

# The impact of energizing interactions on voluntary and involuntary turnover

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**Abstract.** In this paper we build from the theory of energetic activation to highlight the role energizing interactions play in relation to performance and turnover. We theorize that the association between energizing interactions within organizations and turnover is mediated by individual performance. We test our hypotheses using longitudinal network data collected annually within the IT department of a global engineering consulting firm over a four-year period. Our study shows that when an individual perceives their interactions with others inside the organization as increasing their level of energetic activation, they have a reduced likelihood of voluntary turnover, but that this relationship is mediated by individual performance. Perceiving interactions as increasing energetic activation results in higher performance, which in turn actually increases voluntary turnover. In contrast, when others perceive interactions with the focal actor as increasing their level of energetic activation it reduces the focal actor's risk of involuntary turnover. This relationship is also mediated by performance. When others within the organization perceive interactions with the focal actor as increasing their level of energetic activation, it results in the focal actor having higher performance, which in turn reduces the focal actor's involuntary turnover. In conclusion, we note that our findings are specific to knowledge workers with IT skills and may not be generalizable to all employees. We also suggest implications for managers and potential areas for future research.

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Social scientists have been interested in the study of turnover in organizations for decades (Griffeth, Hom, & Gaertner, 2000; March & Simon, 1958). In a recent review of turnover research, it was reported that over 1,500 academic studies have addressed the issue (Holtom, Mitchell, Lee, & Eberly, 2008). While this speaks to its relevance it also suggests that there is considerable debate about the causes of turnover. Despite the large number of studies that have focused on turnover, there are surprisingly few that have taken a relational view. By a relational view we mean one that emphasizes the association between turnover and the relations between people in an organization, where people have a preference for continued interactions with others and where interactions can help facilitate positive outcomes for individuals (Borgatti & Foster, 2003; Brass, Galaskiewicz, Greve, & Tsai, 2004; Kilduff & Brass, 2010).

One area of recent research attention that has incorporated a relational view is the theory of job embeddedness. This broad ranging theory postulates that an employee's embeddedness in the workplace, that is, the extent to which they are connected to other individuals or groups, makes employees less likely to leave (Felps, Mitchell, Hekman, Lee, Holtom, & Harman, 2009; Jiang, Liu, McKay, Lee, & Mitchell, 2012; Lee, Mitchell, Sablynski, Burton, & Holtom, 2004; Mitchell, Holtom, Lee,

Sablynski, & Erez, 2001). The theory of job embeddedness examines how turnover is related to the number of coworkers that an individual interacts with (links), the extent to which a job fits an individual's life (fit), and what they would be giving up by leaving a job (sacrifice) (Mitchell et al., 2001). This research stream, however, has in general not sought to understand different facets of an individual's interactions with others. One exception is the research by Mossholder, Settoon and Henagan (2005) who found evidence that a person's instrumental relationships with others in an organization can serve to reduce the likelihood of voluntary turnover.

We seek to build upon this relational view, but rather than focus on the benefits of instrumental ties (Mossholder et al., 2005), we turn our attention to energizing interactions within the organization. We take an energetic activation perspective (Quinn, 2007; Quinn, Spreitzer, & Lam, 2012) and suggest that individuals can feel a sense of vitality and enthusiasm based upon their energizing interactions with others inside the organization. We theorize that this increased level of energy creates a sense of wellbeing and a positive attitude toward coworkers and the organization and ultimately decreases the risk of an individual voluntarily leaving the organization. In addition, we theorize that when others perceive interactions with the focal actor as increasing their level of energetic activation it reduces the focal actors risk of involuntary turnover as they are seen as a positive influence in the organization. We suggest, however, that it is not energizing relationships by themselves that affect turnover, but that their effect is mediated through individual performance. We postulate that energizing interactions with others increases an individual's performance and this actually increases the risk of voluntary turnover. Alternatively, when an individual is seen as a positive source of energy by others it increases the focal actor's performance and ultimately decreases their risk of involuntary turnover.

We make three contributions to the literature. First, we enrich the relational approach to turnover by examining the role of energizing interactions within organizations. Second, we theorize and test how two aspects of energizing interactions, those resulting in energetic activation of the focal individual and those resulting in energetic activation of those around the focal individual, have an effect on voluntary and involuntary turnover. In doing so we highlight that the role played by energizing interactions is different for the two types of turnover. Third, we examine the role of performance as a mediator between energizing interactions and both voluntary and involuntary turnover. We test our argument using longitudinal network data collected annually within the IT department of a global engineering consulting firm over a four-year period. As our data consists of information technology knowledge workers in an organization with few constraints regarding its ability to terminate an individual's contract, we limit our theorizing to these type of employees and organizations. We return to this issue in the discussion section.

## **THEORETICAL DEVELOPMENT AND HYPOTHESES**

### **VOLUNTARY TURNOVER**

Turnover in itself is not necessarily detrimental to an organization as the exit of underperforming employees can be beneficial (Abelson & Baysinger, 1984; McElroy, Morrow, & Rude, 2001). In general, however, turnover has been shown to have a negative effect on organizational performance (Hancock, Allen, Bosco, McDaniel, & Pierce, 2013; Park & Shaw, 2013). A distinction is generally made between voluntary and

involuntary turnover. Shaw and colleagues (1998: 511) indicate that "voluntary turnover, or a quit, reflects an employee's decision to leave an organization, whereas an instance of involuntary turnover, or a discharge, reflects an employer's decision to terminate the employment relationship." When those employees who choose to voluntarily leave are high performers, have knowledge that is not easily replaceable, or are future leaders, then the need to develop more refined explanations for turnover is critical (Hausknecht & Holwerda, 2013; Trevor, Gerhart, & Boudreau, 1997)<sup>1</sup>. Firms and researchers have an interest in developing a better understanding of voluntary turnover because this allows employers to better plan for replacements and minimize disruptions to work when people leave. Understanding voluntary turnover is particularly important for teamwork in general, where the exit of an individual can impede the achievement of goals across multiple teams and can have negative effects on organizational performance (Hausknecht & Trevor, 2011; Shaw, Gupta, & Delery, 2005).

Recent research on voluntary turnover has examined economic factors at the macro level and psychological and relational explanations at the micro level. At the macro level, ease of finding a new position has a positive association with turnover (Joseph, Ng, Koh, & Ang, 2007; March & Simon, 1958). Psychological explanations include job satisfaction, which has consistently been found to have a negative relationship with turnover (Griffeth et al., 2000; Liu, Mitchell, Lee, Holtom, & Hinkin, 2012). Research has identified other predictors of turnover such as organizational commitment (Lum, Kervin, Clark, Reid, & Sirola, 1998; McCaul, Hinsz, & McCaul, 1995; Meyer & Allen, 1991), mentoring (Payne & Huffman, 2005), human resource management practices (Heavey, Holwerda, & Hausknecht, 2013; Trevor, & Nyberg, 2008) and individual performance (Shaw et al., 2005; Trevor et al., 1997; Williams & Livingstone, 1994).

