

Taking Stock: Integrating and Differentiating Multiple Proactive Behaviors

Sharon K. Parker

University of Western Australia and University of Sheffield

Catherine G. Collins

University of New South Wales

The authors aimed to clarify the similarities, differences, and interrelationships among multiple types of proactive behavior. Factor analyses of managers' self-ratings (N = 622) showed concepts were distinct from each other but related via a higher-order structure. Three higher-order proactive behavior categories were identified—proactive work behavior, proactive strategic behavior, and proactive person-environment fit behavior—each corresponding to behaviors aimed at bringing about change in the internal organization (e.g., voice), the fit between the organization and its environment (e.g., issue selling), and the fit between the individual and the organization (e.g., feedback seeking), respectively. Further analyses on a subsample (n = 319) showed similarities and differences in the antecedents of these behaviors.

Keywords: *proactive behavior; taking charge; voice; issue selling; feedback seeking; higher-order factor analysis*

Proactivity is very important in today's decentralized work place, where there is greater competition and enhanced pressure for innovation (Crant, 2000; Frese & Fay, 2001; Parker, 2000; Sonnentag, 2003). Proactive individuals, for example, perform their core tasks better

Acknowledgments: We thank the participants of this study, the Australian Research Council for funding support, and Adam Grant for helpful feedback on drafts. A previous version of this article was presented at Academy of Management Meeting in 2004. This article was accepted under the editorship of Russell Cropanzano.

Corresponding author: Sharon K. Parker, UWA Business School, The University of Western Australia, 35 Stirling Highway, Crawley, WA 2009, Australia

E-mail address: sparker@biz.uwa.edu.au

(Thompson, 2005). Proactivity is also important for individual career success (Seibert, Crant, & Kraimer, 1999). Careers are increasingly boundaryless and not confined to one organization, so individuals must take charge of their careers so that they can continually add value to the organization (Mirvis & Hall, 1996).

Perhaps reflecting its importance in today's workplace, there has been considerable growth in proactive concepts (Crant, 2000). Illustrative proactive behaviors that have been investigated, and shown to be distinct from more passive behaviors, include actively adjusting to new job conditions (Ashford & Black, 1996), using one's initiative (Den Hartog & Belschak, 2007), expressing voice (LePine & Van Dyne, 1998), selling critical issues to leaders (Dutton & Ashford, 1993), proactive service performance (Rank, Carsten, Unger, & Spector, 2007), taking charge to bring about change (Morrison & Phelps, 1999), self-initiated role expansions (Parker, Wall, & Jackson, 1997), proactively solving problems and implementing ideas (Parker, Williams, & Turner, 2006), and network building (Morrison, 2002).

As suggested by these examples, attention to proactive behavior has most often grown out of interest in a particular domain. This phenomenon-driven approach has led to a rich array of proactive behaviors that have been shown to be important in diverse areas. However, a downside is that not much is known about how the various behaviors relate to one another or more general processes and antecedents of proactive behavior. As Crant (2000) stated, research on proactivity "has not emerged as an integrated research stream . . . there is no single definition, theory, or measure driving this body of work" (p. 435). Of particular concern is the possibility of a proliferation of potentially overlapping, yet nonintegrated, concepts. As Block (1995) observed, if a variable is "explainable" by other correlated variables, the best-case scenario is that more measures are used than needed to understand the phenomenon. At worst, the building of knowledge is prevented because findings from highly related topics are not integrated.

The overarching aim of the current article is to integrate and clarify the relationships among individual-level proactive behaviors investigated across multiple domains. We have three specific goals. The first is to understand whether the various proactive behaviors are distinct or overlapping. The second goal is to investigate whether these behaviors relate in a higher-order structure. The third goal is assess whether the various proactive behaviors have similar antecedents. Prior to developing these goals, we clarify what we mean by proactive behavior so that we are clear about what behaviors should, or should not, be included in the study.

Conceptual Background: Clarifying the Proactive Domain

Dictionary definitions highlight two key elements of proactivity. First, they identify an anticipatory element, involving acting in advance of a future situation, such as "acting in anticipation of future problems, needs, or changes" (Merriam-Webster Online Dictionary). Second, definitions emphasize taking control and causing change; for example, "controlling a situation by causing something to happen rather than waiting to respond to it after it happens" (Princeton University, 2003). Self-initiation is essential to both taking control and being anticipatory. For example, if one needs to be asked to change something, one is not taking control of a situation. Each of these elements—acting in anticipation, taking control,

and self-initiation—are present in most definitions of proactive behavior.¹ For example, Parker et al. (2006; also see Grant & Ashford, 2008) defined proactive behavior as self-initiated, anticipatory action that aims to change and improve the situation or oneself.

A confusion in the area concerns whether proactive behavior is extrarole behavior. Some have argued that proactive behaviors are by definition extrarole because in-role activities are nondiscretionary and hence not self-directed. However, classifications of in-role and extrarole are unclear and depend on how employees construe the boundary of their role (Morrison, 1994). Proactive individuals are likely to construe their roles more broadly (Parker et al., 1997) and to redefine their roles to encapsulate new tasks and goals (Frese & Fay, 2001). We suggest, consistent with others (Crant, 2000; Grant & Ashford, 2008; Griffin, Neal, & Parker, 2007), that all types of performance—whether they are in-role, extrarole, task performance, or citizenship—can be carried out more or less proactively. Proactive behavior is also not the same as adaptive performance, in which individuals modify their behavior to meet the demands of new situations (Pulakos, Arad, Dorovan, & Plamondon, 2000). Although adaptivity involves adapting to change, proactive behavior involves initiating change (Frese & Fay, 2001; Griffin et al., 2007).²

Aims and Hypotheses

Our aim in this study is to investigate similarities, differences, and interrelationships among multiple types of proactive behavior. To achieve this, we use self-assessments of behavior. Although there can be drawbacks with self-assessments, which we discuss later, there are also advantages. Individuals have constant access to, and hence more examples of, their own performance and can potentially detect differences among their behaviors to a greater degree than can raters (Lance, Teachout, & Donnelly, 1992). Self-assessments also get around the issue that external raters often draw on a general impression across all behaviors, the “halo” effect (Lance, LaPointe, & Fiscaro, 1994). The current article is therefore an important starting point for clarifying how multiple types of proactive behavior are similar or different.

