

The Ties that Bind: Social Networks, Person-Organization Value Fit, and Turnover Intention

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ABSTRACT

This article examines the influence of social networks and value congruence on turnover intention among public and nonprofit employees. We argue that employees exist in social networks inside and outside their organization, and these networks shape employee attitudes and behavior. To illustrate this theory, we use turnover intention. A strong and positive intraorganizational social network characterized by good relations with and a sense of obligation toward other staff is hypothesized to make it more likely that employees will stay. A strong social network external to the organization is hypothesized to increase the opportunities that employees have to leave. Our findings offer strong support for the role of intraorganizational networks, but relatively weak support for the effect of external networks. We also propose that person-organization (P-O) fit shape turnover intention. Our results suggest that employees who experience a strong P-O fit in terms of value congruence are more likely to offer a long-term commitment.

INTRODUCTION

Why do employees quit? There is a rich empirical literature dedicated to answering this question, primarily based upon studies of private organizations. Turnover has also been a subject of keen interest among nonprofits, partly because it is perceived to be a major problem in that sector, particularly in the area of social work (Mor Barak, Nissly, and Levin 2001 offer a meta-analysis of this work). There have been fewer turnover studies of government organizations (notable exceptions include Kellough and Osuna 1995; Lewis 1991; Lewis and Park 1989; Selden and Moynihan 2000; Smith 1979), although a recent boomlet of research indicates a renewed interest in the topic (Bertelli 2007; Huang, Chuang, and Lin 2003; Ito 2003; Kim 2005; Lee and Whitford forthcoming; K. J. Meier, and A. Hicklin 2007, unpublished data).

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We focus on the interaction of the individual and organizational aspects of turnover and seek to add to previous research in two ways. Our primary contribution is to test the role of internal and external network relationships on turnover intention. A social network perspective on turnover emphasizes the relational aspects of organizational life. Previous studies of turnover have largely neglected the roles of social networks, guilty of what Granovetter (1985) refers to as an “undersocialized” approach, failing to recognize that individuals are embedded in web of social relations that guide their decisions (Maertz and Griffeth 2004). The treatment of networks in public management has focused predominantly on networks of multiple organizations (Provan and Milward 1995), while intra-organizational social networks have received less attention. Given the inattention to the relational aspect of working in public service, the study of social networks is important because it offers a fuller explanation of employee behavior and attitudes. Social networks are likely also to be particularly important for public and nonprofit agencies: “Because providing care in such a work environment requires giving of oneself emotionally, replenishment in the form of relational and emotional support from coworkers and other employees is important” (Parker 2002, 608).

We hypothesize that strong social intraorganizational networks reduce turnover intention, because employees who perceive that they have a high level of support from their fellow coworkers and feel a sense of obligation toward their colleagues are less likely to express an intention to quit. Strong external networks are hypothesized as having the opposite effects, since belonging to a network external to the organization provides greater information about job opportunities, facilitating the ease of movement for employees.

Our second main contribution is to examine how employee values shape turnover intention. When public administration scholarship has tested the role of individual values on bureaucratic behavior, it has often done so in terms of the public service motivation (PSM) of individuals or has looked at the attractiveness of organizational values. Here, we examine the importance of values in terms of the perceived fit between individual values and organizational values. We hypothesize that individuals who experience a high person-organization (P-O) fit in terms of value congruence are less likely to exit.

Turnover is an attitudinal variable that has particular relevance for public organizations that now face a human capital crisis and nonprofits that have had trouble retaining staff. We model turnover intention not only in terms of a standard measure of short-term desire to exit the organization but also in terms of a lifetime commitment on the part of the respondent. Our theoretical approach offers alternate explanations for why people leave, providing practical insights for managers trying to keep them to stay. Our analysis suggests that turnover can be reduced by finding mechanisms to foster social integration within organizations and by changing organizational practices (recruitment, communication, and job design) in a way that fosters P-O fit.

The following sections review previous findings on turnover in greater detail, and develop a theory on the role of social networks and value congruence. We then test this theory on a sample of public and nonprofit employees, before we discuss the implications of our findings for practice and future research.

RESEARCH ON TURNOVER

Turnover is a topic of organizational research with clear relevance to practice, given the costs that turnover imposes on organizations in terms of loss of institutional memory,

hiring, and training and given increasing evidence that turnover is negatively related to performance in both the private (Shaw, Gupta, and Delery 2005) and public sector (K. J. Meier, and A. Hicklin 2007, unpublished data). There are not major theoretical differences in the empirical work across the public, private, and non-profit settings. Factors that affect turnover, or its frequently used surrogate, turnover intention, fall into three major groups: environmental or economic, individual, and organizational (Mobley et al. 1979; Selden and Moynihan 2000). This section briefly reviews research on turnover, looking at environmental, individual, and organizational variables. The literature is too extensive for a comprehensive review, but we identify some of the more prominent findings, in part to demonstrate how the focus of this article on social networks represents a new theoretical approach and contribution.

Environmental or economic variables examine the effects of economic conditions on an employee's propensity to leave. All things being equal, the better the local economic conditions, the more likely an employee will quit, confident that they will be able to find another job (Cotton and Tuttle 1986; March and Simon 1958; Park, Ofori-Dankwa, and Bishop 1994). Since this article examines a cross-section of respondents in a particular geographic area, there is not the opportunity to test the influence of economic variation.

Another approach to turnover is to look at how individual differences explain propensity to quit. In early studies of turnover, race and gender were frequently used demographic variables, on the assumption that women and minorities were more likely to quit. Subsequent research largely debunked this assumption, suggesting that when other relevant variables were included, race and gender were no longer significant predictors of turnover (Blau and Kahn 1981; Kellough and Osuna 1995; Lewis and Park 1989; Smith 1979). Previous research on individual differences also provides what we might term the life cycle stability hypothesis, which suggests that older and more experienced workers exhibit a preference for a status quo that makes them less likely to quit. Research has consistently shown that age and length of time in position are negatively correlated with turnover (Blau and Kahn 1981; Cotton and Tuttle 1986; Iverson and Currihan 2003; Kellough and Osuna 1995; Lazear 1999; Lewis and Park 1989; Lewis 1991; Mor Barak, Nissly, and Levin 2001; Muchinsky and Morrow 1980). Our analysis therefore controls for the age of employees and length of time in their current position.

A third level of analysis focuses on organizational characteristics, or more precisely, the interaction of individual employees and the characteristics of their organization. One component of turnover research focuses on the effect of human resource management policies on turnover intention (Arthur 1994; Gould Williams 2004; Mobley 1977; Shaw et al. 1998). There is empirical evidence on the positive effects of promotion and advancement opportunity (Kellough and Osuna 1995; Lazear 1999; Lee and Whitford forthcoming; Selden and Moynihan 2000; Smith 1979), better pay (Cotton and Tuttle 1986; Kim 1999; Lazear 1996; Leonard 1987; Lewis and Park 1989; Park, Ofori-Dankwa, and Bishop 1994; Selden and Moynihan 2000), and better benefits (Shaw et al. 1998). There is mixed empirical support on the effect of training and employee development: it sometimes appears to encourage retention (Curry, McCarragher, and Dellmann-Jenkins 2005), it sometimes appears to make an employee more marketable and more likely to leave (Ito 2003), and is sometimes not significant at all (Kim 2005; Shaw et al. 1998). Family-friendly policies have also been found to reduce turnover (Durst 1999; Ezra and Deckman 1996; Selden and Moynihan 2000).