Prior research taking a relational perspective on voluntary turnover found that the exit of friends was associated with the likelihood of an individual leaving the organization (Krackhardt & Porter, 1985; 1986). More recently, research has shown that individuals that are more central in instrumental networks are less likely to leave an organization (Mossholder et al., 2005). In addition, the theory of job embeddedness proposes that the extent to which individuals are entwined in a social web comprising social ties in the workplace predicts turnover above and beyond being involved in organizational activities that increase an individual's investment in their job (Jiang et al., 2012; Mitchell et al., 2001). People who are more strongly connected to others tend to be resistant to particular shocks that might lead others to start quitting processes (Mitchell & Lee, 2001). These theories, however, have not explicitly considered the role that workplace interactions have on energetic activation and how this might affect turnover, nor have they addressed how this relationship is influenced by individual performance.

## INVOLUNTARY TURNOVER

While voluntary turnover has been the focus of considerable recent research there has been limited attention paid to involuntary turnover. Theories of turnover, such as job embeddedness, have had little to say regarding involuntary turnover. This type of organizational exit occurs when a firm terminates an individual's employment contract (Batt & Colvin, 2011). It can occur because a firm ceases to trade, because it chooses to downsize or outsource work in order to maintain or try to regain its competitive advantage. Alternatively, involuntary exit can occur because an

1. It is important to note that "voluntary" turnover is not always voluntary. Pressure is often applied to individuals to leave, especially when a firm is constrained from terminating an individual's contract due to union agreements or legal reasons. In the firm that we study there was considerable involuntary turnover which suggests that voluntary turnover was truly voluntary.

employee is not a good fit or is a poor performer (Bycio, Hackett, & Alvares, 1990; Knight, & Latreille, 2000; McEvoy & Cascio, 1987; Shaw et al., 1998). This type of exit has been defined as “a bad hiring decision that must be corrected” (Shaw et al., 1998: 513) and “employer decisions to fire individual employees, rather than decisions to cut costs through mass layoffs, downsizing, early retirement buyouts, or organizational restructuring” (Batt & Colvin, 2011: 695). The ability of a firm to terminate an individual's contract differs by country and industry. In the firm we study, employees had “at will” contracts and did not have recourse to union or legal protection if the firm chose to terminate their contract. Also there were no major organizational changes during the period of the study. We therefore limit our theorizing to involuntary turnover based upon poor performance and being a “poor fit” for the organization.

While issues such as not being a good fit or being a poor performer may be the proximate causes of involuntary turnover we suggest that there is also an underlying relational mechanism that can have an influence on involuntary turnover. Likewise, voluntary turnover may be associated with availability of opportunities outside the organization, human resource management practices, and job satisfaction, but again we suggest a relational mechanism can also influence an individual's decision to voluntarily exit an organization. From a theoretical perspective, however, not enough is known about what relational explanatory factors are associated with performance and both voluntary and involuntary turnover. For this we turn to recent theorization around energetic activation.

#### ENERGETIC ACTIVATION

Research on the role of human energy has recently become more prominent in the studies of individuals within organizations (Cross, Baker & Parker 2003; Gerbasi, Porath, Parker, Spreitzer & Cross, 2015; Quinn, 2007; Quinn & Dutton, 2005; Quinn et al., 2012; Ryan & Deci 2008). Human energy can be divided into two components. First, individuals possess physical energy which allows them to do work (Quinn et al., 2012). Physical energy is a finite quantity and is expended when an individual is working. This type of energy is restored during periods of rest. Second, individuals also possess a more subjective form of energy that is experienced in the form of enthusiasm towards work, what Quinn and colleagues (2012) call energetic activation. The concept of energetic activation is closely aligned with other responses such as subjective energy (Marks, 1977), energetic arousal (Thayer, 1989), and emotional energy (Collins, 1993). Quinn and colleagues (2012: 6) define energetic activation as the “subjective component of a ‘biobehavioral system of activation’... experienced as feelings of vitality, vigor, or enthusiasm. It can manifest itself in emotions (feelings with short durations targeted toward a specific object, event, or person), moods (longer-lasting, less-targeted feelings), or dispositions (enduring tendencies to be energetic or not).” The emotions, moods and dispositions experienced as part of high energetic activation can result in an individual feeling enthusiasm, vitality (Ryan & Frederick, 1997; Thayer, 1989), and zest (Miller & Stiver, 1997) with a desire to act within an organization in a positive way (Quinn et al., 2012). Alternatively, low energetic activation will have an opposite effect with an individual feeling a lack of vitality, a desire to avoid situations or individuals that lower their energetic activation (Collins, 1993), and a lower inclination to act positively within an organization context (Quinn et al., 2012). Overall, energetic activation is an emerging but important construct of interest that is notably different than friendship or liking.

Research indicates that individuals who experience energetic activation have higher performance, health, and well-being at work (Lyubomirsky, King, & Diener, 2005; Quinn et al., 2012; Saravi, 1999; Spreitzer, Sutcliffe, Dutton, Sonenshein, & Grant, 2005). Energetic activation like physical energy is a resource that can be expended when doing work, but like physical energy it also needs to be restored in some way. One way in which an individual's level of energetic activation can be restored is through interactions with others. Interactions with others can result in an increase in the feeling of energetic activation (Baker, Cross & Wooten, 2003), but interactions can also result in a dampening of the feeling of being energized (Gerbası et al., 2015). Recent research suggests that those individuals who experience interactions that decrease energetic activation have lower performance (Gerbası et al., 2015). While, having interactions that result in increased energetic activation is associated with having higher individual performance within an organization (Baker et al., 2003; Casciaro & Lobo, 2008). In the following section we hypothesize that an individual's interactions with their work colleagues that increase their level of energetic activation can lower their risk of voluntarily leaving the organization. In addition, we hypothesize that when other individuals' interactions with a focal employee positively affects their energetic activation it decreases an organization's likelihood of terminating the contract of the focal actor. Finally, we suggest how these two relationships are mediated by individual performance.

#### ENERGETIC ACTIVATION AND VOLUNTARY TURNOVER

The emotions, moods and dispositions experienced as part of energetic activation (Quinn et al., 2012) have multiple antecedents. For example, an individual can derive energetic activation from the work they do. In the context of the IT department in our study, this could be as a result of designing an innovative solution to a potentially damaging computer virus. While we see this as important, our focus is on the effects derived from others in the workplace. If we consider energetic activation with regard to interactions inside the organization, an individual could have higher energetic activation after a meeting with someone (Quinn & Dutton, 2005). People who emerge from interactions with higher energetic activation are more likely to carry this positive emotion into follow-on interactions with colleagues (Parker, Gerbası & Porath, 2013) or into the next item of work that they address. Likewise, people who have an interaction that lowers their level of energetic activation will carry the negative emotion away with them. The emotions that an individual feels as part of having a heightened or lowered feeling of energetic activation as a result of a specific event will likely dissipate as time passes after the event. However, if one individual has lengthy interactions with another then it will have an influence on their mood. Finally, if an individual has frequent interactions with another or if their work is interconnected as a result of an organization's workflow, then over time the mood is likely to evolve into a disposition. Even if an individual does not have to frequently interact with someone, if they are interconnected via the organization's formal workflow, they will have to think about the individual at certain times in their weekly routines. This will likely have a longer-term impact on an individual's disposition and overall level of energetic activation. Depending how one person views another, it could have either a heightened effect on the focal individual's level of energetic activation or a dampening effect (Gerbası et al., 2015; Parker et al., 2013)

