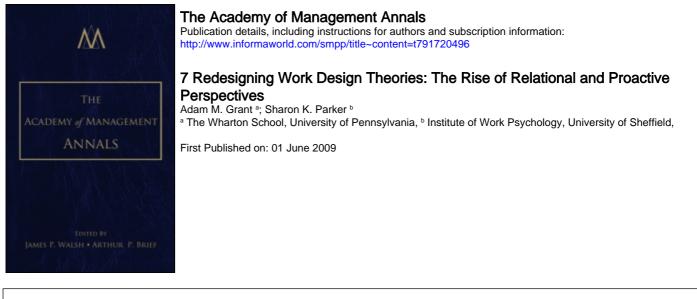
This article was downloaded by: [Grant, Adam M.] On: 23 July 2009 Access details: Access Details: [subscription number 913327287] Publisher Routledge Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



To cite this Article Grant, Adam M. and Parker, Sharon K.(2009)'7 Redesigning Work Design Theories: The Rise of Relational and Proactive Perspectives', The Academy of Management Annals, 3:1,317 — 375

To link to this Article: DOI: 10.1080/19416520903047327 URL: http://dx.doi.org/10.1080/19416520903047327

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: http://www.informaworld.com/terms-and-conditions-of-access.pdf

This article may be used for research, teaching and private study purposes. Any substantial or systematic reproduction, re-distribution, re-selling, loan or sub-licensing, systematic supply or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.



Redesigning Work Design Theories: *The Rise of Relational and Proactive Perspectives*

ADAM M. GRANT*

The Wharton School, University of Pennsylvania

SHARON K. PARKER

Institute of Work Psychology, University of Sheffield

Abstract

Many scholars assume that the fundamental questions about work design have been answered. However, a global shift from manufacturing economies to service and knowledge economies has dramatically altered the nature of work in organizations. To keep pace with these important and rapid changes, work design theory and research is undergoing a transformation. We trace the highlights of two emerging viewpoints on work design: relational perspectives and proactive perspectives. Relational perspectives focus on how jobs, roles, and tasks are more socially embedded than ever before, based on increases in interdependence and interactions with coworkers and service recipients. Proactive perspectives capture the growing importance of employees taking initiative to anticipate and create changes in how work is performed, based on increases in uncertainty and dynamism. Together, these two perspectives



^{*}Corresponding author. Email: grantad@wharton.upenn.edu

ISSN 1941-6520 print/ISSN 1941-6067 online © 2009 Academy of Management DOI: 10.1080/19416520903047327 http://www.informaworld.com

challenge the widely held belief that new developments in work design theory and research are no longer needed. Our review charts the central contributions and unanswered questions from these relational and proactive perspectives with the goal of inspiring renewed interest in advancing theory, research, and practice on work design.

One of the saddest things is that the only thing that a man can do for eight hours a day, day after day, is work. You can't eat eight hours a day nor drink for eight hours a day nor make love for eight hours—all you can do for eight hours is work. Which is the reason why man [*sic*] makes himself and everybody else so miserable and unhappy. (William Faulkner, 1958)

We spend the majority of our waking hours working, and many organizational scholars have spent the majority of their waking hours trying to understand the trials and tribulations of work. Eminent scholars have identified the work design theories that resulted from these efforts as part of a selective group of organizational theories that are simultaneously valid, important, and useful (Miner, 1984, 2003). For more than 40 years, work design theories have helped scholars and practitioners to describe, explain, and change the experiences and behaviors of employees (Hackman & Oldham, 1980). Work design has been shown to affect behavioral outcomes such as performance, turnover, and absenteeism (e.g., Fried & Ferris, 1987; Hackman & Oldham, 1976), psychological outcomes such as job satisfaction, internal work motivation, stress, and burnout (Parker & Wall, 1998), and physical outcomes such as blood pressure, cardiovascular disease, and even mortality (Ganster, Fox, & Dwyer, 2001; Melamed, Fried, & Froom, 2001). However, until quite recently, work design theory and research had begun to vanish from our top journals, as many scholars have assumed that the fundamental questions have already been answered (Humphrey, Nahrgang, & Morgeson, 2007). Indeed, in a review, Ambrose and Kulik (1999, p. 262) concluded, "After twenty years of research, a clear picture of the psychological and behavioral effects of job design has emerged".

We doth protest. In the years since work design theories entered the limelight, the nature of work has changed dramatically. We have witnessed a global shift from a manufacturing economy, in which organizations lived and died by the tangible goods they produced, to a knowledge and service economy, in which organizational success and survival increasingly depends on the ability to meet the needs of customers and clients with financial, professional and business, educational, health, leisure and hospitality, government, and trade, transportation, and utilities information and service (Batt, 2002; Schneider & Bowen, 1995). The Bureau of Labor Statistics (2007) estimates that more than five times as many Americans are now employed in service jobs (115.4 million) as in manufacturing and production jobs (22.2 million). The service economy employs more than 80% of American workers and makes up 80% of the US GDP, and similar trends are occurring across the globe in Europe and Asia (Ford & Bowen, 2008; Parker, Wall, & Cordery, 2001). These changes have been fueled by rapid developments in information, communication, and transportation technologies and services (Barley & Kunda, 2001). The growth of the internet and cellular telephones have opened the door for virtual teams and telework, and organizations are flattening their structures to provide greater autonomy for teams to collaborate in completing work across cultural, occupational, and geographic boundaries (Griffin, Neal, & Parker, 2007; Kozlowski & Ilgen, 2006; Osterman, 2000; Parker, Wall, & Jackson, 1997). We have learned that the effects of globalization are so pervasive that the world is now flat (Friedman, 2005)-or at least spiky (Florida, 2005). These striking changes in the context of work demand new theoretical perspectives to guide scholars and practitioners in describing, explaining, and changing the nature of work (Barley & Kunda, 2001; Johns, 2006; Parker et al., 2001; Rousseau & Fried, 2001).

As a result, scholars have begun to redesign theories of work design. In the past decade, organizational scholars have introduced new characteristics of work and new outcomes of work, as well as new mechanisms that link them and boundary conditions that alter them (Morgeson & Campion, 2003; Parker et al., 2001). Although there is still much progress to be made, these emerging perspectives take a much-needed step toward crafting work design theories that capture the work context of the twenty-first century. Our review charts these new directions with an emphasis on two particular perspectives. The first is a relational perspective that accentuates the role of interpersonal interactions and interdependencies in work. The second is a proactive perspective that accentuates how employees take initiative to shape their own job designs and work contexts, as well as how these job designs and work contexts can be structured to facilitate initiative. Our aim is to highlight fresh findings with an eye toward stimulating generative studies and integrative conceptual frameworks. We hope that our synthesis will help to sustain and further fuel renewed interest in work design, attracting the attention of researchers who specialize in other topics. And we hope that it will build bridges from theory to practice by encouraging scholars to continue redesigning work design theories to capture recent changes in organizational life.

Work Design Theories: Beyond the Industrial Revolution

Work design describes how jobs, tasks, and roles are structured, enacted, and modified, as well as the impact of these structures, enactments, and modifications on individual, group, and organizational outcomes. An example of a traditional work design issue concerns the low level of autonomy that machine operators have over their work methods and task timing. A more contemporary example concerns the high levels of interdependence and time pressure experienced by software designers who collaborate with, and receive feedback from, customers, suppliers, and coworkers. In each case, the work can be redesigned, by the organization or in some cases by employees themselves, to alter the structure and content of the work, with the goal of improving outcomes such as employee motivation, performance, and well-being.

Extensive reviews of the work design literature are available elsewhere, and we will not repeat them here (Fried, Levi, & Laurence, 2008; Grant, Fried, & Juillerat, 2008; Griffin, 1987; Morgeson & Campion, 2003; Morgeson & Humphrey, 2008; Oldham, 1996; Parker & Ohly, 2008; Parker & Wall, 1998; Wall & Martin, 1987). To refresh briefly the reader's memory, the stage for work design research was set by economic perspectives on the efficiencies of specialization and division of labor (Babbage, 1835; Smith, 1776). Early in the twentieth century, Taylor's (1911) time-and-motion studies in scientific management brought the design of work to the attention of organizational scholars. In part as a reaction to the unintended satisfaction and motivation costs of specialization and division of labor, researchers launched the human relations movement. This movement began with the study of whether improving environmental and social conditions would enhance employee motivation, satisfaction, comfort, and productivity (Mayo, 1933, 1945; Roethlisberger & Dickson, 1939).

In the following decades, scholars planted the roots of contemporary work design research. Herzberg and colleagues proposed that jobs could be enlarged and enriched to increase motivation and satisfaction (Herzberg, 1966; Herzberg, Mausner, & Snyderman, 1967). Turner and Lawrence (1965) called attention to the importance of task attributes in shaping job perceptions and behaviors, and the Tavistock scholars examined the interdependencies of social and technical systems (Trist & Bamforth, 1951; Walker & Guest, 1952). During the 1970s, Hackman and colleagues synthesized and expanded previous ideas about work design into the Job Characteristics Model (JCM), which focused on five structural characteristics of jobs (task variety, autonomy, feedback, significance and identity) that could enhance internal work motivation, satisfaction, performance, and presenteeism by cultivating experiences of meaningfulness, responsibility, and knowledge of results. They suggested these relationships held to the degree that employees had strong growth needs, the requisite knowledge and skills, and reasonable levels of satisfaction with the work context (Hackman & Lawler, 1971; Hackman & Oldham, 1976, 1980).

Although the JCM became the dominant model of work design, it was not without its critics. Scholars voiced concerns about weak relationships between job characteristics and objective performance (Aldag, Barr, & Brief, 1981), the socially constructed nature of work perceptions and job attitudes (Salancik & Pfeffer, 1978), the possibility that enriched jobs might only be preferred when accompanied by pay increases (Simonds & Orife, 1975) that meet expectations (Locke, Sirota, & Wolfson, 1976), and other challenges (for reviews, see Parker and Wall (1998) and Roberts and Glick (1981)). In response to these critiques, the 1980s was marked by tests of the JCM, investigations of the dimensionality and objectivity of job characteristics, and theoretical and empirical comparisons and integrations with the social information processing perspective (Griffin, 1987; Oldham, 1996; Zalesny & Ford, 1990).

Over time, scholars recognized that the JCM includes only a subset of the job characteristics that influence employees' experiences and behaviors, and expanded the basic model to better capture technological and social developments in the workplace. Researchers now recognize that jobs vary not only in terms of the core task characteristics described by the JCM, but also in terms of knowledge characteristics such as job complexity, information processing, problem-solving, and specialization, as well as in terms of physical characteristics such as ergonomics, physical demands, equipment use, and work conditions (Morgeson & Campion, 2003; Morgeson & Humphrey, 2006; Parker & Wall, 1998). Parker et al. (2001) presented an Elaborated Job Characteristics Model that summarized these extensions, identifying a broader range of job characteristics that can affect a wider set of outcomes, such as safety and creativity. They described evidence for mechanisms beyond motivation, and discussed individual and organizational moderators of these relationships.

Other developments highlighted the interdisciplinary nature of job design, emphasizing the potential trade-offs and solutions that emerge when motivational approaches to job design from organizational psychology are considered in juxtaposition with mechanistic approaches from industrial engineering, perceptual-motor approaches from cognitive psychology, and biological perspectives from biology and medicine (Campion & McClelland, 1993; Campion & Thayer, 1985; Morgeson & Campion, 2002; for a review, see Campion, Mumford, Morgeson, & Nahrgang (2005)). It is at this point of departure that we begin our analysis of new advances in work design theory and research. These advances have been stimulated by an increasingly broad focus on work and how it is organized, as opposed to the historically narrower emphasis on jobs and assigned tasks (Ilgen & Hollenbeck, 1991).

We focus on two advances in particular: relational perspectives and proactive perspectives. We chose these perspectives because they map onto two of the most critical features of context that organizations must manage to be effective: interdependence and uncertainty (Scott & Davis, 2007; Thompson, 1967). Both interdependence and uncertainty are central factors in shaping work design (Cummings & Blumberg, 1987), and both shape the outcomes that organizations need to achieve (Griffin et al., 2007). Interdependence reflects the fact that work roles are embedded in broader social systems of interdependent behaviors (Katz & Kahn, 1966; Weick, 1979). Relational perspectives on work design explicitly encapsulate this emphasis on the social systems of work. Uncertainty reflects unpredictability in the inputs, processes, or outputs of work systems (Wall, Cordery, & Clegg, 2002; Wright & Cordery, 1999), which is shaped by contextual factors such as new competition, changing technologies, and evolving customer demands (Burns & Stalker, 1961). Because it is rarely possible to manage uncertainty through control systems (Weick, Sutcliffe, & Obstfeld, 1999), organizations rely on employees to take initiative to change how work is executed, and on work designs that enable such behaviors (Frese & Fay, 2001; Staw & Boettger, 1990). Proactive perspectives on work design focus on how jobs, roles, and tasks can be structured to facilitate initiative, and on how this initiative, in turn, alters the nature of jobs, roles, and tasks. Since both interdependence and uncertainty are increasing in most organizations (Griffin et al., 2007), it is especially important to pursue and develop relational and proactive perspectives on work design.

Relational Perspectives: The Social Context of Work Design

I would say that my involvement comes from individuals. It's an immediate, initial thing that happens, a connection that I make each time when I work with someone with whom I find some common ground, some shared ways of thinking about things. If I don't have that connection, it's tough for me to get going working with them. (Architect; Kahn, 1990, p. 707)

The social context of work can play a critical role in shaping employees' experiences and behaviors. By social context of work, we refer to the interpersonal interactions and relationships that are embedded in and influenced by the jobs, roles, and tasks that employees perform and enact. At the dawn of work design research, scholars recognized that work is inextricably intertwined with interpersonal interactions and relationships. For example, researchers at the Tavistock Institute examined the social structure of work (Trist & Bamforth, 1951), and sociologists accentuated linkages between informal social interaction and job satisfaction (Roy, 1959). Organizational psychologists described organizations as systems of interdependent actors (Katz & Kahn, 1966) and described the process of organizing as unfolding through the reciprocal interactions of individuals in loosely or tightly coupled systems (Weick, 1979). Similarly, job design researchers assessed the extent to which jobs involved dealing with others, receiving feedback from others, and friendship opportunities (Hackman & Lawler, 1971; Hackman & Oldham, 1976; Sims, Szilagyi, & Keller, 1976), as well as the extent of both required and optional interaction, whether interaction was initiated or received, and the degree to which interdependence was embedded in the job (Turner & Lawrence, 1965). However, these relational perspectives began to disappear from mainstream work design theory and research in the late 1970s and early 1980s (Grant, 2007; Grant et al., 2007; Latham & Pinder, 2005; Morgeson & Campion, 2003; Morgeson & Humphrey, 2006).

We attribute this vanishing act to the interplay of three forces. First, scholars returned initial empirical results that social characteristics of jobs-such as dealing with others and friendship opportunities—were weak predictors of motivational outcomes (Hackman & Lawler, 1971; Hackman & Oldham, 1976, 1980). These disappointing findings led researchers to conclude, perhaps prematurely, that social characteristics were less important than task characteristics. Second, social information processing theorists launched a critique that job perceptions and attitudes are socially constructed by cues from other people, not objectively determined by structural characteristics of work (Salancik & Pfeffer, 1978). This critique motivated scholars to focus their conceptual attention on cleanly separating tasks from social cues. Scholars deemed this pure separation critical to proving that jobs have objective structural characteristics that exist independent of interpersonal relationships, and critical to adjudicating the debate by showing that job characteristics and social cues can independently and interactively influence perceptions, attitudes, motivation, and performance (Griffin, 1983, 1987). Third, the cognitive revolution had begun to dominate organizational scholarship, leaving work design researchers more interested in studying the psychological processes inside employees' heads than the social structures that created bonds between them (Locke & Latham, 2002).

During this period, several researchers highlighted the importance of interpersonal relationships and social interactions in work design, but these perspectives were not incorporated into general theories and research programs on work design. For example, Kiggundu (1981, 1983) called attention to the importance of interdependence as a feature of work design; Stone and Gueutal (1985) discovered that service to the public is one of the three central dimensions along which individuals perceive jobs; and Karasek and Theorell (1990) studied social support as a buffer against work stress. However, these social characteristics were neglected by work design researchers, who seldom integrated social characteristics of work into broader views of work design.

Until now, that is. Today, work design researchers are increasingly recognizing that jobs, roles, tasks, and projects are embedded in interpersonal relationships, connections, and interactions. Several exciting programs of research have begun to resuscitate and elaborate relational perspectives on work design that take the interdependent nature of jobs, roles, tasks, and projects seriously. These relational perspectives have been stimulated by marked shifts in the social context of work. Internal relationships are more pervasive and vital than in the past: most organizations use teams to complete work (Osterman, 2000), such that employees carry out their tasks and responsibilities interdependently (Griffin et al., 2007). Increasingly, teams need to collaborate beyond their boundaries, coordinating with individuals and teams from different departments, fields, and industries (Howard, 1995; Mohrman, Cohen, & Mohrman, 1995). External relationships are also more widespread and important

than ever before: the service sector continues to grow, leaving employees responsible for fulfilling the expectations of customers, clients, patients, and other end users and recipients (Batt, 2002; Parker et al., 2001; Schneider & Bowen, 1995). Frequent technological and strategic changes such as mergers and acquisitions and the introduction of matrix and network organizations all involve modifications to the social structure of organizations. As Barley and Kunda (2001, p. 77) state: "Interpersonal skills and the ability to collaborate in distributed, cross-functional teams appear to be more important than in the past... Under team systems, even factory workers are said to require interpersonal and decision-making skills previously reserved for managers".

In line with these trends, researchers have developed relational perspectives that emphasize social characteristics of work, social mechanisms through which work design influences employees' actions, social factors that moderate the effects of work design on behaviors, and social outcomes of work design. In the sections that follow, we describe the highlights of these relational perspectives with an emphasis on theoretical contributions and empirical findings.

Measuring Social Characteristics and their Relationships with Outcomes

An important program of research by Morgeson, Humphrey, and colleagues has been a driving force behind the renewed attention to relational perspectives in work design theory and research. Morgeson and Humphrey (2006) integrated several diverse literatures to develop a comprehensive measure of 21 characteristics of work that includes five social characteristics: social support, interaction outside the organization, initiated interdependence, received interdependence, and feedback from others. Social support is the degree to which employees receive assistance from supervisors and coworkers (Karasek, 1979; Karasek & Theorell, 1990), which can take both emotional and instrumental forms (House, 1981). Interaction outside the organization is the degree to which employees communicate with people beyond the boundaries of the organization, such as distributors, suppliers, clients, or customers (Morgeson & Humphrey, 2006; Tschan, Semmer, & Inversin, 2004). Task interdependence is the degree to which an employee's job is connected with other jobs, such that employees rely on each other to complete tasks; initiated interdependence occurs when work flows from the focal employee to others, and received interdependence occurs when the focal employee's job is affected by others' jobs (Kiggundu, 1981, 1983; Thompson, 1967; Wageman, 2001). Feedback from others is the degree to which employees receive information from supervisors, coworkers, customers, clients, or others about their performance (Hackman & Lawler, 1971; Hackman & Oldham, 1980).