Distinctiveness of behaviors. Our first goal is to establish whether multiple proactive behaviors are distinct from each other. We included types of proactive behavior from many different work domains, aiming for breadth in our coverage. Thus, we included proactive concepts related to organizational change and improvement (taking charge, individual innovation, and issue selling), voice, proactive feedback seeking (feedback monitoring, feedback inquiry), proactive socialization (job change negotiation), and careers (career initiative).³ We also assessed two additional important types of proactive behaviors not already explicitly investigated within the literature yet that are a clear fit with the definition of proactive behavior: problem prevention and strategic scanning. Problem prevention, acting to prevent the reoccurrence of challenges and barriers to work, has been identified as an important proactive behavior (e.g., Frese & Fay, 2001) yet thus far has not been empirically assessed. Strategic scanning involves proactively surveying the organization’s environment to identify ways to ensure a fit between it and the organization, such as identifying ways the organization might

respond to emerging markets. Such proactive behavior helps to ensure effectiveness in light of frequent changes in the competitive and technological environment (Crant, 2000).

Table 1 describes each of the types of proactive behavior considered in our research, including their definition from the original authors, illustrative behaviors, and primary intended target of impact. We discuss the target of impact dimension shortly. As elaborated in Table 1, each of these proactive behaviors has been investigated in independent research domains, often using different theoretical perspectives. We therefore expect each of the behaviors to be distinct from each other. Our hypothesis is,

Hypothesis 1: Taking charge, voice, individual innovation, problem prevention, issue selling (credibility and willingness), strategic scanning, feedback inquiry, feedback monitoring, job change negotiation, and career initiative will be distinct from each other.

Relationships among proactive behaviors. The second goal of the article is to investigate how the proactive behaviors relate to each other. We propose a higher-order structure in which some proactive behaviors are more similar to one another than other proactive behaviors. The basis of similarity that we suggest is the intended target of impact, which refers to whom or what the proactive behavior aims to affect or change (Grant & Ashford, 2008). We identify three broad intended targets of impact toward which proactive behavior can be directed: the internal organization environment (proactive work behavior), the organization's fit with the external environment (proactive strategic behavior), and the individual's fit within the organizational environment (proactive person–environment [P-E] fit behavior).

Underpinning these higher-order categories of behaviors are similar motivations and role identities. Motivation determines the direction of behavior as well as its form, intensity, and duration (Pinder, 1984), and hence common motivations are likely to direct proactive behavior toward having a particular target of impact. For example, individuals committed to goals regarding improving their work place are likely to engage in proactive work behavior, and those committed to progressing within the organization are likely to engage in proactive P-E fit behavior. In addition, individuals' role identities guide their behavior because individuals prefer to exhibit behaviors that are congruent with their self-concept (Neale & Griffin, 2006). The different targets of impact tap into different roles for individuals, and the salience of these roles for the person and their identity will affect behavioral enactment. For example, engaging in proactive strategic behavior is likely to reflect strong identification with the organization. We discuss the proposed higher-order categories, and their identifying behaviors, next.

Changing the internal organizational environment: Proactive work behavior. Taking charge, voice, individual innovation, and problem prevention are proactive behaviors that all focus on taking control of, and bringing about change within, the internal organizational environment, such as by improving work methods or influencing work colleagues. We propose that these behaviors together identify a higher-order category of "proactive work behavior." Taking charge concerns constructive efforts by employees to effect organizationally functional change with respect to how work is executed (Morrison & Phelps, 1999), as illustrated by the behavior of "trying to bring about improved procedures in your work place." Likewise, voice is concerned with speaking out about issues that affect one's work group as well as seeking information about such issues (Van Dyne & LePine, 1998). As with taking

Table 1
Types of Proactive Behavior, Definitions, Illustrative Behaviors,
and Their Proposed Higher Order (HO) Category

Behavior and HO Category	Definition From Original Authors	Illustrative Behavior
Proactive work behavior (HO)	Taking control of, and bringing about change within, the internal organizational environment	
Taking charge	Voluntary and constructive efforts to effect organizationally functional change with respect to how work is executed; change-oriented behavior aimed at improvement (Morrison & Phelps, 1999)	Try to bring about improved procedures in the work place
Voice	Making innovative suggestions for change and recommending modifications to standard procedures even when others disagree; speaking up that is constructive and intended to positively contribute to the organization (Van Dyne & LePine, 1998)	Communicate your views about work issues to others in the workplace, even if your views differ and others disagree
Individual innovation	Behaviors involved in the creation and implementation of ideas (Scott & Bruce, 1994), including identifying an opportunity, generating new ideas or approaches, and implementing the new ideas	Search out new techniques, technologies, and/or product ideas
Problem prevention	Self-directed and anticipatory action to prevent the reoccurrence of work problems (Frese & Fay, 2001)	Try to find the root cause of things that go wrong
Proactive strategic behavior (HO)	Taking control of, and causing change in, the broader organization's strategy and its fit with the external environment	
Strategic scanning	Proactively surveying the organization's environment to identify ways to ensure a fit between the organization and its environment, such as identifying ways the organization might respond to emerging markets or actively searching the environment for future organizational threats and opportunities	Actively scan the environment to see how what is happening might affect organization in the future
Issue selling credibility	Influencing the formation of a strategy in organizations by making others aware of particular issues (Dutton & Ashford, 1993); calling an organization's attention to key trends, developments, and events that have implications for its performance (Morrison & Phelps, 1999, p. 404)	Positive track record for selling issues

