there is the possibility that there are alternative explanations for our findings. Finally, we selected a sample working in a particular profession (i.e., industrial and organizational psychologists) in order to achieve sufficient variance on the networking measures, which may limit the generalizability of our findings to other occupational contexts.

In addition to accounting for these limitations, future research should build upon these findings to extend researchers' knowledge of networking behaviors and voluntary turnover phenomena. First, given that both networking and turnover processes take place over long periods of time, the relationships among networking and turnover antecedents are likely more complicated than what we initially proposed and investigated in this study. Future research should rigorously investigate dynamic interplay of networking behaviors, work attitudes, and labor market perceptions as they fluctuate over time to promote or deter voluntary turnover by adopting longitudinal research designs where networking behaviors, desires to remain, and opportunities to exit are measured repeatedly (at least three times). Such research designs would be capable of teasing apart whether networking behaviors are associated with an increase in desires to remain and opportunities to exit over time (cf. Wolff & Moser, 2009).

Second, although our study focuses on clarifying the conditions under which networking behaviors may have potentially negative implications for organizations (i.e., voluntary turnover) relative to the benefits that accrue for individuals, future research should consider other potentially dysfunctional consequences of networking behaviors to more fully understand the implications for organizations. As an example, under the guise of networking, employees may engage in counterproductive work behaviors (e.g., gossip) or other work-avoidant behaviors, which may hinder departmental or organizational functioning. Related to this, future research should systematically investigate whether the benefits of networking (e.g., increased exchange of instrumental information) outweigh unintended outcomes (e.g., voluntary turnover). For example, research has indicated that networking may function to isolate certain minority groups (i.e., ethnic minorities, women), resulting in less access to resources than their (White, male) counterparts (Ibarra, 1995). In this case, the benefits of networking for the individual may have negative implications not only for organizations but also for society.

Future research should also consider investigating the relative advantages external networking poses for organizational functioning.

Our findings suggest that employees' external networking behaviors represent a potential risk to organizations because they are positively associated with voluntary turnover. However, many benefits may result from building, maintaining, and using relationships with professional colleagues outside of one's employing organization. For example, within the current sample of industrial and organizational psychologists, external networking may be used to exchange information related to scientific advancements and/or benchmarking, which may translate into an organizational advantage. Thus, future research may delve into the specific types of interpersonal resources exchanged in networking interactions to provide insights into whether and how employees' external networking behaviors may have positive implications for organizations.

Third, although bivariate correlations found in our study support the suggestion that job satisfaction and perceived employment opportunities are theoretically meaningful mediators in the networking–turnover relationships, they were no longer significant predictors of turnover when considered simultaneously with other study variables in the structural equation model. This is consistent with prior research findings that the predictive relationship between job satisfaction and turnover disappears when job embeddedness is included (Jiang et al., 2012) and that perceived ease of movement no longer predicts turnover once actual obtainment of alternative offer is also taken into account (Griffeth et al., 2005). Research should further probe the relative importance of these constructs in comparison with other attitudinal constructs (e.g., organizational commitment, perceived organizational support) and economic factors (e.g., labor market conditions) in predicting withdrawal and turnover to clarify which variables have the most impact on one's decisions to leave. In addition, it is possible that perceived employment opportunities predict leaving without a job offer in hand when employees have a strong desire to leave. Therefore, there may be opportunities for future research to clarify whether and how desires and alternative opportunities interact with one another to predict different forms of voluntary turnover (e.g., Lee & Mitchell, 1994).

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APPENDIX A

Shortening Networking Behavior Measures

Overview. The purpose of this study was to shorten networking behaviors measures to a manageable length. To ensure the reduced measures adequately tap into the networking behaviors constructs, we examined their relations to theoretically relevant personality constructs.

Participants and procedures. Data were collected through Amazon Mechanical Turk, which has been found to be a source of high-quality data (e.g., Buhrmester, Kwang, & Gosling, 2011). We recruited 370 individuals to participate in an online survey for a nominal reward. Participants' average age was 36. Sixty-five percent of participants were women. Seventy-seven percent of participants were White, 8% were Asian, 8% were Black, and 4% were Hispanic. Thirty-four percent of respondents earned a bachelor's degree, 30% attended some college or earned an associate's degree, 18% had an advanced degree (master's, doctoral, professional), and about 10% earned a high school diploma.

Measures. Information about the original networking behaviors scale is reported in the main text of this manuscript. Extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience were measured using 44 items from the Big Five Inventory (John & Srivastava, 1999) rated on a five-point Likert scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*.