To examine the predictive validity of these social characteristics, Humphrey et al. (2007) conducted a meta-analysis of 259 studies of 219,625 participants. They assessed the incremental contributions of the social characteristics by investigating their relationship with attitudinal outcomes after controlling for

10 motivational task characteristics and knowledge characteristics. Their results demonstrated surprisingly significant associations between the social characteristics and employees' attitudes: above and beyond the motivational task and knowledge characteristics, as a set, the social characteristics explained unique variance of 24% in turnover intentions, 40% in organizational commitment, 17% in job satisfaction, and 9% in subjective performance. There were not sufficient data to link social characteristics to objective or observer-rated performance. However, these promising findings suggest that the decision to give social characteristics a backstage role in work design research may have been premature.

Although this research is informative in demonstrating the value of attending to social characteristics as a group, it provides fewer insights into the unique effects of each social characteristic. It is to these effects of social characteristics that we turn our attention now.

Social Support

Work design researchers agree that employees' experiences and abilities to carry out their work are heavily influenced by their access to social support (Morgeson & Humphrey, 2006; Spreitzer, Sutcliffe, Dutton, Sonenshein, & Grant, 2005). Four major perspectives on social support have emerged in recent years: the Demand–Control–Support model (Karasek & Theorell, 1990), the Job Demands–Resources model (Bakker & Demerouti, 2007), organizational support theory (Rhoades & Eisenberger, 2002), and the social undermining perspective (Duffy, Ganster, & Pagon, 2002).

The demand-control-support model. The demand-control-support model was developed by researchers interested in explaining and ameliorating the negative effects of job demands on stress, strain, burnout, and physical symptoms and illnesses. Karasek (1979) originally proposed that job controllatitude in decision-making, similar to autonomy-would serve a buffering role by enabling employees to master their tasks and engage in problemfocused coping (Daniels & Harris, 2005; Grandey, Fisk, & Steiner, 2005; Sonnentag & Zijlstra, 2006; Theorell & Karasek, 1996). Upon finding evidence that social support served a similar buffering role in protecting against the deleterious effects of job demands, researchers expanded the model to include social support (Karasek & Theorell, 1990; Van Yperen & Hagedoorn, 2003; Bliese & Britt, 2001). Research on the buffering effects of social support has been inconclusive (Halbesleben & Buckley, 2004). Some studies have shown that social support reduces the negative psychological and physical health effects of job demands, others have revealed a three-way interaction suggesting that social support is more likely to exert these buffering effects when job control is lacking, and still others have identified no buffering effects of social support (van der Doef & Maes, 1999).

326 • The Academy of Management Annals

The job demands-resources model. In response to this mixed evidence, European scholars have developed a new model that examines the effects of job demands and job resources on distinct dimensions of burnout. Rather than proposing that social support buffers the negative effects of job demands on health outcomes, these authors argue that job resources such as social support independently reduce disengagement and depersonalization, while job demands separately increase emotional exhaustion (Bakker & Demerouti, 2007; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). Studies in this area suggest that social support can reduce disengagement and depersonalization by facilitating goal achievement and personal growth. Social support may thus enhance well-being by enabling employees to accomplish their objectives and learn from their experiences.

Organizational support theory. A third perspective on social support is presented in the form of organizational support theory. Building on social exchange theory (Blau, 1964; Emerson, 1976; Homans, 1958; Kelley & Thibaut, 1978), Eisenberger and colleagues proposed that employees are attentive to cues about whether they are supported by their organizations (Eisenberger, Huntington, Hutchison, & Sowa, 1986). When organizations provide favorable treatment, employees feel that the organization cares about their contributions and values their well-being, which motivates them to reciprocate with strengthened affective commitment, enhanced performance, increased citizenship, and decreased withdrawal. Extensive research has corroborated these propositions (Rhoades & Eisenberger, 2002), and recent studies have shown that support from supervisors is a primary contributor to feeling supported by the organization (Eisenberger, Stinglhamber, Vandenberghe, Sucharski, & Rhoades, 2002).

Social undermining. Common to all three of these perspectives is the assumption that social support is associated with beneficial outcomes, either directly or by reducing the negative impact of stressors. A fourth perspective on social support challenges this assumption by revealing that the source of support plays a critical role in shaping its effects. Duffy et al. (2002) conducted a study of self-efficacy, organizational commitment, counterproductive behaviors, and somatic complaints among police officers. Building on psychological research, Duffy et al. (2002) proposed that it is possible to receive support at the same time as being undermined—having one's work, relationships, or reputation hindered by others. They hypothesized that whether social support buffers against or exacerbates negative outcomes depends on the source providing the support. Their data showed that, as predicted, if employees are undermined by one source, support from a different source helps to buffer against negative outcomes. However, their data also corroborated their counterintuitive hypothesis that if the support is provided the same source as the undermining, negative outcomes are exacerbated. This is because it requires considerable emotional energy and coping resources to predict the inconsistent behavior of, and manage ambivalent relationships with, a supervisor or coworker who is a source of both support and undermining (Duffy et al., 2002). For employees who felt undermined by a supervisor or coworker, if they also received support from this supervisor or coworker, they reported lower levels of well-being, commitment, and self-efficacy at work, along with higher levels of counterproductive behaviors. Additional studies have shown that undermining exerts particularly pernicious effects when it is not common in the social context (Duffy, Ganster, Shaw, Johnson, & Pagon, 2006). These results challenge work design researchers to recognize that social support can have negative as well as positive effects depending on the source, and point to the value of considering undermining as a social characteristic of work that is not merely the opposite of support.

Interaction outside the Organization

Two competing perspectives have appeared in the literature on interaction outside the organization with clients, customers, patients, and other recipients. We first discuss theory and research on emotional labor and burnout, which has primarily revealed downsides of interaction outside the organization, and then turn to research on relational job design, which has predominantly identified benefits of interaction outside the organization. We then explore potential resolutions of the tensions between these two perspectives.

The emotional labor and burnout perspective. Researchers studying emotional labor and burnout conceptualize emotional demands as a characteristic of work design. These researchers have emphasized the costs of interaction outside the organization, finding that burnout is more pervasive in service work than in other occupational sectors (Maslach, Schaufeli, & Leiter, 2001). From this perspective, "high emotional demands resulting from interactions with clients are seen as a core characteristic of service jobs" (Zapf, Seifert, Schmutte, Mertini, & Holz, 2001, p. 527), and burnout is caused by "frequent and intense client-patient interactions" (Lee & Ashforth, 1996, p. 123). In many service occupations, emotion expression is part of the work role (Rafaeli & Sutton, 1987), and emotional display rules are shaped heavily by the interpersonal requirements of employees' jobs (Diefendorff & Richard, 2003; Diefendorff, Richard, & Croyle, 2006). Indeed, a number of scholars have argued that interactions with clients, customers, and patients subject employees to emotional display demands that tax their emotional energy and feelings of authenticity (Brotherridge & Grandey, 2002; Grandey, 2000; Hochschild, 1983; Morris & Feldman, 1996; Zapf, 2002). Elaborating on these ideas, Cordes and Dougherty (1993, p. 644) explicitly proposed that burnout is caused by "direct, intense, frequent, or lengthy interpersonal contacts". Although few studies have explicitly tested these predictions (Dormann & Zapf, 2004), it is widely accepted among researchers that burnout occurs "in response to chronic interpersonal stressors on the job" (Maslach et al., 2001, p. 399). Thus, the literatures on burnout and emotional labor suggest that frequent, direct, emotionally intense interactions with clients, customers, and patients outside the organization are likely to cause stress, strain, and burnout.

The relational job design perspective. A contrasting viewpoint on interaction outside the organization has been presented by work design researchers focusing on relational job design (Grant, 2007, 2008a; Grant et al., 2007). Whereas traditional work design research focuses on how the task architectures of jobs can be structured to cultivate intrinsic motivation (Hackman & Oldham, 1976, 1980), recent research has examined how the relational architectures of jobs can be structured to cultivate prosocial motivation: to increase employees' desires to protect and promote the well-being of beneficiaries (Grant, 2007, 2008b). Grant (2007) proposed that when employees work in jobs that are high in task significance, which provide opportunities to affect the well-being of beneficiaries, employees are more likely to be aware of the impact of their actions on beneficiaries. However, Grant (2007) proposed that a cognitive awareness of how one's actions affect beneficiaries may be a necessary but insufficient condition for prosocial motivation; it is also critical for employees to care about beneficiaries. Many jobs are high in task significance but provide few opportunities for employees to directly interact with beneficiaries, preventing employees from gaining a deep understanding of the impact of their actions on beneficiaries. Grant (2007) argued that when jobs are structured to provide employees with contact with beneficiaries, employees can empathize, identify with, and take the perspective of beneficiaries, and thereby develop stronger affective commitments to them (Parker & Axtell, 2001). These affective commitments to beneficiaries, combined with an awareness of impact on beneficiaries, will strengthen employees' prosocial motivations, encouraging higher levels of effort, persistence, and helping behavior (Grant, 2007).

Across a series of experiments, Grant and colleagues tested these core propositions. In a field experiment in a call center that raised money for a university, callers who had brief contact with one scholarship recipient who benefited from their work increased significantly in persistence (time spent on the phone) and performance (money raised) a full month later (Grant et al., 2007). Callers in two control groups did not show any significant changes in persistence or performance. Two laboratory experiments identified the mediating mechanisms and moderating boundary conditions for these effects. Contact with beneficiaries increased persistence by enhancing employees' perceptions that their actions had an impact on beneficiaries and by increasing their affective commitments to beneficiaries, but only when the work was high in task significance (Grant et al., 2007). These findings suggest that the opportunity to interact with other people (contact with beneficiaries), provided that one's actions had the potential to benefit these people (task significance), motivated higher levels of persistence. Another field experiment with a new group of callers returned more striking results: after meeting a single fellowship student who benefited from their work, callers increased more than fivefold in the average dollar amount of funds that they raised weekly, whereas callers in a control condition did not change significantly (Grant, 2008c). Additional studies indicate that contact with beneficiaries may also enable employees to feel more appreciated and valued by beneficiaries, which motivates greater job dedication and helping behavior (Grant, 2008a). Researchers have also suggested that contact with beneficiaries can facilitate perspectivetaking (Parker & Axtell, 2001) and provide feedback and information that stimulates the discovery of new task strategies (Hackman, Oldham, Janson, & Purdy, 1975) and product and service innovations (Sethi & Nicholson, 2001).

Medical researchers have recently provided additional support for Grant's (2007) propositions about the effects of contact with beneficiaries in the context of radiology work. When radiologists were given the opportunity to see photographs of patients whose imaging scans they were evaluating, these radiologists reported stronger feelings of empathy for patients and performed more effectively in accurately diagnosing medical problems in the scans (Turner, Hadas-Halperin, & Raveh, 2008). As the lead author of the study explained:

Our study emphasizes approaching the patient as a human being and not as an anonymous case study... We feel it is important to counteract the anonymity that is common in radiologic exams... The photos were very helpful both in terms of improving diagnosis and the physicians' own feelings as caregivers... Down the road, we would like to see photos added to all radiology case files. (RSNA Reporter's Notebook, 2008)

Toward reconciliation. These benefits of interactions outside the organization identified by work design researchers appear to conflict with the costs predicted by burnout and emotional labor scholars. Researchers have yet to reconcile these competing perspectives, and there are several possible explanations. First, the two camps of researchers have examined different outcomes (stress and burnout vs. motivation and performance). Second, the two camps have focused on interactions with different groups of individuals (work design researchers have mostly focused beneficiaries who are affected in a meaningful way by the work that employees perform, whereas this is not necessarily so in burnout research). Third, the two camps may be studying samples of contact, such as nursing, might attract participants with high empathy and therefore vulnerability to burnout).

330 • The Academy of Management Annals

Fourth, the two camps have focused on different interaction levels: emotional labor and burnout researchers have emphasized the costs of chronic, frequent, and intense interactions, whereas work design researchers have emphasized the benefits of brief, infrequent interactions. Interaction outside the organization may function like a vitamin (Warr, 2007): it is salutary up to moderate levels, at which point overdoses can be harmful. In a related vein, emotional labor is often studied in the context of work that requires interactions with customers and clients who hold disproportionate or ambiguous expectations and engage in unfriendly behaviors or verbal aggression (Dormann & Zapf, 2004; Grandey, Dickter, & Sin, 2004), whereas work design researchers have structured respectful, appreciative interactions that require little or no emotional labor. Germane to this distinction, Zapf and Holz (2006) found that stress from emotional labor is attributable to the specific feeling of emotional dissonance, when employees experience a discrepancy between felt and displayed emotions.

Importantly, one particular issue that warrants attention is the role that organizational constraints and opportunities might play. Emotional labor and burnout researchers have often studied employees who face considerable "red tape" (Scott & Pandey, 2005), which leaves them feeling unable to help the very individuals their jobs are designed to benefit (Marshall, Barnett, & Sayer, 1997). For example, nurses and teachers often feel that their efforts to help patients and students are thwarted by bureaucratic systems, organizational policies, and heavy workloads while receiving little support (Maslach et al., 2001). In contrast, work design researchers have studied contexts in which employees face fewer constraints in helping beneficiaries (Grant, 2008a; Grant et al., 2007). These differences suggest that organizational constraints and opportunities to help recipients effectively might moderate the effects of interaction outside the organization on employees' motivation, attitudes, and performance.

Similarly, researchers studying necessarily evils—tasks that require employees to harm others in order to advance a perceived greater good—have argued that causing pain or discomfort to the very people one's work is designed to help may cause stress and burnout (Molinsky & Margolis, 2005). This theme is common in research on emotional labor and burnout: employees often receive unpleasant feedback from clients and customers, signaling that their work has had a negative rather than positive impact. Managing guilt from this realization, as well as attempting to prevent overload and distress while expressing sensitivity and compassion, can be emotionally overwhelming (Margolis & Molinsky, 2008; Molinsky & Margolis, 2005). Indeed, recent research suggests that the experience of harming others is associated with higher burnout even after controlling for common predictors such as job demands, control, workload, and uncertainty (Grant & Campbell, 2007). We hope that researchers will begin to systematically investigate whether the experience of harming othersor feeling unable to provide, or blocked from providing, the level of help that is needed—contributes to an explanation for the divergent accounts of the two camps of researchers. More generally, it will be valuable for researchers to test these explanations for why the two camps disagree about the effects of interaction outside the organization, as well as to build new theory about factors that may moderate its effects (Grandey & Diamond, 2009).

Task Interdependence

Of the social characteristics measured by Morgeson and Humphrey (2006), task interdependence has received the most attention. The concept has roots in Thompson's (1967) original distinctions between pooled, sequential, and reciprocal interdependence, as well as other discussions of interdependence (Katz & Kahn, 1966; Trist & Bamforth, 1951; Turner & Lawrence, 1965). The central question that has occupied the attention of researchers concerns the nature of the relationship between interdependence and psychological and behavioral outcomes. Researchers have often observed inconsistent, nonmonotonic, or curvilinear relationships between task interdependence and favorable psychological and behavioral outcomes at both the individual and group levels (Campion, Medsker, & Higgs, 1993; Campion, Papper, & Medsker, 1996; Stewart & Barrick, 2000; Wageman, 1995; Wong & Campion, 1991). At least four different explanations may account for this pattern.

The opponent process perspective. One viewpoint, which we refer to as the opponent process perspective, maintains that task interdependence has both positive and negative effects through opposing mediating processes, both linear (McGuire, 1997), whereby one process is stronger at low levels of interdependence and the other process is stronger at high levels of interdependence. This perspective suggests that at moderate levels, interdependence offers the benefits of cohesion, trust, and commitment, but at very high levels, the communication and coordination costs of interdependence outweigh these benefits (Hertel, Konradt, & Orlikowski, 2004; Kirkman et al., 2004; MacDuffie, 2007). In addition, at high levels, interdependence allows for greater workload sharing and opportunities to negotiate roles through interactions with team members; this reduces consensus between employees about role requirements (Dierdorff & Morgeson, 2007), making it more difficult to enforce expectations and evaluate performance (Griffin et al., 2007).

The type-contingent perspective. A second viewpoint, which we refer to as the type-contingent perspective, holds that the effects of task interdependence depend on the type or form of task interdependence under consideration. For example, Kiggundu (1981, 1983) developed a model proposing that initiated interdependence leads to felt responsibility for others' work outcomes, which—in combination with autonomy, which cultivates felt responsibility

332 • The Academy of Management Annals

for one's own work outcomes—enhances internal work motivation, job satisfaction, and growth satisfaction, and reduces turnover intentions. He proposed that received interdependence, on the other hand, should be associated with negative outcomes because it reduces autonomy by leaving employees' schedules and responsibilities reliant on the actions of others. His data provided preliminary support for his hypotheses about the benefits of initiated interdependence but revealed no costs of received interdependence. Building on these ideas, Pearce and Gregersen (1991) argued that reciprocal interdependence, which occurs when employees both initiate and receive interdependence, would cultivate the highest levels of felt responsibility and thus motivate extra-role helping and citizenship behaviors. A study of hospital employees demonstrated that reciprocal interdependence was associated with higher levels of extra-role helping and citizenship behaviors, mediated by higher levels of felt responsibility (Pearce & Gregersen, 1991). Subsequent research has shown that reciprocal interdependence may increase helping by encouraging help-seeking (Anderson & Williams, 1996), and that the reciprocal nature of the interdependence may be important for driving helping; when interdependence is reciprocal, individuals perceive the relationship as more beneficial, and hence invest more trust and engage in more helping (de Jong, Van der Vegt, & Molleman, 2007). These results suggest that the effects of task interdependence may vary as a function of its type.

The disposition-contingent and context-contingent perspectives. A third viewpoint, which we refer to as the *disposition-contingent* perspective, proposes that the effects of task interdependence depend on individual traits and preferences. Research in this area has shown that task interdependence is only associated with higher levels of satisfaction for employees who prefer group work (Campion et al., 1993; Shaw, Duffy, & Stark, 2000). Finally, a fourth viewpoint, which we refer to as the *context-contingent* perspective, proposes that the effects of task interdependence depend on contextual conditions. From this viewpoint, task interdependence can have positive effects in some contexts and negative effects in other contexts.

One key contextual moderator is group diversity; researchers have proposed that task interdependence is more likely to enable performance benefits in heterogeneous than homogeneous groups. Indeed, a number of studies suggest that task interdependence motivates higher performance quality and quantity, helping behaviors, and innovation in groups that are heterogeneous but not homogeneous with respect to attributes such as social categories, educational and functional backgrounds, and personal values (Jehn, Northcraft, & Neale, 1999; Van der Vegt & Janssen, 2003; Van der Vegt & Van de Vliert, 2005; cf. Jackson, Joshi, & Erhardt, 2003). In diverse groups, task interdependence appears to encourage cooperation (Aronson, 1978, 1999) as well as the sharing of information from novel perspectives (Jehn et al., 1999) that can facilitate decision-making and performance (Nemeth, 1986). These benefits of task interdependence in diverse groups may be particularly pronounced when goal interdependence is also present, as the combination of shared objectives and the requirement to work collaboratively to achieve these objectives appear to motivate participants to cooperate and share their diverse perspectives (Van der Vegt & Janssen, 2003; see also Sherif, Harvey, White, Hood, & Sherif, 1961). The benefits of task interdependence may also be greater when rewards and feedback, like goals, are provided at the group level, congruent with the interdependent nature of the work (Saavedra, Earley, & Van Dyne, 1993; Wageman, 1995). These results indicate that task interdependence is most likely to offer performance benefits in diverse groups in which goals, rewards, and feedback are also interdependent rather than independent, as well as for individuals who prefer to work in groups.