(continued)

Table 1 (continued)

Behavior and HO Category	Definition From Original Authors	Illustrative Behavior
Issue selling willingness	Influencing the formation of a strategy in organizations by giving the time, energy, and effort into behaviors to ensure key decision makers in the organization know the issues (Ashford, Rothbard, Piderit, & Dutton, 1998)	Amount of time willing to devote to selling this issue
Proactive person-environment fit behavior (HO)	Changing oneself or the situation to achieve greater compatibility between one's own attributes and the organizational environment	
Feedback inquiry	Directly asking for feedback from others; a type of proactive feedback seeking in which employees engage in voluntary and anticipatory actions to obtain information about their behavior (Ashford & Black, 1996; Ashford, Blatt, & Van de Walle, 2003)	Seek feedback from supervisor about work performance
Feedback monitoring	Using as feedback the information obtained from actively monitoring the situation and others' behavior (Ashford & Black, 1996; Ashford et al., 2003); is considered a type of proactive feedback seeking	Observe what performance behaviors the boss rewards and use this as feedback on one's own performance
Job change negotiation	Explicit attempts to change one's job so that it better fits one's skills and abilities (Ashford & Black, 1996; Nicholson, 1984); a type of proactive socialization in which employees actively adjust to new job conditions (Jones, 1986), originally applied to newcomers, though equally applicable to all employees	Negotiate with others about task assignments and role expectations
Career initiative	Individual's active attempts to promote his or her career rather than a passive response to the job situation as given (Seibert, Kraimer, & Crant, 2001); engaging in career planning, skill development, and consultation with more senior personnel (Tharenou & Terry, 1998)	Engage in career path planning

a. References for the measures from which items are taken are outlined in the method section.

charge, the internal organizational environment is the intended target of impact of voice. Individual innovation (Scott & Bruce, 1994) is distinct from both taking charge and voice because of its emphasis on novelty, but it has in common with these behaviors the aim of influencing one's internal work environment. Finally, problem prevention focuses on dealing with the reoccurrence of challenges and barriers in the work environment; therefore, we also expect this construct to best fit within this higher-order category. In summary,

Hypothesis 2a: Taking charge, voice, individual innovation, and problem prevention will together identify a higher-order category of proactive behavior.

Changing the organization's fit with the external environment: Proactive strategic behavior. Issue selling and strategic scanning are self-initiated behaviors that are concerned with taking control of, and causing change in, the broader organization's strategy and its fit with the external environment. Issue selling involves managers proactively influencing the formation of strategy in organizations by making others aware of particular events or trends in the environment (Dutton & Ashford, 1993). Through bringing critical issues to the attention of leaders, issue selling aims to influence and change the strategy of an organization and ultimately its performance. Strategic scanning similarly has an organizational focus, being concerned with proactively improving the organization's fit with the environment, such as by identifying future organizational threats and opportunities. We propose that together these behaviors identify a higher-order category of behaviors, which we refer to as "proactive strategic behavior."

Like proactive work behavior, proactive strategic behavior aims to change the environment in some way. Both types of behavior also potentially enhance an organization's effectiveness. However, for proactive strategic behavior, the target of impact—the organization's fit with the environment—is wider in scope and more external in focus than internal organizational change. For example, Morrison and Phelps (1999) observed that "issue selling focuses on strategic issues, whereas taking charge focuses on the internal means for accomplishing organizational goals, such as work methods, policies, and procedures" (p. 404). The hypothesis is,

Hypothesis 2b: Strategic scanning and issue selling will together identify a higher-order category of proactive behavior.

Changing the individual's fit with the organizational environment: Proactive P-E fit behavior. We propose that proactive feedback seeking, proactive socialization, and career initiative identify a third higher-order category of behavior, which we refer to as "proactive P-E fit behavior." P-E fit refers to the compatibility of the attributes of a person with the situation (Caplan, 1987), such as whether the person's abilities fit the demands of the job (an example of person–job fit) or whether the values of the person are compatible with the organization (an example of person–organization fit). As has been recognized (Morrison, 1993), employees can take a proactive role in increasing their level of P-E fit, such as by seeking information about their performance in the situation.

Two types of compatibility have been identified as important to P-E fit (Edwards, 1996). The first is demand–abilities fit, which occurs when individuals have the knowledge, skills, and other resources demanded by the environment. A type of proactive behavior especially relevant to the demand–abilities fit perspective is proactive feedback seeking, which involves actively gathering information about one's behavior, either by directly asking for feedback (inquiry) or by actively monitoring the situation and others' behavior (monitoring). In both types of proactive feedback seeking, the aim is to gather information to better respond to the demands of the environment and thereby perform more effectively within the context (Ashford & Black, 1996). Thus, feedback seeking is an important way in which individuals can gain greater clarity about what others expect of them so they can better adapt to the requirements of the situation.

