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TURNOVER CONTAGION: HOW COWORKERS' JOB EMBEDDEDNESS AND JOB SEARCH BEHAVIORS INFLUENCE QUITTING

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This research developed and tested a model of turnover contagion in which the job embeddedness and job search behaviors of coworkers influence employees' decisions to quit. In a sample of 45 branches of a regional bank and 1,038 departments of a national hospitality firm, multilevel analysis revealed that coworkers' job embeddedness and job search behaviors explain variance in individual "voluntary turnover" over and above that explained by other individual and group-level predictors. Broadly speaking, these results suggest that coworkers' job embeddedness and job search behaviors play critical roles in explaining why people quit their jobs. Implications are discussed.

As the global economy becomes increasingly knowledge based, organizations that can successfully retain their human resources have an advantage over organizations that cannot. Indeed, a number of studies have shown that turnover negatively effects performance (e.g., Shaw, Gupta, & Delery, 2005). Hatch and Dyer summarized such findings with the observation that "firms with high turnover significantly under-perform their rivals" (2004: 1155). As such, organizational leaders are interested in understanding why people choose to leave their jobs and insights that might help with employee retention (Ulrich & Smallwood, 2006). Accordingly, researchers have spent considerable effort developing and testing models to explain why people quit.

To explain the phenomenon of employee turnover, the social sciences have offered both psychological (i.e., micro) and organizational and economic (i.e., macro) explanations. On the micro side, job satisfaction and organizational commitment have captured most of the research interest. On the macro side, economic research often looks at particular industries or localities to explain how market forces such as unemployment rates or job supply and demand affect the frequency with which people leave their jobs (e.g., Banerjee & Gaston, 2004). Sociological research has also looked at how turnover affects and is affected by institutional changes within and across industries (e.g., Haveman, 1995), as well as organizational variables such as size (Price, 1977).

The unique contribution of management scholarship is not only to investigate the individual or institutional level, but also what emanates from the careful exploration of "the space in between" (Bradbury & Lichtenstein, 2000). For this reason, organizational researchers are often encouraged to do "meso-level" research, in which individuals are studied in their social contexts (e.g., House, Rousseau, & Thomas-Hunt, 1995; Johns, 2006). However, there is surprisingly little work on how social relationships affect turnover. To quote Pfeffer, "Turnover has most often been examined as the

consequence of an individual decision process, with the individual acting in isolation. . . . Virtually all of the dominant models of turnover conceptualize it as an individual decision, without considering the effect of social structure" (1991: 795). Although Pfeffer's comment overlooks the work of economists and sociologists, he is broadly correct in stating that the bulk of management research on turnover focuses on individual attitudes as the sole precursor to leaving. The influence of one's immediate coworkers on turnover decisions (what Pfeffer describes as social structure) has been largely ignored.

This article investigates the social dimensions of quitting and offers a model of "turnover contagion" in which the decision to stay at or leave a job is influenced by coworkers. We provide evidence that turnover decisions are a domain in which coworkers can influence an actor's thoughts, judgments, feelings, and behaviors (Salancik & Pfeffer, 1978). Two field studies support the predictive validity of our model, offering new insights into the interpersonal precursors of "voluntary turnover" (job leaving). We argue that this type of meso-level research can widen researchers' conceptual lenses, increase our ability to predict turnover, and enhance the utility of turnover research for practitioners.

TOWARD A THEORY OF TURNOVER CONTAGION

Turnover Research Heritage

March and Simon's (1958) seminal book, *Organizations,* marks the real beginning of the attempt to develop an overall theory explaining why people leave their jobs. According to March and Simon's theory, the two factors that determine whether an employee will leave his or her job are the perceived desirability of leaving the employing organization (conceptualized as job satisfaction and organizational commitment) and the perceived ease of leaving the organization (conceptualized as the quality of job alternatives). The research focusing on job satisfaction and organizational commitment, in particular, has been extensive. Mobley (1977) identified the sequential and intermediary variables leading from job dissatisfaction to eventual quitting. In an exemplar of programmatic turnover research, Price and Mueller (1986) added to this model by cataloging the antecedents of organizational commitment and job satisfaction, including pay, social integration, instrumental communication, formal communication, centralization, routinization, role overload, promotional opportunity, professionalism, general training, supervisor support, coworker support, and distributive justice (Price, 1977; Price & Mueller, 1986). It is important to note that in Price and Mueller's model, as in virtually all other traditional models, various factors influence turnover through their impact on organizational commitment and job satisfaction, which in turn influence intent to leave, which then leads to voluntary turnover.

The result of subsequent scholarship based on these ideas is both impressive and troublesome. It is impressive in that turnover theory and research have proceeded programmatically in such a way that researchers can be confident about a pair of assertions. First, less satisfied and less committed employees think about leaving, look for alternative jobs, are more likely to quit, and do each of these to a greater degree when they believe that desirable job alternatives exist. Second, many individual- and macro-level variables are related to turnover through satisfaction and commitment. However, the turnover literature is also troublesome in that even the most inclusive models leave the vast majority of variance unexplained (e.g., Griffeth, Hom, & Gaertner, 2000; Maertz & Campion, 1998; Price & Mueller, 1986). A number of authors have therefore suggested that scholars need to expand their conceptual lenses to better understand employee turnover (e.g., Kammeyer-Mueller, Wanberg, Glomb, & Ahlburg, 2005; Maertz & Campion, 1998; Mitchell & Lee, 2001; Mossholder, Settoon, & Henagan, 2005). The framework we describe below, in which we outline the turnover contagion process, is such an expansionary attempt.

The Turnover Contagion Process

The central theoretical claim made here is that when an employee's coworker engages in behaviors antecedent to leaving a job, these activities sometimes spill over onto others in such a way that the affected others are more likely to leave. Put more precisely, a coworker's search for job alternatives or actual quitting can spread, through a process of social contagion, to affect another employee's quitting behavior. Like the contagion of illness, the process involves the transmission of something from one individual to another. For us, the "something" is the tendency to leave a job. Others have used the contagion metaphor to understand the spread of burnout (Bakker & Schaufeli, 2000), emotions (Barsade, 2002), and long work hours (Brett & Stroh, 2003).

We believe that the primary mechanism in turnover contagion is people's pervasive tendency to compare themselves to others. Research on social comparison has documented that this tendency is

among the most robust and ubiquitous of psychological phenomena (Kruglanski & Mayseless, 1990). "The notion that people rely on others to help define reality in ambiguous circumstances has long been a core tenet in social psychology" (Degoey, 2000: 58). Salancik and Pfeffer (1978) extended Festinger's (1954) original work on social comparison to organizational behavior and job attitudes, and Bandura (1977) applied these insights to learning theory. Social comparisons are especially likely to be made in novel, risky, or ambiguous situations (Festinger, 1954; Tesser, Campbell, & Mickler, 1983; Wooten & Reed, 1998). When comparisons reveal differences with a relevant other's thoughts, feelings, or behaviors, an individual's propensity to change his or her understanding of a situation so that thoughts, feelings, and behaviors become consistent with those of the relevant other increases (Festinger, 1954). Chartrand and Bargh stated this: "Throughout the history of psychology, many have argued that the act of perceiving another person's behavior creates a tendency to behave similarly oneself" (1999: 813).