Much of the individual-organization interaction is captured in an employee's job satisfaction. March and Simon (1958) argued that the decision to leave was based on

factors that influence the desirability and ease of movement. The most frequently used indicator of desire to exit is job satisfaction, with employees expressing high job satisfaction being unlikely to leave. Job satisfaction is the single most reliable predictor of turnover (Cotton and Tuttle 1986; Iverson and Curriuan 2003; Mobley 1977; Mor Barak, Nissly, and Levin 2001). The key advantage of job satisfaction is that it is a simple single summary measure that captures employee's perceptions of how they are being treated by their organization. Job satisfaction is predicated on many of the same organizational factors that are also sometimes associated with turnover, for example, job routineness, pay, goal clarity, goal conflict, procedural constraints, human resource development (Wright and Davis 2002), participation and perceptions of supervisory style (Kim 2002), promotion opportunity (Ting 1997), and employee burnout (Cordes and Dougherty 1993, 639; Huang, Chuang and Lin 2003; Kim 2005). Authors have sometimes presented alternates to job satisfaction. Study of Bertelli (2007) of turnover among Treasury officials proposes an alternate to job satisfaction in the form of an index that measures job involvement and intrinsic motivation. Consistent with their theoretical interest in the employee's perception of their organization, Lee and Whitford (forthcoming) use a measure of organizational rather than job satisfaction.

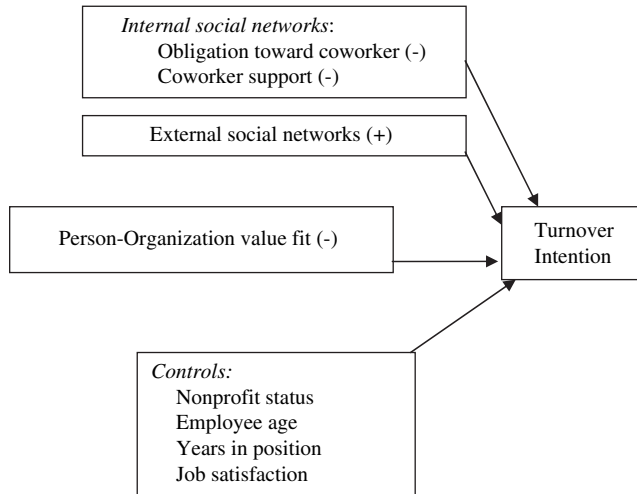
Given its prominence in previous research, some measure of current satisfaction with the workplace should form the core of any basic model of turnover. Exclusion of this variable would create omitted variable bias. For the model in this article, for example, omitting job satisfaction would overestimate the significance of other correlated variables, value congruence, and intraorganizational social network relationships. The efforts of Mossholder, Settoon, and Henagan (2005) to link social networks to turnover recognize this fact and therefore include job satisfaction as the only attitudinal control in order to provide greater confidence in the results that emerge.

Our model of turnover is presented in figure 1. It includes some of the controls from previous research discussed above that relate to the individual's life cycle and job satisfaction. The key contribution is to examine the role of two categories of variables not traditionally associated with turnover: social networks and P-O value congruence. In the area of social networks, we examine whether intraorganizational networks (in the form of employee support and coworker obligation) reduce turnover intention, while we examine whether connections to an external network increase turnover intention.

Beyond the fact that they have been largely overlooked by most studies of turnover, what is common between both concepts is an assumption that the individual's perception of their environment shapes preferences. However, as figure 1 suggests, we see P-O value congruence and social networks as separate theoretical concepts, and our model does not attempt to force these concepts into some wider unifying theoretical framework. Both concepts have significant theoretical literatures that offer support for their validity as an explanation for human resource outcomes and therefore represent a suitable level of analysis for middle-range theorizing (Merton 1968).

SOCIAL NETWORKS

In studying bureaucratic organizations, we often focus on rules and structures to the point that the social context of bureaucracies is rarely given adequate attention. This is certainly true in the area of turnover. The empirical literature of turnover examines formal aspects of the organization, or the individual, but not at the social context of the individual. The study

Figure 1**A Model of Social Networks, P-O Value Fit, and Turnover Intention**

of turnover reflects an undersocialized approach, ignoring the fact that individuals are embedded in a social network that will have an impact on their behavior.

The narrow contribution of this article is to examine the role of social networks on turnover intention. More broadly, we hope to prompt greater attention in public management scholarship to the role that social networks play in influencing a wide range of individual behaviors and attitudes. By offering a social network view, we suggest an alternate theoretical approach to understanding why bureaucratic actors behave in the way that we do. Our choice of turnover as a dependent variable seeks to illustrate the practical relevance of this approach. Turnover is a long-studied topic that has become increasingly relevant given the human capital crisis in government (National Commission for Public Service 2003). With an aging workforce, a significant portion of public employees are eligible to take retirement, even as many are young enough to continue working with the government or elsewhere. Hiring younger workers is one solution to this problem. Reducing turnover is another.

Social Networks in Bureaucracy

As governments struggle to develop human capital strategies, the relevance of a social network perspective should not be overlooked. Simply by increasing our understanding of why people decide to stay or leave has a practical benefit in helping us to understand what initiatives affect turnover. The relevance of examining the importance of relational ties between workers becomes more pointed given contemporary downsizing and outsourcing, initiatives that disrupt social ties. In the nonprofit world, turnover is also an ongoing topic of concern because of a perception that employees rarely commit to a nonprofit organization for a considerable period (Mor Barak, Nissly, and Levin 2001). The instability that many nonprofits face may weaken the ability to foster strong social ties. Since nonprofits tend to rely on other organizations to receive funding and help deliver services, their relatively open nature may make external networks more relevant to turnover decisions.

It is somewhat surprising that the importance of social networks has not received more attention in the study of turnover and other aspects of public management. The study of bureaucracy is marked by the struggle to look beyond formal management systems to recognize the social basis for behavior. Well-known examples include the Hawthorne studies, where individuals curbed production to a group norm even in the face of monetary incentives; Barnard (1938) recognized how the informal aspects of organization helped maintained organizational cohesiveness; and Gouldner's (1954) examination of how solidarity and informal norms established role expectations independent of bureaucratic rules. The social aspects of bureaucracy have sometimes been treated in terms of cultural norms (Kaufman 1960) or informal institutions (March and Olsen 1995). But a consistent thread that runs through this work is the recognition that employees adapt their behavior consistent with the norms and expectations of people around them.

Wilson's description (2000) of peer expectations is an example that is close to the idea of social networks we advance here. Wilson illustrates the power of peer expectations by analyzing why soldiers fight. "Those who argue that the behavior of an organizations nothing more than the sum of the behaviors of its rationally self-interested members cannot account for an army at war. By almost any standard, the rationally self-interested behavior for a soldier facing the prospect of imminent death or injury is to break and run" (Wilson 2000, 45). What accounts for the willingness of soldiers to put themselves in danger? More important than morale or patriotism is group solidarity and the esteem of one's colleagues. Wilson argues that the importance of peer expectations is not limited to soldiering, but applies more broadly to the circumstances of more routine bureaucracy (Wilson 2000, 47).

The public management treatment of networks has largely focused on networks of multiple organizations (Provan and Milward 1995). It is reasonable to recognize that the task of building and maintaining effective networks across multiple organizations is a critical and growing area of study in public management, given that more public services are delivered through such networks, and research attention to this area is relatively recent. However, the concept of social networks can also help cast light on traditional dependent variables of interest within public organizations. An example is the work of Meier and O'Toole (2003), who show that the networking activities of school superintendents are positively related to performance. Consistent with their approach, we take an actor-centered or egocentric approach to networks, assuming that social networks reflect the social environment in which people find themselves.

The Role of Intraorganizational Social Networks

Most existing work on intraorganizational social networks comes from outside public management literature. Some research focuses on how developing social capital aids the individual employee in the competition for organizational rewards (Burt 1992; Coleman 1990). This research assumes that workers develop social capital as an investment that pays off in the form of rewards such as better pay and promotion. Given the rational and self-interested assumptions about individual behavior in this tradition, we might expect that those workers who generate strong social relations are more likely to leave, since they are motivated to create such relations for purposes of individual gain. The primary gain of voluntary turnover accrues to the employee, who presumably wins a more favorable position, while quits impose an unavoidable cost on the organization. On the other hand, employees exiting

an organization will lose the potential to use the carefully cultivated social capital they have built. Self-interested employees may be more reluctant to quit for that reason.