A second type of compatibility is supplies–values fit, which occurs when the environment supplies the attributes desired or valued by an individual. A type of proactive behavior especially relevant to achieving a better “supply” from the environment is job change negotiation, a form of proactive socialization in which individuals attempt to change their job so that it better fits their skills, abilities, and preferences (Ashford & Black, 1996; Nicholson, 1984). It involves, for example, negotiating task assignments, role expectations, and desirable job changes.

A further proactive behavior that can enhance both types of compatibility is career initiative. Career initiative includes proactive behaviors such as career planning, skill development, and consultation (Seibert, Kraimer, & Crant, 2001; Tharenou & Terry, 1998). These behaviors involve intervening in and sculpting one’s career instead of only reacting to opportunities. They are relevant to P-E fit because they focus on longer-term compatibility between the organization’s requirements and the individual’s career expectations and preferences.

In summary, proactive P-E fit behavior refers to self-initiated behavior that aims to change oneself or the situation to achieve greater compatibility between one’s own attributes and the organizational environment. Such behavior is distinct from the two other higher-order categories of behavior because it has a much stronger emphasis on changing the self rather than the situation. Even job-role negotiation, although concerned with changing the job, is about changing the job in relation to one’s own abilities, skills, and preferences. Our hypothesis is,

Hypothesis 2c: Proactive feedback seeking (feedback monitoring, feedback inquiry), job change negotiation, and career initiative will together identify a higher-order category of proactive behavior.

Antecedents of proactive behavior. Our third goal is to investigate antecedents of the proactive behaviors and, in so doing, to enhance our understanding of their commonalities and points of difference. To achieve this, we include antecedents that we expect to predict all behaviors as well as antecedents that would predict only some. We also investigate the consistency of the relationships within the higher-order category. If the higher-order representation is meaningful, the antecedents should have reasonably similar relationships with behaviors in the same broad category (Marsh, Ellis, & Craven, 2002; Marsh & Jackson, 1999).

Predictors of all proactive behaviors. First, being defined as a disposition toward taking action to influence one’s environment and bring about change (Bateman & Crant, 1993), proactive personality should positively predict all proactive behaviors. Indeed, proactive personality has been shown to predict proactive problem solving (Parker et al., 2006) and individual innovation (Seibert et al., 2001) as well as more strategic proactive behaviors such as entrepreneurship (Crant, 1996) and proactive P-E fit behaviors, such as career initiative (Seibert et al., 2001). Second, consideration of future consequences refers to individual differences in the extent to which one considers distant versus immediate consequences (Strathman, Gleicher, Boninger, & Edwards, 1994). Some individuals believe certain behaviors are worthwhile because of future benefits, even if the immediate outcome is reasonably undesirable, whereas others are more concerned with maximizing immediate benefits than with considering future consequences. These differences can significantly affect individuals’

choice of health-related behavior (Orbell, Perugini, & Rakow, 2004). As proactive behavior involves anticipatory and future-focused action, individuals high in consideration of future consequences should display proactivity across many domains.

Third, we propose learning goal orientation, or one's emphasis on mastery of new situations (Dweck, 1986), as an antecedent of all proactive behaviors. Individuals with a strong learning orientation are likely to view proactive action as worthwhile, seeing challenging situations as a development opportunity and setting higher goals in these situations (Sujan, Weitz, & Kumar, 1994). Consistent with these ideas, Janssen and Van Yperen (2004) found that a learning goal orientation was positively related to innovative job performance. Individuals with a learning goal orientation are also likely to see proactive P-E fit behaviors as important because they provide a source of mastery. For example, a learning goal orientation enhances one's interest in feedback seeking (Van de Walle & Cummings, 1997) and one's response to feedback, seeing it as information about progress and as diagnostic cues for change (Tuckey, Brewer, & Williamson, 2002). In summary, our hypothesis is,

Hypothesis 3: Proactive personality, consideration of future consequences, and learning goal orientation will positively predict all proactive behaviors.

Predictors of specific proactive behaviors. We propose that conscientiousness will predict proactive P-E fit behaviors only. Conscientiousness has a large achievement or "industrious" element, which is about being hardworking and resourceful as well as being dependable and thorough (Roberts, Chernysheako, Stark, & Goldberg, 2005). Conscientious individuals, with their desire to be dependable, will want to achieve a good fit within the organization. Consistent with this reasoning, conscientiousness has been linked to proactive P-E fit behaviors, such as career planning (Carless & Bernath, 2007) and information seeking (Tidwell & Sias, 2005). We do not expect conscientiousness to predict proactive work behaviors or proactive strategic behaviors. Although conscientiousness drives effort to better fit within the work environment, it does not necessarily direct effort toward more personally "risky" behaviors that change the environment, such as challenging the status quo or selling controversial issues. Conscientious individuals are cautious and tend to think carefully before acting (Costa & McCrae, 1992). Moreover, the dependability element of conscientiousness entails an appreciation for rules, which can stifle externally focused proactive behavior (Tett, 1998).

Rather than conscientiousness, we propose that individual differences in role breadth self-efficacy and felt responsibility for change will be important for proactive work behaviors and proactive strategic behaviors. First, engaging in behavior aimed at changing the external environment, which is recognized as potentially risky to the individual, is likely to involve a decision process in which the individual assesses the likely outcomes of these behaviors (Parker et al., 2006). Self-efficacy is important because it raises one's feelings of control and the perceived likelihood of success (Morrison & Phelps, 1999). It also leads people to persist more (Lent, Brown, & Larkin, 1987) as well as choose more difficult goals (Locke & Latham, 1990), both of which are important for bringing about environmental change. In particular, we propose the importance of role breadth self-efficacy, which refers to one's perceived capability of carrying out a range of proactive, interpersonal, and integrative activities beyond the prescribed technical core (Parker, 1998). Role breadth self-efficacy has been shown to predict

proactive job performance (Griffin et al., 2007; Ohly & Fritz, 2007), suggesting improvements (Axtell et al., 2000), and proactive problem solving (Parker et al., 2006).