Having numerous interactions with individuals inside the organization that result in heightened energetic activation will likely result in an accumulation of energy as a resource (Quinn et al., 2012) that can be used as a buffer against interactions that diminish an individual's feeling of energetic activation (Cross et al., 2003; Gerbasi et al., 2015; Parker et al., 2013). If an individual has more interactions that raise their level of energetic activation compared to those that lower their energetic activation, then the person will likely feel a sense of wellbeing and a belief that they can do work that can make a positive contribution to the goals of the organization (Quinn & Dutton, 2005). The energetic interactions with coworkers will also result in positive relationships with their colleagues that will also be closer and more stable (Lawler, Thye, & Yoon, 2008). Overall, this feeling of vitality and sense of wellbeing coupled with the positive feelings towards work colleagues will result in an individual having a positive view of the value of their job and hence will increase their preference to stay with the organization and lower the risk of voluntary exit. We formally hypothesize this as follows:

*Hypothesis 1: People who have a high level of energetic activation as a result of interactions with colleagues inside an organization are less likely to choose to leave the organization than those who have a low level of energetic activation.*

#### ENERGETIC ACTIVATION AND INVOLUNTARY TURNOVER

If the effect an individual's interactions have on their level of energetic activation is likely to influence their decision to stay or exit an organization, then the inverse is also likely to be true. That is to say, aggregated perceptions of others about a particular individual can also have an effect on how the focal individual is viewed within an organization and can ultimately affect their risk of involuntary exit. We suggest that when an individual heightens the level of energetic activation of those around them then their colleagues will be attracted to and supportive of the focal individual. It has been shown that this positive behavior towards an individual occurs regardless of whether they are actually competent at what they do (Casciaro & Lobo, 2008). These "energizing" individuals are perceived as good team players and positive influences within the organization (Cross et al., 2003; Zatzick, Deery, & Iverson, 2015). Therefore they will have a lower risk of involuntary turnover and hence will be more likely to stay with the organization. In contrast, those individuals who are perceived as not being "energizers" will be less likely to be positively viewed by others and will be considered as "bad eggs" or not a good fit for the organization (Parker et al., 2013). These individuals will have a much higher risk of involuntary turnover and hence will be much less likely to remain with the organization.

*Hypothesis 2: People who heighten the level of energetic activation of those around them are less likely to be at risk of involuntary turnover than those who dampen the level of energetic activation of those around them.*

#### PERFORMANCE AS A MEDIATOR OF THE ENERGETIC ACTIVATION-TURNOVER RELATIONSHIP

Those individuals who have a heightened sense of energetic activation as a result of interactions with those around them in the

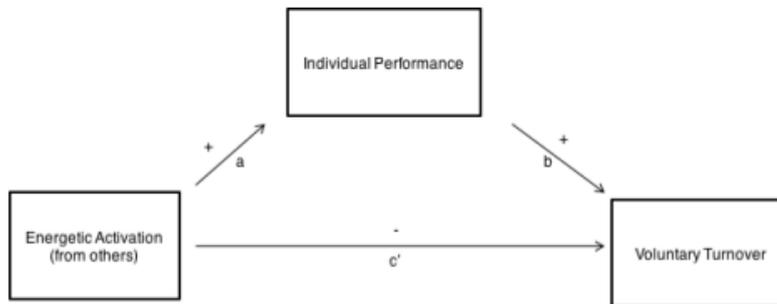
organization are likely to be more motivated. For example, in a study of employees in an information technology company Casciaro and Lobo (2008) found that perceiving people as energizing has a positive influence on interaction around specific tasks. The longer-term effects of an individual having increased energetic activation as a result of interactions with others with whom they work include mutual resource creation that can result in new, more effective ways of working which likely improve individual performance (Gerbasi et al., 2015). There is considerable research to indicate that having positive interactions with people in the workplace increases information sharing and has a positive effect on individual performance (Baldwin, Bedell, & Johnson, 1997; Cross & Cummings, 2004, Shah & Jehn, 1993; Sparrowe, Liden, Wayne, & Kraimer, 2001). In contrast, having interactions that diminish an individual's sense of energetic activation results in a narrowing of an individual's thoughts and actions (Fredrickson & Branigan, 2005), and decreases work related enthusiasm and motivation (Baumeister, Schmeichel, & Vohs, 2007) which in turn lowers an individual's intensity and persistence of effort (Landy & Becker, 1987). Lower energetic activation ultimately results in lower levels of performance (Gerbasi et al., 2015).

Research on the relationship between performance and voluntary turnover is inconclusive (Becker & Cropanzano, 2011; McEvoy, & Cascio, 1987). The push-pull turnover model developed by Jackofsky (1984) indicates that there is a U-shaped relationship between performance and turnover with the highest performers voluntarily leaving and the lowest performers being asked to leave an organization. Research suggests that there is stronger support for low performers being asked to leave than for high performers voluntarily exiting (Becker & Cropanzano, 2011). With regard to voluntary turnover, on the one hand, higher performers are likely to receive increased incentives from their organization such as higher wages, higher bonuses, and faster promotion (Huselid, 1995; Zenger, 1992). On the other hand, higher performers are likely to garner interest from outside the organization for their knowledge and skills (Gerhart, 1990; Lee, Gerhart, Weller, & Trevor, 2008). The more transferable and in demand a set of skills are in the external labor market then the more it will result in high performers with those skills being sought after by other organizations. Research suggests that knowledge workers such as IT engineers and practitioners have transferable skills (Ertürk, & Vurgun, 2015) and that during the period of our study there was a growing labor market for IT professionals (International Labour Organization, 2016), therefore we propose that high performers in our study will have a higher risk of voluntary turnover.

In sum, we hypothesize that performance will mediate the energetic activation-voluntary turnover relationship. In Figure 1 we detail our conceptual model. There is a negative direct effect between having a high level of energetic activation from others and voluntary turnover (path c'), i.e., the higher the energetic activation the lower voluntary turnover. However, having a higher level of energetic activation as a result of interactions with others in the organization may result in a positive impact on performance (path a). Finally having a high level of performance, in a favorable labor market, results in an increased likelihood of voluntary turnover (path b)<sup>2</sup>.

2. The mediation model we detail here is an example of a suppression effect whereby the indirect effect (path a'b) has the opposite sign to the direct effect (Shrout & Bolger, 2002). The difference in the direction of the direct and indirect effects highlights competing processes that are occurring with regard to voluntary turnover.

**Figure 1.** Conceptual model of individual performance mediating the energetic activation-voluntary turnover relationship



We hypothesize the mediation model detailed in Figure 1 as follows:

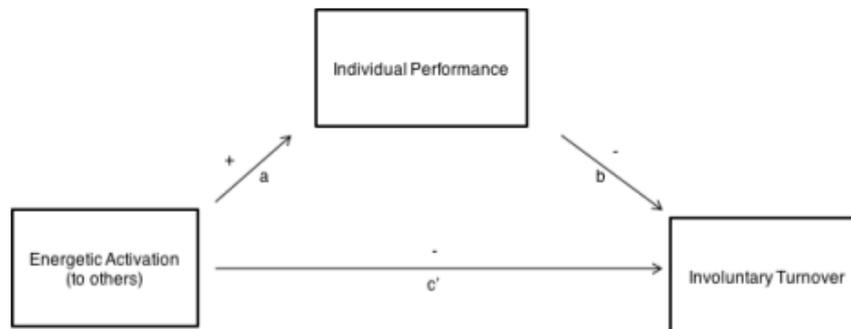
*Hypothesis 3: The relationship between having a high level of energetic activation as a result of interactions with others in the organization and lower voluntary turnover is mediated by individual performance, such that high levels of energetic activation result in higher levels of performance and higher performance results in higher voluntary turnover.*

Individuals who heighten the level of energetic activation of their work colleagues will not only be more popular and sought out but they will also benefit by having greater access to information and resources from the interactions with their colleagues. Research indicates that greater access to resources improves individual performance (Cross & Cummings, 2004, Sparrowe et al., 2001). Alternatively, individuals who dampen the level of energetic activation of their work colleagues will be less likely to benefit from relation-based resources of those around them.