The application to turnover theory is straightforward. Given that high levels of risk and uncertainty often characterize job transition (Steel, 2002), we expect employees to look to others in evaluating whether to seek alternative employment. When a number of coworkers are looking for other jobs, it may increase the salience and perceived viability of leaving for a focal employee, especially since immediate coworkers are likely targets for social comparison (Kulik & Ambrose, 1992). Conversely, if few coworkers are looking for other jobs, it is likely that a focal employee will be less inclined to initiate the turnover process. In either case, social comparison helps to answer the question, "Should I consider leaving?" We posit that the chance that the answer will be yes increases when many coworkers are looking for jobs. In this way, the transmission of a tendency to leave occurs as employees watch and converse with their coworkers. The focal person may observe such job search behaviors in a dyadic interaction (e.g., "I am going on a job interview this week") or in a group interaction (e.g., "You all should probably know that I have a job interview this week"). Moreover, there are a variety of leaving behaviors that can be observed; the employee might see a coworker update a résumé, search classified ads, or schedule interviews. In short, a range of behaviors may indicate that one or multiple coworkers are in the process of leaving.

Some research has addressed the topic of withdrawal caused by group-level variables. Mathieu and Kohler (1990), for example, found that the frequency of absenteeism among work group members was related to individual employee absenteeism. And Eder and Eisenberger (2008) demonstrated that the average tardiness of work group members is related to individual tardiness. They also showed, in a second study, that withdrawal behaviors carried out at the group level, such as taking undeserved work breaks or engaging in idle conversation, influence the probability that individuals do the same. Thus, the idea that withdrawal behaviors of group members can influence an individual's likelihood of engaging in those behaviors clearly has some precedent. Importantly, we do not presume here that either job satisfaction or organizational commitment plays a key role in the process. The turnover contagion model highlights the role that simply observing others plays and suggests that a key determinant of whether quitting is a viable option at any given point in time is whether coworkers are leaving.

From Theory to Hypotheses

Above we have presented a theory of turnover contagion whereby the tendency to quit spreads throughout a work group. We now offer two specific hypotheses about factors that are central to the turnover contagion process. First, we hypothesize that turnover contagion is most likely to occur when the coworkers around a focal employee are not "embedded" in their jobs. We choose to focus on job embeddedness, as opposed to job satisfaction or organizational commitment, because it is a broader construct that captures a greater range of factors that provoke leaving. In Mitchell, Holtom, Lee, Sablynski, and Erez's (2001) original formulation, the job embeddedness construct addressed how well people *fit* in their jobs (e.g., personal skills are well suited to the work assigned) and community (e.g., they like the amenities a community provides); the interpersonal *links* they have on and off the job (e.g., their number of ties to people and groups); and what they would have to give up or *sacrifice* in leaving their place of employment or community (e.g., what opportunities they would forego). In sum, job embeddedness includes several individual-level factors that enmesh employees in their jobs, and numerous studies have shown it to be a good predictor of an employee's tendency to quit (Allen, 2006; Crossley, Bennett, Jex, & Burnfield, 2007; Holtom, Mitchell, & Lee, 2006; Holtom & O'Neill, 2004; Lee, Mitchell, Sablynski, Burton, & Holtom, 2004; Mitchell et al., 2001; Van Dijk & Kirk-Brown, 2003; Zatzick & Iverson 2006). In many of these studies, job embeddedness has gone beyond job satisfaction and organizational commitment in predicting variance in individual turnover.

When coworkers' job embeddedness is low, we believe that the resultant social context will make individuals more likely to entertain the possibility of changing jobs. When coworkers are not tethered to—embedded in—a job, they are likely to be open to the possibility of leaving. It is this willingness to leave that transfers from low-embeddedness coworkers to a focal employee in their work unit. Thus, we expect the average job embeddedness of coworkers to predict focal employee turnover. Further, since job embeddedness is a broad construct that includes nonaffective elements such as the number of links to important others and family ties, we would expect this effect to be observed even when a focal employee is satisfied with the work itself or committed to his/her organization.

Let us briefly take some examples from the Mitchell et al. (2001) job embeddedness measure to provide a more grounded understanding of how turnover contagion might operate. Imagine a workplace where most people strongly agree with the following statements: "I feel like I am a good match for my organization," "I really love the place I live," "I would sacrifice a lot if I left this job," "My family roots are in this community," and "I work closely with my coworkers." Interactions among employees who feel this way are likely to mutually reinforce each other's perceptions that "I belong here, I should be here, and I must remain here." In such a setting, people are unlikely to be looking at want ads, talking about available jobs elsewhere, or saying things that indicate they want to leave. Contrast this situation with a workplace populated by those who are less embedded in their jobs and communities (e.g., people who feel they don't fit in their work group or community, or people who have little to sacrifice in renegotiating their relationships to their jobs). In this sort of environment, even if they like their jobs, employees have little to lose by voicing ideas about leaving or about alternative avenues of employment (Bartunek, Huang, & Walsh, 2008). Frequent discussions about leaving are likely to prime other employees, possibly even those who are fairly embedded, to consider quitting. Thus, we hypothesize the following:

Hypothesis 1. Coworkers' job embeddedness is negatively related to voluntary turnover.