Second, it has been suggested (Frese & Fay, 2001; Parker et al., 2006) that one "approaches" proactive behavior because this behavior is important for fulfilling one's responsibilities, goals, or aspirations. Reflecting this process, we propose felt responsibility for change, or one's belief that one is personally obligated to bring about environmental change (Morrison & Phelps, 1999), as an important predictor of proactive behaviors that change the situation. Morrison and Phelps (1999) argued that those with high felt responsibility for change will perceive behaviors such as taking charge because they provide a sense of personal satisfaction. Felt responsibility for change predicts taking charge (Morrison & Phelps, 1999) as well as voice and continuous improvement (Fuller, Marler, & Hester, 2006). Our hypothesis is,

Hypothesis 4: Conscientiousness will positively predict proactive P-E fit behaviors, whereas role breadth self-efficacy and felt responsibility for change will positively predict proactive work behaviors and proactive strategic behaviors.

The final predictor variable we consider is performance goal orientation, which refers to an emphasis on demonstrating competence and validating worth by seeking favorable judgments, and avoiding negative judgments, about one's performance. A performance orientation tends to promote ego-focused and defensive behaviors, such as withdrawing in the face of obstacles (Button, Mathieu, & Zajac, 1996) and responding to difficulty with off-task thoughts (Colquitt & Simmering, 1998). As such, high performance goal orientation individuals are unlikely to engage in the more challenging behaviors associated with trying to change the way things are done or the broader strategy. Indeed, they are likely to avoid such behaviors because a lack of success might lead to a questioning of their ability. As such, we expect performance goal orientation to inhibit proactive work behaviors and proactive strategic behaviors.

Regarding proactive P-E fit behaviors, on one hand, individuals with a high performance orientation will be motivated to fit well with their environment because a good fit suggests success and competence, whereas a poor fit can suggest a lack of competence. On the other hand, they will also want to manage the achievement of such fit in ways that are not threatening to their ego. Directly asking for feedback, initiating career conversations with senior staff, and negotiating work roles all involve putting oneself on the line and are therefore likely to be risky to individuals who are strongly concerned with demonstrating their self-worth. Ashford, Blatt, and Van de Walle (2003) suggested that when individuals with a high performance goal orientation perceive that seeking feedback will make them look bad, they are less likely to seek feedback via inquiry, which is a more public feedback-seeking strategy, than via monitoring, which is indirect and private. Our prediction is, therefore, that individuals with a performance goal orientation are likely to engage in feedback monitoring, but not feedback inquiry or career initiative, because monitoring is a way of achieving fit while also protecting one's ego. The hypothesis is,

Hypothesis 5: Performance goal orientation will negatively predict all proactive work behaviors and proactive strategic behaviors and will positively predict feedback monitoring.

Method

Sample and Procedure

The sample was Australian managers who worked full-time in middle- to senior-level management positions in a range of industries from both the public and private sectors, including both production and service industries. We chose managers as our focus because we expected that proactive behaviors would be both possible and important. Managers typically possess sufficient autonomy to engage in proactive behavior (e.g., Griffin et al., 2007) and are often rewarded for doing so (e.g., Grant & Ashford, 2008). All of the managers were enrolled in a part-time executive master's of business administration (MBA) course. Most worked full-time, and each manager had on average 8 years of experience from a minimum of one major functional area (accounting, finance, general management, human resources, information technology, marketing, production). The average age of the sample was 35 years (range = 26 to 50; $SD = 5.07$), and 72% were men. The average tenure in the organization was 4.63 years ($SD = 4.36$). More than half (58%) had a degree as their highest educational qualification, and 31% had an additional qualification beyond the degree (e.g., graduate certificate or diploma, master's, PhD).

A survey was handed out to the managers prior to the beginning of the final year of the part-time MBA during orientation. Participants returned the survey in a sealed envelope to the second author. All managers completed the survey because it was strongly recommended as part of course participation. Most managers (98%) gave informed consent to use the data for research. Participants were informed that nonconsent did not in any way affect their role as MBA students. The second author also informed participants that although the surveys were not anonymous (because participants subsequently received feedback on their personality as part of a teaching session), the data were confidential to the researchers (no one else ever saw completed surveys or individual profiles). Participants were also assured that the researchers were not involved in any course assessment.

The final sample available differed in size depending on the hypotheses. Missing data were deleted listwise. For the confirmatory factor analyses (CFAs) conducted to test Hypotheses 1, 2a, 2b, and 2c, managers from two consecutive years ($n = 303$ from one year and $n = 319$ from the subsequent year) were included to achieve sufficient sample size (total $N = 622$). For the tests of Hypotheses 3 to 5 regarding antecedents, managers from just the first sample were used ($n = 303$) because the relevant antecedent data were collected only at that time.

Measures

In previous research, the various proactive behaviors have been operationalized in different ways. For example, taking charge has typically been assessed via supervisor reports, whereas voice has been assessed using self-assessments. We collected self-report data in the current study only so that any differences between the concepts could not be attributed to differences in operationalization. One drawback of self-ratings is that responses can be affected by a desire to put forward socially acceptable responses. To minimize social desirability,

individuals were reminded several times throughout the survey to “rate how you actually behave and not how you think you should behave.” In addition, individuals were repeatedly reassured throughout administration that their survey data were confidential and that nobody except the researchers would see their personal responses. These procedures are consistent with recommendations by Podsakoff, MacKenzie, Lee, and Podsakoff (2003) to reduce common-method variance.