Item reduction. To identify items for removal, we ran an exploratory factor analysis (maximum likelihood estimation with an oblique, promax rotation) on Wolff and Moser's (2006) original internal and external networking behavior items. Using Velicer's MAP method of parallel analysis, five factors were retained (Velicer, 1976). However, this factor solution was not easily interpretable as the items did not cleanly load on factors representing the six networking behaviors types produced by the original scale (Wolff & Moser, 2006). There are two complementary explanations for these findings. First, this factor solution revealed that certain internal and external networking behaviors items that tap into the same networking function (e.g., maintaining) loaded on the same factor, which is due to the fact that network relationship development, regardless of the focus

of networking being with internal or external contacts, follows the same underlying process of building, maintaining, and using network contacts (Porter & Woo, 2015). That is, the actual behaviors that individuals use to build, maintain, and use relationships with internal and external contacts are quite similar. Given the similarities in the behaviors themselves, it is difficult to empirically detect fine grained distinctions between the foci of networking behaviors (i.e., internal or external contacts) by investigating the behaviors in isolation (e.g., using exploratory factor analysis).

Second, these findings may also be attributed to the fact that this set of scales was originally developed through multidimensional scaling (MDS; Wolff et al., 2011), which has different underlying assumptions and purposes than traditional psychometric techniques based on the common factor model. Whereas traditional EFA is used to identify a set of latent factors that are clearly distinguishable from one another based on their shared variance, MDS is used to identify underlying dimensions that explain similarities (or distances) between a set of variables in geometric space (Borg & Groenen, 2005). Using MDS, the original scale was found to have three dimensions, one representing item difficulty, a second representing the structural facet of internal and external networking behaviors, and a third representing the functional facets of building, maintaining, and using. Thus, these items are likely to be strongly related to one another, and therefore, difficult to empirically distinguish using EFA, as is often the case when a scale is developed using MDS (Davison & Skay, 1991).

Following recommendations by Hinkin (1998), we evaluated multiple criteria to identify items that were suitable candidates for removal. Namely, we considered (1) cross-loadings (i.e., whether an item loaded on multiple factors with similar magnitudes); (2) interitem correlations (i.e., whether items showed strong correlations with other items: interitem correlations for internal networking behaviors ranged from .22 to .69, and those for external networking behaviors ranged from .16 to .62); (3) initial item communalities (i.e., whether items showed strong communalities, which ranged from .54 to .64 for internal networking behaviors and from .52 to .70 for external networking behaviors); and (4) whether items adequately sampled from the content domain (i.e., all functional dimensions). Based on these criteria, we retained nine items for each scale (example items are reported in Table 1). We then conducted another round of exploratory factor analysis on the retained items. Velicer's MAP method of parallel analysis suggested that a one-factor solution was most appropriate. We attributed this finding to the similarities in the networking behaviors and the original scale development technique.

Confirmatory factor analysis. We also conducted a confirmatory factor analysis of the selected items (using the same dataset described above) to evaluate whether a six-factor model (with separate structural and

TABLE A1
Means, Standard Deviations, Reliabilities, and Intercorrelations of Study Variables

	M	SD	1	2	3	4	5	6	7	8	9
1. Age	36	12.50	-								
2. Gender	.35	.48	-.02	-							
3. Extraversion	3.10	.88	.03	.00	(.91)						
4. Neuroticism	2.60	.80	-.17**	-.04	-.37**	(.89)					
5. Conscientiousness	4.01	.64	.21**	-.12*	.28**	-.50**	(.85)				
6. Agreeableness	3.86	.59	.16**	-.08	.27**	-.51**	.41**	(.80)			
7. Openness	3.78	.60	.11*	.02	.21**	-.10	.18**	.19**	(.84)		
8. Internal networking	2.28	.61	.03	.13*	.51**	-.21**	.14**	.24**	.32**	(.87)	
9. External networking	2.05	.64	-.02	.13*	.41**	-.17**	.05	.15**	.25**	.76**	(.88)

Note. Gender: 0 = female, 1 = male. Reliability estimates are along the diagonal.
* $p < .05$. ** $p < .01$.

functional facets), a three-factor model (with separate functional facets), a two-factor model (with separate structural facets), or a one-factor model best fit the data. We found that the six- and three-factor models converged to inadmissible solutions; the correlation matrices were not positive definite. When we compared the other two models, we found that the two-factor model ($\chi^2(134, N = 370) = 507.32, p < .001, CFI = .88, RMSEA = .09$) fit better than the one-factor model ($\Delta\chi^2(1, N = 370) = 98.48, p < .01; \chi^2(135, N = 370) = 605.80, p < .001, CFI = .85, RMSEA = .10$). Using the data set from the main study, we found similar results: The six- and three-factor models were not tenable due to a nonpositive definite matrix, and we found that the two-factor ($\chi^2(134, N = 349) = 559.18, p < .001, CFI = .86, RMSEA = .10$) model provided a better fit to the data than a one-factor model ($\Delta\chi^2(1, N = 349) = 880.92, p < .01; \chi^2(135, N = 349) = 1440.10, p < .001, CFI = .67, RMSEA = .15$). Although the fit indices do not reach commonly accepted cut-off values (e.g., Hu & Bentler, 1999), these findings suggest that the refined networking behaviors scales are capable of distinguishing between internal and external networking behaviors.