Unsurprisingly, most research indicates that there is an inverse relationship between performance and involuntary turnover with higher performance resulting in lower involuntary turnover (Batt & Colvin, 2011; Bycio et al., 1990; McEvoy & Cascio, 1989; Wells & Muchinsky, 1985). Organizations are unlikely to fire their better performers unless the employee contravenes the ethical rules within an organization. Therefore, we postulate that performance will mediate the energizing-involuntary turnover relationship. Individuals who heighten the level of energetic activation of their colleagues will have higher levels of performance which in turn will reduce their likelihood of involuntary turnover.

Therefore, we suggest that performance will mediate the energetic activation-involuntary turnover relationship. In Figure 2 we detail our conceptual model. There is a negative direct effect between having a high level of energetic activation to others and involuntary turnover (path c'), i.e., the higher the energetic activation the lower the involuntary turnover. Being an individual that heightens the level of energetic activation in others can have a positive impact on performance (path a). Finally, having a high level of performance results in a decreased likelihood of involuntary turnover (path b).

**Figure 2.** Conceptual model of individual performance mediating the energetic activation-involuntary turnover relationship



We formally hypothesize the mediation model detailed in Figure 2 as follows:

*Hypothesis 4: The relationship between being perceived as an individual who heightens the level of energetic activation of their work colleagues and lower involuntary turnover is mediated by individual performance, such that high levels of energetic activation result in higher levels of performance and higher performance results in lower involuntary turnover.*

## DATA AND METHODS

### SAMPLE

The data are from a 4-year study of the global information technology (IT) department of an engineering consulting firm with over 7,000 specialists worldwide. Since the 1990s, the firm has grown through a series of mergers. The head office is based in the United States, and regional offices are located throughout Europe and the Asia-Pacific region. The globalization of the firm occurred without the establishment of consistent IT processes across the organization. The initial round of research conducted within the organization came two years after a major reorganization aimed at transitioning the group from a regional to a global IT department. Looking at a four-year period allows us to partially control for labor market changes as well as the effect of the reorganization. During the four-year period of the study, one of the authors conducted an annual network analysis survey of the IT department, during which they surveyed the entire population of the department. The number of people surveyed each year ranged from 160 to 191. In all years, the response rate to the survey was over 86%. The response rate is comparable with that of other network studies (e.g., Sasovova, Mehra, Borgatti, & Schippers, 2010; Sparrowe et al., 2001). Non-respondents did not significantly differ from respondents with respect to gender, location, tenure, performance or rates of turnover. Of the 191 people at the beginning of the study we have complete response for 102 respondents over the four time periods. We have an additional 25 individuals from T1 that have responses for T1-T3, bringing our total to 127. In addition, we have an additional 40 respondents who we have complete data for between T2 and T4, resulting in a total of 167 observations used in our analysis.

The data were collected through an online survey tool. In each of the four years (2005-2008), the same questions were asked of the

respondents. The survey included relational questions that assessed the energizing interactions between each pair of employees within the department as well as who they went to for information. In each case, the respondents were asked to evaluate each of the other members of the IT department using the roster method (Marsden, 1990). Demographic variables, including gender, location, and tenure were asked of each survey respondent. In addition to the survey data, we also collected hierarchy, performance and turnover data from the HR department. Annual performance data were collected from the HR department at the end of each year. The turnover data for all years were collected in 2010.

#### DEPENDENT VARIABLE

Data collected from the HR department indicated the year in which each individual left the firm and whether the exit was voluntary or involuntary. Amongst the reasons provided for voluntary turnover, some stated the desire to continue education, others went to work for competitors, and still others left for personal or family reasons. Amongst the reasons provided for those who left involuntarily were performance issues or being "not good fits" for the firm. We do not have any information on whether the voluntary leavers were forced to leave or left through choice. However, given the reasons indicated for voluntary exit, the high number of involuntary exits, and discussions with representatives from the firm we have no reason to believe that the vast majority, if not all, voluntary exits were through choice.

#### INDEPENDENT VARIABLES

We used two explanatory variables in our analyses. The explanatory variables assessed the extent to which interactions led to energetic activation of employees in the IT department. Energetic activation was measured with the following survey question adapted from Cross and Parker (2004) and Gerbasi and colleagues (2015): "People can affect the energy and enthusiasm we have at work in various ways. Interactions with some people can leave you feeling drained, [whereas] others can leave you feeling enthused about possibilities. When you interact with each person below, how does it typically affect your energy level?" Respondents could indicate a value from 1 to 5, where 1 equaled strongly de-energizing and 5 equaled strongly energizing. We found that on average 14% of ties are strongly energizing, 24% are energizing, 55% are neutral, 5% are de-energizing and 2% are strongly de-energizing. The energy network data was re-coded on a 5-point scale with strongly de-energizing being coded as -2, neutral as 0, and strongly energizing as 2. We then aggregated the energetic activation responses for each individual using the Freeman degree centrality routine (Freeman, 1979) in UCINET 6 (Borgatti, Everett, & Freeman, 2002) to form two measures. First, the extent to which a respondent's interactions affected their level of energetic activation -- we call this energetic activation (ego). Second, the extent to which other people viewed an individual as affecting their level of energetic activation -- we call this energetic activation (alter).

While it has been suggested that the effect of having one "strongly de-energizing" tie outweighs the effect of one "strongly energizing" tie (Labianca & Brass, 2006), we are unable to systematically determine if this is the case in our data and hence we count one "strongly energizing" tie as nullifying the effect of one "strongly de-energizing tie." In addition, we chose not to dichotomize the energetic activation measure at a particular level as this would cause us to lose valuable data about the intensity of the

interactions and would potentially bias the results (MacCallum, Zhang, Preacher, & Rucker, 2002). Overall, our two measures take into account both the number of ties and the valence of the ties.

#### MEDIATING VARIABLE

Our mediating variable is individual performance, as it has been shown to be a predictor of voluntary and involuntary turnover (Bycio et al., 1990; Jackofsky, 1984; McEvoy & Cascio, 1987; Salamin & Hom, 2005). Individual performance ratings were collected from the HR department. Each individual was rated annually by their immediate supervisor on knowledge and skills, business development, client services management, project management, general management, employee leadership, and decision making. The score for each element of the ratings was evaluated on a scale of 1 (low level of performance) to 5 (exceptional performance) and the overall score was based upon the averages of the individual ratings. While the performance scores are based upon the subjective views of managers as opposed to being an objective measure, research on performance evaluations by managers indicate that they are relatively valid measures of actual performance (Arvey & Murphy, 1998). As a validity check on the performance variable we also analyzed our data using the average of the employee self-report scores for the same categories as above. The direction and significance of our results using the self-reported scores were the same as for the manager evaluations (results available from the authors).