Items from published scales were used to assess the concepts. Where necessary, we adapted the item wording to fit with a set of consistent item stems and response scales. A 5-point Likert-type response scale was used for all measures (for item stems and scale anchors, see Note a to Table 2). Some of the existing scales were shortened to prevent survey fatigue (Gosling, Rentfrow, & Swann, 2003). Without shortening, the number of items required to assess proactive behavior and the antecedents would have been more than 100, which was too many given their common theme. Thus, to balance the goals of minimizing response bias (Rogelberg & Stanton, 2007) and maintaining construct validity (Nunnally, 1976), all measures consisted of three to five items. For each construct, we selected the highest-loading items from established measures. Face validity of the items was also checked against original construct definitions. The internal reliabilities (Cronbach’s α) of the final scales were all above .70 (see the diagonal in Table 3). The full set of proactive items and the response scales are listed in Table 2.

Proactive work behaviors. Taking charge items from Morrison and Phelps (1999) were adapted to be self-report rather than supervisor ratings. Four items with the highest factor loading were selected. Voice items were selected from Van Dyne and LePine (1998). As a complex range of factor loadings were provided by these authors across time and multiple raters, and as all were high, we selected four items that were most consistent with the construct definition.⁴ Individual innovation was assessed with three of Scott and Bruce’s (1994) six-item scale, which they found to correlate significantly with an objective, archival measure of innovative history (total number of invention disclosures filed by an individual divided by organizational tenure). Factor loadings were not reported, so we selected items that focused on generating and promoting innovation because this behavior is most distinctive to innovation (the other items focus on implementation and hence potentially overlap with the concept of taking charge). Problem prevention was assessed with three items we developed that focused on achieving continual systems improvement through preventing problems. Because this scale was new, we examined its validity by relating it to participants’ functional experience. We expected that problem prevention behaviors would be higher among individuals who had experience in functional roles that required systematic problem solving to ensure business flow. This was the case. Thus, problem prevention significantly correlated with job experience in logistics, strategy and planning, operations, and general management. As one would expect, problem prevention did not correlate significantly with, for example, experience in accounting, auditing, finance, or sales.

Proactive strategic behaviors. *Strategic scanning* was assessed with three items we developed to assess this concept. For validity purposes, we examined the correlation between strategic scanning and job experience. As expected, strategic scanning was significantly correlated with experience in strategy and planning; no other proactive behavior included in the

Table 2
Item Loadings From Exploratory Factor Analysis of Items

(Item Stem) ^a	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11
<i>Issue selling willingness (How much . . .)</i>											
Effort would you be willing to devote to selling this issue in your organization?	.96										
Energy would you be willing to devote to selling this issue in your organization?	.95										
Time would you be willing to devote selling this issue in your organization?	.94										
Issue selling credibility: (Do you agree with or disagree with . . .)		.85									
I have a positive track record for selling issues.		.77									
I have been successful in the past in selling issues in organizations.		.75									
I am known as a successful issue seller.											
<i>Strategic scanning: (How frequently do you . . .)</i>											
Actively scan the environment to see what is happening might affect your organization in the future?			.88								
Identify long-term opportunities and threats for the company?			.73								
Anticipate organization changes that might be needed in the light of developments in the environment (e.g., markets, technology)?			.61								
<i>Career initiative: (Do you agree with or disagree with . . .)</i>											
I have discussed my aspirations with a senior person in the organization.				.85							
I have discussed my career prospects with someone with more experience in the organization.				.85							
I have engaged in career path planning.				.55							
<i>Problem prevention: (How frequently do you . . .)</i>											
Try to develop procedures and systems that are effective in the long term, even if they slow things down to begin with?					.75						
Try to find the root cause of things that go wrong?					.64						
Spend time planning how to prevent reoccurring problems?					.55						
<i>Feedback monitoring: (How frequently do you . . .)</i>											
Observe the characteristics of people who are rewarded by your supervisor and use this information?						.79					
Observe what performance behaviors your boss rewards and use this as feedback on your own performance?						.70					
Pay attention to how your boss acts toward you in order to understand how s/he perceives and evaluates your work performance?						.66					

(continued)

Table 2 (continued)

(Item Stem) ^a	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11
<i>Individual innovation: (How frequently do you . . .)</i>											
Generate creative ideas?						.71					
Search out new techniques, technologies and/or product ideas?						.66					
Promote and champion ideas to others?						.49					
<i>Voice: (How frequently do you . . .)</i>											
Communicate your views about work issues to others in the workplace, even if your views differ and others disagree with you?							.71				
Speak up and encourage others in the workplace to get involved with issues that affect you?							.61				
Keep well informed about issues where your opinion might be useful to your workplace?							.43				
Speak up with new ideas or changes in procedures?							.42				
<i>Job change negotiation: (To what extent do you . . .)</i>											
Negotiate with others about your task assignments and role expectations?								.86			
Negotiate with others (e.g., supervisor, coworkers) about the demands placed on you?								.61			
Negotiate with others (e.g., supervisor, coworkers) about desirable job changes?									.48		
<i>Taking charge: (How frequently do you . . .)</i>											
Try to bring about improved procedures in your workplace?										.71	
Try to institute new work methods that are more effective?										.69	
Try to implement solutions to pressing organization problems?					.42					.34	
<i>Feedback inquiry: (How frequently do you . . .)</i>											
Seek feedback from your supervisor about your work performance?											.93
Seek feedback from your supervisor about potential for advancement within your company?											.49
Seek information from your coworkers about your work performance?											.48

Note: Loadings < .40 are not presented here.

a. Voice, taking charge, individual innovation, problem prevention, strategic scanning, feedback monitoring, and feedback inquiry had a response scale ranging from 1 (very infrequently) to 5 (very frequently). Job change negotiation had a response scale from 1 (to no extent) to 5 (to a great extent). Issue selling willingness had a response scale ranging from 1 (not at all) to 5 (a great deal). Issue selling credibility and career initiative had a response scale from 1 (strongly disagree) to 5 (strongly agree).