Our treatment of intraorganizational social capital in this article is somewhat different. We propose that intraorganizational social networks are sticky webs that keep employees with the same organization, not trampolines that vault employees onto their next job. Our approach does not necessarily represent a contradiction of previous work, since there are many types of network relationships. For example, Burt (1992) noted an entrepreneurial form of networking where managers cultivated relationships with those outside of their work group, thereby fostering promotion opportunities. This is clearly a different type of social relationship than the concepts of coworker support and obligation that we examine.

Our approach is supported by Mitchell et al. (2001), who identify attachment to people and groups as one aspect of job embeddedness that is negatively related to turnover, and Maertz and Griffeth (2004), who identify attachment to others as a motivational factor affecting voluntary turnover. In the public sector, Bertelli (2007) finds that individuals who perceive that they are in a friendly workplace are less likely to quit. We also find support from aspects of the organizational commitment literature. One aspect of commitment in the public sector, according to Balfour and Wechsler (1996, 263) is affiliation commitment, which “should be conceived in terms of perceptions about caring and belonging. Affiliation derives from beliefs that other members of the organization care about the individual and his or her well-being and from a feeling of belonging to a close-knit, cohesive group—a family.” They demonstrate that affiliation commitment reduces turnover intention and is also strongly correlated with other forms of extra-role behavior.

We draw directly from the model of intraorganizational relationships proposed by Mossholder, Settoon, and Henagan (2005). They argue that high-quality relations with other actors increase the likelihood that an employee will stay in the organization: Social networks become ties that bind employees to their organization and mediate the impact of negative factors or shocks that frequently lead to voluntary turnover. Applying the same logic, Labianca and Brass (2006) theorize that negative intraorganizational relationships create social liabilities that reduce employee performance, income, and promotion and encourage turnover.

Mossholder, Settoon, and Henagan (2005) identify four attributes of intraorganizational relations: network centrality, coworker support, felt obligation toward coworkers, and interpersonal citizenship behavior. Each attribute suggests a different causal process by which social networks matter to behavior, but are unified in their focus on intraorganizational relationships. Interpersonal citizenship behavior reflects how an employee actually behaves toward coworkers in terms of offering assistance to others. Such behavior can be motivated by a depth of affection toward coworkers or as an instrumental investment expected to improve career prospects. In either case, employees who regularly aid other workers are expected to be less likely to quit. Network centrality refers to the number of ties an employee has with other members of the organization. Employees with higher ties are deemed to be more embedded and less likely to leave. Network centrality is a structural measure of social relations, but tells us little about the quality of those relations.

In this article, we test coworker support and coworker obligation, which Mossholder, Settoon, and Henagan identify as attitudinal aspects of social relations that reflect the

nature of such relationships.¹ One important aspect of relationships is whether employees feel that they are supported by their colleagues. According to organizational support theory, individuals who feel more integrated into the social network of which they are a part are less likely to exhibit withdrawal behavior (Rhoades and Eisenberger 2002). Coworker support reflects employee beliefs that their fellow workers care for them and respect them, making it less likely that employees will leave: “Work-based social support is usually extended by proximal individuals, and thus exchanges of support should reverberate among coworkers, strengthening interpersonal bonds and attenuating shocks that encourage withdrawal behavior. In sum, employees who are the object of coworkers’ caring and concern increase their direct attachment to such coworkers, and through them, indirect attachment to their organization” (Mossholder, Settoon, and Henagan 2005, 609). We therefore propose the following hypothesis:

H₁ Perceived coworker support is negatively related to turnover intention.

Felt obligation toward coworkers reflects the sense of obligation toward other employees. Again, this is a measure of internal social networks that deals not with the size of the network or centrality of the individual, but with the nature of the relationships with other colleagues in the social network. There is theoretical support to believe that this aspect of social relations matters to turnover. Mossholder, Settoon, and Henagan (2005) point to social exchange theory, which proposes that individuals who feel that they have received benefits from others will feel an obligation that they discharge through extra effort and loyalty. Organizational support theory also provides additional empirical support, as Eisenberger et al. (2001) have shown that those who feel a greater sense of obligation toward peers are less likely to engage in withdrawal behavior. According to Mossholder, Settoon, and Henagan (2005, 610): “Felt obligation propels social relations because benefits extended owing to obligations create feelings of investment and encourage individuals to work at preserving this incipient social capital . . . Although they may not exert a strong effect at a given juncture, felt obligations toward coworkers could elicit longer-term reciprocity in interpersonal exchanges, which would encourage closer relationships and greater interpersonal embeddedness.” This embeddedness is expected to reduce turnover. This leads us to our next hypothesis:

H₂ Felt obligation toward coworkers is negatively related to turnover intention.

The Role of External Social Networks

Although we hypothesize that intraorganizational social networks can facilitate retention, employees also have social networks external to the organization. Based on a foundational work in social network theory, we propose that such external networks encourage turnover. The early work of Mark Granovetter (1973, 1974) has become one of the touchstones for research in networks. As others applied Granovetter’s conceptual approach to networks,

¹ We do not test network centrality and interpersonal citizenship because of difficulties in finding an equivalent measure to those used by Mossholder, Settoon and Henagan (2005). For both measures Mossholder, Settoon and Henagan required workers to talk about other named employees to assess their citizenship qualities and network centrality. We assumed such questions would have a negative affect on response rate and might pose confidentiality problems. Mossholder, Settoon and Henagan tested their hypotheses on a relatively small sample ($n = 176$) of actual quits from a health care center. They found support for the hypotheses on network centrality and interpersonal citizenship behavior, but did not find support for coworker support or coworker obligation, which we examine here.

what was sometimes forgotten was the original research question. Granovetter was interested in how individuals found jobs. He showed that individuals with larger social networks were more successful in their job search. What mattered most about the network was not the quality of the relationships, but the size of the network. Individuals often gained job opportunities through relatively weak connections, leading Granovetter to identify the strength of weak ties.

Weak ties correspond with low-density networks, forming a bridge to clusters of people who otherwise have little connection to one another. Connections between varieties of settings expand potential job opportunities. Close ties provide a highly dense network, in which most members know one another, and the marginal information about job opportunities provided by an additional member is low. In job searches, low-density networks are preferable because they generate more information about prospective jobs. "Acquaintances, as compared to close friends, are more prone to move in different circles than oneself. Those to whom one is closest are likely to have the greatest overlap in contact with those one already knows, so that the information to which they are privy is likely to be much the same as that which one already has" (Granovetter 1974, 52–53). For example, Higgins (2001) found that the greater the diversity of an individual's network of advisors, the greater the number of offers they received during job searches.

External social networks appear to aid job searches. But we also expect that external networks will influence turnover intention. It is reasonable to assume that the employee with more information about job opportunities and more contacts, who can facilitate a career move, will be more likely to consider exiting his/her organization than the employee with less knowledge of external opportunities. Individuals who are part of an external network have greater access to information on job opportunities in related areas, and more ties to call on to pursue those opportunities than individuals who are not in those networks. As employees learn about job postings that offer more favorable work conditions, knowledge of these opportunities makes the relative advantages of exiting the organization more prominent and the difficulties in finding alternate employment less daunting. In effect, the information and ties that external networks provide alter employee perceptions about ease of movement, strengthening the intent to quit the organization (March and Simon 1958). Gerhart (1990) has offered empirical evidence that the perception of available job opportunities and ease of movement does indeed affect turnover intention.

The weak tie hypothesis has found most support in studies of managers rather than lower status or lower socioeconomic employees (Granovetter 1983, 205–9). Since our sample consists of managers and professional employees, the weak tie hypothesis should apply. We measure the external social network of managers in terms of their professional activities. We use an index of dummy variables that includes professional membership, attendance of national and local meetings, and whether the employee reads professional journals, which are a source of information about related job opportunities. Professional activity appears to be a good measure of weak ties, since it connects managers with acquaintances who have a shared professional interest:

H₃ A strong external network has a positive association with turnover intention.

Why should intraorganizational and external social networks have different impacts on turnover, encouraging and discouraging retention respectively? There are two distinct logics at work. External network centrality matters in job searches, but the strength of social relations does not. The work of Granovetter suggests that in job searches information

is more important than emotional connections such as loyalty. When employees decide to stay in an organization, Mossholder, Settoon, and Henagan (2005) argue that the quality of relationships with others matter. In the terms of March and Simon (1958), intraorganizational social networks that create organizational loyalty limit turnover by reducing the desirability of leaving, whereas external social networks make it easier to leave by increasing information about job opportunities elsewhere.