Task interdependence as a moderator. In addition to investigating the relationship between task interdependence and outcomes, researchers have identified task interdependence as a moderator of other important relationships in organizational studies. Placing boundaries on the long-held assumption that autonomy is beneficial to motivation, attitudes, and performance (Fried & Ferris, 1987; Hackman & Oldham, 1976), researchers have proposed and found that autonomy has different effects under different levels of task interdependence. Research has highlighted costs of individual autonomy under conditions of high task interdependence. When task interdependence is high, providing individual autonomy can undermine group performance by reducing group cohesiveness (Langfred, 2000a, 2005; Langfred & Moye, 2004), and does not predict reduced strain or increased job satisfaction because individual employees do not have sufficient control to improve their own experiences in interdependent tasks (Sprigg, Jackson, & Parker, 2000). When task interdependence is low, on the other hand, individual autonomy facilitates the motivation, satisfaction, and performance benefits predicted by the JCM (Fried & Ferris, 1987; Hackman & Oldham, 1976). Further research revealed that this moderating effect is itself contingent on the level at which autonomy is situated: when task interdependence is high, although *individual* autonomy may have costs, providing groups with autonomy can increase their performance (Langfred, 2000a, 2000b, 2005; Pasmore, Francis, Haldeman, & Shani, 1982), although it may run the risk of increasing absenteeism and turnover in the process by introducing instability and unpredictability into the workgroup (Cordery, Mueller, & Smith, 1991; Wall, Kemp, Jackson, & Clegg, 1986). When task interdependence is low, on the other hand, group autonomy may reduce performance by imposing coordination costs (Langfred, 2005).

Other studies of task interdependence as a moderator have shown that task interdependence reverses the impact of communication styles on status judgments (Fragale, 2006). Traditionally, employees who use assertive speech are granted more status. However, in interdependent groups, team members place higher weight on communal expressions of warmth than on assertive expressions of agency, competence, and dominance. As such, individuals who use powerless speech marked by hesitations, hedges, and disclaimers are seen as more communal and warm, and are thus granted higher status (Fragale, 2006). Furthermore, researchers have shown that task interdependence moderates the effect of telecommuting on job satisfaction, such that telecommuting has more negative effects on satisfaction when interdependence is high (Golden & Veiga, 2005), and that task interdependence increases the visibility of disparities in justice, performance, and citizenship behaviors between foreign and local employees (Ang, Van Dyne, & Begley, 2003).

Finally, researchers have highlighted the impact of interdependence as a moderator of the effects of cohesion and interpersonal helping behaviors on group performance. Meta-analytic results suggest that cohesion has a stronger positive association with group performance when task interdependence is high (Beal, Cohen, Burke, & McLendon, 2003; Gully, Devine, & Whitney, 1995), and primary studies reveal that helping contributes more favorably to performance evaluations and objective performance when task interdependence is high (Bachrach, Powell, Bendoly, & Richey, 2006; Bachrach, Powell, Collins, & Richey, 2006). Presumably, this is because cohesion and interpersonal helping facilitate coordination and task completion in interdependent groups but can distract attention away from task responsibilities in independent groups (Bachrach, Powell, Collins, & Richey, 2006). This evidence expands our knowledge of the important effects of interdependence on the type of performance that is noticed and valued in organizations.

Interpersonal Feedback

Hackman and Oldham (1976, 1980) dropped feedback from agents as a job characteristic to focus exclusively on feedback from the work itself. For the following three decades, interpersonal feedback received scant attention in the work design literature. When Morgeson and Humphrey (2006) reintroduced interpersonal feedback to work design theory and research, the time was ripe. With the growth of the service sector, interpersonal feedback is perhaps more critical today than in any previous era. Because services are more intangible than products, employees rely heavily on interpersonal feedback to provide information about the extent to which their performance meets the expectations of customers and clients (Mayer, Ehrhart, & Schneider, 2008). In addition, increasing levels of uncertainty have created many forms of work for which task feedback is ambiguous, rendering interpersonal feedback necessary to interpret performance (Ashford, Blatt, & VandeWalle, 2003).

In the 30 years that work design researchers were investigating other issues, a vast literature on interpersonal feedback emerged. Although this literature has yet to be integrated with work design theory and research, it provides numerous insights that may prove fruitful. The seminal theoretical and empirical synthesis and review by Kluger and DeNisi (1996) serves as a generative starting point. Kluger and DeNisi conducted a meta-analysis of the effects of feedback interventions on performance using 607 effect sizes drawn from a total of 23,663 observations of 12,652 participants. They found that on average, feedback interventions increased performance (d = 0.41), but over 38% of the interventions produced negative effects. This motivated them to develop and test a theory of how feedback characteristics and task characteristics may moderate the impact of feedback on performance.

Feedback characteristics. With respect to feedback characteristics, Kluger and DeNisi (1996) examined a number of content variables. First, they proposed and found that feedback including either praise or discouragement decreased the effectiveness of feedback interventions. Both praise and discouragement direct attention toward the self and toward meta-task processes related to how goals and standards are managed, distracting attention away from task motivation and learning. Second, feedback that made another person salient or threatened self-esteem was associated with attenuated performance. Third, velocity feedback, which communicates information about the rate of change in performance over time and thereby has the potential to enhance task-goal focus, was associated with increased performance. Fourth, feedback that highlighted correct solutions, which facilitates learning by ruling out poor solutions, was associated with increased performance. Together, these findings suggest that interpersonal feedback is more likely to increase performance when it focuses attention on the task and away from the self.

Task characteristics related to feedback. With respect to task characteristics, the results were less conclusive: "These findings are further moderated by task characteristics that are still poorly understood" (Kluger & DeNisi, 1996, p. 254). Feedback interventions were most likely to increase performance for memory tasks, and less likely to increase performance for physical and rule-following tasks, than reaction time, knowledge, or vigilance tasks. Feedback interventions were also more likely to increase performance for simple than complex or novel tasks, and for tasks in which goals were set. These findings await theoretical explanation. They also provide little information about the effects of interpersonal feedback on outcomes other than performance, and they have yet to scratch the surface of the range of work design variables that may moderate the effectiveness of interpersonal feedback. We hope that researchers will begin to investigate how, why, and when task, knowledge, social, and physical characteristics of work alter the impact of interpersonal feedback on a wide range of behavioral, psychological, and health outcomes.

Social Contexts as Moderators and Mediators of the Effects of Task Characteristics

Thus far, our coverage of relational perspectives on work design has focused on social characteristics of work. However, researchers have also developed relational perspectives that accentuate how the social context of work alters and explains the effects of task characteristics. It is to these moderating and mediating processes that we direct our attention now.

Social context, autonomy, and performance. One generative question concerns how the social context of work moderates the effects of autonomy on performance. Trust is an aspect of the social context that has received considerable attention (Clegg & Spencer, 2007). Langfred (2004) predicted and found that among self-managing teams, when trust is high, providing individuals with autonomy can undermine performance by discouraging team members from monitoring each other's performance. In addition, Kramer (1999) reviewed a number of studies showing that restricting autonomy through formal surveillance and monitoring systems can undermine performance by leading employees to feel that their managers do not trust them.

Support is another aspect of the social context that has been identified as a moderator of the effects of autonomy. A quasi-experiment in a printing company showed that introducing autonomous workgroups only produced performance benefits when supportive management systems were lacking (Morgeson, Johnson, Campion, Medsker, & Mumford, 2006). When supportive reward, feedback, and information systems are absent, autonomy can provide teams with the authority to structure their own work processes more effectively, but when supportive management systems are present, this function is less important. Others have noted that enriching jobs to provide autonomy and complexity can place pressure on employees, as it can be stressful to be held responsible for the well-being of other people and the organization (Elsbach & Hargadon, 2006; Xie & Johns, 1995). Building on this observation, Drach-Zahavy (2004a, 2004b) identified trade-offs between job enrichment and support, such that when team members are granted high levels of autonomy, they may be less accessible for support. She further found that these trade-offs were mitigated to some extent by supportive leadership and values emphasizing low power distance. Together, these findings suggest that the social context may moderate the effects of autonomy on individual behaviors and performance. However, exactly how this effect occurs seems to vary considerably across studies and contexts, highlighting the need for future theory and research to more systematically investigate how autonomy interacts with the social context of work design to influence behaviors and performance.

Social context, individual differences, and performance. Researchers have also examined how the social context of work can interact with individual differences to influence performance. Mount, Barrick, and Stewart (1998) found that the extent to which jobs required interpersonal interaction moderated well-documented relationships between personality and performance. They found that extraversion, emotional stability, and agreeableness were more likely to predict performance in jobs that required teamwork. In addition, Grant (2008a) found that prosocial values and conscientiousness moderated the performance effects of relational task significance cues. In a field experiment with fundraisers, he found that task significance was more likely to motivate high performance for employees with strong prosocial values, who place higher priority on benefiting others, or low levels of consciousness, whose effort is more dependent on external cues about the importance of the work. Together, these findings suggest that individual differences and the social context may interact to affect performance.

Relational mechanisms mediating the effects of work design. Researchers have also examined new relational mechanisms through which work design features influence outcomes. For example, Gittell (2001) conducted an innovative study in the airline industry revealing that supervisors who had smaller spans of control were more available to provide direct reports with coaching and feedback; this increased their capability to engage in relational coordination, and was associated with fewer customer complaints, better baggage handling, and fewer late arrivals. Gittell (2002) also showed that relationships between service providers facilitated coordination, thereby predicting higher levels of customer satisfaction and loyalty. These studies underscore the importance of small spans of control and interpersonal relationships for coordinating work in teams and services provided to customers.

Providing a different viewpoint on relational mechanisms, Grant (2008a) developed and tested hypotheses about new relational mechanisms to explain the performance effects of task significance. The dominant assumption in the work design literature is that task significance enables employees to experience their work as more personally meaningful (Fried & Ferris, 1987; Hackman & Oldham, 1976). However, task significance is also a relational job characteristic because it connects employees to the impact of their actions on other people (Grant, 2007). Building on this notion, Grant (2008a) proposed that task significance increases job performance by strengthening employees' perceptions that their actions have an impact on, and are appreciated by, beneficiaries. In a field experiment with lifeguards, he found that lifeguards who read four stories about the potential benefits of their work to swimmers increased significantly in job dedication (hours worked) and helping behavior (supervisor ratings of assistance provided to swimmers). Lifeguards in a control condition, who read stories about the potential personal benefits of the work, did not increase significantly in either job dedication or helping behavior. These effects were mediated by changes in lifeguards' perceptions of having an impact on and feeling valued by swimmers (Grant, 2008a). These findings suggest that task significance can increase performance through relational mechanisms that connect employees' actions to other people.

Contributions and Gaps

Taken together, the emerging relational perspective on work design provides important insights into the social context of work. Work design researchers have broadened our knowledge of the social characteristics of work, which include interaction outside the organization, initiated and received task interdependence, social support, and interpersonal feedback (Morgeson & Humphrey, 2006). Research also suggests that we should consider several additional social characteristics of work. Interpersonal display rules for emotions (Diefendorff & Richard, 2003; Rafaeli & Sutton, 1987) constitute one new class of social characteristics. Opportunities to benefit others (task significance; Grant, 2007; Hackman & Oldham, 1976) and requirements to harm others in the interest of a greater good (necessary evils; Molinsky & Margolis, 2005) can also be considered as social characteristics, since they connect employees' actions to the well-being of other people (Grant, 2008a). These social characteristics can and should be considered as antecedents and moderators of the effects of other work design features on outcomes.

Researchers have also extended our knowledge of the factors that moderate the effects of social characteristics on outcomes. These moderators include group diversity (Jehn et al., 1999), congruence with goals, rewards, and feedback systems (Saavedra et al., 1993; Wageman, 1995), individual difference in extraversion, emotional stability, agreeableness, prosocial values, and conscientiousness (Grant, 2008a; Mount et al., 1998), and trust and support (Drach-Zahavy, 2004a, 2004b; Morgeson et al., 2006). Furthermore, researchers have advanced our understanding of the relational mechanisms through which work design influences outcomes, including trust and informationsharing (Clegg & Spencer, 2007; de Jong et al., 2007; Jehn et al., 1999; Langfred & Moye, 2004; Van der Vegt & Janssen, 2003), relational coordination (Hoffer Gittell, 2001, 2002), cohesion (Langfred, 2005), perceived impact, social worth, and affective commitment to beneficiaries (Grant, 2008a; Grant et al., 2007), and perspective-taking (Parker & Axtell, 2001). Finally, the studies that we highlighted have focused on new social outcomes of work design. These outcomes include help-seeking (Anderson & Williams, 1996; Cleavenger, Gardner, & Mhatre, 2007; de Jong et al., 2007), helping and citizenship behaviors (Chiu & Chen, 2005; Grant, 2008a; Pearce & Gregersen, 1991; Piccolo & Colquitt, 2006; Podsakoff, MacKenzie, Paine, & Bachrach, 2000; Purvanova, Bono, & Dzieweczynski, 2006), and even customer satisfaction, loyalty, and complaints (Gutek, Bhappu, Liao-Troth, & Cherry, 1999; Hoffer Gittell, 2001, 2002).

However, missing at this point is a comprehensive relational model of the social context of work design. Just as Hackman and Oldham's JCM specified the nature and key outcomes of task characteristics, as well as the mediating

mechanisms and moderating boundary conditions for these relationships, we need a "Relational Work Design Model" to capture the social characteristics of work, what behavioral, psychological, and health outcomes they influence, and a core set of mediators and moderators for these relationships. We hope that the evidence reviewed above will provide researchers with a springboard to developing such a comprehensive model. The bare bones of such a model are sketched in Figure 6.1, which summarizes the relevant variables, outcomes, mediating mechanisms, and moderating boundary conditions.

Furthermore, little is currently known about the antecedents of, and influences on, the social context of work design. For example, what causes task interdependence? Some researchers have suggested that organizational structures and managerial decisions are responsible for task interdependence (Oldham & Hackman, 1981; Thompson, 1967), while others have suggested that task interdependence can be shaped by group members' values (Wageman & Gordon, 2005), group processes such as conflict (Langfred 2007), and work flow policies and performance differences both between and within individuals (Doerr, Freed, Mitchell, Schriesheim, & Zhou, 2004; Doerr, Mitchell, Schriesheim, Freed, & Zhou, 2002). The design of offices and workspaces, too, appears to have a strong impact on with whom and how often interpersonal interactions occur (e.g., Cohen, 2007; Elsbach & Pratt, 2008; Millward, Haslam, & Postmes, 2007; Oldham, 1988; Oldham, Cummings, & Zhou, 1995), but we need richer theory and research to explore how different office and workspace designs shape the social and relational characteristics of work.

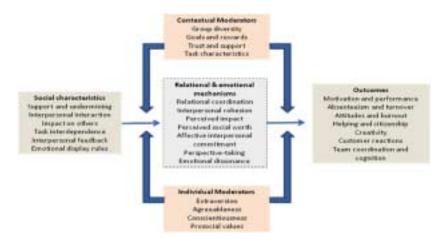


Figure 6.1 Toward a Relational Work Design Model.

Note: In the interest of parsimony, we have not attempted to depict interactions between social characteristics or link specific social characteristics to specific mediating, moderating, and out-come variables. Such efforts represent an important direction for future research.

Moreover, in light of globalization, national and organizational cultures may play an increasingly important role in shaping the social context of work design. For example, employees in collectivistic cultures may be more receptive to task interdependence than employees in individualistic cultures. As another example, compensation policies may influence how employees react to the social characteristics of work (DeVaro, 2009).

In addition, there are important insights to be gained from the theoretical and empirical integration of the largely separate literatures on interaction outside the organization, social support, interdependence, interpersonal feedback, and friendship opportunities. For example, researchers have largely assumed that emotion work occurs in external interactions with customers and clients, but it also occurs in internal interactions with coworkers and supervisors (Grandey, Kern, & Frone, 2007; Tschan, Rochat, & Zapf, 2005). Similarly, researchers have studied task significance and contact with beneficiaries in the context of external interactions, but internal coworkers and supervisors are beneficiaries as well (Grant, 2007; Hackman & Oldham, 1980), particularly when employees initiate interdependence (Pearce & Gregersen, 1991). Of course, feedback and social support can be provided by external clients and customers, not only internal supervisors and coworkers (Hackman et al., 1975), but we know little about whether feedback and support effects differ as a function of whether the source is inside or outside the boundaries of the organization.

Moreover, with a few noteworthy exceptions (Brass, 1981, 1985), researchers have largely overlooked the role of social networks in work design. This is a glaring omission given that networks are likely to have a powerful influence on how managers design jobs (Davis, 2009), as well as on the interaction partners with whom employees connect, the sources and types of feedback and support that employees access, the amount of autonomy that employees have in carrying out their tasks, and the social comparisons that employees make in evaluating the quality of their jobs (Kilduff & Brass, 2009; Harrison & Humphrey, 2009). We encourage researchers to devote renewed attention to how social networks shape work designs and reactions to them.

It is also worth noting that researchers have often applied a one-size-fits-all model to relational work design, overlooking situational and individual differences in the functions of workplace relationships. From a situational perspective, employees may appreciate receiving social support in some circumstances but find it threatening to their competence, self-esteem, and autonomy in others (Deelstra et al., 2003; Fisher, Nadler, & Whitcher-Alagna, 1982), and the act of giving social support can be costly to providers in distracting attention away from task completion (Barnes et al., 2008; Bergeron, 2007). From an individual perspective, although agreeable extraverts may be enthusiastic about increases in task interdependence and interaction outside the organization, disagreeable introverts may see these "opportunities" as

unwelcome obligations that undermine their well-being (McGregor, McAdams, & Little, 2006).

Finally, the social undermining, emotional labor, and burnout literatures highlight the need for a more critical viewpoint on the potential dark sides of relational work design. Whereas many researchers have extolled the virtues of enriching interpersonal relationships, critical theorists point out that relationships are often embedded in hidden power structures that privilege managerial goals over employees' interests (Adler, Forbes, & Willmott, 2007; Fineman, 2006). For example, managers may capitalize on the empathy evoked by the needs of clients and customers to justify imposing increased demands on employees. In addition, fostering collaborative interactions in self-managing teams may pave the way for members to establish and reinforce normative rules that sanction strict attendance policies, close monitoring, and other socially oppressive forms of concertive control (Barker, 1993) that create and sustain status hierarchies (Rosen, 2000). For example, in lean production systems, scholars have argued that team structures enable managers to explicitly "harness" peer pressure to increase productivity and drive down absenteeism (Delbridge, Turnbull, & Wilkinson, 1992). These more critical and interpretivist perspectives show how relational and social processes can be a powerful form of managerial control. We recommend considering more critical and interpretivist perspectives to complement and complicate the dominant functionalist, positivist views of relational work design (Holman, Clegg, & Waterson, 2002).