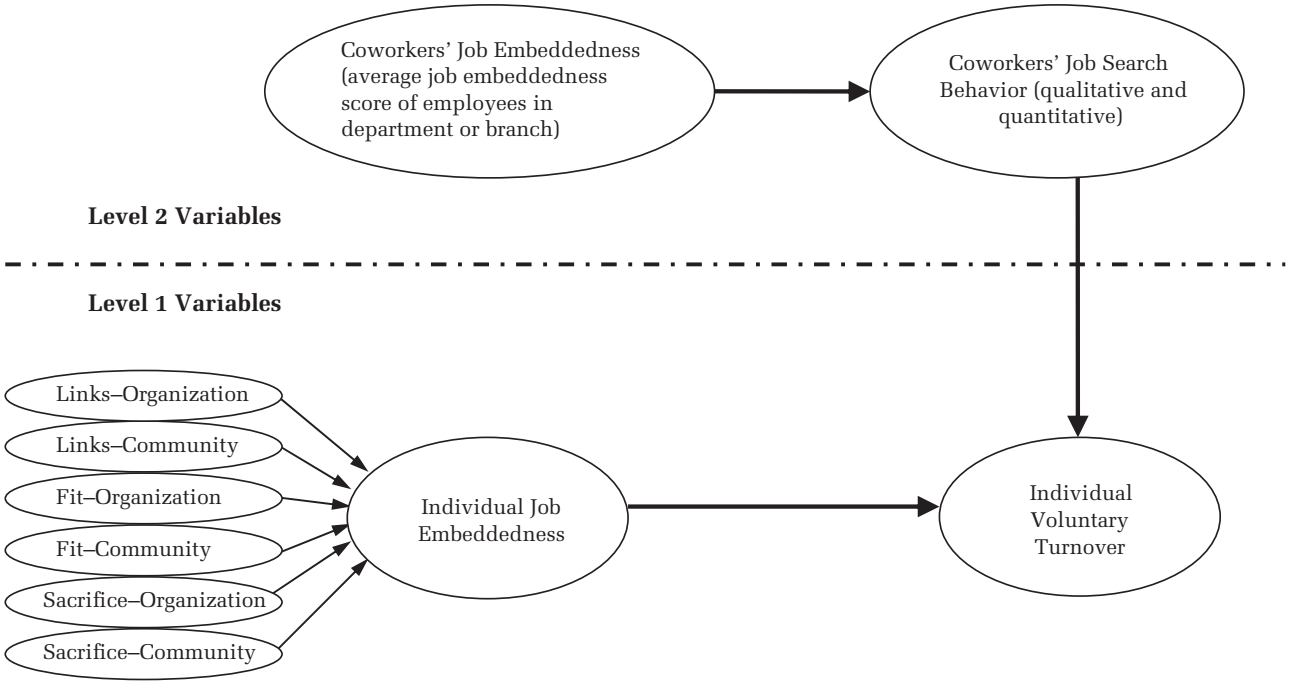
The next question naturally follows: *How* does a willingness to quit engendered by low job embeddedness influence others? As noted previously, we hypothesize that the transmission of this leaving tendency occurs as employees watch and converse with coworkers searching for alternative employment. In Study 1 (see below), we gathered data through a series of focus groups designed to help us better understand the turnover process. A qualitative analysis of the behaviors discussed by the focus group members provides some information about how employees may be influenced by their coworkers' comments about leaving. In Study 2, we sought to specifically measure coworkers' searches for alternative employment using the Job Search Behavior Index (Kopelman, Rovenpor, & Millsap, 1992). These authors reported that this measure (aggregated to the group level) did an excellent job of predicting leaving and internal transfer and went over and above eight affective, perceptional, attitudinal, and intention measures (e.g., organizational commitment, intent to stay, and general job satisfaction) in such prediction. For our purposes, the argument is simple. When an employee sees and hears about coworkers looking for other jobs, leaving becomes a more salient option for her/him, which leads to a greater propensity to quit. Figure 1 presents a summary of these ideas. It should be noted that although both of the studies described below measured coworkers' job embeddedness, only the second study assessed coworker job search behavior using the Kopelman et al. (1992) measure. Thus, Hypothesis 2 is only empirically tested in Study 2.

Hypothesis 2. Coworkers' job search behaviors mediate the negative relationship between coworkers' job embeddedness and focal employee turnover.

From Hypotheses to Analytics

Although undisputedly important, pursuing meso-level research can be challenging (House et al., 1995). When one defines meso-level research as research that includes activities and processes that take place between the micro and macro, this challenge comes into stark relief. "Micro" and "macro" are defined relative to each other, and there are a number of potentially relevant "levels" for both predictors and criteria, including individuals, dyads, small groups, organizations, industries, and societies. The number of possible combinations is extensive; comments by Klein and Kozlowski (2000) were helpful for our definitional analysis. We are particularly interested in how the behaviors that occur in dyads or existing groups (our independent variable) influence individual members to quit (our dependent variable). Rousseau (1985) described such an influence process as a cross-level phenomenon. In our case, the phenomenon of interest is turnover contagion. More specifically, each person's job embeddedness reflects an overall "stuckness" in the job (the inverse of which is a

FIGURE 1
The Turnover Contagion Model



willingness to leave), which can be contagiously transferred through modeling or direct interaction with coworkers. In actual work situations, individuals may work at various times with just one other individual (i.e., dyadically) or, as is increasingly common, in project teams, departments, and independent branches (i.e., in a small group). In a small group, any given individual is likely to send turnover contagion stimuli to a number of others as well as receive this sort of leaving stimuli from a number of others.

If a researcher wants to capture the cumulative influence of coworkers on a focal actor's turnover decision, it is necessary to somehow combine the contagious effects of multiple group members (Klein & Kozlowski, 2000). The simplest way to do this is to aggregate the scores of coworkers who are known to work closely with an individual on those variables that have been theorized to be associated with the turnover contagion process—in short, job embeddedness and job search behaviors. Thus, we propose to test whether the average of coworkers' job embeddedness scores for a natural group influences individual employee turnover and, if so, whether the coworkers' average level of job search behaviors mediates this relationship.

It is important to point out two statistical issues related to this conceptualization. First, given that a focal individual is nested in a group, it is important to control for a focal individual's own level of job embeddedness or job search behavior in any multilevel statistical test (Klein & Kozlowski, 2000). All subsequent analyses do this. Second, this measurement process does not depend on employees coming to some sort of socially agreed upon consensus about job embeddedness or about job search behaviors. For example, one popular type of meso-level research links group-level consensus about something (e.g., norms, mood, etc.) to individual behavior. Chan described these as "direct consensus models" (1998). Our theoretical model is not one of direct consensus. As such, the methodological standards used to verify direct consensus effects (i.e., high degrees of agreement as assessed by intraclass correlations, or R_{wg} statistics) would be meaningless for our analysis. Instead, coworkers' job embeddedness represents what Chan (1998) called an "additive index model" that does not hinge upon agreement, but is instead about whether relevant social comparisons prompt looking for a different job.

STUDY 1

Methods

Sample. Our first research site was a large recreation and hospitality organization, hereafter referred to as Funcorp. This organization operates roughly 200 golf courses, country clubs, private

business and sports clubs, and resorts. Funcorp provides services to about 200,000 member families throughout the United States. Our initial sample consisted of 14,981 Funcorp employees who serve its members. Nine thousand seventy-nine employees completed our survey, for a response rate of 60.6 percent. Missing values reduced the number of usable observations to 8,663, or 57.8 percent of the initial sample. Within our usable sample were 1,037 club departments. Overall, 39.3 percent of the respondents were women; the average age was 39.0 years; the average tenure with the organization was 6.2 years; and 32.6 percent were nonwhites. The average department size was 14.4, and the average number of survey respondents per department was 8.35. The firm provided demographic data for all employees, allowing us to statistically compare respondents and nonrespondents. These comparisons yielded no significant differences in gender, age, tenure, race, or turnover rate, providing some confidence that nonresponse bias was not a concern.

Measures. *Voluntary turnover* was measured in Study 1 as whether an employee voluntarily left the organization in the 18 months immediately following the survey. An 18-month period was reasonable because it allowed enough time for the independent variables to influence employees' turnover decisions and provided us with a large enough sample to reliably run statistical tests. Specifically, 2,001 of the employees surveyed choose to leave Funcorp. This number corresponds to an 18-month voluntary turnover rate of 23.1 percent (or 15.4 percent annually).