P-O FIT

Previous research on turnover has frequently proposed that individuals with higher level of organizational commitment are less likely to quit (see Cohen 1993, for a meta-analysis of this research, also Arthur 1994; Balfour and Wechsler 1996; Cotton and Tuttle 1986; Hochwarter et al. 1999; Ito 2003; Michaels and Spector 1982; Mor Barak, Nissly, and Levin 2001; Stremmel 1991). The concept of commitment is not a unitary one, reflecting the fact that employees commit to an organization for many reasons. This article focuses particularly on how individual values interact with the organizational environment to shape turnover intention.

Although job-level and organization-level characteristics are important objects of employee commitment, employees are attracted to an organization by more than mere presence or absence of financial inducement or desirability of specific tasks. Employees may feel an attachment to the organization because of the opportunity to carry out work that holds intrinsic value to the individual. In other words, the work satisfies important individual values. This echoes the views of Selznick (1957), who called on leaders to infuse organizations with value by communicating to employees the benefits and virtues of the organization and its mission in a way that made employment a source of satisfaction. More recently, Kernaghan (2003, 711) has renewed the call to understand how values can be integrated into the actions of public employees.

In examining the behavior of public employees, there have been two basic ways to consider how values matter to behavior and attitudes. The first is to focus on specific individual values. The best example here is the PSM concept. Employees with high levels of PSM value public service and are expected to be more likely to enter public service (Perry and Wise 1990). In recent years, there has been a good deal of attention to examining how PSM can shape bureaucratic behavior and attitudes such as whistle blowing (Brewer and Selden 1998), organizational commitment (Crewson 1997), job satisfaction, and turnover intention (Naff and Crum 1999). The practical advice that emerges from focusing on intrinsic values would be to hire and retain those with desirable individual values.

A second approach is to focus on organizational values. This approach emphasizes the attractiveness of the mission and goals of the organization. A good example of this is what Balfour and Wechsler (1996) refer to as identification commitment, reflected in pride in the organization and support for its mission. They find that such identification with the organization results in a greater desire to stay in the organization. The practical advice that would emerge from this approach would be to define and communicate the mission, vision, and goals of the organization.

Instead of examining just individual and organizational values as distinct concepts, we examine how they intersect, that is, the value congruence between the individual and organization. The importance of value congruence has found theoretical expression and

empirical support using the P-O fit framework. P-O fit is “the compatibility between people and organizations that occurs when: (a) at least one entity provides what the other needs, or (b) they share similar fundamental characteristics” (Kristof 1996, 4–5). It is an approach to commitment marked by its concern with a contextual approach to values. This is helpful because, unlike PSM style measurements of intrinsic commitment, the P-O fit approach attempts to reflect how the organizational context interacts with values. There are a variety of ways of measuring P-O fit, but Elfenbein and O’Reilly (2007) argue that value congruence is the most useful. The practical implications of the P-O fit approach are to find ways to create and communicate value overlap with employees.

A basic underlying assumption of the P-O fit literature is that people will be more attracted to and less likely to exit organizations where they find a close match (Elfenbein and O’Reilly 2007, 5; Schneider 1987). This suggests that P-O fit will be associated with reduced turnover intention. Chatman (1991) finds that value congruence reduces turnover intention and turnover among recent recruits in accounting firms, and other work has supported this logic (Cable and Judge 1996; Koberg and Chusmir 1987; McCulloch 2001; O’Reilly, Chatman, and Caldwell 1991; Rynes, Brown, and Colbert 2002; Saks and Ashforth 1997). Vandenberghe’s study (1999) of nurses in Belgium found that they were less likely to have quit after 12 months if they perceived high P-O fit. In non-profit studies, attraction to mission has been found to be negatively associated with turnover (Brown and Yoshida 2003; Kim and Lee 2005). A meta-analysis of P-O literature reported a significant relationship between P-O fit and turnover (Verquer, Beehr, and Wagner 2003):

H₄ Person-organization value congruence is negatively related to turnover intention.

DATA AND METHOD

Survey Methodology

The data were collected from organizations in the northeastern United States during the spring of 2005. Twelve organizations from the same labor market, five private nonprofit and seven public, participated in this study. Although these organizations performed a range of functions, all of them provide services. The majority of the organizations (10 out of 12) belong to the human services arena delivering a range of services such as medical care, public health, child protection, interest group advocacy, and psychological/psychiatric services.

Consistent with the study goal of collecting data from managerial and professional employees working for a range of public and private nonprofit organizations, personnel involved in clerical, housekeeping, and other administrative support roles were specifically excluded. In preparing for implementation phase of the self-administered questionnaire, an organizational sponsor was identified for each of the participating organizations. This sponsor came from either the human resources unit or was a senior manager and served a liaison function providing help with key activities such as constructing the sampling frame, getting the message about the questionnaire out to organizational members, encouraging participation, etc. Organizational phone or employee directories were used to construct the sampling frame. In consultation with the organizational sponsor, a strategy for distribution, follow-up to encourage participation and collection of completed questionnaires was worked out. In devising this plan, great care was exercised to ensure the

anonymity of respondents. Given an overarching goal of obtaining a diverse sample comprised of respondents from different organizational settings, a target of 30 respondents per organizations was set. Three of the organizations were smaller, and thus a census was conducted in these organizations. Of the remaining nine, a simple random sampling scheme was used for five and convenience samples were obtained for the remaining four. The data collection phase was initiated in late spring of 2005 and concluded in approximately 4 weeks. On average, 27 responses were obtained from each organization. Of the 531 comprising the sample, 326 responded for a response rate of 61.4%.

Measuring the Dependent Variable

We use two dependent variables, one intended to test short-term or active turnover intention and the other to examine long-term turnover intention. Our use of turnover intention as a dependent variable, rather than actual turnover, is consistent with the majority of empirical research on turnover. The potential to develop and test sophisticated models of turnover is greatly enhanced by the use of this surrogate for actual turnover. As with any surrogate, turnover intention does not perfectly mirror actual turnover, but has been found to be highly correlated with turnover (Dalton, Johnson, and Daily 1999, 1342). The use of turnover intention has the advantage of allowing researchers to study the affective attitudes of employees.

Our short-term measure of turnover intention is based on a response to the question “How often do you look for job opportunities outside this organization?” (1 = never, 5 = constantly). The advantage of this measure is that turnover intention is demonstrated by an active search for alternative positions, rather than a more abstract statement of intention to leave at some point in the future. Our long-term measure of turnover intention is intended to reflect the concept of lifetime employment, and whether the employee perceives their workplace as an environment where they could spend the rest of their career. It is based on a response to the statement “I would be very happy to spend the rest of my career with this organization” (seven = strongly disagree, one = strongly agree). More detail on the measurement of the dependent variables and all of the independent variables can be found in the Appendix.

Data Analysis

As with most empirical analyses, there are limitations to data measurement. Although we generally use summative indexes to measure theoretical constructs, our measure of obligation toward coworkers is a single-item measure. However, the measure appears to have face validity since it asks respondents specifically about their sense of obligation to other people in their organization. In addition, the variable demonstrated convergent and discriminant validity relative to other appropriate measures in the survey. Wanous and Hundy (2001) provide evidence that single items can reliably measure moderately complex psychological constructs.