Table 3
Correlations Among Proactive Behaviors and Among Proactive Behaviors and Antecedents

Model No.	Type	Model Description	χ^2	df	Normed χ^2	RMSEA	NNFI	CFI	IFI	χ^2 Difference
M1	FO	One-factor model in which all proactive behavior items load on one underlying proactive factor	8670.14	528	16.24	.16	.62	.64	.64	M1 vs. M3A = 7519.31, <i>df</i> = 56, <i>p</i> < .05; M3A better
M2	FO	An 11-factor orthogonal model in which each factor is distinct and uncorrelated from each other; suggested the proactive behaviors have nothing in common with each other	2843.18	527	5.39	.10	.89	.90	.90	M2 vs. M3A = 1692.35, <i>df</i> = 55, <i>p</i> < .05; M3A better
M3A	FO	An 11-factor oblique model in which each factor is distinct from each other (same as Model 2), albeit correlated	1150.83	472	2.43	.05	.96	.97	.97	M3A vs. M6 = 230.96, <i>df</i> = 41, <i>p</i> < .05; M3A better
M3B	FO	An 11-factor oblique model in which problem prevention and taking charge form a single factor but all other concepts are distinct from each other and intercorrelated	1341.30	482	2.78	.05	.96	.96	.96	M3A vs. M3B = 190.47, <i>df</i> = 10, <i>p</i> < .05; M3A better
M3C	FO	An 11-factor oblique model in which individual innovation and taking charge form a single factor but all other concepts are distinct from each other and intercorrelated	1367.02	482	2.83	.06	.95	.96	.96	M3A vs. M3C = 216.19, <i>df</i> = 10, <i>p</i> < .05; M3A better
M4	HO	An 11-factor oblique model with one HO factor on which all the 11 factors load; same as M3A with 1 HO factor	1660.90	516	3.21	.06	.94	.95	.95	M4 vs. M6 = 279.11, <i>df</i> = 3, <i>p</i> < .05; M6 better
M5	HO	An 11-factor oblique model with two HO factors: work and strategic combined and P-E fit; same as M3A with 2 HO factors	1433.59	515	2.78	.06	.96	.96	.96	M5 vs. M6 = 51.80, <i>df</i> = 2, <i>p</i> < .05; M6 better
M6	HO	An 11-factor oblique model with the hypothesized three HO factors (work, strategic, P-E fit); same as M3A with 3 HO factors	1381.79	513	2.69	.05	.96	.96	.96	—

Note: *N* = 622. FO = first-order model; HO = higher-order model; RMSEA = root mean square error of approximation; NNFI = non-normed fit index; CFI = comparative fit index; IFI = incremental fit index; P-E = person-environment.

study correlated as strongly with this experience variable. Strategic scanning was also higher for those with experience in other functions with a longer-term planning emphasis, such as marketing, general management, and research and development, but was not correlated with experience in professions such as law and accounting that have a retrospective focus.

Issue selling was assessed with Ashford, Rothbard, Piderit, and Dutton's (1998) two measures of this concept. Consistent with Ashford et al., the instructions for both measures explained that issue selling is a strategic process that involves "getting the time and attention of the critical decision makers in their organization on an issue that is important to the future success of the organization." The first measure, issue selling willingness, tapped how much time, energy, and effort the individual would put into selling strategic issues. Participants were instructed to "think about a general issue that you believe is very important to the future success of your organization (such as a problem or an emerging opportunity) that you feel should be heard or acted upon." Because we expected that participants might think of issues that were not very strategic, we asked them to categorize their issue into one of five categories, such as changes in the external environment (e.g., technological, market change, customer dissatisfaction) or internal structural or procedural issues (e.g., inefficiencies). We then weighted the willingness scores such that higher scores were received for more strategic issues focused on aligning the organization with the external environment (e.g., technology or market changes in the external environment, external opportunities such as strategic alliances or a new market). The second measure was issue selling credibility, which captures the extent of success in an individual's previous selling behaviors.

Proactive P-E fit behaviors. Proactive feedback seeking was assessed with established measures from Ashford (1986). Specifically, feedback monitoring was measured with three items assessing the frequency of this behavior, as was *feedback inquiry*. *Career initiative* was assessed with three of the highest loading items from Tharenou and Terry (1998) that have also been extensively used with Seibert and colleagues (1999; Seibert et al., 2001). *Job change negotiation* was assessed with the validated measure from Ashford and Black (1996). Items were adapted from past to present tense so that they were applicable to all respondents rather than only to newcomers.