In prior studies of job embeddedness, researchers have relied on a 40-item measure to capture the six subdimensions that were then aggregated to create composite measures (e.g., Mitchell et al., 2001). In defining the construct, Mitchell et al. (2001) characterized job embeddedness as a formative indicator construct, in that multiple variables are associated with the embeddedness construct and predictive validity represents the major mechanism for validation of its conceptual meaning (Edwards, 2001). In other words, job embeddedness captures a large set of things that enmesh people in their jobs and that predict voluntary turnover.

In the present study, we assessed the degree to which an employee's coworkers were enmeshed in the organization and community (*coworkers' job embeddedness*) using a 21-item measure of job embeddedness developed and validated by Holtom, Mitchell, Lee, and Tidd (2006). In their measure development study, the product-moment correlation showed a strong relationship between the original long form and the revised short form ($r = .92$) used to measure job embeddedness. This measure was developed using data collected from 769 corrections officers. Given the fact that the short-form items are also represented in the long form, we would expect this correlation to be very high. More importantly, after job satisfaction was controlled for, the long-form measure of individual job embeddedness significantly predicted voluntary turnover ($p < .001$), as did the short-form measure ($p < .001$), which provides evidence of predictive validity for this shorter measure. Further, there was no difference in the amount of variance in turnover explained by the two forms of the instrument.

In both samples, the respondents indicated on a five-point scale the extent to which they agreed with 18 of the 21 items. The other 3 items involved yes or no answers. We standardized and averaged each individual's scores for each item to create an individual-level job embeddedness score. These individual job embeddedness scores were then averaged across employees in each department to create an aggregate of departmental job embeddedness (i.e., departmental coworkers' job embeddedness). The Appendix reports the survey's items. Because individual job embeddedness is a formative (or indicator) construct, high internal consistency (e.g., as measured by coefficient alpha) and unidimensionality (e.g., as shown by one-factor-model superiority) are not the standards by which construct validity should be judged (Diamantopoulos & Winklhofer, 2001). However, for descriptive purposes, we note that coefficient alpha was high ($\alpha = .88$).

Control variables. Given that we wanted to test coworkers' job embeddedness as a predictor of focal employee turnover, we sought to control for other variables that might provide alternative explanations. These control variables included both the individual (level 1) factors of job embeddedness, job satisfaction, organizational commitment, part-time versus full-time status, age, gender, race, and tenure, as well as the group (level 2) factors of coworkers' job satisfaction, coworkers' organizational commitment, department size, and local unemployment rate. *Job satisfaction* assessed the degree to which employees expressed satisfaction with ten dimensions of their jobs (e.g., pay, coworkers, promotion, etc.) using a shortened version of Spector's (1985) job satisfaction measure. Spector's original scale includes 36 items, but because of survey length constraints our shortened measure included only the 2 best-loading items for each subscale (as based on Spector [1985]). Thus, the respondents indicated on a five-point scale the extent to which they agreed with 20 items assessing satisfaction with various aspects of their jobs. Coefficient alpha for job satisfaction was .93. We measured *organi-*

zational commitment using four items from Meyer, Allen, and Smith's measure of affective organizational commitment. Respondents indicated on a five-point scale the extent to which they agreed with the items. Coefficient alpha for this measure was .85. The employees' full or part-time *work status* was determined from organizational records at the time the employee completed the survey (0 = "full time," 1 = "part time"). Part-time employees worked a maximum of 32 hours per week and did not receive benefits, whereas full-time employees were expected to work at least 40 hours per week and received benefits. We obtained the demographic variables *age*, *gender*, *race*, and *tenure* from the organizations' records and entered them as controls. We included these employee demographic variables in the model because we wanted to have confidence that effects were not based on employee's life experiences, social categories, or career position.

In addition, the analysis contained several group (level 2) controls because they could also constitute potential alternative explanations. These include *coworkers' job satisfaction* and *coworkers' organizational commitment,* which are the individual-level variables of job satisfaction and organizational commitment averaged over department. We should reiterate that we were adding group-level job satisfaction and group-level organizational commitment simply as conservative controls. Since they are major predictors of turnover at the individual level, they may also control variance in turnover when assessed at the group level. However, we are not postulating that they necessarily operate through a contagion process similar to coworkers' job embeddedness (although they could). *Department size* was assessed as the number of employees in each branch or department. *Local unemployment rate* was obtained from the Bureau of Labor Statistics for each zip code where a club was located.

Analysis

Employees who share a department have the same coworkers' satisfaction, coworkers' commitment, and coworkers' embeddedness scores. To ignore this dependence by using normal logistic regression would violate a core assumption of regression analysis. Even excluding the focal actor from each aggregated score would leave highly interdependent aggregated scores. In fact, aggregated scores with the focal actor excluded are almost identical to aggregated scores with the focal actor included (i.e., the average correlation is .95). Therefore, the data were analyzed with multilevel logistic regression software called hierarchical generalized linear modeling (HGLM; Guo & Zhao, 2000). The main difference between hierarchical linear modeling (HLM) and HGLM is that the latter allows for binary outcome variables (e.g., stay/quit). HGLM was ideal for our tests because it is designed to account for nonindependence between group-level predictor variables. Given that HGLM is simply a type of multilevel logistic regression analysis, normally distributed outcome variables and error terms are not necessary. It has been used to study multilevel predictors of a wide range of binary outcomes, including whether a person drops out of high school, completes college, marries, divorces, or goes bankrupt (see Guo and Zhao, 2000). HGLM helps one to disentangle individual-level effects from social effects by statistically disaggregating individual (level 1) and group (level 2) effects. In sum, we used this form of analysis because it provided the least biased and most informative method of hypothesis testing in this context.

TABLE 1
Study 1 Means, Standard Deviations, and Correlations of Level 2 Variables[a]

Variables	Mean	s.d.	1	2	3	4
1. Group size	8.35	1.50				
2. Local unemployment rate	4.55	1.01	−.08			
3. Coworkers' organizational commitment	4.04	0.48	−.13	.01		
4. Coworkers' job satisfaction	3.90	0.42	−.02	.04	.63	
5. Coworkers' job embeddedness	3.79	0.31	−.09	.00	.64	.59

[a] k = 1,037 departments; all correlations greater than .03 are significant at $p < .01$.

Results

Tables 1 and 2 report the means, standard deviations, and correlation coefficients between the dependent, independent, and control variables for the level 1 and level 2 variables. Table 3 presents the results of the HGLM analysis.