#### CONTROL VARIABLES

As part of the analysis, we included various demographic control variables collected as part of the survey, for example, gender, organizational tenure, and geographic location. We control for geographic location (coded as 1 for USA and 0 for other locations)<sup>3</sup> as it partly accounts for the variance in different economic conditions. We control for organizational tenure as it has been shown to be a consistent predictor of exit in previous studies (Griffeth et al., 2000). We include a control for gender (coded 1 for females, 0 for males) as some studies have found that the likelihood of turnover is different by gender (Russ & McNeilly, 1995; Weisberg & Kirschenbaum, 1993). We also control for whether an employee has a management role or not (coded 1 for managers, 0 for non-managers). In order to account for the heterogeneity of the labor market for different IT skills, we created dummy variables for the eight different IT functions in the department, e.g., networks/servers, security, and application development. We found no significant differences of any of the function variables on either voluntary or involuntary turnover so we have not included them in the models presented in the paper (results available from the authors).

Research has indicated that the more instrumental relationships an individual has with others in an organization the lower their risk of voluntary turnover (Mossholder et al., 2005). Therefore we control for the number of incoming and outgoing information ties each individual has in the IT department. We calculated outgoing and incoming Freeman degree centrality scores (Freeman, 1979) using UCINET 6 (Borgatti et al., 2002) from the following question: "Please indicate if you get the following from each person below: Information you use to accomplish your work." Outgoing Freeman degree centrality scores count the number of individuals the respondent receives information from (mean = 84.41),

3. We tested other ways of accounting for location including a series of country level dummy variables, and regional level variables (USA, Europe, Asia Pacific), we consistently found that the USA was significantly different from the other locations, but there were no significant differences between the other countries or regions, hence we include only a dummy variable for the USA versus all other countries in our model for the sake of parsimony.

whereas incoming Freeman degree centrality scores count the number of individuals the respondent gives information to (mean = 77.30).

To account for whether the structure of an individual's information network, as opposed to the number of their ties, has an effect on turnover we use a measure developed by Burt (1995). Specifically, we control for network constraint (Burt, 1995), this measure accounts for the extent to which the structure of an individual's network has a tendency to be open compared to being closed. An open network is one whereby an individual tends to have ties to others that are themselves not connected. Whereas a closed network is one in which the individuals in the focal person's network tend to have ties to each other. Open networks increase the likelihood of receiving non-redundant information which has positive performance implications (Burt, 1995), while closed networks are more likely to result in the growth in trust and work related norms and a feeling of being embedded within an organization (Burt, 2001; Coleman, 1988; 1990).

In addition, we control for the proportion of energizing relationships that are reciprocated (Gouldner, 1960). This helps to control for the proportion of individuals that the respondent is energized by and is energizing to within the organization. A low value indicates that the respondent is not energizing the people who energizes them, whereas a high value indicates that the respondent is energized by and energizes the same other individuals with whom they are connected.

Table 1 reports the descriptive statistics and Pearson correlations for the variables we used in the analysis. Over the four-year period there are 167 individuals with observations for at least three time periods (the minimum number of time periods necessary to conduct our analysis). Employees have an average tenure of 5.95 years. Overall there were fewer women than men in the IT department (37%) and over half the people worked in the United States (52%) compared to Europe and Asia. The mean for energetic activation (ego) is 35.01 and for energetic activation (alter) the mean is 34.75.

## MODEL AND METHODS

As our data consist of four different time points we assessed the relationship between turnover and energetic activation, and the mediating effects of performance using a series of panel regression models in R (R Core Team, 2013). In addition, to add robustness to our main effects models as well as our mediation models, we tested the effects for statistical significance using 95% bias corrected and accelerated bootstrapped confidence intervals (CI) based on 1,000 samples to avoid concerns regarding inflated Type I error rate (cf. Shrout & Bolger, 2002). As our dependent variable is categorical we estimated a series of multinomial logistic (predicting voluntary and involuntary turnover compared to staying with the firm) panel models. In the first model we include the control variables (at T-2) to test the likelihood of voluntary and involuntary turnover compared to staying with the firm at Time T. In Model 2 we add the effects of the independent variables of interest, energetic activation (ego) and energetic activation (alter) at T-2. Finally in Model 3 we include performance at T-1 to test for mediation and use the Freedman-Schatzkin test (Freedman & Schatzkin, 1992) as recommended by MacKinnon and colleagues (2002)<sup>4</sup>. This allows us to test if energetic activation at T-2 has an effect on performance at T-1, which in turn has an effect on involuntary and voluntary turnover at time T.

4. While there are more recent methods for testing mediation effects (e.g., Preacher & Hayes, 2004) these are not currently available for multinomial logistic panel models.

**Table 1.** Descriptive statistics and Pearson correlations

	Mean	Std. Dev.	1	2	3	4	5	6	7	8	9	10	11	12
1. Female <sup>a</sup>	0.37	0.02	1.00											
2. USA Location <sup>b</sup>	0.52	0.50	-0.02	1.00										
3. Tenure (in years)	5.95	3.89	0.01	0.11	1.00									
4. Manager <sup>c</sup>	0.54	0.23	-0.11	0.00	0.27	1.00								
5. Performance T-1	3.63	0.50	0.14	0.20	0.14	-0.01	1.00							
6. Network Constraint T-2	0.17	0.15	0.01	0.06	0.25	0.32	0.08	1.00						
7. Outgoing Information Ties T-2	84.41	34.67	0.02	0.22	0.31	0.34	0.16	-0.53	1.00					
8. Incoming Information Ties T-2	77.30	27.16	-0.04	0.36	0.36	0.45	0.23	-0.56	0.65	1.00				
9. Energetic Activation(Ego) T-2	35.01	32.95	0.02	0.19	0.12	0.17	0.09	-0.28	0.34	0.31	1.00			
10. Energetic Activation(Alter) T-2	34.75	28.73	0.09	0.24	0.15	0.23	0.35	-0.44	0.51	0.53	0.34	1.00		
11. % Reciprocal Energy Ties T-2	0.22	0.12	0.11	0.15	0.00	0.06	0.17	0.12	0.13	0.12	0.68	0.51	1.00	
12. Voluntary Turnover	0.05	0.30	-0.08	0.09	<sup>-0.0</sup> <sub>6</sub>	-0.07	0.10	-0.02	0.01	0.05	-0.05	-0.01	-0.07	1.00
13. Involuntary Turnover	0.10	0.22	0.04	-0.01	<sup>-0.0</sup> <sub>1</sub>	-0.01	-0.16	-0.05	-0.07	-0.03	-0.06	-0.14	-0.09	-0.08