Although ordinary least squares regression procedures may be robust with respect to violations of underlying distributional assumptions, we did not want to base our analysis on this assumption. Given the ordinal nature of the dependent variables, we employ ordered logistic (or ordered logit) regression. To assess model adequacy, we tested for parallel regressions. The chi-square test result (long-term turnover intention: $\chi^2 = 35.904$ with

Table 1
Descriptive Statistics

Variables	Min	Max	Mean	SD
Short-term turnover intention	1	5	2.24	1.08
Long-term turnover intention	1	7	3.2	1.81
Obligation toward coworkers	1	7	4.61	1.79
Coworker support	4	20	17.09	2.41
External social network	0	4	1.70	1.32
P-O Value Fit	3	21	14.99	3.99
Job satisfaction	3	15	12.69	2.65
Age	23	69	44.95	10.89
Years in position	0	38	5.81	6.34
Nonprofit status	0	1	0.37	0.48

degree of freedom [d.f.] of 40, and $p = .655$; short-term turnover intention: $\chi^2 = .083$ with d.f. of 24, and $p = 1.000$) indicated that there was no significant difference in the relationship between independent variables and the logits for all of the logits, thus satisfying a basic assumption of ordinal regression.

FINDINGS

Table 1 provides descriptive statistics for our variables. Table 2 provides the results of our analysis, including basic measures of coefficients, standard errors, and significance levels. Table 3 provides a range of the magnitude of the estimates for the independent variables of theoretical interest, showing how likely that those who responded at the mean and

Table 2
Ordered-Logit Estimates of Turnover Intention

Independent variables	Short-Term Turnover Intention		Long-Term Turnover Intention	
	Coefficient	SE	Coefficient	SE
Obligation toward coworkers	-0.180*	0.082	-0.247***	0.079
Coworker support	-0.288***	0.056	-0.020	0.052
External social network	0.149 ⁺	0.095	-0.105	0.092
Person/Organization Value Fit	-0.038	0.039	-0.152***	0.039
Job satisfaction	-0.360***	0.058	-0.489***	0.062
Age	-0.001	0.012	-0.034**	0.012
Years in position	-0.097***	0.023	-0.079***	0.021
Nonprofit status	0.064	0.246	0.049	0.237
Estimated cut points				
τ_1	-12.510	1.172	-13.580	1.192
τ_2	-10.498	1.106	-11.975	1.145
τ_3	-8.213	1.022	-10.826	1.103
τ_4	-6.556	0.989	-9.212	1.044
τ_5			-8.430	1.027
τ_6			-6.922	1.003
One-tailed significant tests,	$N = 274$, chi-square = 147.141,		$N = 275$, chi-square = 235.657,	
with *** = .001, ** = .01,	percent correctly classified:		percent correctly classified:	
* = .05, + = .1	51.5		37.8	

Table 3
Magnitude of Effects of Variables of Interest on Dependent Variables

Independent	P-O Value Fit		Obligation to Coworkers		Coworkers Support		External Network		Job Satisfaction	
	Max (21)	Mean (15)	Max (7)	Mean (5)	Max (20)	Mean (17)	Max (4)	Mean (2)	Max (15)	Mean (13)
Dependent: How often do you look for job opportunities?										
Never	49.7%	29.2%	62.6%	28.2%	53.3%	29.5%	38.1%	40.2%	49.8%	23.6%
Not very often	31.6%	38.2%	28.1%	36.1%	30.4%	43.7%	35.8%	35.5%	34.8%	38.6%
Sometimes	16.1%	22.3%	7.5%	26.8%	13.1%	24.2%	19.7%	21.0%	14.2%	29.6%
Very often	2.3%	5.7%	1.6%	5.6%	1.0%	2.4%	5.6%	2.6%	1.1%	7.1%
Constantly	0.3%	4.6%	0.3%	3.2%	2.2%	0.2%	0.9%	0.7%	0.1%	1.1%
Dependent: I would be very happy to spend the rest of my career with this organization										
Strongly agree (1)	76.3%	10.0%	56.9%	14.7%	26.8%	19.2%	38.7%	24.7%	45.1%	8.7%
2	17.7%	28.4%	21.8%	24.9%	25.4%	25.3%	23.6%	25.4%	30.6%	24.3%
3	4.7%	25.3%	9.2%	21.5%	18.6%	18.8%	15.4%	18.3%	14.4%	23.1%
4	1.3%	24.4%	6.5%	24.0%	17.9%	22.9%	11.5%	19.0%	8.1%	26.6%
5	0.1%	5.7%	1.9%	5.9%	4.8%	7.0%	2.8%	5.8%	1.2%	9.3%
6	0.03%	4.7%	2.5%	4.9%	3.5%	5.4%	3.6%	5.0%	0.5%	6.6%
Strongly disagree (7)	0.0%	1.5%	1.3%	4.1%	3.2%	1.4%	4.4%	1.9%	0.1%	1.4%

maximum for the independent variables are to have responded in each category of the dependent variable scale. Table 4 provides a cross-tabulation of actual and predicted values for both dependent variables. In examining these tables for both dependent variables, as expected we do find instances of under- and overprediction. However, there is no discernible pattern to prediction errors and on an overall basis prediction errors for both dependent variables seem to be similar across the full range of values assumed by the dependent variables.

We find support for the hypothesis that social relations shape turnover intention. Employees who feel a sense of obligation toward their coworkers are less likely to consider exiting the social network of which they are a part, either in the short or long term. Those who responded at the mean for the obligation to coworkers scale said that they never sought job opportunities 28% of the time, compared to 63% of those who responded at the maximum of the coworker obligation scale. The magnitude of the effect of coworker

Table 4
Predicted versus Actual Vales for the Dependent Variables

Actual Value	Short-Term Turnover Intention					Long-Term Turnover Intention						
	Predicted Value					Predicted Value						
	1	2	3	4	5	1	2	3	4	5	6	7
1	36	40	6	0	0	22	29	4	2	0	0	0
2	18	58	18	0	0	7	32	14	6	0	0	0
3	5	32	31	1	0	1	16	17	9	1	0	0
4	0	5	7	6	1	1	6	12	22	7	4	2
5	0	0	3	5	2	0	1	6	9	4	0	0
6						0	1	3	7	4	3	5
7						0	2	0	1	4	5	6

obligation appears to be even greater for long-term turnover intention. Almost 57% of those who responded at the maximum of the obligation to coworkers scale said strongly agreed that they would be happy to spend the rest of their career with their organization, compared to 15% of those who responded at the mean for this scale.

Employees who feel as if they receive significant coworker support are less likely to seek job opportunities in the short run. Those who responded at the mean of the coworker support scale said that they never seek job opportunities 30% of the time, compared to 53% of those who responded at the maximum of the coworker support scale. Coworker support does not affect long-term turnover intent.

The findings on intraorganizational social networks are of note for a number of reasons. The support for coworker support and coworker obligation are of particular interest in part because Mossholder, Settoon and Henagan (2005) did not find empirical support for their measures of these variables. Our findings therefore provide support for a nascent theory on the relational aspects of turnover and in particular support hypotheses that initial empirical work cast doubt on.

The findings also raise questions about a frequently tested variable in the study of turnover: organizational commitment. Organizational commitment or loyalty is usually characterized treated as a relationship between the employee and the organization, and in some cases, was modeled on the assumption that it was amenable to manipulation by organizational leaders (e.g., Dobni, Ritchie, and Zerbe 2000). The social network perspective suggests that employees are not just committed to organizations, but to people in organizations, to the social network of which they are a part. Social networks rely on regular interaction with fellow workers and are not easily shaped by organizational leaders.

One approach to organizational commitment that has recognized this is the model presented by Balfour and Wechsler (1996) that specifically identifies affiliation as a distinct component of commitment. They also find that affiliation commitment, akin to what we are describing as social networks, have stronger influence on the desire to remain in the organization than other aspects of commitment and are the only aspect of commitment that is related to extra-role behaviors such as putting in extra effort to help the organization succeed. "Extra efforts do not appear to be motivated by more abstract notions of organizational mission or by exchange-related rewards; instead, they are the result of supportive, productive, and meaningful relations with other people" (Balfour and Wechsler 1996, 271). This suggests the relevance of social networks to other aspects of organizational behavior beyond the turnover variable.

We do not find strong support that our measure of external social network predicts turnover intention. Activity in professional networks is positively related to short-term turnover intention. However, it is significant only at the 0.1 level, and the magnitude of the effect is negligible. External networks are negatively related with long-term turnover and well outside significance levels. What explains the failure of this hypothesis? One caveat to our finding is that professional involvement is only one type of external social network that individuals may rely on to find out about job opportunities, and previous research has tended to emphasize casual acquaintances rather than professional contacts in testing the weak ties hypothesis (Granovetter 1983). Future testing of the role of external social networks might therefore measure the role of acquaintances in shaping turnover intention.