Proactive Perspectives: Initiative in Modifying Work Design

I take on as much event planning as I can, even though it wasn't originally part of my job. I do it because I enjoy it, and I'm good at it. I have become the go-to person for event planning, and I like my job much more because of it. (Marketing coordinator; Berg, Dutton, & Wrzesniewski, 2008)

Traditionally, work design researchers assumed that managers were responsible for structuring jobs for employees to carry out (Hackman & Oldham, 1976, 1980). However, as uncertainty rises, it is increasingly difficult for managers to design formalized job descriptions that specify the tasks and behaviors that are important to individual, group, and organizational effectiveness (Griffin et al., 2007). As technological advances and competitive pressures increase the uncertainty inherent in work and the velocity at which work is completed, organizations need jobs, roles, and tasks to develop and change over time to address emergent demands and opportunities (Ilgen & Hollenbeck, 1991). The advent of global work, virtual work, telework, and self-managing teams has replaced static jobs with dynamic roles, tasks, and projects that are constantly shifting and changing. As such, the meaning of performance in organizations is changing. Managers cannot merely expect

employees to carry out their assigned tasks proficiently; they now rely heavily on employees to adapt to and introduce changes in the nature of work and the methods used to carry it out (Frese & Fay, 2001; Griffin et al., 2007; Morrison & Phelps, 1999; Wrzesniewski & Dutton, 2001).

At the same time, employees' expectations are rising (Rousseau, Ho, & Greenberg, 2006; Twenge, 2006). Job mobility has expanded rapidly as long careers are replaced by weakening temporal, physical, and administrative attachments between employees and organizations (Pfeffer & Baron, 1988), leaving many employees defining organizations as sites for using skills (O'Mahony & Bechky, 2006), no longer as communities of lifelong employment (Ashford, George, & Blatt, 2007; Pfeffer, 2006). Recognizing that they can change jobs and organizations on a regular basis, employees are expecting managers to provide them with work that fits their unique preferences, values, motives, and capabilities (Rousseau et al., 2006). In order to retain employees, managers are finding it necessary to design jobs and roles that are less fixed and more flexible than ever before.

Together, these changes challenge the fundamental assumption that employees passively carry out static jobs and tasks assigned by managers. In uncertain environments, employees are increasingly likely to be-and increasingly needed to be-active participants in work design. They engage in proactive behaviors: anticipatory actions taken to create change in how jobs, roles, and tasks are executed (Frese & Fay, 2001; Grant & Ashford, 2008; Parker, Williams, & Turner, 2006). Recognizing the importance of these behaviors, scholars have introduced three dominant perspectives related to work design and proactivity. Scholars studying work design to stimulate proactivity have examined how organizations can structure jobs and tasks to encourage employees to take initiative and actively shape their work tasks and contexts. Scholars studying job crafting and role adjustment have explored the proactive steps that employees take to modify the cognitive, physical, and relational boundaries of their work. Scholars studying idiosyncratic deals and role negotiation have investigated how employees take initiative to propose and discuss personalized employment arrangements with managers and supervisors. In the sections that follow, we discuss the key theoretical insights and empirical findings that have emerged from these three proactive perspectives on work design.

Work Design to Stimulate Proactivity

Researchers have developed and tested theory to examine how the ways in which managers design work influence employees' proactive behaviors. In their review of organizational research on proactive behaviors, Grant and Ashford (2008) propose that work designs characterized by autonomy, ambiguity, and accountability are likely to stimulate proactivity on the part of employees. In the following sections, we discuss the conceptual logic and research evidence relevant to understanding the effects of these and additional work design features.

Autonomy. Autonomy is thought to stimulate proactivity by signaling to employees that they have the ability and opportunity to take on broader roles (Parker, 2000, 2007). For example, Parker (1998) argued that autonomy not only directly increases the controllability of a task, which boosts self-efficacy (Gist & Mitchell, 1992), but that autonomy also facilitates enactive mastery experiences by giving employees the opportunity to acquire new skills and master new responsibilities. Indeed, evidence shows that when work is designed to provide autonomy, employees develop higher role-breadth selfefficacy, or confidence in their capabilities to carry out a wider range of tasks and responsibilities effectively (Parker, 1998). In turn, as a result of their greater self-efficacy, employees tend to set more proactive, challenging goals and then strive to achieve them (Parker et al., 1997).

Consistent with these ideas, in a field study of wire makers, Parker et al. (2006) found that autonomy was associated with greater role-breadth selfefficacy, which in turn linked to the proactive behaviors of idea implementation and problem-solving. Related field studies have shown that autonomy predicts higher levels of proactive behavior (Fay & Frese, 2001; Frese, Kring, Soose, & Zempel, 1996; Frese, Teng, & Wijnen, 1999; McAllister, Kamdar, Morrison, & Turban, 2007; Speier & Frese, 1997). Studies have also shown that designing work to provide autonomy is associated with higher levels of role-breadth self-efficacy (Morgeson, Delaney-Klinger, & Hemingway, 2005; Parker, 1998; Parker & Sprigg, 1999), while restricting autonomy predicts lower levels of role-breadth self-efficacy (Axtell & Parker, 2003; Parker, 2003), and that role-breadth self-efficacy predicts additional proactive behaviors of improving core tasks, taking initiative to improve work unit methods and effectiveness, and championing changes to improve organizational efficiency (Griffin et al., 2007). Perhaps the most impressive evidence of the role of work design in stimulating proactive behaviors directed toward changing one's own work appears in a 2-year, four-wave, multi-method longitudinal study of a representative sample of employees in an east German city conducted by Frese, Garst, and Fay (2007). These authors used interview data, interviewer ratings, and self-report surveys to investigate the dynamic relationships between work characteristics and initiative. They found that initial levels of autonomy and complexity predicted higher levels of personal initiative, a relationship which was mediated by control orientation-a higher-order factor comprising self-efficacy, control aspirations, and perceived opportunity for control. Exercising personal initiative, in turn, predicted increased perceptions of autonomy and complexity over time. This study provides powerful evidence for the role of autonomy in stimulating proactive behaviors directed toward changing one's own work characteristics (Frese et al., 2007).

344 • The Academy of Management Annals

Having identified the importance of autonomy for facilitating proactive behaviors, researchers have begun to investigate additional mediators and new moderators of this relationship. With respect to additional mediators, several studies suggest that autonomy predicts higher levels of proactive behavior not only by cultivating role-breadth self-efficacy, but also by leading employees to define their roles in a more flexible manner (Parker et al,. (1997; Parker et al., 2006). This evidence dovetails nicely with other studies suggesting that employees can psychologically and behaviorally redefine their roles and job requirements to include broader responsibilities and impacts (Morrison, 1994; Tepper, Lockhart, & Hoobler, 2001; Wrzesniewski & Dutton, 2001; see also Ashforth & Kreiner, 1999; Fine, 1996; and Ilgen & Hollenbeck, 1991). With respect to new moderators, Parker and Sprigg (1999) discovered that autonomy only predicted higher levels of role-breadth self-efficacy for employees with proactive personalities, who have dispositional tendencies to effect change (Bateman & Crant, 1993). Moreover, autonomy was more likely to reduce the association between high job demands and increased strain for employees with proactive personalities. These findings suggest that employees with proactive personalities may be particularly able and willing to capitalize on autonomy to engage in proactive behaviors, as well as coping with and learning from job demands.

More generally, this research linking autonomy to proactive behaviors highlights new mechanisms through which autonomy can increase performance. Traditional work design theorists assumed that autonomy increases core task performance through a motivational mechanism of increasing the likelihood that employees experience personal responsibility for their work (Fried & Ferris, 1987; Hackman & Oldham, 1976). Complementarily, the aforementioned body of research suggests that autonomy can increase proactive performance through a learning mechanism of empowering employees to take initiative to expand their roles and develop their knowledge and skills (for further discussion, see Holman & Wall, 2002; Langfred & Moye, 2004; Liden, Wayne, & Sparrowe, 2000; Morgeson & Campion, 2003; Parker et al., 2001; Wall, Jackson, & Davids, 1992).

Ambiguity and accountability. Whereas considerable research has linked autonomy to proactive behaviors and identified mediators and moderators of this relationship, much less research has focused on other work design variables that may stimulate proactivity. Grant and Ashford (2008) proposed that ambiguity—the presence of uncertain or equivocal expectations—is a second work design feature that can encourage proactive behaviors. Ambiguity is thought to motivate proactive behaviors by increasing employees' desires to reduce uncertainty; to do so, employees are more likely to act in advance to prevent problems, introduce greater structure, and improve their tasks (Grant & Ashford, 2008). Indeed, a series of field and laboratory studies has shown that role ambiguity and uncertainty predict higher levels of proactive career behaviors, including information-seeking and feedback-seeking (for a review, see Ashford et al. (2003). Of course, considering that extensive research has also linked ambiguity to stress (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964), it is likely that ambiguity is a double-edged sword.

Grant and Ashford (2008) argued that accountability-the expectation to justify one's actions to an audience (Tetlock, 1985)-is a third work design feature that may promote proactive behaviors (Morgeson & Humphrey, 2008). Accountability is thought to motivate proactive behavior by strengthening employees' feelings of responsibility for taking initiative and by reducing the perceived image costs of proactive behavior: "Given that they are already in the spotlight, they may as well anticipate, plan, and act in advance as much as possible to increase their chances of success and demonstrate that they are taking initiative" (Grant & Ashford, 2008, p. 14). In an laboratory experiment, Staw and Boettger (1990) found that being in a supervisory position with accountability pressures led to greater task revision, or taking action to fix a faulty or poorly specified task. Other research has shown that felt responsibility for change predicts proactive behaviors of taking charge to improve work methods and processes (McAllister et al., 2007; Morrison & Phelps, 1999), as well as voicing ideas for constructive changes and initiating steps to improve productivity and quality (Fuller, Marler, & Hester, 2006). Psychologists have found that particular forms of accountability can motivate more effortful and self-critical thinking: accountability produces these effects if the audience to whom individuals are accountable holds unknown views, values accuracy, evaluates processes instead of outcomes, is well-informed, or holds legitimacy (Lerner & Tetlock, 1999). Further research is necessary to advance our understanding of when, why, and how the work design feature of accountability may stimulate proactive behaviors.

In summary, existing research provides clear evidence that work design features encourage proactive behaviors. Support for the roles of autonomy and ambiguity in encouraging proactive behaviors is strong, while research has only indirectly addressed the effects of accountability on proactive behaviors. In addition, Grant and Ashford (2008) proposed that a range of individual difference variables would moderate these associations of autonomy, ambiguity, and accountability with proactive behaviors, but these propositions have yet to be tested empirically. However, there is evidence that additional work characteristics beyond autonomy, ambiguity, and accountability may stimulate proactive behaviors.

Job complexity, stressors, and routinization. One work characteristic that appears to encourage proactive behaviors is job complexity, which can stimulate creativity, intellectual flexibility, and feelings of responsibility (Frese et al., 2007; Shalley, Zhou, & Oldham, 2004). Frese and colleagues have consistently

shown that employees who work in complex jobs exercise more personal initiative (Frese, Garst, et al., 1996; Frese, Kring et al., 2007; Speier & Frese, 1997), and several studies have shown that job complexity predicts higher supervisor ratings of creativity (Oldham & Cummings, 1996; Tierney & Farmer, 2002, 2004). However, given that very high levels of complexity are often associated with increased stress (Xie & Johns, 1995) and therefore decreased creativity (Elsbach & Hargadon, 2006), it may be the case that there is a curvilinear relationship between job complexity and proactive behavior, such that moderate levels of complexity encourage intellectual flexibility and felt responsibility without providing demands that overwhelm employees. Existing research has returned mixed results for this relationship (Fay & Sonnentag, 2002; Ohly, Sonnentag, & Pluntke, 2006). This line of logic also implies that very high job demands may undermine proactive behavior; reacting to heavy workloads may prevent employees from having the time and energy necessary to anticipate, plan ahead, and act in advance to create change. Interestingly, however, Fay and Sonnentag (2002) conducted a longitudinal study showing that the stressors of time pressure and situational constraints were associated with increases in personal initiative over time. They drew on control theory to propose that work-related stressors lead individuals to think ahead about how to prevent negative outcomes in the future, encouraging greater initiative. These findings dovetail nicely with evidence that job dissatisfaction can promote creativity and voice (Zhou & George, 2001) and that emotional exhaustion may encourage helping and citizenship behaviors, which can serve the function of building connections with others (Halbesleben & Bowler, 2007).

These results accentuate the need for future research to investigate the conditions under which work design stressors encourage versus discourage proactive behaviors. One promising moderator is routinization, which frees up psychological resources for creative thinking and planning. Elsbach and Hargadon (2006) developed a theoretical framework to explain how routinized or "mindless" work, consisting of low cognitive difficulty and low performance pressure, increases creativity in complex, demanding jobs by enhancing cognitive capacity, feelings of psychological safety, and positive emotions. Consistent with these arguments, Ohly et al. (2006) presented empirical evidence that routinization predicts higher levels of creative and proactive behaviors. Accordingly, in highly complex or stressful jobs, routinization-a work characteristic traditionally thought to undermine motivation, satisfaction, and performance (Hackman & Oldham, 1980), as well as helping and voice (Raub, 2008)-may motivate creative and proactive behaviors. Thus, whereas routinization is often conceptualized as a characteristic of simple jobs, researchers have begun to recognize the possibility that routinized tasks can be intertwined within complex jobs to stimulate proactivity and creativity by freeing up psychological resources.

Social context. Linking with the previous session on relational perspectives, there is emerging evidence that the social context of work design can influence proactive behaviors. For example, researchers have found that placing employees in contact with outside beneficiaries such as clients and customers can motivate higher levels of initiative, persistence, and creativity in solving problems (Grant et al., 2007; Sethi & Nicholson, 2001), and that receiving social support predicts higher levels of proactive behaviors in coping with stressors and searching for new jobs (Heaney, Price, & Rafferty, 1995; Kanfer, Wanberg, & Kantrowitz, 2001). Furthermore, Edmondson and colleagues have found that a climate of psychological safety is associated with higher levels of proactive learning and voice behaviors (Edmondson, 1996, 1999; Edmondson, Bohmer, & Pisano, 2001). Other studies have shown that coworker trust is linked to proactivity in implementing ideas and solving problems (Parker et al., 2006), and that high-quality interpersonal and workgroup relationships are associated with greater proactivity in voicing and selling important issues (Ashford, Rothbard, Piderit, & Dutton, 1998; Dutton, Ashford, Lawrence, & Miner-Rubino, 2002; LePine & Van Dyne, 1998). These findings point to the need for further research to advance our understanding of the roles that social characteristics of work and the social context of work design can play in promoting and inhibiting different types of proactive behaviors.

Job Crafting, Role Adjustment, and I-Deals

Whereas work design researchers have sought to study how jobs, roles, and tasks can be structured to encourage and support proactive behaviors, other researchers have examined the different ways in which employees themselves take initiative to modify their own jobs, roles, and tasks. This notion has theoretical roots in perspectives on role innovation, which suggest that employees introduce novel ways to change their roles (Katz & Kahn, 1966; Van Maanen & Schein, 1979), and perspectives on role transitions and roles as resources, which suggest that instead of merely enacting their roles as assigned, employees engage in active efforts to modify and utilize their roles (Baker & Faulkner, 1991; Callero, 1994; Nicholson, 1984). Building on Nicholson's (1984) theoretical work, Black and Ashford (1995) studied how, in the socialization process, many employees seek to "make jobs fit" by proactively modifying their jobs to match their values, skills, and preferences. Similarly, Ashford and colleagues argued and found that employees do not merely wait for feedback to be provided during annual performance reviews; rather, they proactively seek out feedback from supervisors, peers, customers, and other sources (Ashford & Cummings, 1983, 1985; Ashford et al., 2003). Similarly, Dawis and Lofquist (1984) described how employees actively change their work environments in the adjustment process. Moreover, Staw and Boettger (1990) introduced the concept of task revision to describe how employees take initiative to improve faulty tasks, and Morrison and Phelps (1999) forwarded the notion of taking charge to describe how employees take proactive steps to improve work methods and processes. Elaborating on these ideas, three conceptual frameworks have emerged to describe how employees and supervisors modify jobs, roles, and tasks. One framework focuses on job crafting, the second focuses on role adjustment, and the third focuses on idiosyncratic deals and role negotiation.

Job crafting. Wrzesniewski and Dutton (2001, p. 180) introduced the concept of job crafting to:

...capture the actions employees take to shape, mold, and redefine their jobs. Job crafters are individuals who actively compose both what their job is physically, by changing a job's task boundaries, what their job is cognitively, by changing the way they think about the relationships among job tasks, and what their job is relationally, by changing the interactions and relationships they have with others at work.

Wrzesniewski and Dutton proposed that job crafters change the task boundaries of their jobs when they alter the type or number of tasks that they carry out, change the cognitive boundaries of their jobs when they alter their views of work, and change the relational boundaries of their jobs when they alter the range, nature, or number of their interactions at work. They suggested that these job crafting activities are rooted in three basic motivations-the desires for control and meaning, a positive self-image, and connection with others-which are more likely to promote job crafting when employees perceive opportunities for crafting, which appear to be more common in jobs involving high autonomy or low task interdependence (Wrzesniewski & Dutton, 2001). Moreover, they argued that employees would craft their jobs differently as a function of their intrinsic vs. extrinsic motivational orientations and their orientations toward work as a job versus a career versus a calling. Finally, they propose that insofar as job crafting alters the task, cognitive, and relational boundaries of work, employees are likely to experience changes in the meaning of their work and their own identities at work (Wrzesniewski & Dutton, 2001).

Although the concept of job crafting has proved generative in rejuvenating theoretical interest in the role of employees in shaping their own work, surprisingly little empirical research has tested or expanded on Wrzesniewski and Dutton's (2001) theoretical model. We are aware of two exceptions. First, Leana, Appelbaum, and Shevchuk (2009) extended job crafting from the individual level to the collective level to study collaborative job crafting, wherein employees work together to change the nature of work practices and processes. In a quantitative study of job crafting in special education childcare classrooms, they found that autonomy predicted both individual job crafting

and collaborative job crafting, and task interdependence, supportive supervision, and social capital predicted collaborative job crafting. Interestingly, collaborative job crafting, but not individual job crafting, predicted higher levels of performance (care quality) as assessed by independent raters. This research suggests that job crafting can be undertaken by groups as well as by individual employees, and that such collaborative job crafting efforts—when focused on constructive changes—can improve unit performance.

Second, qualitative research by Berg, Grant, and Johnson (2009) explored how employees cope with unanswered occupational callings-lines of work that they did not pursue, but perceive as intrinsically enjoyable, meaningful, and self-defining. Interviews with educators, non-profit, and manufacturing employees revealed that employees crafted their jobs and their leisure time in pursuit of their unanswered callings. They crafted their jobs by emphasizing tasks related to unanswered callings, expanding their jobs to include unanswered callings, and reframing their roles to create better alignment with unanswered callings. They crafted their leisure time by pursuing their unanswered callings as hobbies and experiencing them vicariously through the involvement of others. The interviews further suggested that employees experienced these job and leisure crafting efforts as bringing greater enjoyment and meaning, but also encountered unintended consequences of frustration from feeling unable to pursue their unanswered callings, overload from feeling unable to balance their unanswered callings with their work roles, and regret from exposing themselves to counterfactual thinking about alternative career paths that might have been. These findings suggest that job crafting may be a mixed blessing in exposing employees to negative as well as positive emotions. Their research also indicated that employees engaged in leisure crafting when job crafting failed, highlighting the value of future inquiry into how job crafting spills over into the work-family interface.