Hypothesis 1 posited a negative relationship between coworkers' job embeddedness and voluntary turnover. Table 3 (model 1) shows a negative and significant relationship between coworkers' job embeddedness and individual voluntary turnover ($\beta = -.19$, $p < .001$). We further suggested that coworkers' job embeddedness would predict turnover even when coworkers' job satisfaction and organizational commitment are controlled. As shown in Table 3 (model 2), coworkers' job embeddedness remains significantly predictive of turnover ($\beta = -.16$, $p < .001$), and neither coworkers'

TABLE 2
Study 1 Means, Standard Deviations, and Correlations of Level 1 Variables[a]

Variables	Mean	s.d.	1	2	3	4	5	6	7	8
1. Voluntary turnover	0.23	0.42								
2. Age	39.98	14.45	−.21							
3. Tenure	7.20	6.79	−.17	.41						
4. Gender	0.39	0.49	.01	−.07	−.03					
5. Race	0.33	0.47	−.08	−.04	.05	−.12				
6. Work status	0.26	0.44	.07	−.05	−.24	.05	−.17			
7. Organizational commitment	3.97	0.87	−.19	.21	.14	−.06	.12	−.13		
8. Job satisfaction	3.89	0.72	−.08	.00	−.02	−.06	.12	.04	.62	
9. Job embeddedness	3.76	0.55	−.17	.20	.15	−.01	.06	−.01	.63	.57

[a] n = 8,663 individuals; all correlations greater than .02 are significant at $p < .01$.

job satisfaction nor coworkers' organizational commitment remains as a significant predictor of turnover in this "competitive test" model. Thus, Hypothesis 1 is supported. Although replication was not the focus of this research, Table 3 does show results that replicate prior research. Specifically, individual-level job satisfaction, organizational commitment, and job embeddedness are significant, negative predictors of voluntary turnover (model 2: satisfaction, $\beta = -.07$, $p < .05$; commitment, $\beta = -.16$, $p < .01$; embeddedness, $\beta = -.09$, $p < .01$).

TABLE 3
Study 1 HGLM Logistic Regression Results Predicting Individual Voluntary Turnover[a]

Variables	Individual Turnover	
	Model 1	Model 2
Level 2		
Group size	−.01	−.01
Local unemployment rate	−.03	−.03
Coworkers' job embeddedness	−.19***	−.16***
Coworkers' organizational commitment		−.06
Coworkers' job satisfaction		.01
Level 1		
Age	−.47***	−.48***
Tenure	−.62***	−.61***
Gender	−.05*	−.05*
Race	−.14***	−.15***
Work status	.09**	.09**
Job embeddedness	−.10**	−.09**
Organizational commitment	−.17***	−.16***
Job satisfaction	−.05*	−.07*
Log-likelihood	−794.45	−802.81
$-2[L(\beta_{reduced}) - L(\beta_{full})]$[b]		16.72***

[a] To enhance ease of interpretation, we report standardized coefficients. n = 8,663 individuals; k = 1,037 departments.

[b] The significant change in log-likelihood indicates that model 2 is significantly *worse* at predicting turnover than model 1. The loss of two degrees of freedom may be the cause.

* $p < .05$
** $p < .01$
*** $p < .001$

Supplementary Qualitative Analysis

Our model suggests that aggregate job embeddedness influences individual turnover through contagion of job search behaviors. In Study 1, we did not quantitatively measure job search behaviors. Instead, we conducted content analyses of a deductive nature based on 11 focus groups at both of our research sites. To get a wide variety of responses, we selected Funcorp and Cashcorp[1] sites where employee turnover from prior years was high (six focus groups) and other sites where turnover was low (five focus groups). Eisenhardt and Graebner (2007) called this method "contrasting polar types." Focus groups were conducted before the survey was sent out in both samples. We asked focus group participants to tell us about their jobs and why people stayed or left. The focus groups lasted 90–120 minutes each and were attended by an average of eight employees each. All interviews were audiotaped and later transcribed verbatim.

One of the leading measures of job search behavior (Kopelman et al., 1992) asks respondents to note which, if any, of ten different search behaviors they have engaged in during the prior year. The behaviors include revising one's résumé, going on a job interview, and talking with coworkers about getting a new job. In the focus groups, we were careful not to put any of the participants under pressure by asking questions about revising résumés or going on job interviews. However, when we asked about the reasons why people stay, we noted that many

[1] This is our pseudonym for the bank providing Study 2 data.

spontaneous comments about leaving emerged. Moreover, it seemed to be much more acceptable to discuss leaving in the high-turnover locations.

Consequently, we asked two of the authors who were not involved with conducting the focus groups to use Atlas.ti qualitative software (a qualitative analysis tool that helps users organize, locate, code, and annotate findings from large volumes of qualitative documents) to independently count the comments about leaving (e.g., reasons for leaving, alternative job options, people who had left or were considering leaving). To ensure the coding process was blind, all focus-group-identifying information was removed from the transcripts. Before coding, the two judges discussed how they would count leaving reasons. For example, they agreed that when a single focus group participant listed several leaving reasons, they would count each reason as unique. One coder counted 158 leaving reasons in the 11 focus groups, and the other coder counted 163 leaving reasons. Together, the two judges identified 168 leaving reasons, of which 156 were the same, for 93 percent agreement. All disagreements were resolved in a discussion between the two judges, and the judges ultimately agreed on a final count of 158 leaving reasons.

To assess spontaneous discussions about leaving, the coders counted the number of reasons for leaving that employees publicly stated in each group. Employees mentioned that their coworkers left to obtain more pay, better opportunities or benefits, and less physically demanding jobs, or to go back to school. For example, one Cashcorp employee at a branch where the coworkers' job embeddedness score was low made the comment, "Did you know that at [alternative company], the pay starts at $9 or $10 and they reimburse 100% of tuition? If I saw that they were hiring, I could see myself leaving." After conducting the focus groups, we surveyed the employees as part of the broader quantitative portion of our study, as we describe in the Methods sections pertaining to Studies 1 and 2. From each focus group participant's individual job embeddedness, commitment, and satisfaction scores, we calculated each focus group's average level of job embeddedness, commitment, and satisfaction. We imputed the organizational average score to each of the 5 focus group participants (out of 88) who did not fill out a survey. The survey data gathered from focus group participants were also included in the broader HGLM analysis. The number of coded comments about leaving (a proxy for job search behavior) was then correlated with the group's average level of job embeddedness, commitment, and satisfaction.

Our findings were consistent with our hypotheses about what causes people to search and leave. The group's average levels of satisfaction ($r = -.10$, n.s.) and commitment ($r = -.27$, n.s.) were not significantly correlated with the number of comments about leaving. However, and consistently with the turnover contagion model, the group's level of job embeddedness was significantly, negatively correlated with the number of comments about leaving ($r = -.64$, $p < .05$). This qualitative finding regarding coworkers' job embeddedness is considerably more speculative than our subsequent quantitative findings reported for Study 2. As mentioned by Lee (1999), qualitative research *is not* suited to discussions of prevalence, generalizability, or calibration. Qualitative research, however, *is* well suited to discussions of description, interpretation, and explanation. Thus, these findings increased our confidence in our conceptual understanding and encouraged us to further test whether coworker job search mediates the relationship between coworkers' job embeddedness and focal employee turnover.