We find support for P-O value fit, which has a statistically significant negative effect on long-term turnover intention. Those who responded at the mean of the P-O value fit

scale strongly agreed that they would spend the rest of their career with their organization 76% of the time, compared to 10% of those who responded at the maximum of the scale. The findings suggest that where there is overlap between the values of the employee and the organization, employees are less likely to consider exiting the organization. Why is value congruence not as prominent for short-term turnover intention as it is for long-term turnover intention? One possible answer is that over a shorter period time horizon, other factors, such as job satisfaction and coworker support, are more prominent to making career decisions than value fit. The long-term perspective allows respondent a more aspirational response that reduces the importance of more immediate factors.

Among our control variables, we find that job satisfaction is negatively and significantly related to both short-term and long-term turnover intention. This variable is the most frequently associated with turnover in previous empirical work, so the results are not terribly surprising. Table 3 provides the magnitude of the effects of job satisfaction variable to provide a benchmark of a well-tested variable relative to the variables of theoretical interest. Among the significant theoretical variables discussed above, the magnitude of the effects is of a comparable size to job satisfaction, further underlining the relevance of these variables to turnover studies. Employees who responded at the mean for job satisfaction said that they never sought alternative job opportunities 24% of the time, whereas those who responded at the maximum indicated that they never sought job opportunities 50% of the time. Those who responded at the mean for job satisfaction strongly agreed that they would spend the rest of their career with their organization 9% of the time, compared to 45% of those on the maximum point of the scale for job satisfaction.

Among our other controls, we find that age is not a statistically significant predictor of short-term turnover intention. However, consistent with previous research, age does have a negative effect on long-term turnover intention. It is logical that we see age having a greater impact on the long-term turnover intention, since older employees will be closer to retirement, and less likely to consider a change of career. We also find that employees who have held the position for a considerable period are less likely to leave, even controlling for age. A willingness to stay in a position for a considerable period is a strong predictor of a willingness to maintain that position in the future. We follow Ingersoll's (2001) example of controlling for the differences between sectors by including a dummy variable, where one is membership of a nonprofit organization and zero is membership of a public organization. Being in a nonprofit organization did not have a significant influence on either short- or long-term turnover intention.

Practical Implications

What are the practical implications of this article? The need to reduce turnover is a pressing problem for many public and nonprofit organizations that already face a drain of human capital to retirement (National Commission for Public Service 2002). The model and findings from this article suggest two additional ways that employers can reduce turnover. Organizations can foster P-O value fit by first selecting individuals with a strong fit with the organization and its values, and then nurturing this fit by communicating the value of the organization's mission and making clear the role that employees have in achieving this mission. Selznick (1957) recommended that leaders infuse their organization with value, and this remains good advice with tangible benefits for turnover. Infusing an organization with value may be easier for non-profit organizations (Light 1999) and organizations closer

to clients (Grant 2007). Some of the trends that we currently see in government, such as privatization and outsourcing, seem to undermine the ability of agency leaders to convince employees that they are part of an organization that provides value to society. In addition, organizations willing to listen to their employees and modify organizational values to be consistent with employee values will also suffer from less turnover.

The move toward strategic planning and performance measurement provide public organizations with procedures to identify and celebrate the mission of the organization and the employee's role in achieving this mission. Leaders should take this opportunity move beyond values statements that ignore the broader values held by employees, such as social values (Meglino and Ravlin 1998). At an organizational level, this suggests greater employee participation, especially in strategic planning and goal-setting efforts (Kim 2002). At an individual level, it means that supervisors ensure, to the extent possible, that employees have the opportunity to perform tasks that they find meaningful.

The second policy recommendation that emerges from our results is to encourage social networks within organizations. Although this article does not attempt to find the source of positive social ties, organizations that foster social interaction opportunities among members and encourage shared responsibility and teamwork are more likely to create positive social capital. Finding ways to foster such relationships can reduce turnover. Gaertner, Dovidio, and Bachman (1997) propose that social interventions can be deliberately constructed to foster cooperation and strengthen group ties. Practical examples include mentorship programs, creating special events for new employees, encouraging informal get-togethers as well as formal retreats, and designing physical space to foster employee interaction. Again, trends in government—the aforementioned exit of senior employees, downsizing, reliance on third parties, and the continuing attempts to create individualized systems of pay-for-performance that encourage competition between workers—may weaken a sense of collective obligation and mutual support. Although these trends may sometimes be deliberate initiatives, we should recognize the costs that such initiatives have on social ties and voluntary turnover.

Conclusion: The Ties that Bind

This article has applied two approaches to turnover that are largely absent from previous public and nonprofit turnover research, social network theory and P-O value fit. Our findings offer some support for P-O value fit as an avenue for limiting turnover. The results suggest that the ability of organizations to find overlap with the values of their employees can have a significant negative effect on long-term turnover intention.

In the area of social networks, we proposed that intraorganizational social networks reduce turnover by making it less desirable, whereas an employee's membership of external networks facilitates turnover by making it easier to find a new job. We find some support for the claim that "relational ties people form while working together may be the ties that bind" (Mossholder, Settoon and Henagan 2005, 616.) The aspects of social network theory that appear relevant to explaining turnover intention, with our sample, are the social relationships that employees have with coworkers, and the sense of obligation they hold toward their fellow workers. We find support for the role of intraorganizational social networks in limiting turnover, but little support for the role of external networks in shaping turnover intention among our sample, at least as measured through professional activity.

There are a variety of research implications from the findings. An obvious implication would be to replicate the findings using other attitudinal measures and behaviors as dependent variables, such as extra-role behavior. Although we have tested two measures of social networks, other aspects could be tested, including network centrality and network size. More broadly, we note that the network form is, in itself, simply a description of the map of relationships rather than the underlying social psychological mechanisms by which individuals develop relationships. Networks are the social space in which relationships are established and attachments developed. Our research suggests that social networks matter, but to understand why they matter we need to investigate how social networks emerge, what sustains them, and why they influence individual behavior.

APPENDIX: VARIABLE MEASUREMENT

Variables	Measure
Dependent variables	
Short-term turnover intention	How often do you look for job opportunities outside this organization? 5 = constantly, 4 = very often, 3 = sometimes, 2 = not very often, 1 = never
Long-term turnover intention (Allen and Meyer 1990)	I would be very happy to spend the rest of my career with this organization (reversed) 1 = strongly disagree, 7 = strongly agree
Independent variables	
Nonprofit status	1 = nonprofit status, 0 = state government organization
Age	Age of respondent
Years in position	Response to: How many years have you been in your current position?
Job satisfaction (Cook et al. 1981)	Summative index of responses to the following statements (Cronbach's alpha = 0.88) In general, I like working here In general, I do not like my job (reversed) All in all, I am satisfied with my job 1 = strongly disagree, 2 = somewhat disagree, 3 = neutral, 4 = somewhat agree, 5 = strongly agree
P-O Value Fit (O'Reilly and Chatman 1986)	Summative index of responses to the following statements (Cronbach's alpha = 0.77) If the values of this organization were different, I would not be as attached to this organization The reason I prefer this organization to others is because of what it stands for, its values What this organization stands for is important to me 1 = strongly disagree, 7 = strongly agree

Continued

Appendix (continued)
Variable Measurement

Variables	Measure
Obligation toward coworkers (Allen and Meyer 1990)	I would not leave my organization right now because I have a sense of obligation to the people in it 1 = strongly disagree, 7 = strongly agree
Coworker support (Spector and Jex 1998)	Summative index (reversed) of responses to the following statements (Cronbach's alpha = 0.81) How often do you get into arguments with others at work? How often do other people yell at you at work? How often are people rude to you at work? How often do other people do nasty things to you at work? 5 = constantly, 4 = very often, 3 = sometimes, 2 = not very often, 1 = never
External social network adapted from Aiken and Hage (1968)	Summative index of responses to the following statements (Cronbach's alpha = 0.66) Are you a member of a professional association (e.g., ASPA, APHSA, AMA, ANA, etc.) I regularly attend professional association meetings at the local level I regularly attend professional association meetings at the national level I systematically read professional journals 1 = yes, 0 = no