Role adjustment. Building on Wrzesniewski and Dutton's (2001) theoretical model of job crafting, and developments in work design theory (Karasek & Theorell, 1990; Parker & Wall, 1998), Clegg and Spencer (2007) introduced a conceptual model of role adjustment that captures the dynamic and reciprocal nature of the process of job design. These authors propose that high performance from employees leads supervisors to perceive employees as more competent, which increases the trust that supervisors feel in employees. This interpersonal trust motivates supervisors to expand employees' roles by delegating greater responsibility to them. At the same time, high performance signals to employees that they themselves are competent, which increases the trust that employees feel in themselves. This intrapersonal trust motivates employees to expand their own roles and craft their jobs, which increases the knowledge held by employees, as well as their motivations and opportunities for further high performance, thus triggering a self-fueling or deviationamplifying spiral of high performance and expanded roles. A similar spiral was proposed by Brousseau (1983, p. 39), who argued that more autonomous jobs enhance cognitive complexity, and this "allows individuals to formulate and pursue more elaborate plans and goals". Likewise, Karasek and Theorell (1990) proposed that active jobs—those that are high in both demands and autonomy—provide opportunities for learning, which facilitate feelings of mastery that help employees cope with the strain, further freeing up their capacity to learn, develop, and take on expanded roles.

Clegg and Spencer's model follows parallel logic when employees perform poorly. Poor performance signals incompetence to supervisors and employees, reducing interpersonal and intrapersonal trust. These decreases in trust lead supervisors to constrict employees' roles by providing less autonomy or narrower, easier assignments, and lead employees to constrict their own roles by crafting simpler jobs. The resulting role constriction decreases employees' opportunities and motivations for learning, reducing performance, which triggers a self-fueling spiral of low performance and constricted roles (Clegg & Spencer, 2007). In a similar vein, stress researchers proposed a negative spiral in which jobs with high demands but low autonomy lead to the accumulation of strain, which leads employees to take on less challenging situations, learn fewer coping strategies, and experience less mastery (Karasek & Theorell, 1990, p. 103). This lack of mastery then restricts employees' abilities to cope with strain and increases residual strain levels, ad infinitum. Models such as these take valuable steps toward advancing our understanding of the dynamic interrelationships between job design, role expansion and constriction, and performance.

Idiosyncratic deals and role negotiation. Employees do not always craft their jobs and modify their roles in isolation from supervisors. In past decades, researchers noticed that employees were negotiating changes in roles and job descriptions with supervisors (Fried, Hollenbeck, Slowik, Tiegs, & Ben-David, 1999; Graen & Scandura, 1987; Ilgen & Hollenbeck, 1991), and that idiosyncratic jobs customized to specific individuals were surprisingly common in organizations (Miner, 1987). Recently, Rousseau and colleagues have spearheaded the development and tests of a theoretical model that captures this process. Rousseau et al. (2006) introduced the notion of idiosyncratic deals, or "i-deals", which are customized employment terms negotiated between employees and their supervisors. I-deals emerge when employees have unique skills that merit additional compensation or special arrangements, or when employees have unique life circumstances that require flexible working times, methods, or locations (Greenberg, Roberge, Ho, & Rousseau, 2004; Rousseau, 2001, 2005). Rousseau and colleagues describe how i-deals can be formed either ex ante, prior to employment, or ex post, once employees are already on

the job. They differentiate i-deals from favoritism, cronyism, and unauthorized arrangements in that i-deals are negotiated by employees on the basis of their value to the organization and their personal needs for the joint benefit of themselves and the organization. Rousseau et al. (2006) predict that i-deals are more likely to be negotiated *ex post* than *ex ante* because *ex post* deals provide time for employees to prove their value, gain comfort with supervisors, earn special treatment, and gain inside knowledge about how to negotiate effectively. They explore the contexts in which i-deals occur, as well as how the content of i-deals and coworkers' reactions to them affect employees' perceptions and reactions. This theoretical work illuminates how the design of work can occur through relational negotiations between employees and supervisors, and introduces fairness and justice concerns as important issues that influence how negotiations about work design are enacted and received.

Scholars have just begun to publish empirical research on i-deals. In a study of German government employees, Hornung, Rousseau, and Glaser (2008) found a higher proportion of i-deals in departments with individualized work arrangements such as telecommuting and part-time work, and discovered that employees with high dispositional tendencies toward personal initiative were more likely to negotiate i-deals. These authors further distinguished between flexibility i-deals providing freedom in scheduling and developmental i-deals providing opportunities for learning and growth. Flexibility i-deals predicted lower levels of work-family conflict and less unpaid overtime work, while developmental i-deals were associated with higher work-family conflict, more unpaid overtime work, increased performance expectations, and higher affective organizational commitment. In addition, Hornung, Rousseau, Glaser, Angerer, and Weigl (2009) conducted two studies of i-deals in US and German hospitals. They found that employees were more likely to negotiate i-deals and less likely to have i-deal requests denied when they had high-quality leader-member exchange relationships with supervisors. They further found that i-deals predicted higher levels of job complexity and control, which in turn predicted higher levels of personal initiative and work engagement. These findings suggest that strong relationships with supervisors facilitate successful i-deal negotiations, which in turn can enable employees to work in more complex jobs, leading to greater initiative and engagement. Related studies have revealed that high-quality leadermember exchange relationships with supervisors are associated with role expansion, but only when the climate is supportive (Hofmann, Morgeson, & Gerras, 2003).

Contributions and Gaps

In summary, researchers have shown that work characteristics can promote or inhibit employees' proactive behaviors, which are increasingly critical in uncertain organizational environments. At the same time, in largely independent

352 • The Academy of Management Annals

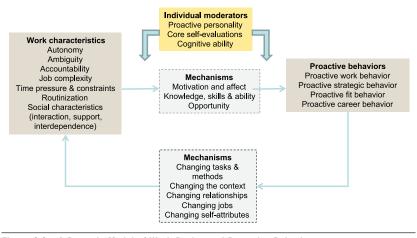


Figure 6.2 A Dynamic Model of Work Design and Proactive Behavior.

literatures, there has been a growing emphasis on how employees' proactive behaviors—in the form of job crafting, role adjustment, and i-deals—can shape and influence their work designs. Given the obvious synergies in these research areas, it is important that these topics do not develop independently of each other. We introduce Figure 6.2 as a model to assist with achieving greater synergy.

This model, like traditional work design theories, proposes that work characteristics influence outcomes via multiple mechanisms. In this case, however, the mechanisms, moderators, and outcomes are all relevant to proactive behaviors rather than traditional job performance. This model is also distinct from traditional models in that it shows a dynamic loop from the outcomes of proactive behavior to work characteristics. In this section, we elaborate the core features of this integrative model.

First, our earlier review highlighted many different types of proactivity. Our model synthesizes the proliferation of proactive behaviors into broader categories. Researchers have noted that proactive behaviors vary in terms of their targets of impact (Grant & Ashford, 2008; Van Dyne, Cummings, & McLean Parks, 1995). Parker and Collins (2009) identified three broad targets of proactive behavior that we draw on here. The first is proactive work behavior, which involves changing the internal organizational environment, such as when employees improve how work is executed by taking charge or revising tasks. The second is proactive strategic behavior, which involves changing the organization's relation to the external environment, such as when managers sell issues to influence the formulation and implementation of strategy. The third is proactive greater compatibility with the organization. In contrast to proactive work behavior and proactive strategic behavior,

these behaviors are more clearly targeted towards the self rather than other people, the organization, or the environment. For example, employees engage in proactive person-environment fit behavior by seeking feedback, crafting their jobs, or negotiating ex post i-deals. We identify a fourth category of proactive career behavior. Whereas the aforementioned categories focus on proactive behaviors within the context of a designated job, employees can also be proactive in their efforts to secure a job or find new jobs (e.g., career initiative), and can be proactive in their negotiations prior to accepting a job (ex ante i-deals). In addition, researchers may consider other dimensions along which proactivity can vary, such as form, timing, frequency, and tactics (Grant & Ashford, 2008). Although there are different ways of categorizing proactive behaviors, we hope that the identification of four broad categories serves as a starting point for a more integrated approach. For example, recognizing that job crafting, ex post i-deals, and job-role negotiation all share a common focus on improving person-environment fit may be important in facilitating more integrated inquiries into how work design stimulates these types of proactive behaviors.

Second, the model identifies work characteristics as antecedents of proactive behaviors. We hope to see researchers investigate how proactive behaviors are influenced by work characteristics other than autonomy, job complexity, and demands, which have received the greatest attention thus far. In light of the relational perspectives that we reviewed in the previous section, we encourage researchers to more closely examine the role of social characteristics in proactivity. For example, interdependence may constrain job crafting because it imposes coordination requirements, placing boundaries on the extent to which employees can craft their own jobs (Wrzesniewski & Dutton, 2001), but it may also promote collective crafting, encouraging employees to negotiate roles and coordinate efforts to improve the ways in which work is done (Leana et al., 2009; Dierdorff & Morgeson, 2007). Research is needed in this area, and linking with the relational model, we particularly encourage efforts to examine how other social characteristics of work affect proactive behaviors. We also see value in adopting a more nuanced, differentiated perspective on how different dimensions of work characteristics may have distinct effects on proactive behaviors. For example, researchers might explore whether Wood's (1986) distinction between component, coordinative, and dynamic complexity helps to clarify the mixed results about the effects of job complexity on proactivity.

Third, the model highlights multiple mechanisms through which work characteristics can affect proactive behaviors. Along with motivational mechanisms like self-efficacy and role orientation that have already been shown to influence proactivity, researchers may consider newer mechanisms such as positive affect and emotions (Grant & Ashford, 2008) and cognitive complexity (Parker & Ohly, 2008). In the model, we acknowledge that individual differences can moderate the relationship between work design, mechanisms, and proactive behaviors. For example, individuals with more proactive personalities or high core self-evaluations may feel motivated and able to capitalize on the opportunities provided by their jobs and roles (Fuller et al., 2006; Grant & Ashford, 2008; Judge & Hurst, 2007; Parker & Sprigg, 1999). Similarly, those with high cognitive ability and job-related skill may feel more capable of expanding their roles (Morgeson et al., 2005).

The last part of the model considers how proactive behaviors influence work characteristics, which is an issue that has received limited attention thus far (Clegg & Spencer, 2007; Frese et al., 2007; Grant, 2007). We identify several pathways through which proactive behaviors can influence work characteristics. First, proactive behaviors often involve changes in tasks and methods that directly affect work characteristics. For example, by negotiating involvement in a wider range of projects (job-role negotiation), employees increase task and skill variety. Likewise, by crafting their jobs to establish better connections with end users, employees enhance job impact and contact with beneficiaries. Second, proactive behaviors can influence work characteristics by changing the context in which a job is performed, such as technology or physical space. For instance, if employees discover and implement a more efficient method of operating technology, they may experience lower job demands yet higher levels of routinization. Third, through relational pathways, proactive behaviors may prompt changes in relationships that in turn affect work characteristics. For example, when employees take charge of situations and exercise initiative, this might lead supervisors to see them as more competent and trustworthy, encouraging supervisors to delegate tasks with greater decision-making responsibilities (Clegg & Spencer, 2007). Furthermore, proactive networkbuilding behaviors might result in invitations from colleagues to participate in important projects, thereby increasing task and skill variety, task significance, and interdependence. And proactive behaviors-especially career behaviorscan also lead to job changes, such as a promotion or a new position in a different organization, which will affect work characteristics such as autonomy and responsibility. Finally, proactive behaviors can change meaning, knowledge, motivation, or levels of cognitive complexity, which in turn shapes work characteristics. For instance, insofar as job crafting results in enhanced perceptions of meaning (Wrzesniewski & Dutton, 2001) and competence and trust (Clegg & Spencer, 2007), employees may feel more motivated and able to further expand their tasks and relationships. Likewise, insofar as engaging in proactive work behaviors and proactive strategic behaviors facilitates a broader, more integrated understanding of the organization, employees may feel more responsible for-and more capable of-taking on a larger set of tasks.

In summary, our model proposes that proactive behaviors can shape work characteristics by changing tasks, methods, contexts, relationships, and jobs and/or by changing attributes of individual that lead them to perceive or enact their work differently. We hope that our model helps to guide and inspire research that integrates across these overlapping areas. Important to this endeavor will be studies that examine the dynamic and reciprocal processes inherent in the model, such as multi-wave longitudinal studies (see Frese et al., 2007) that take time seriously (Mitchell & James, 2001; Zaheer, Albert, & Zaheer, 1999), as well as more in-depth qualitative investigations of these processes. It will be especially valuable to incorporate forces that create deviationcounteracting loops (Weick, 1979; Lindsley, Brass, & Thomas, 1995) in which increases and decreases in work characteristics and performance levels do not self-perpetuate ad infinitum.

From a practical perspective, there is also much to be gained from synthesizing across these literatures. Work design practice typically focuses on topdown changes in work and authority structures, and although job incumbents are often included in the process, the primary onus of responsibility for the redesign lies in the hands of leaders and managers. Work redesign interventions are often difficult to execute, especially if they challenge traditional control structures within the organization, and present trade-offs between outcomes that are often difficult to manage (Morgeson & Campion, 2002). We believe that training and coaching individuals in job crafting-a more bottom-up, proactive approach-may increase the effectiveness of top-down work redesign efforts by equipping the stakeholders with the skills and attitudes to realize and improve upon the opportunities offered (Parker & Wall, 1998). At the same time, there may be value in helping job crafters to recognize that changes in broader organizational contexts may be necessary for crafting to succeed. In other words, the pendulum must not swing too far: individuals can and do engage in proactive job crafting efforts, but contextual factors can constrain these efforts. As such, integrating crafting-oriented training and development with more traditional work redesign interventions may be a promising path toward facilitating beneficial outcomes for employees and organizations.

At the same time, we believe a critical perspective on proactivity is warranted. Scholars have identified potentially harmful effects of proactivity (Grant & Ashford, 2008). Wrzesniewski and Dutton (2001, p. 195) observed: "Job crafting is neither inherently good nor bad for organizations... if job crafting altered connections to others or task boundaries in ways that were at odds with organizational objectives, job crafting could harm rather than enhance organizational effectiveness". For example, employees may use their newfound autonomy to micromanage others (Lawler, Hackman, & Kaufman, 1973) and shirk unpleasant tasks (Jones, 1984). As such, managers often seek to suppress forms of proactivity that are misaligned with organizational goals (Campbell, 2000; Frese & Fay, 2001). Thus, as critical theorists have observed about empowerment practices (Fineman, 2006), although proactive behaviors appear to be initiated bottom-up by employees, they may in fact be heavily constrained and channeled by top-down managerial controls. Systems for promoting continuous improvement and proactivity, such as those common in lean production systems, might even have a negative effect on the ultimate quality of individuals' jobs. For example, Conti and Warner (1993) described quality circles as systems in which employees spend four hours per month making the rest of the work for the month even more Taylorized. Such managerially-oriented harnessing of proactivity merits particular attention in future research.

Conclusion: The Future of Work Design Theory and Research

"It seemed I could either have a job, which would give me structure and community", he said, "or I could be freelance and have freedom and independence. Why couldn't I have both?" (Computer programmer, Brad Neuberg; Fost, 2008)

Like many employees, Brad Neuberg was seeking out work that would both facilitate interpersonal relationships and allow for proactive behaviors. He invented "coworking", or co-located work sites, to provide community for independent workers doing different jobs. It appears that this new form of working enriches the relational architecture of independent workers' jobs without stifling their capabilities to be proactive. This trend accentuates the importance of theoretically integrating relational and proactive perspectives on work design. How can organizations and employees achieve a balance between interdependence and initiative, designing jobs that are socially embedded but also allow autonomy and opportunity for proactive behaviors? This question calls for scholars to explore how relational characteristics can be structured in ways that stimulate, rather than constrain, proactivity.

The intersection between relational and proactive perspectives gives rise to many further questions. Thus far, we have argued that relational perspectives on work design are more important because of the increased interdependence of work within and between organizations, and that proactive perspectives are more important because of the increased uncertainty of work. However, these trends of increasing interdependence and uncertainty are emerging in tandem, not in isolation, which creates challenges for work design practice as well as theory. Traditionally, researchers have recommended the use of selfmanaging teams under conditions of high interdependence and uncertainty (Cummings & Blumberg, 1987). However, such a recommendation does not account for some of the complexities of the modern work context, such as interdependence across organizations (not just within them), different forms of interdependence (e.g., knowledge workers being members of multiple teams at once), or different methods that can be used to manage interdependence (e.g., meetings, virtual working). Likewise, uncertainty is becoming increasingly complex as the pace of organizational transformation is rising.

Ultimately, we need a better understanding of how work designs can support high levels of coordination and proactivity. To achieve this understanding, it may be necessary to consider relational and proactive perspectives in parallel.

As researchers strive to address these challenges, we hope to see greater use of three methodological approaches. Qualitative studies, in the form of ethnographies, interview studies, and case studies, will help to build and elaborate theory about the processes through which managers and employees negotiate roles, craft jobs, and otherwise modify work designs. Longitudinal survey studies will be critical in testing theory about the reciprocal and dynamic processes through which work designs and proactive behaviors influence each other over time. Field experiments and quasi-experiments will play a central role in determining whether efforts to redesign the relational and proactive features of work produce their intended effects in organizational contexts, as well as in identifying whether training employees to craft their jobs results in the predicted changes in work characteristics, behaviors, and experiences.

While we anticipate that these relational and proactive perspectives will continue to garner considerable attention, we feel that it is important to be mindful of the fact that there is still a place for more traditional, task-focused approaches to work design and redesign. Many manufacturing and call center jobs have been outsourced to developing countries, where traditional job enrichment practices will prove useful in addressing problems related to physical demands and repetitive, fragmented tasks. Such low-quality job designs are also still too prevalent in developed countries, which have witnessed a divide between highly skilled knowledge work and deskilled, low-paid work. Accordingly, we hope that theoretical and empirical progress on relational and proactive perspectives will complement, not supplant, classic approaches to work design. After all, work design can be heavily shaped by broad sociopolitical, cultural, and legal forces (Parker et al., 2001).