STUDY 2

Hypotheses

In Study 2, we sought not only to replicate the results of Study 1 but also to gain greater understanding of the coworker behaviors that explain the effect of coworkers' job embeddedness on individual employee turnover. Recall that Hypothesis 2 holds that coworkers' job search behavior mediates the effect of coworkers' job embeddedness on individual turnover. As described in the theory development section, contagion is a process by which turnover propensity spreads from coworkers to a focal actor. This process is hypothesized to occur when employees model each other's leaving-related behaviors (i.e. resume revision, reading the classifieds, going on job interviews, etc.). However, in Study 1 we did not directly measure job search behavior. In Study 2 we attempted to assess directly if job search behavior was more common where employees were not embedded and if coworkers' search behavior mediated the relationship between coworkers' job embeddedness and focal employee turnover.

Methods

Sample. Our second site was a retail bank in the U.S. Midwest. Cashcorp owns and operates 45 branch offices in two states and has roughly two billion dollars in assets. We sent a survey to all 486 employees. Three-hundred and twenty employees

TABLE 4
Study 2 Means, Standard Deviations, and Correlations of Level 2 Variables[a, b]

Variables	Mean	s.d.	1	2	3	4	5	6
1. Group size	5.20	6.07						
2. Local unemployment rate	4.08	2.46	−.08					
3. Coworkers' job alternatives	3.34	0.41	.08	−.14				
4. Coworkers' organizational commitment	2.97	0.35	.04	.03	−.53			
5. Coworkers' job satisfaction	3.27	0.31	.01	−.09	−.52	.66		
6. Coworkers' job embeddedness	2.36	0.27	.19	−.02	−.19	.52	.46	
7. Coworkers' search behavior	0.45	0.19	−.12	.13	.38	−.60	−.55	−.60

[a] The correlation between coworkers' job embeddedness and comments about leaving is −.64, $p < .05$. The relationships between coworkers' job satisfaction and coworkers' organizational commitment and comments about leaving are not significant.
[b] $k = 45$ departments; all correlations greater than .19 are significant at $p < .05$.

completed the survey, for a response rate of 66 percent. Missing values reduced the number of usable observations to 234 and the final response rate to 48 percent. In our usable sample, respondents were from 45 branches; 77.1 percent were women; the average age was 37.8 years; the average tenure with the organization was 6.1 years; and 8.2 percent were nonwhites. The average branch size was 10.8 (5.2 survey respondents per branch). In the two years following the survey, 60 employees who completed our survey voluntarily left Cashcorp, which equates to a two-year voluntary turnover rate of 25.7 percent (or 12.9 percent per year). Finally, nonresponse bias was unlikely because employees who completed our survey and those who did not were not significantly different in terms of gender, age, tenure, race, or turnover rate.

Measures. The measures and methods were only slightly different from those for Study 1. The most important addition was that Study 2 included the ten-item Job Search Behavior Index (Kopelman et al., 1992; $\alpha = .83$). We aggregated this measure to the unit level in order to assess the amount of job search activity occurring in a particular bank branch. This index seeks to tap the actual behaviors involved in looking for a new job and includes items such as, "[During the past year, have you] revised your résumé?" ". . . read the classified/help wanted advertisements in the newspaper?" ". . . sent copies of your résumé to a prospective employer?" ". . . talked to coworkers about getting a new job?" ". . . gone on a job interview?" The results of Kopelman and colleagues (1992) suggest that this index may be a better and more behaviorally grounded predictor of employee turnover than are intention to leave and attitudinal variables.

Study 2 also employs slightly better measures of job satisfaction and organizational commitment. Whereas the first study used a shortened 20-item version of Spector's Job Satisfaction Index (1985), Study 2 used the full 36-item scale. In addition, Study 1 only assessed affective commitment, and Study 2 used a more comprehensive 18-item measure of organizational commitment that includes affective, normative, and continuance commitment (Meyer, Allen, & Smith, 1993). Both studies used the same short version of Holtom and colleagues' (2006) job embeddedness scale. Once again, the reliability scores for these scales were high ($\alpha = .93$, job satisfaction; $\alpha = .89$, organizational commitment; and $\alpha = .82$, job embeddedness). Finally, we used Griffeth and Hom's (1988) 5-item Index of Perceived Job Alternatives at the individual level to control for the effect of employee perceptions on the job alternative–turnover relationship. Finally, as in Study 1, we aggregated five variables (i.e., job search, job embeddedness, job satisfaction, organizational commitment, and job alternatives) to the unit level. Our rationale for aggregating job satisfaction, organizational commitment, and job alternatives was the same as for Study 1. They were seen as conservative controls.

Analysis. The analytic technique also remained the same (i.e., HGLM), with the exception that we tested mediation using both the traditional Baron and Kenny (1986) standard and the Sobel test, which directly assesses the statistical significance of the change in regression coefficients when the mediator is added to the equation. As Baron and Kenny (1986) suggested, the Sobel test offers a confirmatory and rigorous test of mediation.

Results

Tables 4 and 5 present the level 1 and level 2 descriptive statistics. Table 6 presents results of the regression of the job attitude variables on the mediator (coworkers job search behavior) as well as results of the HGLM analysis for actual quitting. The main purpose of this study, though, was to test whether coworkers' job search behavior would mediate the relationship between cowork-

TABLE 5
Study 2 Means, Standard Deviations, and Correlations of Level 1 Variables[a]

Variables	Mean	s.d.	1	2	3	4	5	6	7	8	9	10
1. Voluntary turnover	0.26	0.44										
2. Age	37.51	12.15	−.37									
3. Tenure	5.89	7.05	−.26	.47								
4. Gender	0.73	0.45	.10	−.15	−.03							
5. Race	0.09	0.28	.20	−.09	−.04	.06						
6. Work status	0.13	0.33	.16	−.22	−.13	.13	.09					
7. Job alternatives	3.36	0.95	.07	.02	.03	.07	−.13	−.06				
8. Organizational commitment	2.97	0.62	−.26	.06	.13	.05	.04	.01	−.33			
9. Job satisfaction	3.28	0.53	−.24	.04	−.04	−.07	−.02	−.02	−.34	.55		
10. Job embeddedness	2.41	0.47	−.28	.30	.27	−.04	−.14	−.17	−.23	.56	.47	
11. Job search behavior index	0.43	0.31	.45	−.37	−.33	.03	.10	.06	.19	−.44	−.37	−.49

[a] $n = 234$ for all variables; all correlations greater than .13 are significant at $p < .05$.

ers' job embeddedness and focal employee voluntary turnover. Results indicate that coworkers' job embeddedness was significantly and negatively related to coworkers' job search behavior ($\beta = -.41$, $p < .001$) even after we controlled for bank branch size, local unemployment rate, coworkers' organizational commitment, coworkers' job satisfaction, and coworkers' perceptions of job alternatives. Next, we regressed voluntary turnover on coworkers' job embeddedness (models 1 and 2 in Table 6). Replicating our first study's findings, coworkers' job embeddedness