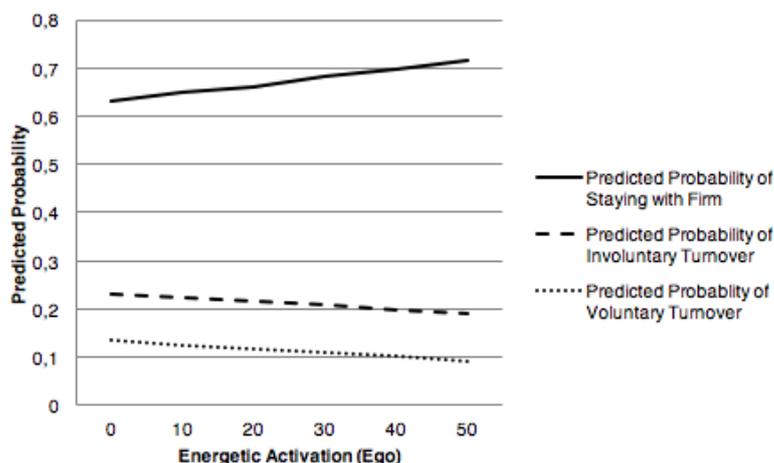
N = 167. All values over +/- .09 are significant at the .05 level. <sup>a</sup> Reference category is male, <sup>b</sup> reference category is all other locations, <sup>c</sup> reference category is non-managers

## RESULTS

In Table 2 we present the multinomial logistic panel regression models for voluntary and involuntary turnover. The top half of the table details the results for voluntary turnover and the bottom half details the results for involuntary turnover. Model 1 includes all of the demographic control variables. We find a negative relationship between tenure and voluntary turnover. Those who have been in the firm longer, are less likely to voluntarily leave the firm. We also find that individuals in managerial positions are less likely to voluntarily leave the firm. We do not find any significant relationships between the information ties or network constraint on voluntary turnover. In Model 2 we build on Model 1 by including the energetic activation variables, to test Hypotheses 1. We find support for Hypothesis 1, there is a negative and significant relationship between energetic activation (ego) and voluntary turnover ( $b = -0.049$ ,  $p < 0.05$ ). This suggests that the higher the level of energetic activation (the more an individual is energized by their work colleagues) an individual feels, the less likely they are to voluntarily leave the organization (i.e., they are more likely to stay with the firm).

Following the recommendations of Wiersema & Bowen (2009), to better visualize our results we plotted the marginal effects of energetic activation (ego) on turnover (Figure 3). The Y-axis displays the probability of each outcome occurring. The X-axis displays the energetic activation (ego). There are separate lines for each potential outcome (staying with the firm, voluntary turnover and involuntary turnover). We can see that the probability of voluntary exit decreases as energetic activation (ego) increases, while the probability of staying with the firm increases.

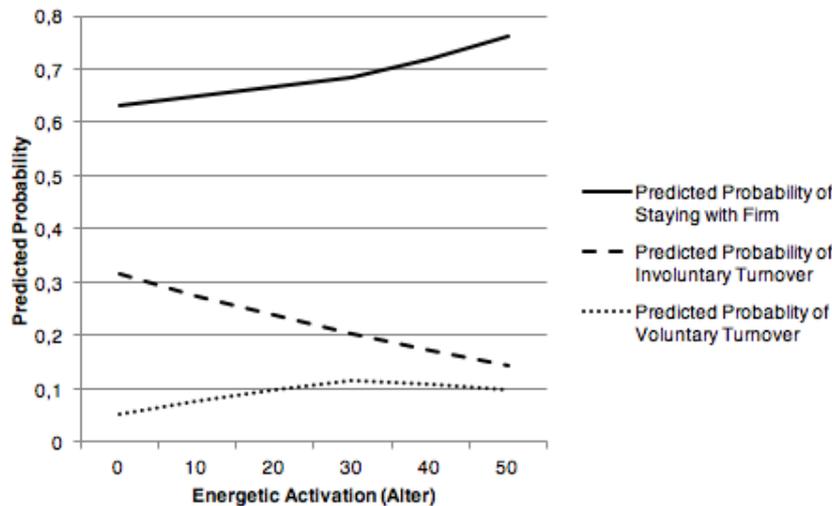
**Figure 3.** Predicted probabilities of turnover due to energetic activation (ego)



We next turn to our hypothesis predicting involuntary turnover. The bottom half of Table 2 presents the estimates of the panel multinomial logistic regression models for involuntary turnover. Model 1 includes the demographic, information ties, network constraint and reciprocal energy ties control variables. None of these variables was a significant predictor of involuntary turnover. In Model 2 we included the energetic activation variables to test Hypothesis 2. We find support for Hypothesis 2, individuals with higher energetic activation (alter) (their work colleagues

find them energizing) are less likely to experience involuntary turnover ( $b = -0.029, p < 0.05$ ). The more other work colleagues find a respondent to be energizing, the less likely they are to experience involuntary turnover. Again we follow the recommendations of Wiersema & Bowen (2009), and plot the marginal effects of energetic activation (alter) on turnover (Figure 4). The probability of involuntary exit decreases as energetic activation (alter) increases, while the probability of staying with the firm increases.

**Figure 4.** Predicted probabilities of turnover due to energetic activation (alter)



To test our two mediation hypotheses, we add the performance variable into our model. In the top half of Model 3 (Table 2), we see that performance positively and significantly predicts voluntary turnover ( $b = 1.344, p < 0.05$ ). High performers are more likely to voluntarily leave the firm. We find that in Model 3 the effect for energetic activation (ego) is no longer significant and has decreased in magnitude ( $b = -0.013, p > 0.05$ ). This indicates the effect of energetic activation (ego) on voluntary turnover is mediated by performance, supporting Hypothesis 3. As the signs for the main effect and the indirect effect are opposite the model is an example of a suppressor effect (Shrout & Bolger, 2002). Additionally, we conducted the Freedman & Schatzkin test (Freedman & Schatzkin, 1992),  $t(165) = -5.008, p < .05$ , which indicates support for the mediation effect.

In the bottom half of Model 3 (Table 2) we include performance to test for mediation and to address Hypothesis 4. We find that performance negatively and significantly predicts involuntary turnover ( $b = -0.545, p < 0.05$ ), and that the effect for energetic activation (alter) is no longer significant. This suggests that performance is mediating the effect of energetic activation (alter) on involuntary turnover, supporting Hypothesis 4. Additionally, we conducted the Freedman & Schatzkin test<sup>5</sup> (Freedman & Schatzkin, 1992),  $t(165) = -5.975, p < .05$ , which indicates support for the mediation effect.