REFERENCES

- Aiken, Michael, and Jerald Hage. 1968. Organizational interdependence and intra-organizational structure. *American Sociological Review* 33:912–30.
- Allen, Natalie J., and John P. Meyer. 1990. The measurement and antecedents of affective, continuance and normative commitment to the organization. *Journal of Occupational Psychology* 63 (1): 1–18.
- Arthur, Jeffery B. 1994. Effects of human resource systems on manufacturing performance and turnover. *Academy of Management Journal* 37:670–87.
- Balfour, Danny L., and Barton Wechsler. 1996. Organizational commitment. *Public Productivity & Management Review* 19:256–77.
- Barnard, Chester I. 1938. *The functions of the executive*. Cambridge, MA: Harvard Univ. Press.
- Bertelli, Anthony. 2007. Bureaucratic turnover and democratic governance: evidence from the U.S. Internal Revenue Service. *Journal of Public Administration Research and Theory* 17:235–58.
- Blau, Francine D., and Lawrence M. Kahn. 1981. Race and sex differences in quits by young workers. *Industrial and Labor Relations Review* 34:563–77.
- Brewer, Gene A., and Sally C. Selden. 1998. Whistleblowers in the federal civil service: New evidence of the public service ethic. *Journal of Public Administration Research and Theory* 8:413–39.
- Brown, William A., and Carlton F. Yoshida. 2003. Mission attachment and satisfaction as factors in employee retention. *Nonprofit Management and Leadership* 14:5–18.
- Burt, Ronald S. 1992. *Structural holes: The structural holes of competition*. Cambridge, MA: Harvard Univ. Press.
- Cable, Daniel M., and Timothy A. Judge. 1996. Person-organization fit, job choice decisions, and organizational entry. *Organizational Behavior and Human Decision Processes* 67:294–311.

- Chatman, Jennifer A. 1991. Matching people and organizations: Selection and socialization in public accounting firms. *Administrative Science Quarterly* 36:459–84.
- Cohen, Aaron. 1993. Organizational commitment and turnover: A meta-analysis. *Academy of Management Journal* 36:1140–57.
- Coleman, James S. 1990. *Foundations of social theory*. Cambridge, MA: Harvard Univ. Press.
- Cook, John D., Sue J. Hepworth, Toby D. Wall, and Peter B. Warr. 1981. *The experience of work: A compendium of 249 measures and their Use*. London: Academic Press.
- Cordes, Cynthia L., and Thomas W. Dougherty. 1993. A review and integration of research on job burnout. *Academy of Management Review* 18:621–56.
- Cotton, John L., and Jeffery M. Tuttle. 1986. Employee turnover: A meta-analysis and review with implications for research. *Academy of Management Review* 11:55–70.
- Crewson, Phillip E. 1997. Public service motivation: Building empirical evidence of incidence and effect. *Journal of Public Administration Research and Theory* 7:499–518.
- Curry, Dale, Timothy McCarragher, and Mary Dellmann-Jenkins. 2005. Training, transfer, and turnover: Exploring the relationship among transfer of learning factors and staff retention in child welfare. *Children and Youth Service Review* 27:931–48.
- Dalton, Dan R., Jonathan L. Johnson, and Catherine M. Daily. 1999. On the use of “intent to . . .” variables in organizational research: An empirical and cautionary assessment. *Human Relations* 52:1337–50.
- Dobni, Dawn, J. R. Brent Ritchie, and Wilf Zerbe. 2000. Organizational values: The inside view of service productivity. *Journal of Business Research* 47:91–107.
- Durst, Samantha. 1999. The effect of family-friendly programs on public organizations. *Review of Public Personnel Administration* 19 (3): 19–33.
- Eisenberger, Robert, Stephen Armeli, Barbara Rexwinkel, Patrick D. Lynch, and L. Linda Rhoades. 2001. Reciprocation of perceived organizational support. *Journal of Applied Psychology* 86: 42–51.
- Elfenbein, Hillary Anger, and Charles A. O’Reilly. 2007. “Fitting In”: The effects of relational demography and person-organization fit on group process and performance. *Group & Organization Management* 32(1):109–42.
- Ezra, Marni, and Melissa Deckman. 1996. Balancing work and family responsibilities: Flextime and childcare in the federal government. *Public Administration Review* 56:174–9.
- Gaertner, Samuel F., John F. Dovidio, and Betty A. Bachman. 1997. Revisiting the contact hypothesis: The induction of a common ingroup identity. *International Journal of Intercultural Relations* 20:271–90.
- Gerhart, Barry. 1990. Voluntary turnover and alternative job opportunities. *Journal of Applied Psychology* 75:467–76.
- Gould Williams, Julian. 2004. The effects of ‘high-commitment’ HRM practices on employee attitude: The views of public sector workers. *Public Administration* 82:63–81.
- Gouldner, Alvin W. 1954. *Patterns of industrial bureaucracy*. Glencoe, IL: The Free Press.
- Granovetter, Mark S. 1973. The strength of weak ties. *American Journal of Sociology* 78:1360–80.
- . 1974. *Getting a job: A study of contacts and careers*. Cambridge, MA: Harvard Univ. Press.
- . 1983. The strength of weak ties: A network theory revisited. *Sociological Theory* 1:201–33.
- . 1985. Economic action and social structure: The problem of embeddedness. *American Journal of Sociology* 91:481–501.
- Grant, Adam M. 2007. Relational job design and the motivation to make a prosocial difference. *Academy of Management Review* 32:393–417.
- Higgins, Monica C. 2001. Changing careers: the effects of social context. *Journal of Organizational Behavior* 22:595–618.
- Hochwarter, Wayne A., Pamela L. Perrewé, Gerald R. Ferris, and Rachel Guercio. 1999. Commitment as an antidote to the tension and turnover consequences of organizational politics. *Journal of Vocational Behavior* 55:277–97.

- Huang, Ing-Chung, Chih-Hsun Jason Chuang, and Hao-Chieh Lin. 2003. The role of burnout in the relationship between perceptions of organizational politics and turnover intentions. *Public Personnel Management* 32:519–32.
- Ingersoll, Richard M. 2001. Teacher turnover and teacher shortages: An organizational analysis. *American Educational Research Journal* 38:499–534.
- Ito, Jack K. 2003. Career branding and mobility in the civil service: An empirical study. *Public Personnel Management* 32:1–21.
- Iverson, Roderick D., and Douglas B. Curran. 2003. Union participation, job satisfaction, and employee turnover: An event-history analysis of the exit-voice hypothesis. *Industrial Relations* 42:101–5.
- Kaufman, Herbert. 1960. *The forest ranger: A study in administrative behavior*. Baltimore, MD: The Johns Hopkins Press.
- Kellough, J. Edward, and Will Osuna. 1995. Cross-agency comparisons of quit rates in the federal service: Another look at the evidence. *Review of Public Personnel Administration* 15 (4): 15–68.
- Kernaghan, Kenneth. 2003. Integrating values into public services: the values statement as centerpiece. *Public Administration Review* 63:711–9.
- Kim, Marlene. 1999. Where the grass is greener: Voluntary turnover and wage premiums. *Human Relations* 52:584–92.
- Kim, Soonhee. 2002. Participative management and job satisfaction: Lessons for management leadership. *Public Administration Review* 62:231–41.
- . 2005. Factors affecting state government information technology employee turnover intentions. *American Review of Public Administration* 35:137–56.
- Kim, Seok-Eun, and Jung-Wook Lee. 2005. Is mission attachment an effective management tool for employee retention? An empirical analysis of a nonprofit human service agency. Paper presented at the 8th Public Management Research Conference, Los Angeles. September 29–October 1.
- Koberg, Christine S., and Leonard H. Chusmir. 1987. Organizational culture relationships with creativity and other job-related variables. *Journal of Business Research* 15:397–409.
- Kristof, Amy L. 1996. Person-organization fit: An integrative review of its conceptualizations, measurement, and implications. *Personnel Psychology* 49:1–49.
- Labianca, Giuseppe, and Daniel J. Brass. 2006. Exploring the social ledger: negative relationships and negative asymmetry in social networks in organizations. *Academy of Management Review* 31:596–614.
- Lazear, Edward P. 1999. Personnel economics: Past lessons and future directions. *Journal of Labor Economics* 17:199–236.
- Lee, Soo-Young, and Andrew B. Whitford. Forthcoming. Commitment, voice, and the intent to leave: Evidence from the public workforce. *Journal of Public Administration Research and Theory*.
- Leonard, Jonathan S. 1987. Carrots and sticks: pay, supervision, and turnover. *Journal of Labor Economics* 5:136–52.
- Lewis, Greg B. 1991. Turnover and the quiet crisis in the federal civil service. *Public Administration Review* 51:145–55.
- Lewis, Greg B., and Kyungho Park. 1989. Turnover rates in federal white-collar employment: Are women more likely to quit than men? *American Review of Public Administration* 18:13–28.
- Light, Paul. 1999. *The new public service*. Washington, DC: Brookings Institution.
- Maertz, Carl P., and Roger W. Griffeth. 2004. Eight motivational forces and voluntary turnover: A theoretical synthesis with implications. *Journal of Management* 30:667–83.
- March, James G., and Herbert A. Simon. 1958. *Organizations*. New York: Wiley.
- March, James G., and Johan P. Olsen. 1995. *Democratic governance*. New York: Free Press.
- McCulloch, Malcolm C. 2001. Using person-organization fit to predict job departure in call centers. Paper presented at the 16th Annual Conference of the Society for Industrial and Organizational Psychology, San Diego, April, 2001.
- Meglino, Bruce, and Elizabeth C. Ravlin. 1998. Individual values in organizations: concepts, controversies and research. *Journal of Management* 24:351–89.