Relationships with personality variables. To further evaluate the construct validity of the reduced scales, we examined bivariate relationships between internal and external networking behaviors and the Big Five personality characteristics. Means, standard deviations, scale reliabilities, and intercorrelations of study variables are shown in Table A1. Generally, the pattern of results was consistent with previous research (Forret & Dougherty, 2001; Wolff & Kim, 2012): Both internal and external networking were positively related to extraversion, agreeableness, and openness to experience and negatively related to neuroticism. From a theoretical standpoint, we expect one's personality characteristics to relate to both internal and external networking similarly as the underlying process of networking (i.e., building and maintaining network contacts) is the same regardless of whether one is networking with contacts within or outside of one's employing organization (Porter & Woo, 2015). As such, when considered separately, internal networking or external networking likely captures an individual's tendency to network, in general.

APPENDIX B

A Modified Two-Factor Measurement Model for Internal and External Networking Behaviors

Given that the theoretical emphasis of the main study is on teasing apart the unique relationships of internal and external networking with turnover

antecedents and turnover, we adopted a modified two-factor measurement model of networking where internal and external networking are specified as two separate factors (each represented by building, maintaining, and using scale scores) as an alternative to the six-factor measurement model that was originally proposed by Wolff and Moser (2006). For the current research purposes, distinguishing between the specific functions of networking was of less concern, because the same underlying process of networking (represented by building, maintaining, and using functions) is applicable regardless of whether one is networking with internal or external network contacts. Rather, our emphasis was on with whom employees were networking. Networking directed toward a specific set of network contacts (either internal or external) generates access to different types of resources from each set of contacts, and it is through these different resources that internal and external networking have their differential relationships with employee outcomes (regardless of which function is at play).

To empirically evaluate whether it was appropriate to use the refined scales to assess the structural dimensions of internal and external networking behaviors, we compared our hypothesized two-factor measurement model where internal and external networking are modeled as separate factors with building, maintaining, and using scale scores as indicators ($\chi^2(8, N = 349) = 36.29, p < .001$; CFI = .97, TLI = .95, RMSEA = .10, SRMR = .05) to a one-factor model ($\chi^2(9, N = 349) = 284.40, p < .001$; CFI = .73, TLI = .55, RMSEA = .30, SRMR = .12). We found that the two-factor model fit substantially better ($\Delta\chi^2(1, N = 349) = 248.11, p < .001$), providing evidence that internal and external networking behaviors are distinct from one another in our data.

When we adopted this modified measurement model, there was evidence that internal and external networking exhibited similar relationships with the same construct when considered individually as well as moderate to strong relationships with one another in both the scale refinement (see Appendix A) and main study samples. Here we discuss why these findings emerged, which we hope will provide insights for future research investigating internal and external networking behaviors. First, we found that internal and external networking behaviors had similar bivariate relationships with study outcomes, but they had differential relationships with these outcomes when considered simultaneously, which is similar to the findings of previous research investigating internal and external networking (e.g., MacCallum, Forret, & Wolff, 2014). These findings are likely a function of both internal and external networking measures assessing a general behavioral pattern of networking. That is, when considered individually, the unique effects of internal or external networking may not

be apparent. Thus, to isolate the unique effects of internal and external networking on individual outcomes, multivariate analyses are necessary.

Second, we also found moderate to strong relationships between internal and external networking behaviors in both the main study and the scale refinement study samples. We attribute these findings to the fact that both internal and external networking follow the same underlying networking process (i.e., building, maintaining, and using contacts). However, we argue that the similarities between the underlying processes of internal and external networking should not obscure the theoretical distinctiveness of these two forms of networking: As mentioned above, internal and external networking behaviors are conducted with two distinct sets of contacts that offer access to different resources, which differentially contribute to employee outcomes. Moreover, consistent with this study, in the applied psychology and management literatures, there are multiple instances of constructs that are strongly associated with one another but that differentially predict criteria and are, therefore, considered theoretically distinct (e.g., person–organization fit and needs–supplies fit; Cable & DeRue, 2002).

In general, we argue that both the functional (i.e., building, maintaining, and using) and structural (i.e., internal and external) dimensions of networking are valuable and valid approaches to conceptualizing and investigating networking, and the choice of which conceptualization is appropriate is dependent upon the theoretical emphasis of a study. For instance, differentiating specific functions of networking behaviors is particularly useful when a study is geared toward understanding the processes underlying network relationship development over time, as each function plays an integral role in relationship initiation and growth (Porter & Woo, 2015). On the other hand, distinguishing between internal and external networking is more appropriate for studies focused on delineating the unique roles of different sets of network contacts in promoting or deterring individual outcomes.