5. The Freedman & Schatzkin tests the difference between the adjusted and unadjusted regression coefficients ( $H_0: \tau - \tau' = 0$ ). The correlation between  $\tau$  and  $\tau'$  can be used in an equation for the standard error based on the variance and covariance of the adjusted and unadjusted regression coefficients as indicated below, where  $\rho_{X1}$  is equal to the correlation between the independent variable and the intervening variable,  $\sigma_\tau$  is the standard error of  $\tau$ , and  $\sigma_{\tau'}$  is the standard error of  $\tau'$ . The estimate of  $\tau - \tau'$  is divided by the standard error and this value is compared to the t distribution for a test of significance.

$$\sigma_{\text{Freedman-Schatzkin}} = \sqrt{\sigma_\tau^2 + \sigma_{\tau'}^2 - 2\sigma_\tau\sigma_{\tau'}\sqrt{1 - \rho_{X1}^2}}$$

**Table 2.** Multinomial logistic panel model predicting voluntary and involuntary turnover

	Model 1			Model 2			Model 3		
	Coef.	Std. Err.	Upper bound	Coef.	Std. Err.	Upper bound	Coef.	Std. Err.	Upper bound
Voluntary Turnover									
Female <sup>a</sup>	-0.751	1.423	-3.904	-0.798	0.559	-2.139	-0.952	0.585	-3.445
USA Location <sup>b</sup>	1.011	0.617	-1.145	0.955	0.533	-0.508	0.968	0.541	-0.211
Tenure (in years)	-0.156 <sup>c</sup>	0.073	-0.318	-0.160 <sup>c</sup>	0.072	-0.338	-0.169 <sup>c</sup>	0.071	-0.354
Manager <sup>c</sup>	-1.239 <sup>*</sup>	0.531	-2.634	-1.209 <sup>*</sup>	0.553	-2.547	-0.836	0.573	-2.311
Network Constraint T-2	-0.041	0.064	-0.018	-0.041	0.064	-0.024	-0.041	0.064	-0.032
Outgoing Information T-2	0.009	0.014	-0.021	0.007	0.011	-0.021	0.008	0.011	-0.021
Incoming Information T-2	0.022	0.016	-0.018	0.025	0.168	-0.022	0.020	0.016	-0.029
Reciprocal Energy Ties T-2	-0.045	0.023	-0.089	-0.052	0.054	-0.162	-0.033	0.081	-0.222
Energetic Activation (ego) T-2				-0.049 <sup>*</sup>	0.022	-0.072	-0.013	0.015	-0.031
Energetic Activation (alter) T-2				-0.012	0.009	-0.034	-0.019	0.011	-0.043
Performance T-1							1.344 <sup>*</sup>	0.591	0.412
Constant	-2.213	0.676	-3.596	-2.270	1.317	-4.058	-6.761	2.242	-14.6

Coefficients presented are the unstandardized bootstrapped coefficients. The lower and upper bounds are the bias corrected and accelerated 95% confidence intervals. <sup>a</sup> Reference category is male, <sup>b</sup> reference category is all other locations, <sup>c</sup> reference category is non-managers

**Table 2.** Multinomial logistic panel model predicting voluntary and involuntary turnover (continued)

	Model 1			Model 2			Model 3					
	Coef.	Std. Err.	Upper bound	Coef.	Std. Err.	Upper bound	Coef.	Std. Err.	Upper bound			
Involuntary Turnover												
Female	0.439	0.336	-0.332	1.167	0.506	0.373	-0.327	1.324	0.588	0.381	-0.247	1.405
USA Location	0.526	0.459	-0.357	1.335	0.457	0.381	-0.453	1.344	0.527	0.386	-0.4	1.536
Tenure (in years)	-0.039	0.053	-0.138	0.058	-0.048	0.044	-0.147	0.049	-0.038	0.056	-0.146	0.071
Manager	0.047	0.421	-0.807	0.833	0.009	0.437	-0.854	0.885	-0.036	0.046	-0.939	0.889
Network Constraint T-2	0.015	0.021	-0.029	0.027	0.001	0.027	-0.25	0.028	0.001	0.027	-0.023	0.031
Outgoing Information T-2	-0.005	0.008	-0.013	0.022	-0.004	0.008	-0.015	0.023	-0.004	0.008	-0.016	0.025
Incoming Information T-2	0.005	0.014	-0.03	0.023	0.006	0.012	-0.022	0.035	0.005	0.013	-0.027	0.037
Reciprocal Energy Ties T-2	-0.045	0.019	-0.081	0.008	-0.021	0.012	-0.064	0.077	-0.028	0.032	-0.068	0.078
Energetic Activation (ego) T-2					-0.04	0.007	-0.037	0.021	-0.007	0.007	-0.384	0.022
Energetic Activation (alter) T-2					-0.029*	0.008	-0.051	-0.006	-0.012	0.008	-0.296	0.361
Performance T-1									-0.545*	0.212	-0.048	-0.002
Constant	-0.848	0.718	-2.114	0.416	-1.148	0.74	-2.512	0.215	0.483	1.643	-2.671	3.401
Involuntary Turnover												
Log likelihood	-171.95				-164.17				-159.77			
Wald Chi-Square	19.17				39.16				47.96			
N	167				167				167			

Coefficients presented are the unstandardized bootstrapped coefficients. The lower and upper bounds are the bias corrected and accelerated 95% confidence intervals. <sup>a</sup> Reference category is male, <sup>b</sup> reference category is all other locations, <sup>c</sup> reference category is non-managers

## POST HOC TESTS

In order to test whether there was reverse causation, such that prior year performance significantly predicts current year energy ties, we estimated two models, one predicting energetic activation ego and one predicting energetic activation alter (results available from the authors). The results do not support the notion of reverse causality in our data. The strongest predictor of the level of energetic activation is the corresponding information ties, rather than performance.

## DISCUSSION

When someone leaves a job, it is rarely a total surprise. Usually, bosses, colleagues, and subordinates all are aware on some level that this person is distant from them or is growing even more distant over time, in what may be a process of packing up to leave (Lee & Mitchell, 1994). This is true regardless of who makes the decision about how the person leaves; whether they are asked to leave or leave on their own, their departure is often signaled months and even years in advance by changes in the pattern of their social relationships on the job. Years of research on embeddedness theories of turnover (Felps et al., 2009; Lee et al., 2004; Mitchell et al., 2001) has shown that those who are more isolated on the job tend to leave at a higher rate, but the specific form this isolation takes in terms of energizing interactions has been less explored, particularly over an extended period in the same organization.

Our research adds to one aspect of the job embeddedness theory, that of the role of social interactions in the workplace, by showing that energizing interactions with work colleagues inside the organization have an effect on the likelihood of an individual voluntarily exiting an organization. Our research indicates that individuals who have a higher level of energetic activation based upon interactions with the people with whom they work are at a lower risk of voluntary exit, i.e., they are more likely to stay with the organization. This effect, however, is mediated by performance. Those individuals with higher levels of energetic activation have higher performance, but this leads to a higher risk of voluntary exit. Our data are for IT professionals who have transferable skills and it is likely that the positive association between performance and voluntary turnover is not generalizable to all types of skills. We return to this somewhat surprising finding below.

When it comes to involuntary turnover we find that when others within the organization perceive interactions with the focal actor as increasing their level of energetic activation it reduces the focal actor's risk of involuntary turnover, i.e., they are more likely to stay with the organization. Overall, people with more work colleagues who perceive them as energizing are less likely to be fired. This relationship is also mediated by performance with those people viewed as increasing the energetic activation levels of others being more likely to be evaluated as higher performers. In turn, these individuals have a lower risk of involuntary turnover. That certain individuals do not increase the level of energetic activation of those around them corresponds with the view that they are not a good fit for the organization and ultimately this leads to their involuntary exit as a result of being poor performers.

Our research adds to the understanding of the role of energetic interactions in relation to turnover. Previous studies (Mossholder et al., 2005) examined the effect of instrumental ties on turnover. We are able to show that interactions that produce a sense of energetic activation in an

individual decrease the likelihood of voluntary turnover. Overall, we believe that our results on interactions within organizations that lead to energetic activation suggest the need to develop theoretical perspectives regarding the role of social emotions, moods, and dispositions in the workplace. We add to the gathering evidence that the development of relationships at work plays a role in people's judgments, both positive and negative, about their jobs. A person's perceptions of others around them and the impact of these perceptions on their level of energetic activation appears to have a notable effect on their choice to remain within an organization. This direct relationship is not as straightforward as it might seem, however, as it is mediated by individual performance.