- Meier, Kenneth J., and Laurence J. O'Toole Jr. 2003. Public management and educational performance: The impact of managerial networking. *Public Administration Review* 63:689–99.
- Merton, Robert. 1968. *Social theory and social structure*. New York: Free Press.
- Michaels, Charles E., and Paul E. Spector. 1982. Causes of employee turnover: A Test of the Mobley, Griffeth, Hand, and Meglino model. *Journal of Applied Psychology* 67:53–9.
- Mitchell, Terence R., Brooks Holtom, Thomas W. Lee, Chris J. Sablynski, and Miriam Erez. 2001. Why people stay: Using job embeddedness to predict voluntary turnover. *Academy of Management Journal* 44:1102–21.
- Mobley, William. 1977. Intermediate linkages in the relationship between job satisfaction and employee turnover. *Journal of Applied Psychology* 62:237–40.
- Mobley, William H., Roger W. Griffeth, Herbert H. Hand, and Bruce M. Meglino. 1979. A review and conceptual analysis of the employee turnover process. *Psychological Bulletin* 86: 493–522.
- Mor Barak, Michal E., Jan A. Nissly, and Amy Levin. 2001. Antecedents to retention and turnover among child welfare, social work, and other human service employees: What can we learn from past research? A review and meta-analysis. *Social Science Review* 75:625–61.
- Mossholder, Kevin W., Randall P. Settoon, and Stephanie C. Henagan. 2005. A relational perspective on turnover: Examining structural, attitudinal and behavioral predictors. *Academy of Management Journal* 48:807–18.
- Muchinsky, Paul M., and Paula C. Morrow. 1980. A multidisciplinary model of voluntary employee turnover. *Journal of Vocational Behavior* 17:263–90.
- Naff, Katherine C., and John Crum. 1999. Working for America: Does public service motivation make a difference? *Review of Public Personnel Administration* 19 (4): 5–16.
- National Commission for Public Service. 2003. *Urgent business for America: Revitalizing the federal government for the 21st century*. <http://www3.brookings.edu/gs/cps/volcker/reportfinal.pdf> (accessed July 30, 2007).
- O'Reilly, Charles A., and Jennifer A. Chatman. 1986. Organizational commitment and psychological attachment: The effects of compliance, identification, and internalization on prosocial behavior. *Journal of Applied Psychology* 71:492–9.
- O'Reilly, Charles A., Jennifer A. Chatman, and D. F. Caldwell. 1991. People and organizational culture: A profile comparison approach to assessing person-organization fit. *Academy of Management Journal* 34:487–516.
- Park, Hong Y., Joseph Ofori-Dankwa, and Deborah Ramirez Bishop. 1994. Organizational and environmental determinants of functional and dysfunctional turnover: Practical and research implications. *Human Relations* 47:353–67.
- Parker, Victoria A. 2002. Connecting relational work and workgroup context in caregiving organizations. *Journal of Applied Behavioral Science* 38:276–97.
- Perry, James L., and Lois R. Wise. 1990. The motivational bases of public service. *Public Administration Review* 50:367–73.
- Provan, Keith G., and H. Brinton Milward. 1995. A preliminary theory of interorganizational network effectiveness: A comparative study of four community mental health systems. *Administrative Science Quarterly* 40:1–33.
- Rhoades, Linda, and Robert Eisenberger. 2002. Perceived organizational support: A review of the literature. *Journal of Applied Psychology* 87:698–714.
- Rynes, Sara L., Kenneth G. Brown, and Amy E. Colbert. 2002. Seven common misconceptions about human resource practices: Research findings versus practitioner beliefs. *Academy of Management Executive* 16 (3): 92–102.
- Saks, Alan M., and Blake Ashforth. 1997. A longitudinal investigation of the relationships between job information sources, applicant perceptions of fit, and work outcomes. *Personnel Psychology* 50:395–426.
- Schneider, Benjamin. 1987. The people make the place. *Personnel Psychology* 40:437–53.
- Selden, Sally C., and Donald P. Moynihan. 2000. A model of voluntary turnover in state government. *Review of Public Personnel Administration* 20 (2): 63–74.

- Selznick, Philip. 1957. *Leadership and administration: A sociological interpretation*. Evanston, IL: Row, Peterson.
- Shaw, Jason D., John Delery, G. Douglas Jenkins Jr., and Nina Gupta. 1998. An organization-level analysis of voluntary and involuntary turnover. *Academy of Management Journal* 41:511–25.
- Shaw, Jason D., Nina Gupta, and John E. Delery. 2005. Alternative conceptualizations of the relationship between voluntary turnover and organizational performance. *Academy of Management Journal* 48:50–68.
- Smith, Catherine B. 1979. Influence of internal opportunity structure and sex of worker on turnover patterns. *Administrative Science Quarterly* 24:362–81.
- Spector, Paul E., and Steve M. Jex. 1998. Development of four self-report measures of job stressors and strain: Interpersonal conflict at work scale, organizational constraints scale, quantitative workload inventory, and physical symptoms inventory. *Journal of Occupational Health Psychology* 3:356–67.
- Stremmel, Andrew J. 1991. Predictors of intention to leave child care work. *Early Childhood Research Quarterly* 6:285–98.
- Ting, Yuan. 1997. Determinants of job satisfaction of federal government employees. *Public Personnel Management* 26:313–34.
- Vandenbergh, Christian. 1999. Organizational culture, person-culture fit, and turnover: A replication in the health care industry. *Journal of Organizational Behavior* 20:175–84.
- Verquer, Michelle L., Terry A. Beehr, and Stephen H. Wagner. 2003. A meta-analysis of relations between person-organization fit research and work attitudes. *Journal of Vocational Behavior* 63:473–89.
- Wanous, John P., and Michael J. Hudy. 2001. Single-item reliability: A replication and extension. *Organizational Research Methods* 4 (4): 361–75.
- Wilson, James Q. 2000. *Bureaucracy: What government agencies do and why they do it?*, 2nd ed. New York: Basic Books.
- Wright, Bradley E., and Brian S. Davis. 2002. Job satisfaction in the public sector: The role of the work environment. *American Review of Public Administration* 33:70–90.