There are also many other key questions that have yet to be addressed by work design theory and research. Affective perspectives remain neglected; we still know quite little about the roles of moods and emotions as consequences or antecedents of work design (Saavedra & Kwun, 2000). On a related note, although the proposal that work characteristics affect motivation is a core feature of work design theory, scholars have noted that the motivational processes are currently underspecified (Parker & Ohly, 2008). How managers make decisions about job design, as well as how jobs can be designed within teams and matched to individual attributes—such as personalities, knowledge, skills, and abilities—are still poorly studied issues (Morgeson & Humphrey, 2008). We have only begun to approach the tip of the iceberg with respect to explaining whether all job characteristics have curvilinear effects: are there any principles of work design that do not bring about both positive and negative effects (Warr, 2007; Xie & Johns, 1995)? Researchers have yet to explore strategic issues such as the framing of jobs as an exercise of impression management and influence (Westphal, 2009), as well as the impact of work design an organizational performance (Becker & Huselid, 2009). And cross-cultural perspectives have received very little attention; sparse research has examined the impact of culture on how work is designed, enacted, and experienced (Erez, 2009; Robert, Probst, Martocchio, Drasgow, & Lawler, 2000). National and organizational cultures can play an important role in influencing employees' engagement in interpersonal interactions and proactive behaviors. Given the globalization of the economy and the increased number of multinational corporations, organizations that operate in different societies—as well as expatriates who move to work from one society to another—need to adapt to different patterns of relational and proactive work designs. However, we lack in-depth knowledge of how the global environment, and the differences in cultures across societies and organizations, affects the relational and proactive contexts of work.

Nevertheless, we are encouraged by the rise of relational and proactive perspectives. These advances in work design theory and research are beginning to answer calls to bring work back in (Barley & Kunda, 2001) and take context seriously (Johns, 2006). Whereas many theoretical perspectives in management apply only to a subset of employees, occupations, organizations or industries, work design theory is relevant to understanding and changing the experiences and behaviors of every leader, manager, and employee in the world. Because all employees perform work, the field of management would be incomplete without a deep understanding of work design. As global economies continue to shift away from manufacturing work and toward service and knowledge work, foundational features of work have changed at a brisk pace, underscoring the value of sharpening relational and proactive perspectives on work design.

More than three decades ago, Terkel (1972, p. 29) wrote: "Most of us have jobs that are too small for our spirit. Jobs are not big enough for people". Although this is still true for many employees, we believe it is equally important to recognize that a growing number of employees have jobs that are socially embedded in, interpersonally interdependent with, and relationally connected to multiple networks of coworkers and service recipients, at the same time that our organizations rely on us to be proactive in initiating and implementing changes in how work is carried out. Before long, a growing number of employees may have jobs that are too big for their time and energy levels, if not for their spirits. As autonomy and demands rise, employees may be faced with an overwhelming number of choices and tasks to prioritize, which may undermine motivation, performance, and satisfaction by causing stress and depression (Chua & Iyengar, 2006; Schwartz, 2000). Continued advances in work design theory and research are therefore essential if we wish to strike an ideal balance.

Acknowledgments

For helpful feedback, we thank Art Brief, Jim Walsh, Yitzhak Fried, Tina Juillerat, and Frederick Morgeson.

References

- Adler, P.S., Forbes, L.C., & Willmott, H. (2007). Critical management studies. Academy of Management Annals, 1, 119–179.
- Aldag, R.J., Barr, S.H., & Brief, A.P. (1981). Measurement of perceived task characteristics. *Psychological Bulletin*, 90, 415–431.
- Ambrose, M.L. & Kulik, C.T. (1999). Old friends, new faces: Motivation research in the 1990s. *Journal of Management*, 25, 231–292.
- Anderson, S.E., & Williams, L.J. (1996). Interpersonal, job, and individual factors related to helping processes at work. *Journal of Applied Psychology*, 81, 282–296.
- Ang, S., Van Dyne, L., & Begley, T.M. (2003). The employment relationships of foreign workers versus local employees: A field study of organizational justice, job satisfaction, performance, and OCB. *Journal of Organizational Behavior*, 24, 561–583.
- Aronson, E. (1978). The jigsaw classroom. Oxford. UK: Sage.
- Aronson, E. (1999). The power of self-persuasion. American Psychologist, 54, 875-884.
- Ashford, S.J., Blatt, R., & VandeWalle, D. (2003). Reflections on the looking glass: A review of research on feedback-seeking behavior in organizations. *Journal of Management*, 29, 769–799.
- Ashford, S.J., & Cummings, L.L. (1983). Feedback as an individual resource: Personal strategies of creating information. Organizational Behavior and Human Performance, 32, 370–398.
- Ashford, S.J., & Cummings, L.L. (1985). Proactive feedback seeking: The instrumental use of the information environment. *Journal of Occupational Psychology*, 58, 67–79.
- Ashford, S.J., George, E., & Blatt, R. (2007). Old assumptions, new work: The opportunities and challenges of research on nonstandard employment. In A.P. Brief & J.P. Walsh (Eds.), Academy of management annals (Vol. 1, pp. 79–143). Mahwah, NJ: Lawrence Erlbaum.
- Ashford, S.J., Rothbard, N.P., Piderit, S.K., & Dutton, J.E. (1998). Out on a limb: The role of context and impression management in selling gender-equity issues. *Administrative Science Quarterly*, 43, 23–57.
- Ashforth, B.E., & Kreiner, G.E. (1999). 'How can you do it?': Dirty work and the challenge of constructing a positive identity. Academy of Management Review, 24, 413–434.
- Axtell, C.M., & Parker, S.K. (2003). Promoting role breadth self-efficacy through involvement, work design, and training. *Human Relations*, 56, 112–131.
- Babbage, C. (1835). On the economy of machinery and manufacturing. London: Knight.
- Bachrach, D.G., Powell, B.C., Bendoly, E., & Richey, R.G. (2006). Organizational citizenship behavior and performance evaluations: Exploring the impact of task interdependence. *Journal of Applied Psychology*, 91, 193–201.
- Bachrach, D.G., Powell, B.C., Collins, B.J., & Richey, R.G. (2006). Effects of task interdependence on the relationship between helping behavior and group performance. *Journal of Applied Psychology*, 91, 1396–1405.
- Baker, W.E., & Faulkner, R.R. (1991). Role as resource in the Hollywood film industry. American Journal of Sociology, 97, 279–309.

- Bakker, A.B., & Demerouti, E. (2007). The job demands-resources model: State of the art. Journal of Managerial Psychology, 22, 309–328.
- Barker, J.R. (1993). Tightening the iron cage: Concertive control in self-managing teams. Administrative Science Quarterly, 38, 408–437.
- Barley, S.R., & Kunda, G. (2001). Bringing work back in. Organization Science, 12, 76–95.
- Barnes, C.M., Hollenbeck, J.R., Wagner, D.T., DeRue, D.S., Nahrgang, J.D., & Schwind, K.M. (2008). Harmful help: The costs of backing-up behavior in teams. *Journal* of Applied Psychology, 93, 529–539.
- Bateman, T.S., & Crant, J.M. (1993). The proactive component of organizational behavior. *Journal of Organizational Behavior*, 14, 103–118.
- Batt, R. (2002). Managing customer services: Human resource practices, quit rates, and sales growth. Academy of Management Journal, 45, 587–597.
- Beal, D.J., Cohen, R.R., Burke, M.J., & McLendon, C.L. (2003). Cohesion and performance in groups: A meta-analytic clarification of construct relations. *Journal of Applied Psychology*, 88, 989–1004.
- Becker, B., & Huselid, M. (2009). SHRM and job design: Narrowing the divide. *Journal of Organizational Behavior*, 30.
- Berg, J.M., Grant, A.M., & Johnson, V. (2009). When callings are calling: Crafting work and leisure in pursuit of unanswered occupational callings. Organization Science.
- Berg, J.M., Dutton, J.E., & Wrzesniewski, A. (2008). What is job crafting and why does it matter? Theory-to-practice briefing. Ross School of Business, University of Michigan. Retrieved August 24, 2008 from: www.bus.umich.edu/Positive/POS-Teaching-and-Learning/Job_Crafting-Theory_to_Practice-Aug_08.pdf
- Bergeron, D.M. (2007). The potential paradox of organizational citizenship behavior: Good citizens at what cost? *Academy of Management Review*, 32, 1078–1095.
- Black, J.S., & Ashford, S.J. (1995). Fitting in or making jobs fit: Factors affecting mode of adjustment for new hires. *Human Relations*, 48, 421–437.
- Blau, P.M. (1964). Exchange and power in social life. New York: Wiley.
- Bliese, P.D., & Britt, T.W. (2001). Social support, group consensus and stressor-strain relationships: Social context matters. *Journal of Organizational Behavior*, 22, 425–436.
- Brass, D.J. (1981). Structural relationships, job characteristics, and worker satisfaction and performance. *Administrative Science Quarterly*, *26*, 331–348.
- Brass, D.J. (1985). Technology and structuring of jobs: Employee satisfaction, performance, and influence. Organizational Behavior and Human Decision Processes, 35, 216–40.
- Brotherridge, C.M., & Grandey, A.A. (2002). Emotional labor and burnout: Comparing two perspectives of "people work". *Journal of Vocational Behavior*, 60, 17–39.
- Brousseau, K.R. (1983). Toward a dynamic model of job-person relationships: Findings, research questions, and implications for work system design. Academy of Management Review, 8, 33–45.
- Bureau of Labor Statistics. (2007). Establishment data historical employment. Retrieved July 29, 2008 from: ftp://ftp.bls.gov/pub/suppl/empsit.ceseeb1.txt
- Burns, T., & Stalker, G.M. (1961). The management of innovation. London: Tavistock.
- Callero, P.L. (1994). From role playing to role-using: Understanding role as resource. *Social Psychology Quarterly*, *57*, 228–243.

- Campbell, D.J. (2000). The proactive employee: Managing workplace initiative. Academy of Management Executive, 14, 52–66.
- Campion, M.A. & McClelland, C.L. (1993). Follow-up and extension of the interdisciplinary costs and benefits of enlarged jobs. *Journal of Applied Psychology*, 78, 339–351.
- Campion, M.A., Medsker, G.J., & Higgs, A.C. (1993). Relations between work group characteristics and effectiveness: Implications for designing effective work groups. *Personnel Psychology*, 46, 823–850.
- Campion, M.A., Mumford, T.V., Morgeson, F.P., & Nahrgang, J.D. (2005). Work redesign: Eight obstacles and opportunities. *Human Resource Management*, 44, 367–390.
- Campion, M.A., Papper, E.M., & Medsker, G.J. (1996). Relations between work team characteristics and effectiveness: A replication and extension. *Personnel Psychology*, 49, 429–452.
- Campion, M.A., & Thayer, P.W. (1985). Development and field evaluation of an interdisciplinary measure of job design. *Journal of Applied Psychology*, 70, 29–43.
- Chiu, S.-F., & Chen, H.-L. (2005). Relationship between job characteristics and organizational citizenship behavior: The mediational role of job satisfaction. *Social Behavior and Personality*, *33*, 523–540.
- Chua, R.Y.-J., & Iyengar, S.S. (2006). Empowerment through choice? A critical analysis of the effects of choice in organizations. In B. Staw & R.M. Kramer (Eds.), *Research in organizational behavior* (Vol. 27, pp. 41–79). Greenwich, CT: Elsevier.
- Cleavenger, D., Gardner, W. L., & Mhatre, K. (2007). Help-seeking: Testing the effects of task interdependence and normativeness on employee propensity to seek help. *Journal of Business and Psychology*, *21*, 331–359.
- Clegg, C., & Spencer, C. (2007). A circular and dynamic model of the process of job design. *Journal of Occupational and Organizational Psychology*, 80, 321–339.
- Cohen, L.M. (2007). Bridging two streams of office design research: A comparison of design/behavior and management journal articles from 1980–2001. *Journal of Architectural and Planning Research*, 24, 289–307.
- Conti, R.F., & Warner, M. (1993). Taylorism, new technology and just-in-time systems in Japanese manufacturing. *New Technology, Work and Employment, 8*, 31–42.
- Cordery, J.L., Mueller, W.S., & Smith, L.M. (1991). Attitudinal and behavioral effects of autonomous group working: A longitudinal field study. Academy of Management Journal, 34, 464–476.
- Cordes, C.L. & Dougherty, T.W. (1993). A review and integration of research on job burnout. *Academy of Management Review, 18*, 621–656.
- Cummings, T.G., & Blumberg, M. (1987). Advanced manufacturing technology and work design. In T.D. Wall, C.W. Clegg, & N.J. Kemp (Eds.), *The human side of* advanced manufacturing technology (pp. 37–60). New York: John Wiley.
- Daniels, K., & Harris, C. (2005). A daily diary study of coping in the context of the job demands-control-support model. *Journal of Vocational Behavior*, 66, 219–237.
- Davis, G.F. (2009). Job design meets organizational sociology. Journal of Organizational Behavior, 30.
- Dawis, R.V., & Lofquist, L.H. (1984). A psychological theory of work adjustment. Minneapolis, MN: University of Minnesota Press.

- de Jong, S.B., Van der Vegt, G.S., & Molleman, E. (2007). The relationships among asymmetry in task dependence, perceived helping behavior, and trust. *Journal of Applied Psychology*, 92, 1625–1637.
- Deelstra, J.T., Peeters, M.C.W., Schaufeli, W.B., Stroebe, W., Zijlstra, F.R.H., & van Doornen, L.P. (2003). Receiving instrumental support at work: When help is not welcome. *Journal of Applied Psychology*, 82, 324–331.
- Delbridge, R., Turnbull, P., & Wilkinson, B. (1992). Pushing back the frontiers: management control and work intensification under JIT/TQM regimes. *New Technology, Work and Employment, 7,* 97–105.
- Demerouti, E., Bakker, A.B., Nachreiner, F., & Schaufeli, W.B. (2001). The job demands– resources model of burnout. *Journal of Applied Psychology*, 86, 499–512.
- DeVaro, J. (2009). A theoretical analysis of relational job design and compensation. Journal of Organizational Behavior, 30.
- Diefendorff, J.M., & Richard, E.M. (2003). Antecedents and consequences of emotional display rule perceptions. *Journal of Applied Psychology*, 88, 284–294.
- Diefendorff, J.M., Richard, E.M., & Croyle, M.H. (2006). Are emotional display rules formal job requirements? Examination of employee and supervisor perceptions. *Journal of Occupational and Organizational Psychology*, 79, 273–298.
- Dierdorff, E.C., & Morgeson, F.P. (2007). Consensus in work role requirements: The influence of discrete occupational context on role expectations. *Journal of Applied Psychology*, 92, 1228–1241.
- Doerr, K.H., Freed, T., Mitchell, T.R., Schriesheim, C.A., & Zhou, X.T. (2004). Work flow policy and within-worker and between-workers variability in performance. *Journal of Applied Psychology*, 89, 911–921.
- Doerr, K.H., Mitchell, T.R., Schriesheim, C.A., Freed, T., & Zhou, X.T. (2002). Heterogeneity and variability in the context of flow lines. Academy of Management Review, 27, 594–607.
- Dormann, C., & Zapf, D. (2004). Customer-related social stressors and burnout. Journal of Occupational Health Psychology, 9, 61–82.
- Drach-Zahavy, A. (2004a). The proficiency trap: How to balance enriched job designs and the team's need for support. *Journal of Organizational Behavior*, 25, 979–996.
- Drach-Zahavy, A. (2004b). Exploring team support: The role of team's design, values, and leader's support. Group Dynamics: Theory, Research, and Practice, 8, 235–252.
- Duffy, M.K., Ganster, D.C., & Pagon, M. (2002). Social undermining in the workplace. Academy of Management Journal, 45, 331–351.
- Duffy, M.K., Ganster, D.C., Shaw, J.D., Johnson, J.L., & Pagon, M. (2006). The social context of undermining behavior at work. Organizational Behavior and Human Decision Processes, 101, 105–126.
- Dutton, J.E., Ashford, S.J., Lawrence, K.A., & Miner-Rubino, K. (2002). Red light, green light: Making sense of the organizational context for issue selling. *Organization Science*, 13, 355–369.
- Edmondson, A.C. (1996). Learning from mistakes is easier said than done: Group and organizational influences on the detection and correction of human error. *Journal of Applied Behavioral Science*, 32, 5–28.
- Edmondson, A. (1999). Psychological safety and learning behavior in work teams. Administrative Science Quarterly, 44, 350–83.

- Edmondson, A.C., Bohmer, R.M., & Pisano, G.P. (2001). Disrupted routines: Team learning and new technology implementation in hospitals. *Administrative Science Quarterly*, 46, 685–716.
- Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology*, 71, 500–507.
- Eisenberger, R., Stinglhamber, F., Vandenberghe, C., Sucharski, I., & Rhoades, L. (2002). Perceived supervisor support: Contributions to perceived organizational support and employee retention. *Journal of Applied Psychology*, 87, 365–373.
- Elsbach, K.D., & Hargadon, A.B. (2006). Enhancing creativity through "mindless" work: A framework of workday design. Organization Science, 17, 470–483.
- Elsbach, K.D., & Pratt, M.G. (2008). The physical environment in organizations. Academy of Management Annals, 1, 181–224.
- Emerson, R. (1976). Social exchange theory. Annual Review of Sociology, 2, 335-362.
- Erez, M. (2009). Culture and job design. Journal of Organizational Behavior, 30.
- Faulkner, W. (1958). William Faulkner. In M. Cowley (Ed.), Writers at work: The Paris Review interviews (1st ser., pp. 119–142). London: Penguin.
- Fay, D., & Frese, M. (2001). The concept of personal initiative: An overview of validity studies. *Human Performance*, 14, 97–124.
- Fay, D., & Sonnentag, S. (2002). Rethinking the effects of stressors: A longitudinal study on personal initiative. *Journal of Occupational Health Psychology*, *7*, 221–234.
- Fine, G.A. (1996). Justifying work: Occupational rhetorics as resources in restaurant kitchens. Administrative Science Quarterly, 41, 90–115.
- Fineman, S. (2006). On being positive: Concerns and counterpoints. Academy of Management Review, 31, 270–291.
- Fisher, J.D., Nadler, A., & Whitcher-Alagna, S. (1982). Recipient reactions to aid. *Psychological Bulletin*, 91, 27–54.
- Florida, R. (2005). The world is spiky. *Atlantic Monthly, October*, 48–51. Retrieved July 29, 2008 from: http://creativeclass.com/rfcgdb/articles/other-2005-The%20 World%20is%20Spiky.pdf
- Fost, D. (2008, February 20). They're working on their own, just side by side. *New York Times.* Retrieved August 24, 2008 from: www.nytimes.com/2008/02/20/ business/businessspecial2/20cowork.html?_r=1&oref=slogin&ref=technology& pagewanted=print
- Ford, R.C., & Bowen, D.E. (2008). A service-dominant logic for management education: It's time. Academy of Management Learning and Education, 7, 224–243.
- Fragale, A.R. (2006). The power of powerless speech: The effects of speech style and task interdependence on status conferral. Organizational Behavior and Human Decision Processes, 101, 243–261.
- Frese, M., & Fay, D. (2001). Personal initiative: An active performance concept for work in the 21st century. In B.M. Staw & R.I. Sutton (Eds.), *Research in organizational behavior* (Vol. 23, pp. 133–187). Greenwich, CT: JAI Press.
- Frese, M., Garst, H., & Fay, D. (2007). Making things happen: Reciprocal relationships between work characteristics and personal initiative in a four-wave longitudinal structural equation model. *Journal of Applied Psychology*, 92, 1084–1102.
- Frese, M., Kring, W., Soose, A., & Zempel, J. (1996). Personal initiative at work: Differences between East and West Germany. *Academy of Management Journal*, 39, 37–63.