TABLE 6
Study 2 OLS and HGLM Regression Results Examining the Influence of Coworkers' Job Embeddedness[a]

			Individual Turnover		
Variables	Coworker Job Search		Model 1	Model 2	Model 3
Level 2					
Group size	−.09	−.04	−.10	−.21*	−.19*
Local unemployment rate	.20	.20	.16	.06	−.04
Coworkers' job alternatives	.13	.18		−.17	−.26
Coworkers' organizational commitment	−.32*	−.24		−.11	−.04
Coworkers' job satisfaction	−.18	−.08		−.27	−.29
Coworkers' job embeddedness		−.41***	−.92***	−.68**	−.46
Coworkers' job search					.59**
Level 1					
Age			−.58**	−.52*	−.54*
Tenure			−.26	−.18	−.18
Gender			.08	.16	.15
Race			.29	.30	.33
Work status			.29	.27	.28
Job embeddedness			.12	.10	.12
Organizational commitment			−.15	−.15	−.15
Job satisfaction			−.10	−.07	−.10
Job alternatives			−.10	−.11	−.10
Job search behavior index			.87***	.90***	.87***
R^2	.44	.55			
ΔR^2 from previous model		.11***			
Log-likelihood			−330.25	−330.55	−326.63
$-2[L(\beta_{\text{reduced}}) - L(\beta_{\text{full}})]$					7.84**

[a] To enhance ease of interpretation, we report standardized coefficients. $n = 234$ individuals; $k = 45$ branches.
* $p < .05$
** $p < .01$
*** $p < .001$

significantly predicted turnover ($\beta = -.92$, $p < .001$). Then we regressed voluntary turnover simultaneously on coworkers' job search behavior and coworkers' job embeddedness (model 3 in Table 6). Coworkers' job embeddedness becomes nonsignificant when the mediator is added. Moreover, the Sobel test shows that the change in the regression coefficient for coworkers' job embeddedness is itself significant (Sobel $t = -8.6$, $p < .001$). Thus, Hypothesis 2 is supported. Coworkers' job search behavior appears to mediate the relationship between coworkers' job embeddedness and turnover. As in our first study, we found that when we included coworkers' satisfaction and commitment variables in the model, only coworkers' job embeddedness was still significant.

The implications of our results are apparent in the effect sizes and statistical ramifications within our sample. On average, using a simple log-odds transformation, we found that a one standard deviation increase in coworkers' job embeddedness decreased the probability of an individual voluntarily leaving from 15.4 percent per year to 8.5 percent per year at Funcorp, and from 12.9 percent per year to 4.2 percent per year at Cashcorp. This equates to a decrease in voluntary turnover of 45 percent at Funcorp and 67 percent at Cashcorp, given controls for other variables in the model. We speculate that the Cashcorp results are stronger because the units are smaller and more exclusive. In the confined space of a bank branch, people saw their unit members more frequently and were exposed to only their fellow branch members' leaving behaviors. Across the two samples, a one standard deviation decrease in coworkers' job search behavior decreased the probability of an individual "turning over" by 35 percent. Moreover, in comparing the effect sizes of the individual and coworker variables, we found them to be roughly equal predictors of focal actor quitting. Thus, the job embeddedness and job search behavior of coworkers had a sizable influence on focal actor turnover decisions.

DISCUSSION

Extending social comparison theory to the domain of turnover, we investigated the role of coworkers' attitudes and behaviors on individual employee turnover propensity. In two separate samples, we found that aggregated coworkers' job embeddedness was a valid predictor of individual voluntary turnover. There are a variety of ways to demonstrate validity: (1) controlling for alternative explanations, (2) predicting a criterion, (3) explaining additional variance over and above that explained by competitive constructs, and (4) showing the process by which something has an effect (i.e., establishing mediation). It should be noted that all four of these criteria have been demonstrated for coworkers' job embeddedness. In analyses (1) controlled for demographic characteristics (e.g., tenure, age, work status, and gender), perceived and objective measures of job alternatives, and department size, coworkers' job embeddedness (2) predicts turnover in two distinct samples, (3) exceeds the prediction of similarly aggregated variables such as coworkers' job satisfaction and coworkers' organizational commitment, (4) and can plausibly be seen to operate through the observation of coworkers' job search behaviors. Thus, we can have some confidence that coworkers' job embeddedness is one important driver of turnover contagion.

But going beyond job embeddedness, we also provide evidence through both qualitative and quantitative analyses that coworkers' job search may act as a critical mechanism in the turnover contagion process. These findings are conservative in that job search behaviors have more recently evolved to include Internet job search, job clearinghouse websites, and e-mail correspondence about positions. The Job Search Behavior Index (Kopelman et al., 1992) does not account for these new ways of searching for a job.

A particular strength of the study is the replication of findings for two large samples in two very different settings. Cashcorp employees worked in self-contained branches with relatively few people. The employees at Funcorp, in contrast, were grouped according to department within a larger organizational unit (a club). These department members were not isolated from other employees in different departments. We suspect that this factor dilutes the influence of coworkers' job embeddedness. As such, finding that coworkers' job embeddedness influences voluntary turnover at Funcorp represents a more rigorous test of our hypotheses. Taking the results of these samples together enhances our confidence in the robustness of our inferences.

Limitations and Future Research

We have argued that taking an average of coworkers' job embeddedness and coworkers' job search behaviors makes sense as a way to capture the turnover contagion stimuli to which a focal individual is exposed. However, we note that the assessment of turnover contagion was indirect. Neither the more speculative qualitative data gathered

from the focus groups nor the more rigorous job search behaviors gathered in Study 2 measured what a focal person *actually* heard or saw coworkers do. Such behavioral data are difficult to gather but would seem to be a necessary component of future research on this topic. Moreover, there are other variables that might signal how likely it is for contagion to occur—for instance, how close desks are situated to each other, how often or effectively coworkers communicate with each other, friendship level, and status similarity. Given that such data were not available in our samples, the current research employed a simpler (and more conservative) measurement of turnover contagion. Future research could productively build on these findings to identify alternative operationalizations of the turnover contagion process, as well as moderators of these effects.

Further, our research has not included all variables known to be related to turnover. In particular, a valuable contribution to future research would be to include more macro variables, such as organizational support, leadership quality, and compensation policies, that might be fruitfully integrated as antecedent, moderator, or alternative mechanisms for the turnover contagion model developed here. In particular, it is possible that norms about the legitimacy of leaving might develop and could affect turnover (Abelson, 1993). Qualitative work by Bartunek et al. (2008) and Rumery (2003) has suggested that such collective norms can develop and that they may affect turnover attitudes and behaviors. Unfortunately, our data cannot speak to this issue. Moreover, it should be pointed out that if such norms were to exist, they would be predicated on extensive social comparison (Bartunek et al, 2008) and thus would act as a complementary rather than substitute mechanism for turnover contagion. Thus, although a normative factor could add to the prediction of individual turnover, we do not believe that effect will replace or be as strong as the contagion effect captured here. Said differently, we have attempted to control for the variables most likely to provide alternative explanations for our findings, yet we have not controlled for all of them, nor have we included all the variables that may be involved in the process. The inclusion of these additional variables may both clarify and extend the current research.