Our research indicates that performance mediates the relationship between energetic activation and both involuntary and voluntary exit. Individuals who are seen as "energizers" by others also have higher performance, resulting in a reduced risk of involuntary exit. Overall, this finding was not unexpected and fits with the push-pull model of turnover (Becker & Cropanzano, 2011; Gerhart, 1990; Jackofsky, 1984; Salamin & Hom, 2005). In contrast, our findings for voluntary turnover are less straightforward. The direct effect of energetic activation on voluntary turnover is negative, i.e., it reduces turnover; however the mediation effect is positive with energetic activation increasing performance and high performance resulting in increased voluntary turnover. The difference in the direction of the direct and indirect effects highlights competing processes that are occurring with regard to voluntary turnover. Our mediation results for voluntary turnover are somewhat at odds with some previous research (e.g., Griffeth et al., 2000) that finds a negative effect of performance on voluntary turnover. In addition, the mediation finding is contrary to embeddedness theory (Felps et al, 2009; Lee et al., 2004; Mitchell et al., 2001). Our results, however, are in accordance with research that suggests that high performing individuals, especially those with transferable skills (Ertürk, & Vurgun, 2015) such as IT specialists, are the most likely to leave an organization as they have the most opportunities in the external labor market (Becker & Cropanzano, 2011; Gerhart, 1990; Jackofsky, 1984; Salamin & Hom, 2005). Overall, the performance findings align with prior research indicating an inverted U-shaped relation between performance and turnover with both high and low performers being more likely to leave an organization (Becker & Cropanzano, 2011; Gerhart, 1990; Jackofsky, 1984; Salamin & Hom, 2005). In our case the high performers left through voluntary turnover and the low performers through involuntary turnover.

#### LIMITATIONS AND FUTURE RESEARCH

There are specific limitations of this work that must be taken into account. First, we have looked only at the IT department in one organization. The ability to make more general statements based on the findings would obviously be enhanced by looking at more than one organization and more than one functional department. It is possible that the labor market for IT skills is different to that of other skills and this may change the likelihood of voluntary turnover. In addition, we have focused on a knowledge-intensive organization, employees' energizing interactions and their influence on energetic activation may be different in an organization that is not knowledge-intensive. For example, work in less knowledge intensive organizations may be less interdependent and hence individuals may have fewer ties. Nevertheless, having annual demographic and network survey data over a four-year period allows us to analyze and draw conclusions that add to our understanding of the relationship between

energetic activation, performance, and turnover over time, thereby reducing concern over attenuated relationships between predictors and turnover outcomes (Griffeth et al., 2000). It also allowed us to put a considerable amount of distance between the reorganization and the end of our data collection.

Second, given the nature of the survey data collection, there are other turnover factors we were unable to consider within the constraints of this study, such as the influence on energetic activation of the relational ties that an individual has outside of the organization. Lack of data on ties outside the organization means that we are unable to control for all of an individual's professional network. Relational ties attained through activities such as consulting, conferences, workshops, etc., likely lead to greater knowledge about alternative work opportunities and an increased likelihood of an employee voluntarily exiting an organization (Coff, 1999; Von Nordenflycht, 2010). Our findings suggest that one possibility for future research is replicating this study with questions on the relationships of respondents to those inside and outside the organization. If this were done over time, it would be possible to see whether lower levels of connectedness within the organization were balanced out by greater connectedness outside the organization.

Third, a broader research design would allow for all aspects of job embeddedness theory to be tested (Mitchell et al., 2001), i.e., in addition to our focus on the number of coworkers that an individual interacts with (links), the other two pillars of the theory could be tested with data collected on the extent to which a job fits an individual's life (fit), and what they would be giving up by leaving a job (sacrifice). The constraints of the data collection also restricted our ability to collect data on other correlates of voluntary and involuntary turnover, including employee attitudes such as job satisfaction and organizational commitment. There are other variables that could be mediators of the energetic activation and turnover relationship such as thriving (Porath, Spreitzer, Gibson, & Garnett, 2012), self-efficacy (Bandura, 1977), and resilience (Luthans, 2002), these could be avenues for future research.

## IMPLICATIONS FOR MANAGEMENT

Of course, our findings also have important implications for managers. All organizations struggle with the loss of valuable talent and the concurrent costs when a valued employee leaves (Ballinger, Craig, Cross, & Gray, 2011). There is a direct cost to these departures as well as a network cost when one begins to fully appreciate the damage turnover can do by disrupting productive informal networks and critical collaborations when well-connected employees depart. Our research aims to contribute to practice by showing managers that energetic interactions are associated with turnover. As such, managers who are concerned with increasing the "stickiness" of employment should work to maintain positive trends within employees' networks such that they result in increased energetic activation of those around them. To accomplish this, managers should design and implement interventions that identify employees with stagnant or shrinking networks and develop outreach and other efforts that connect these employees to others who have a reputation for increasing the energetic activation of those people around them.

Our findings, however, show that it is not just a matter of creating more energetic interactions, but that human resource professionals also need to be aware that people who have increased energetic activation are also those that perform better and ultimately are at risk of voluntary

turnover. These individuals likely see the benefits and intrinsic rewards of an energizing workplace but are also tempted by alternatives outside the organization. One possible solution would be to link performance with an increase in other intrinsic rewards such as learning opportunities, as well as more tangible extrinsic rewards such as promotion opportunities, pay, and bonuses.

Network research methods are not just used by academics, there has also been an uptake in their use by organizations thanks to the growing applied literature on the methodology and workshops aimed at practitioners (Anklam, 2007; Cross & Thomas, 2009). Our findings indicate that practitioners who apply network research methods should pay careful attention to the extent to which employees' have energetic interactions in order to potentially spot employee departures ahead of time. The benefits of observing the patterns of interaction within and between teams and within the organization go beyond gaining a better understanding of turnover risks that are outlined here. These data would enable executives to be proactive in avoiding the loss of key talent in ways that, to date, most companies have not been able to achieve. As noted above, spotting trends in key employee networks can spark retention programming with a case management approach aimed at increasing the level of employee engagement. To that end, we hope our findings have a significant impact on organizational performance as well as individual well-being at work as employees consider how to shape their own networks (Cross & Thomas, 2011).

## CONCLUSION

While we have suspected that those people who don't increase the energetic activation of those around them are at risk of turnover, we have seen little rigorous investigation of this issue. This research provides evidence that the level of a person's energetic activation is predictive of their willingness to stay, and also that a person's ability to serve as a source of energetic activation for others is predictive of an organization's willingness to keep them employed. These findings, however, are both mediated by individual performance, but in different ways. Perceiving interactions as increasing energetic activation results in higher performance, which in turn actually increases voluntary turnover. In contrast, when others perceive interactions with the focal actor as increasing their level of energetic activation it results in the focal actor having higher performance, which in turn reduces the focal actor's involuntary turnover. Our research fits into the broader research stream of turnover research by incorporating the nature of an employee's energetic interactions into the decisions regarding turnover at the individual and firm level.

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