- Frese, M., Teng, E., & Wijnen, C.J.D. (1999). Helping to improve suggestion systems: Predictors of making suggestions in companies. *Journal of Organizational Behavior*, 20, 1139–1155.
- Fried, Y., & Ferris, G.R. (1987). The validity of the job characteristics model: A review and meta-analysis. *Personnel Psychology*, 40, 287–322.
- Fried, Y., Hollenbeck J.R., Slowik, L.H., Tiegs, R.B., & Ben-David, H.A. (1999). Changes in job decision latitude: The influence of personality and interpersonal satisfaction. *Journal of Vocational Behavior*, 54, 233–243.
- Fried, Y., Levi, A.S., & Laurence, G. (2008). Motivation and job design in the new world of work. In C. Cooper & C. Cartwright (Eds.), *The Oxford handbook of personnel psychology*. Oxford, UK: Oxford University Press.
- Friedman, T.L. (2005). *The world is flat: A brief history of the 21st century.* New York: Farrar, Straus, and Giroux.
- Fuller, J.B., Marler, L.E., & Hester, K. (2006). Promoting felt responsibility for constructive change and proactive behavior: Exploring aspects of an elaborated model of work design. *Journal of Organizational Behavior*, 27, 1089–1120.
- Ganster, D.C., Fox, M.L., & Dwyer, D.J. (2001). Explaining employees' health care costs: A prospective examination of stressful job demands, personal control, and physiological reactivity. *Journal of Applied Psychology*, 86, 954–964.
- Gist, M.E., & Mitchell, T.B. (1992). Self-efficacy: A theoretical analysis of its determinants and malleability. Academy of Management Review, 17, 183–211.
- Gittell, J.H. (2001). Supervisory span, relational coordination, and flight departure performance: A reassessment of postbureaucracy theory. *Organization Science*, *12*, 468–483.
- Gittell, J.H. (2002). Relationships between service providers and their impact on customers. *Journal of Service Research*, *4*, 299–311.
- Golden, T.D., & Veiga, J.F. (2005). The impact of extent of telecommuting on job satisfaction: Resolving inconsistent findings. *Journal of Management*, 31, 301–318.
- Graen, G.B., & Scandura, T.A. (1987). Toward a psychology of dyadic organizing. *Research in Organizational Behavior*, 9, 175–208.
- Grandey, A. (2000). Emotion regulation in the workplace: A new way to conceptualize emotional labor. *Journal of Occupational Health Psychology*, 5, 95–110.
- Grandey, A., Fisk, G., & Steiner, D. (2005). Must "service with a smile" be stressful? The moderating role of personal control for US and French employees. *Journal* of Applied Psychology, 90, 893–914.
- Grandey, A., Kern, J.H., & Frone, M.R. (2007). Verbal abuse from outsiders versus insiders: Comparing frequency, impact on emotional exhaustion, and the role of emotional labor. *Journal of Occupational Health Psychology*, 12, 63–79.
- Grandey, A.A., Dickter, D.N., & Sin, H.P. (2004). The customer is not always right: Customer aggression and emotion regulation of service employees. *Journal of Organizational Behavior*, 25, 397–418.
- Grandey, A.A., & Diamond, J.A. (2009). Interactions with the public: Bridging job design and emotional labor perspectives. *Journal of Organizational Behavior*, 30.
- Grant, A.M. (2007). Relational job design and the motivation to make a prosocial difference. *Academy of Management Review*, *32*, 393–417.
- Grant, A.M. (2008a). The significance of task significance: Job performance effects, relational mechanisms, and boundary conditions. *Journal of Applied Psychology*, 93, 108–124.

- Grant, A.M. (2008b). Does intrinsic motivation fuel the prosocial fire? Motivational synergy in predicting persistence, performance, and productivity. *Journal of Applied Psychology*, 93, 48–58.
- Grant, A.M. (2008c). Employees without a cause: The motivational effects of prosocial impact in public service. *International Public Management Journal*, 11, 48–66.
- Grant, A.M., & Ashford, S.J. (2008). The dynamics of proactivity at work. Research in Organizational Behavior, 28, 3–34.
- Grant, A.M., & Campbell, E.M. (2007). Doing good, doing harm, being well and burning out: The interactions of perceived prosocial and antisocial impact in service work. *Journal of Occupational and Organizational Psychology*, 80, 665–691.
- Grant, A.M., Campbell, E.M., Chen, G., Cottone, K., Lapedis, D., & Lee, K. (2007). Impact and the art of motivation maintenance: The effects of contact with beneficiaries on persistence behavior. Organizational Behavior and Human Decision Processes, 103, 53–67.
- Grant, A.M., Fried, Y., & Juillerat, T. (2008). Work matters: Job design in classic and contemporary perspectives. Forthcoming in S. Zedeck (Ed.), APA handbook of industrial and organizational psychology. Washington, DC: American Psychological Association.
- Greenberg, J., Roberge, M.-E., Ho, V.T., & Rousseau, D.M. (2004). Fairness in idiosyncratic work arrangements: Justice as an ideal. In J.J. Martocchio (Ed.), *Research in personnel and human resources management* (Vol. 23, pp. 1–34). Greenwich, CT: Elsevier Science/JAI Press.
- Griffin, M.A., Neal, A., & Parker, S.K. (2007). A new model of work role performance: Positive behavior in uncertain and interdependent contexts. *Academy of Management Journal*, 50, 327–347.
- Griffin, R.W. (1983). Objective and social sources of information in task redesign: A field experiment. Administrative Science Quarterly, 28, 184–200.
- Griffin, R.W. (1987). Toward an integrated theory of task design. *Research in* Organizational Behavior, 9, 79–120.
- Gully, S.M., Devine, D.J., & Whitney, D.J. (1995). A meta-analysis of cohesion and performance: Effects of levels of analysis and task interdependence. *Small Group Research*, 26, 497–520.
- Gutek, B.A., Bhappu, A.D., Liao-Troth, M.A., & Cherry, B. (1999). Distinguishing between service relationships and encounters. *Journal of Applied Psychology*, 84, 218–233.
- Hackman, J.R., & Lawler, E.E. (1971). Employee reactions to job characteristics. Journal of Applied Psychology, 55, 259–286.
- Hackman, J.R., & Oldham, G.R. (1976). Motivation through the design of work: Test of a theory. *Organizational Behavior and Human Performance*, *16*, 250–279.
- Hackman, J.R., & Oldham, G.R. (1980). Work redesign. Reading, MA: Addison-Wesley.
- Hackman, J.R., Oldham, G., Janson, R., & Purdy, K. (1975). A new strategy for job enrichment. *California Management Review*, 17, 57–71.
- Halbesleben, J.R.B., & Bowler, W.M. (2007). Emotional exhaustion and job performance: The mediating role of motivation. *Journal of Applied Psychology*, 92, 93–106.
- Halbesleben, J.R.B., & Buckley, M.R. (2004). Burnout in organizational life. *Journal of Management*, 30, 859–879.

- Harrison, D.A., & Humphrey, S.E. (2009). Designing for diversity or diversity for design? Tasks, interdependence, and within-unit differences at work. *Journal of Organizational Behavior*, 30.
- Heaney, C.A., Price, R.H., & Rafferty, J. (1995). Increasing coping resources at work: A field experiment to increase social support, improve work team functioning, and enhance employee mental health. *Journal of Organizational Behavior*, 16, 335–353.
- Hertel, G., Konradt, U., & Orlikowski, B. (2004). Managing distance by interdependence: Goal setting, task interdependence, and team-based rewards in virtual teams. *European Journal of Work and Organizational Psychology*, 13, 1–28.
- Herzberg, F. (1966). Work and the nature of man. Oxford, UK: World Publishing.
- Herzberg, F., Mausner, B., & Snyderman, B.B. (1967). *The motivation to work* (2nd ed.). New York: Wiley.
- Hochschild, A.R. (1983). *The managed heart: Commercialization of human feeling*. Berkeley, CA: University of California Press.
- Hofmann, D.A., Morgeson, F.P., & Gerras, S.J. (2003). Climate as a moderator of the relationship between leader-member exchange and content specific citizenship: Safety climate as an exemplar. *Journal of Applied Psychology*, 88, 170–178.
- Holman, D.J., Clegg, C., & Waterson, P. (2002). Navigating the territory of job design. Applied Ergonomics, 33, 197–205.
- Holman, D.J., & Wall, T.D. (2002). Work characteristics, learning-related outcomes, and strain: A test of competing direct effects, mediated, and moderated models. *Journal of Occupational Health Psychology*, 7, 283–301.
- Homans, G.C. (1958). Social behavior as exchange. American Journal of Sociology, 63, 597–606.
- Hornung, S., Rousseau, D.M., & Glaser, J. (2008). Creating flexible work arrangements through idiosyncratic deals. *Journal of Applied Psychology*, 93, 655–664.
- Hornung, S., Rousseau, D.M., Glaser, J., Angerer, P., & Weigl, M. (2009). Beyond topdown and bottom-up work redesign: Customizing job content through idiosyncratic deals. *Journal of Organizational Work Behaviour*, 30.
- House, J.S. (1981). Work, stress, and social support. Reading, MA: Addison-Wesley.
- Howard, A. (1995). A framework for work change. In A. Howard (Ed.), The changing nature of work (pp. 3–44). San Francisco, CA: Jossey-Bass.
- Humphrey, S.E., Nahrgang, J.D., & Morgeson, F.P. (2007). Integrating motivational, social, and contextual work design features: A meta-analytic summary and theoretical extension of the work design literature. *Journal of Applied Psychology*, 92, 1332–1356.
- Ilgen, D., & Hollenbeck, J. (1991). The structure of work: Job design and roles. In M.D. Dunnette & L.M. Hough (Eds.), *Handbook of industrial and organizational psychology* (Vol. 2, pp. 165–208). Palo Alto, CA: Consulting Psychologists Press.
- Jackson, S.E., Joshi, A., & Erhardt, N.L. (2003). Recent research on team and organizational diversity: SWOT analysis and implications. *Journal of Management*, 29, 801–830.
- Jehn, K.A., Northcraft, G.B. & Neal, M.A. (1999). Why differences make a difference: A field study of diversity, conflict, and performance in workgroups. *Administrative Science Quarterly*, 44, 741–763.
- Johns, G. (2006). The essential impact of context on organizational behavior. *Academy* of Management Review, 31, 386–408.

- Jones, G.R. (1984). Task visibility, free riding, and shirking: Explaining the effect of structure and technology on employee behavior. Academy of Management Review, 9, 684–695.
- Judge, T.A., & Hurst, C. (2007). Capitalizing on one's advantages: Role of core selfevaluations. *Journal of Applied Psychology*, 92, 1212–1227.
- Kahn, R.L., Wolfe, D.M., Quinn, R.P., Snoek, J.D., & Rosenthal, R.A. (1964). Organizational stress: Studies in role conflict and ambiguity. Oxford, UK: John Wiley.
- Kahn, W.A. (1990). Psychological conditions of personal engagement and disengagement at work. Academy of Management Journal, 33, 692–724.
- Kanfer, R., Wanberg, C.R., & Kantrowitz, T.M. (2001). Job search and employment: A personality-motivational analysis and meta-analytic review. *Journal of Applied Psychology*, 86, 837–855.
- Karasek, R.A. (1979). Job demands, job decision latitude, and mental strain: Implications for job redesign. Administration Science Quarterly, 24, 285–307.
- Karasek, R.A., & Theorell, T. (1990). Healthy work. New York: Basic Books.
- Katz, D., & Kahn, R.L. (1966). The social psychology of organizations. New York: Wiley.
- Kelley, H.H., & Thibaut, J.E. (1978). Interpersonal relations: A theory of interdependence. New York: Wiley.
- Kiggundu, M. N. (1981). Task interdependence and the theory of job design. Academy of Management Review, 6, 499–508.
- Kiggundu, M.N. (1983). Task interdependence and job design: Test of a theory. Organizational Behavior and Human Performance, 31, 145–172.
- Kilduff, M., & Brass, D.J. (2009). Job design: A social network perspective. Journal of Organizational Behavior, 30.
- Kirkman, B.L., Rosen, B., Tesluk, P.E., & Gibson, C.B. (2004). The impact of team empowerment on virtual team performance: The moderating role of face-to-face interaction. *Academy of Management Journal*, 47, 175–192.
- Kluger, A.N., & DeNisi, A. (1996). Effects of feedback intervention on performance: A historical review, a meta-analysis, and a preliminary feedback intervention theory. *Psychological Bulletin*, 119, 254–284.
- Kozlowski, S.W.J., & Ilgen, D.R. (2006). Enhancing the effectiveness of work groups and teams. *Psychological Science in the Public Interest*, 7, 77–124.
- Kramer, R. (1999). Trust and distrust in organizations: Emerging perspectives, enduring questions. Annual Review of Psychology, 50, 569–598.
- Langfred, C.W. (2000a). The paradox of self-management: Individual and group autonomy in work groups. *Journal of Organizational Behavior*, 21, 563–585.
- Langfred, C. W. (2000b). Work-group design and autonomy: A field study of the interaction between task interdependence and autonomy. *Small Group Research*, 31, 54–70.
- Langfred, C.W. (2004). Too much of a good thing? Negative effects of high trust and individual autonomy in self-managing teams. Academy of Management Journal, 47, 385–399.
- Langfred, C.W. (2005). Autonomy and performance in teams: The multilevel moderating effect of task interdependence. *Journal of Management*, 31, 513–529.
- Langfred, C.W. (2007). The downside of self-management: A longitudinal study of the effects of conflict on trust, autonomy, and task interdependence in selfmanaging teams. Academy of Management Journal, 50, 885–900.

- Langfred, C.W., & Moye, N.A. (2004). Effects of task autonomy on performance: An extended model considering motivational, informational, and structural mechanisms. *Journal of Applied Psychology*, 89, 934–945.
- Latham, G.P., & Pinder, C.C. (2005). Work motivation theory and research at the dawn of the twenty-first century. *Annual Review of Psychology*, *56*, 495–516.
- Lawler, E.E., Hackman, J.R., & Kaufman, S. (1973). Effects of job redesign: A field experiment. *Journal of Applied Social Psychology*, 3, 49–62.
- Leana, C., Appelbaum, E., & Shevchuk, I. (2009). Work process and quality of care in early childhood education: The role of job crafting. *Academy of Management Journal.*
- Lee, R.T., & Ashforth, B.E. (1996). A meta-analytic examination of the correlates of the three dimensions of job burnout. *Journal of Applied Psychology*, 81, 123–133.
- LePine, J.A., & Van Dyne, L. (1998). Predicting voice behavior in work groups. *Journal* of Applied Psychology, 83, 853–868.
- Lerner, J.S., & Tetlock, P.E. (1999). Accounting for the effects of accountability. *Psychological Bulletin*, 125, 255–275.
- Liden, R.C., Wayne, S.J., & Sparrowe, R.T. (2000). An examination of the mediating role of psychological empowerment on the relations between the job, interpersonal relationships, and work outcomes. *Journal of Applied Psychology*, 85, 407–416.
- Lindsley, D.H., Brass, D.J., & Thomas, J.B. (1995). Efficacy-performance spirals: A multilevel perspective. Academy of Management Review, 20, 645–678.
- Locke, E.A., & Latham, G.P. (2002). Building a practically useful theory of goal setting and task motivation: A 35-year odyssey. *American Psychologist*, 57, 705–717.
- Locke, E.A., Sirota, D., & Wolfson, A.D. (1976). An experimental case study of the successes and failures of job enrichment in a government agency. *Journal of Applied Psychology*, 61, 701–711.
- MacDuffie, J.P. (2007). HRM and distributed work: Managing people across distances. Academy of Management Annals, 1, 549–615.
- Margolis, J.D., & Molinsky, A.L. (2008). Navigating the bind of necessary evils: Psychological engagement and the production of interpersonally sensitive behavior. Academy of Management Journal, 51, 847–872.
- Marshall, N.L., Barnett, R.C., & Sayer, A. (1997). The changing workforce, job stress, and psychological distress. *Journal of Occupational Health Psychology*, 2, 99–107.
- Maslach, C., Schaufeli, W.B., & Leiter, M.P. (2001). Job burnout. Annual Review of Psychology, 52, 397–422.
- Mayer, D.M., Ehrhart, M.G., & Schneider, B. (2008). Service attribute boundary conditions of the service climate–customer satisfaction link. Academy of Management Journal.
- Mayo, E. (1933). *The human problems of an industrial civilization*. New York: Macmillan.
- Mayo, E. (1945). *The social problems of an industrial civilization*. Cambridge, MA: Harvard University Press.
- McAllister, D.J., Kamdar, D., Morrison, E.W., & Turban, D.B. (2007). Disentangling role perceptions: How perceived role breadth, discretion, instrumentality, and efficacy relate to helping and taking charge. *Journal of Applied Psychology*, 92, 1200–1211.
- McGregor, I., McAdams, D.P., & Little, B.R. (2006). Personal projects, life stories, and happiness: On being true to traits. *Journal of Research in Personality*, 40, 551–572.

- McGuire, W.J. (1997). Creative hypothesis generating in psychology: Some useful heuristics. *Annual Review of Psychology*, 48, 1–30.
- Melamed, S., Fried, Y., & Froom, P. (2001). The interactive effect of chronic exposure to noise and job complexity on changes in blood pressure and job satisfaction: A longitudinal study of industrial employees. *Journal of Occupational Health Psychology*, 6, 182–195.
- Millward, L.J., Haslam, S.A., & Postmes, T. (2007). Putting employees in their place: The impact of hot desking on organizational and team identification. Organization Science, 18, 547–559.
- Miner, A.S. (1987). Idiosyncratic jobs in formalized organizations. Administrative Science Quarterly, 32, 327–351.
- Miner, J.B. (1984). The validity and usefulness of theories in an emerging organizational science. Academy of Management Review, 9, 296–306.
- Miner, J.B. (2003). The rated importance, scientific validity, and practical usefulness of organizational behavior theories: A quantitative review. Academy of Management Learning & Education, 2, 250–268.
- Mitchell, T.R., & James, L.R. (2001). Building better theory: Time and the specification of when things happen. Academy of Management Review, 26, 530–547.
- Mohrman, S.A., Cohen, S.G., & Mohrman, A.M.Jr. (1995). Designing team-based organizations: New forms for knowledge and work. San Francisco, CA: Jossey-Bass.
- Molinsky, A., & Margolis, J. (2005). Necessary evils and interpersonal sensitivity in organizations. Academy of Management Review, 30, 245–268.
- Morgeson, F.P., & Campion, M.A. (2002). Avoiding tradeoffs when redesigning work: Evidence from a longitudinal quasi-experiment. *Personnel Psychology*, 55, 589–612.
- Morgeson, F. P., & Campion, M. A. (2003). Work design. In W. Borman, R. Klimoski, & D. Ilgen (Eds.), Handbook of psychology (Vol. 12), Industrial and organizational psychology (pp. 423–452). New York: John Wiley.
- Morgeson, F.P., Delaney-Klinger, K., & Hemingway, M.A. (2005). The importance of job autonomy, cognitive ability, and job-related skill for predicting role breadth and job performance. *Journal of Applied Psychology*, 90, 399–406.
- Morgeson, F.P., & Humphrey, S.E. (2006). The work design questionnaire (WDQ): Developing and validating a comprehensive measure for assessing job design and the nature of work. *Journal of Applied Psychology*, 91, 1321–1339.
- Morgeson, F.P., & Humphrey, S.E. (2008). Job and team design: Toward a more integrative conceptualization of work design. In J. Martocchio (Ed.), *Research in personnel and human resource management* (Vol. 27, pp. 39–92). Bingley, UK: Emerald Group.
- Morgeson, F.P., Johnson, M.D., Campion, M.A., Medsker, G.J., & Mumford, T.V. (2006). Understanding reactions to job redesign: A quasi-experimental investigation of the moderating effects of organizational context on perceptions of performance behavior. *Personnel Psychology*, 59, 333–363.
- Morris, A.J., & Feldman, D.C. (1996). The dimensions, antecedents, and consequences of emotional labor. Academy of Management Review, 21, 986–1010.
- Morrison, E.W. (1994). Role definitions and organizational citizenship behavior: The importance of the employee's perspective. Academy of Management Journal, 37, 1543–1567.