Finally, another potential limitation concerns the issue of weights for the subdimensions of job embeddedness. As a robustness check, we ran all the analyses using the weighted approach suggested by Law, Wong, and Mobley (1998). Specifically, we ran a logistic regression in which we regressed turnover on the six job embeddedness items to get the weights of each of the dimensions. We then multiplied each individual's score on each dimension by the weight for each dimension and added the six resulting products together. This created the weighted job embeddedness score. We then aggregated these weighted individual job embeddedness scores among the members of each department to create our measure of coworkers' job embeddedness. The results of this analysis are virtually identical to those obtained from the straight aggregation approach but with slightly improved predictive validity, which we would expect (Edwards, 2001; Howell, Breivik, & Wilcox, 2007; Law et al., 1998). We chose not to report or base our conclusions on the results using these weights for three reasons. First, such weights capitalize on sample-specific variance and error. Second, findings reported in other studies suggest that the contributions to turnover of the dimensions vary by samples (Allen, 2006; Lee et al., 2004, Zatzick & Iverson, 2006). Thus, using weights means that the construct is essentially different with every sample, which makes it difficult to meaningfully compare results across studies (Howell et al., 2007) and thus reduces generalizability and complicates theory building. Third, it was more conservative (e.g., less likely to capitalize on chance) and in line with previous research to use the aggregate job embeddedness score. However, we should add that this variation in weights points to the need for future research into the potential moderators of the relationship between the subdimensions of job embeddedness and turnover or performance. Better information is still needed about how and under what conditions job embeddedness subdimensions influence turnover. Finally, though we did not use the weights in the research reported here, we recognize that such sample-specific information may be what is most valuable in making prescriptions for any given organization.

Managerial Implications

Organizations can use the results of this study to design specific interventions aimed at reducing voluntary turnover. A primary implication is that, at the group level, job embeddedness is an important antecedent to eventual turnover. Beyond just affecting individual decision making, it also influences whether the social environment incites leaving. Of particular interest in the context of this research is a study by Allen (2006). He found that collective socialization tactics—where newcomers experience common learning experiences with a group or cohort—increase embeddedness in an or-

ganization. Such socialization tactics provide a common message about the organization, roles, and appropriate responses. This common message may shape how groups of people interpret organizational events such as the loss of a respected coworker or a large number of coworkers simultaneously. In short, organizations could actively manage the content of collective socialization experiences as well as attend to influential individuals in social networks (Bartunek et al., 2008; Mossholder et al., 2005).

Second, individual-level factors that increase individual job embeddedness should also be considered (Mitchell et al., 2001). Prior research has identified a number of antecedents to on-the-job embeddedness. For example, personality variables such as conscientiousness, extraversion, and agreeableness have demonstrated a strong, positive relationship with on-the-job embeddedness (Giosan, Holtom, & Watson, 2005). Thus, reducing voluntary turnover through selection is one clearly actionable approach (Barrick & Zimmerman, 2005). Further, both perceived supervisor support and perceived organizational support have been demonstrated to positively predict levels of on-the-job embeddedness (Giosan et al., 2005) and reduced voluntary turnover (Maertz, Griffeth, Campbell, & Allen, 2007). Other suggestions include developing schedules that fit employee needs (Holtom, Lee, & Tidd, 2002), providing creative benefit alternatives or cafeteria plans, tailoring benefits to meet individual needs and enhance work-life balance, allowing employees input into designing work environments, and providing incentives or perks based on tenure (Giosan et al., 2005).

Off-the-job embeddedness can also be increased in a number of ways. For example, one firm was able to increase community embeddedness and subsequent retention by recruiting and hiring from communities close to their facilities and avoiding relocating employees whenever possible (Holtom et al., 2006). Similarly, another firm increased links in the community by supporting community service by employees (e.g., giving two days off per year for community service), allowing them to volunteer in local student programs as mentors, and encouraging professional involvement in community-based professional organizations (Holtom et al., 2006). Finally, one organization augmented employee-perceived community-related sacrifice and subsequent retention by providing home-buying assistance (Holtom et al., 2006). In sum, there are many ways that organizations can systematically seek to reduce the rate of voluntary, avoidable turnover by enacting programs designed to increase job embeddedness at the meso and micro levels.

Job search behavior may also have managerial implications, and these are potentially more controversial. Specifically, managers could prohibit gossiping about people who are looking for other jobs, especially "on company time." Such a prohibition might inhibit the spread of contagious information, but bald attempts at concertive control may provoke reactance, ill-will, and even sabotage. Perhaps a more realistic alternative is for managers to track job embeddedness and turnover at the team level. Where embeddedness is low and/or turnover is high, they might actively try to raise embeddedness scores or reconstitute a group with some people who have high embeddedness. Such changes might reduce the job search behaviors demonstrated by group members.

Concluding Thoughts

Tackling turnover theory at the meso level is not new; it has been advocated at the organization culture level (Abelson, 1993) and even empirically examined on occasion (cf. Feeley & Burnett, 1997. However, it is our belief that these approaches have not focused enough on social factors—specifically, the attitudes, characteristics, and behaviors of focal employees' coworkers. Although researchers perhaps do not naturally think of quitting as a social phenomenon, our research suggests that it is and that additional research regarding the social predictors of turnover is warranted.

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APPENDIX
Job Embeddedness Scale, Short Form[a]

1. My job utilizes my skills and talents well.
2. I feel like I am a good match for my organization.
3. If I stay with my organization, I will be able to achieve most of my goals.
4. I really love the place where I live.
5. The place where I live is a good match for me.
6. The area where I live offers the leisure activities that I like (sports, outdoor activities, cultural events & arts).
7. I have a lot of freedom on this job to pursue my goals.
8. I would sacrifice a lot if I left this job.
9. I believe the prospects for continuing employment with my organization are excellent.
10. Leaving the community where I live would be very hard.
11. If I were to leave the community, I would miss my non-work friends.
12. If I were to leave the area where I live, I would miss my neighborhood.
13. I am a member of an effective work group.
14. I work closely with my coworkers.
15. On the job, I interact frequently with my work group members.
16. My family roots are in this community.
17. I am active in one or more community organizations (e.g., churches, sports teams, schools, etc.).
18. I participate in cultural and recreational activities in my local area.
19. Are you currently married?
20. If you are currently married, does your spouse work outside the home?
21. Do you own a home (with or without a mortgage)?

[a] Source: Holtom et al., 2006.

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