- Morrison, E.W., & Phelps, C. (1999). Taking charge: Extra-role efforts to initiate workplace change. Academy of Management Journal, 42, 403–419.
- Mount, M.K., Barrick, M.R., & Stewart, G.L. (1998). Five-factor model of personality and performance in jobs involving interpersonal interactions. *Human Performance*, 11, 145–165.
- Nemeth, C.J. (1986). Differential contributions of majority and minority influence. *Psychological Review*, 93, 23–32.
- Nicholson, N. (1984). A theory of work role transitions. Administrative Science Quarterly, 29, 172–191.
- O'Mahony, S., & Bechky, B.A. (2006). Stretchwork: Managing the career progression paradox in external labor markets. Academy of Management Journal, 49, 918–941.
- Ohly, S., Sonnentag, S., & Pluntke, F. (2006). Routinization, work characteristics and their relationships with creative and proactive behaviors. *Journal of Organizational Behavior*, 27, 259–279.
- Oldham, G.R. (1988). Effects of changes in workspace partitions and spatial density on employee reactions: A quasi-experiment. *Journal of Applied Psychology*, *73*, 253–258.
- Oldham, G.R. (1996). Job design. International Review of Industrial and Organizational Psychology, 11, 33-60.
- Oldham, G.R., & Cummings, A. (1996). Employee creativity: Personal and contextual factors at work. *Academy of Management Journal, 39*, 607–634.
- Oldham, G.R., Cummings, A., & Zhou, J. (1995). The spatial configuration of organizations: A review of the literature and some new research directions. In G. Ferris (Ed.), *Research in personnel and human resources management* (Vol. 13, pp. 1–37). Greenwich, CT: JAI Press.
- Oldham, G.R., & Hackman, J.R. (1981). Relationships between organization structure and employee reactions: Comparing alternative frameworks. *Administrative Science Quarterly*, 25, 66–83.
- Osterman, P. (2000). Work reorganization in an era of restructuring: Trends in diffusion and effects on employee welfare. *Industrial and Labor Relations Review*, 53, 179–196.
- Parker, S.K. (1998). Enhancing role breadth self-efficacy: The roles of job enrichment and other organizational interventions. *Journal of Applied Psychology*, 83, 835–852.
- Parker, S.K. (2000). From passive to proactive motivation: The importance of flexible role orientations and role breadth self-efficacy. *Applied Psychology: An International Review*, 49, 447–469.
- Parker, S.K. (2003). Longitudinal effects of lean production on employee outcomes and the mediating role of work characteristics. *Journal of Applied Psychology*, 88, 620–634.
- Parker, S.K. (2007). "That is my job": How employees' role orientation affects their job performance. *Human Relations*, 60, 403–434.
- Parker, S.K., & Axtell, C.M. (2001). Seeing another viewpoint: Antecedents and outcomes of employee perspective taking. Academy of Management Journal, 44, 1085–1100.
- Parker, S.K., & Collins, C.G. (2009). Taking stock: Integrating and differentiating multiple proactive behaviors. *Journal of Management*.

- Parker, S.K., & Ohly, S. (2008). Designing motivating jobs. In R. Kanfer, G. Chen, & R. Pritchard (Eds.), Work motivation: Past, present, and future. Oxford, UK: Routledge.
- Parker, S.K., & Sprigg, C.A. (1999). Minimizing strain and maximizing learning: The role of job demands, job control, and proactive personality. *Journal of Applied Psychology*, 84, 925–939.
- Parker, S.K., & Wall, T. (1998). Job and work design: Organizing work to promote wellbeing and effectiveness. London: Sage.
- Parker, S.K., Wall, T.D., & Cordery, J.L. (2001). Future work design research and practice: Towards an elaborated model of work design. *Journal of Occupational and Organizational Psychology*, 74, 413–440.
- Parker, S.K., Wall, T.D., & Jackson, P.R. (1997). "That's not my job": Developing flexible employee work orientations. Academy of Management Journal, 40, 899–929.
- Parker, S.K., Williams, H.M., & Turner, N. (2006). Modeling the antecedents of proactive behavior at work. *Journal of Applied Psychology*, 91, 636–652.
- Pasmore, W.A., Francis, C., Haldeman, J., & Shani, A. (1982). Sociotechnical systems: A North American reflection on empirical studies of the seventies. *Human Relations*, 35, 1179–1204.
- Pearce, J.L., & Gregersen, H.B. (1991). Task interdependence and extrarole behavior: A test of the mediating effects of felt responsibility. *Journal of Applied Psychology*, 76, 838–844.
- Pfeffer, J. (2006). Working alone: Whatever happened to the idea of organizations as communities? In E.E. Lawler III & J. O'Toole (Eds.), *America at work: Choices* and challenges (pp. 3–22). New York: Palgrave Macmillan.
- Pfeffer, J., & Baron, J.N. (1988). Taking the workers back out: Recent trends in the structuring of employment. In B.M. Staw & L.L. Cummings (Eds.), *Research in* organizational behavior (Vol. 10, pp. 257–303). Greenwich, CT: JAI Press.
- Piccolo, R.F., & Colquitt, J.A. (2006). Transformational leadership and job behaviors: The mediating role of core job characteristics. *Academy of Management Journal*, 49, 327–340.
- Podsakoff, P.M., MacKenzie, S.B., Paine, J.B., & Bachrach, D.G. (2000). Organizational citizenship behaviors: A critical review of the theoretical and empirical literature and suggestions for future research. *Journal of Management*, 26, 513–563.
- Purvanova, R.K., Bono, J.E., & Dzieweczynski, J. (2006). Transformational leadership, job characteristics, and organizational citizenship performance. *Human Performance*, 19, 1–22.
- Rafaeli, A., & Sutton, R.I. (1987). The expression of emotion as part of the work role. Academy of Management Review, 12, 23–37.
- Raub, S. (2008). Does bureaucracy kill individual initiative? The impact of structure on organizational citizenship behavior in the hospitality industry. *International Journal of Hospitality Management*, 27, 179–186.
- Rhoades, L., & Eisenberger, R. (2002). Perceived organizational support: A review of the literature. *Journal of Applied Psychology*, 87, 698–714.
- RSNA Reporter's Notebook. (2008, December 15). Patient photos spur radiologist empathy and eye for detail. *Radiology Today*. Retrieved January 12, 2009 from: www.radiologytoday.net/archive/rt_121508p10.shtml
- Robert, C., Probst, T.M., Martocchio, J.J., Drasgow, F., & Lawler, J.J. (2000). Empowerment and continuous improvement in the United States, Mexico, Poland, and

India: Predicting fit on the basis of the dimensions of power distance and individualism. *Journal of Applied Psychology*, *85*, 643–658.

- Roberts, K.H., & Glick, W. (1981). The job characteristics approach to task design: A critical review. *Journal of Applied Psychology*, 66, 193–217.
- Roethlisberger, F.J., & Dickson, W.J. (1939). Management and the worker. Boston, MA: Harvard University Press.
- Rosen, M. (2000). Turning words, spinning worlds: Chapters in organizational ethnography. London: Routledge.
- Rousseau, D.M. (2001). The idiosyncratic deal: Flexibility versus fairness? Organizational Dynamics, 29, 260–273.
- Rousseau, D.M. (2005). I-deals: Idiosyncratic deals employees bargain for themselves. New York: M.E. Sharpe.
- Rousseau, D.M., & Fried, Y. (2001). Location, location, location: Contextualizing organizational behavior. *Journal of Organizational Behavior*, 22, 1–15.
- Rousseau, D.M., Ho, V.T., & Greenberg, J. (2006). I-deals: Idiosyncratic terms in employment relationships. Academy of Management Review, 31, 977–994.
- Roy, D.F. (1959). Banana time: Job satisfaction and informal interaction. *Human* Organization, 18, 158–168.
- Salancik, G. R., & Pfeffer, J. (1978). A social information processing approach to job attitudes and task design. Administrative Science Quarterly, 23, 224–253.
- Saavedra, R., Earley, P.C., & Van Dyne, L. (1993). Complex interdependence in taskperforming groups. *Journal of Applied Psychology*, 78, 61–72.
- Saavedra, R., & Kwun, S.K. (2000). Affective states in job characteristics theory. Journal of Organizational Behavior, 21, 131–146.
- Schneider, B., & Bowen, D.E. (1995). Winning the service game. Boston, MA: Harvard Business School Press.
- Schwartz, B. (2000). Self determination: The tyranny of freedom. *American Psychologist*, 55, 79–88.
- Scott, P.G., & Pandey, S.K. (2005). Red tape and public service motivation: Findings from a national survey of managers in state health and human services agencies. *Review of Public Personnel Administration*, 25, 155–180.
- Scott, W.R., & Davis, G.F. (2007). Organizations and organizing: Rational, natural, and open systems perspectives. Upper Saddle River, NJ: Pearson Prentice Hall.
- Sethi, R., & Nicholson, C.Y. (2001). Structural and contextual correlates of charged behavior in product development teams. *The Journal of Product Innovation Management*, 18, 154–168.
- Shalley, C.E., Zhou, J., & Oldham, G.R. (2004). The effects of personal and contextual characteristics on creativity: Where should we go from here? *Journal of Management*, 30, 933–958.
- Shaw, J.D., Duffy, M.K., & Stark, E.M. (2000). Interdependence and preference for group work: Main and congruence effects on the satisfaction and performance of group members. *Journal of Management*, 26, 259–279.
- Sherif, M., Harvey, O.J., White, B.J., Hood, W.R., & Sherif, C.W. (1961). Intergroup conflict and cooperation: The Robbers' Cave experiment. Norman, OK: Oklahoma Book Exchange.
- Simonds, R.H., & Orife, J.N. (1975). Worker behavior versus enrichment theory. Administrative Science Quarterly, 20, 606–612.

- Sims, H.P., Szilagyi, A.D., & Keller, R.T. (1976). The measurement of job characteristics. Academy of Management Journal, 19, 195–212.
- Smith, A. (1776). An inquiry into the nature and causes of the wealth of nations. London: W. Strahan and T. Cadell.
- Sonnentag, S., & Zijlstra, F.R.H. (2006). Job characteristics and off-job activities as predictors of need for recovery, well-being, and fatigue. *Journal of Applied Psychology*, 91, 330–350.
- Speier, C., & Frese, M. (1997). Generalized self-efficacy as a mediator and moderator between control and complexity at work and personal initiative: A longitudinal field study in East Germany. *Human Performance*, 10, 171–192.
- Spreitzer, G., Sutcliffe, K., Dutton, J.E., Sonenshein, S., & Grant, A.M. (2005). A socially embedded model of thriving at work. Organization Science, 16, 537–549.
- Sprigg, C.A., Jackson, P.R., & Parker, S.K. (2000). Production teamworking: The importance of interdependence and autonomy for employee strain and satisfaction. *Human Relations*, 53, 1519–1543.
- Staw, B.M., & Boettger, R.D. (1990). Task revision: A neglected form of work performance. Academy of Management Journal, 33, 534–559.
- Stewart, G.L., & Barrick, M.R. (2000). Team structure and performance: Assessing the mediating role of intrateam process and the moderating role of task type. *Academy of Management Journal*, 43, 135–148.
- Stone, E.F., & Gueutal, H.G. (1985). An empirical derivation of the dimensions along which characteristics of jobs are perceived. *Academy of Management Journal*, 28, 376–396.
- Taylor, F.W. (1911). The principles of scientific management. New York: W.W. Norton.
- Tepper, B.J., Lockhart, D., & Hoobler, J. (2001). Justice, citizenship, and role definition effects. *Journal of Applied Psychology*, *86*, 789–796.
- Terkel, S. (1972). Working. New York: Pantheon.
- Tetlock, P.E. (1985). Accountability: The neglected social context of judgment and choice. *Research in Organizational Behavior*, *7*, 297–332.
- Theorell, T., & Karasek, R.A. (1996). Current issues relating to psychosocial job strain and cardiovascular disease research. *Journal of Occupational Health Psychology*, *1*, 9–26.
- Thompson, J.D. (1967). Organizations in action. New York: McGraw-Hill.
- Tierney, P., & Farmer, S.M. (2002). Creative self-efficacy: Potential antecedents and relationship to creative performance. Academy of Management Journal, 45, 1137–1148.
- Tierney, P., & Farmer, S.M. (2004). The Pygmalion process and employee creativity. *Journal of Management*, 30, 413–432.
- Trist, E.L., & Bamforth, K.M. (1951). Some social and psychological consequences of the longwall method of coal-getting. *Human Relations*, 4, 3–38.
- Tschan, F., Rochat, S., & Zapf, D. (2005). It's not only clients: Studying emotion work with clients and co-workers with an event-sampling approach. *Journal of Occupational and Organizational Psychology*, 78, 195–220.
- Tschan, F., Semmer, N.K., & Inversin, L. (2004). Work related and "private" social interactions at work. Social Indicators Research, 67, 145–182.
- Turner, A.N., & Lawrence, P.R. (1965). *Industrial jobs and the worker*. Boston, MA: Harvard University Press.

- Turner, Y.N., Hadas-Halperin, I., & Raveh, D. (2008). *Patient photos spur radiologist empathy and eye for detail.* Paper presented at the annual meeting of the Radiological Society of North America, November.
- Twenge, J.M. (2006). Generation me: Why today's young Americans are more confident, assertive, entitled—and more miserable than ever before. New York: Free Press.
- van der Doef, M., & Maes, S. (1999). The job demand-control (-support) model and psychological well-being: A review of 20 years of empirical research. *Work & Stress, 13, 87-114.*
- Van der Vegt, G.S., & Janssen, O. (2003). Joint impact of interdependence and group diversity on innovation. *Journal of Management*, 29, 729–751.
- Van der Vegt, G.S., & Van de Vliert, E. (2005). Effects of perceived skill dissimiliarity and task interdependence on helping in work teams. *Journal of Management*, 31, 73–89.
- Van Dyne, L., Cummings, L.L., & McLean Parks, J. (1995). Extra-role behaviors: In pursuit of construct and definitional clarity. In L.L. Cummings & B.M. Staw (Eds.), *Research in organizational behavior* (Vol. 17, pp. 215–285). Greenwich, CT: JAI Press.
- Van Maanen, J., & Schein, E.H. (1979). Toward a theory of organizational socialization. Research in Organizational Behavior, 1, 209–264.
- Van Yperen, N.W., & Hagedoorn, M. (2003). Do high job demands increase intrinsic motivation or fatigue or both? The role of job control and job social support. *Academy of Management Journal*, 46, 339–348.
- Wageman, R. (1995). Interdependence and group effectiveness. Administrative Science Quarterly, 40, 145–181.
- Wageman, R. (2001). The meaning of interdependence. In M.E. Turner (Ed.), Groups at work: Theory and research (pp. 197–217). Mawhah, NJ: Lawrence Erlbaum.
- Wageman, R., & Gordon, F.M. (2005). As the twig is bent: How group values shape emergent task interdependence in groups. Organization Science, 16, 687–700.
- Walker, C.R., & Guest, R.H. (1952). The man on the assembly line. Cambridge, MA: Harvard University Press.
- Wall, T.D., Cordery, J.L., & Clegg, C.W. (2002). Empowerment, performance, and operational uncertainty: A theoretical integration. *Applied Psychology: An International Review*, 51, 146–169.
- Wall, T.D., Jackson, P.R., & Davids, K. (1992). Operator work design and robotics system performance: A serendipitous field study. *Journal of Applied Psychology*, 77, 353–362.
- Wall, T.D., Kemp, N.J., Jackson, P.R., & Clegg, C.W. (1986). Outcomes of autonomous workgroups: A long-term field experiment. Academy of Management Journal, 29, 280–304.
- Wall, T.D., & Martin, R. (1987). Job and work design. In C.L. Cooper & I.T. Robertson (Eds.), *International review of industrial and organizational psychology* (pp. 61– 91). Oxford, UK: John Wiley & Sons.
- Warr, P. (2007). Work, happiness, and unhappiness. Mahwah, NJ: Lawrence Erlbaum.
- Weick, K.E. (1979). *The social psychology of organizing* (2nd ed.). Reading, MA: Addison-Wesley.
- Weick, K.E., Sutcliffe, K.M., & Obstfeld, D. (1999). Organizing for high reliability: Processes of collective mindfulness. In R.I. Sutton & B.M. Staw (Eds.), *Research*

in organizational behavior (Vol. 21, pp. 81–123). New York: Elsevier Science/JAI Press.

- Westphal, J.D. (2009). An impression management perspective on job design: The case of corporate directors. *Journal of Organizational Behavior*, 30.
- Wong, C., & Campion, M.A. (1991). Development and test of a task level model of motivational job design. *Journal of Applied Psychology*, 76, 825–837.
- Wood, R.E. (1986). Task complexity: Definition of the construct. Organizational Behavior and Human Decision Processes, 37, 60–82.
- Wright, B.M., & Cordery, J.L. (1999). AddedProduction uncertainty as a contextual moderator of employee reactions to job design. *Journal of Applied Psychology*, 84, 456–463.
- Wrzesniewski, A., & Dutton, J. E. (2001). Crafting a job: Revisioning employees as active crafters of their work. Academy of Management Review, 26, 179–201.
- Xie, J.L., & Johns, G. (1995). Job scope and stress: Can job scope be too high? *Academy* of Management Journal, 38, 1288–1309.
- Zaheer, S., Albert, S., & Zaheer, A. (1999). Time scales and organizational theory. Academy of Management Review, 24, 725–741.
- Zalesny, M.D., & Ford, J.K. (1990). Extending the social information processing perspective: New links to attitudes, behaviors, and perceptions. Organizational Behavior and Human Decision Processes, 47, 205–246.
- Zapf, D. (2002). Emotion work and psychological well-being: A review of the literature and some conceptual considerations. *Human Resource Management Review*, 12, 237–268.
- Zapf, D., & Holz, M. (2006). On the positive and negative effects of emotion work in organizations. European Journal of Work and Organizational Psychology, 15, 1–28.
- Zapf, D., Seifert, C., Schmutte, B., Mertini, H., & Holz, M. (2001). Emotion work and job stressors and their effects on burnout. *Psychology & Health*, 16, 527–545.
- Zhou, J., & George, J.M. (2001). When job dissatisfaction leads to creativity: Encouraging the expression of voice. *Academy of Management Journal*, 44, 682–696.