Antecedents. Each of the antecedent measures were assessed on a 5-point Likert measure from 1 (*strongly disagree*) to 5 (*strongly agree*). Proactive personality was assessed with four of the highest loading items from Bateman and Crant's (1993) measure. An example item is, "I am always looking for better ways to do things." Consideration of future consequences was assessed with two items from the measure developed by Strathman et al. (1994). An example item is, "I consider how things might be in the future, and try to influence those things with my day to day behavior." Learning goal orientation and performance goal orientation were assessed using four items each from the scales developed by Button et al. (1996). Example items for learning goal orientation and performance goal orientation are, "I prefer to work on tasks that force me to learn new things" and "The things I enjoy the most are the things I do best," respectively. Conscientiousness was assessed with the 12-item scale from the NEO Five-Factor Inventory (Costa & McCrae, 1992). Role breadth self-efficacy was assessed with four of the highest loading items from Parker (1998), an example item being, how confident

would you be if you were asked to “design new work procedures for your work area?” Felt responsibility for change was assessed with three items from Morrison and Phelps (1999). An illustrative item is, “I feel a personal sense of responsibility to bring about change at work.” The diagonal of Table 3 shows the alpha coefficients for the final antecedent scales.

Results

To assess whether the various proactive behaviors were distinct from each other (Hypothesis 1), we first conducted an exploratory factor analysis (EFA) of the items using maximum likelihood extraction with varimax rotation. One of the taking charge items (“try to introduce new structures, technologies, or approaches to improve efficiency”) had its highest loading on the individual innovation scale and hence was excluded from further analysis. Table 2 shows the loadings for the final 11-factor solution, which accounted for 63% of the variance. As can be seen, the variables are defined by distinct items, consistent with Hypothesis 1. However, there is some overlap, as suggested by the relatively low loadings for some items.

To compare alternative structures, we conducted a series of CFAs using LISREL 8.5 (Jöreskog & Sörbom, 1996) with maximum likelihood estimation. Fit statistics for the various factor structures are shown in Table 4. A model in which all items loaded on a single factor (Model M1) had a very poor fit to the data, suggesting that the different concepts do not represent just one factor. Model M2, in which each item loaded only on its hypothesized factor and the latent variables were orthogonal, was also a poor fit. Model M3A, in which each item loaded on the hypothesized factor and the latent variables were allowed to intercorrelate with each other, provided a very good fit to the data, and all factor loadings for this model were statistically significant and greater than .40. Nevertheless, in Model 3A, intercorrelations among some of the latent factors were high, particularly between the latent variables of taking charge and problem prevention ($r = .72$) and taking charge and individual innovation ($r = .72$). To test whether these high intercorrelations reflect a lack of differentiation between behaviors, we investigated models in which these very correlated behaviors were collapsed into a single variable (see Model 3B and Model 3C, Table 4). In all cases, the difference in chi-square statistics suggested Model 3A was a better fit. In sum, the CFA statistics suggest that the proactive behaviors are separate constructs, consistent with EFA findings and Hypothesis 1.

The high intercorrelations between some proactive behaviors suggests the possibility of a higher-order structure. Indeed, it is relevant to consider a higher-order model only if first-order factors are correlated (Bollen, 1989; Marsh & Jackson, 1999). Because it is the most stringent approach, we first conducted an EFA based on scales rather than items. The resulting three-factor solution accounted for 58% of the variance and was consistent with the hypothesized structure. The first factor was defined by the proactive work role scales: taking charge (loading = .91), problem prevention (.63), individual innovation (.51), and voice (.45). The second factor was defined by each of the proactive P-E fit scales: feedback inquiry (.78), feedback monitoring (.61), job change negotiation (.47), and career initiative (.45). The third factor was defined by strategic scanning (.60), issue selling willingness (.49), and issue selling credibility (.47). There were no cross-loadings greater than .40 for any scale.

Table 4
Fit Indices for First-Order and Higher-Order Models

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. Taking charge	4.00	0.67	.83																	
2. Individual innovation	3.81	0.74	.58**	.76																
3. Problem prevention	3.87	0.71	.61**	.41**	.75															
4. Voice	4.06	0.63	.56**	.45**	.37**	.75														
5. Feedback inquiry	3.35	0.87	.20**	.16**	.25**	.24**	.76													
6. Feedback monitoring	3.66	0.82	.05	.12**	.14**	.11*	.48**	.79												
7. Job change negotiation	3.67	0.71	.30**	.28**	.30**	.32**	.40**	.33**	.74											
8. Career initiative	3.85	0.96	.11**	.07	.11*	.17**	.39**	.24*	.23**	.80										
9. Issue-selling credibility	3.58	0.78	.41**	.36**	.30**	.42**	.18**	.13**	.27**	.16**	.89									
10. Issue-selling willingness	6.19	2.41	.13**	.26**	.04	.17**	.10*	.05	.11*	.06	.32**	.97								
11. Strategic scanning	3.56	0.93	.37**	.46**	.34**	.36**	.19**	.15**	.25**	.15**	.39**	.31**	.85							
12. Proactive personality	3.82	0.65	.33**	.29**	.30**	.30**	.14*	.12*	.20**	.19**	.25**	.11	.14*	.75						
13. Consideration of future consequences	3.74	0.74	.17**	.20**	.22**	.18**	.19**	.23**	.19**	.26**	.23**	.22**	.21**	.31**	.69					
14. Learning goal orientation	4.35	0.52	.31**	.25**	.29**	.22**	.20**	.15*	.18**	.16**	.13*	.12*	.18**	.39**	.26**	.81				
15. Performance goal orientation	3.61	0.68	-.09	-.07	.04	-.07	.12*	.23**	.14*	.11	-.13*	-.11	-.12*	.18**	.11	.05	.70			
16. Role breadth self-efficacy	4.38	0.47	.43**	.33**	.33**	.39**	.05	.02	.20**	.10	.36**	.15**	.25**	.24**	.16**	.39**	-.10	.74		
17. Felt responsibility for change	4.14	0.61	.55**	.32**	.38**	.41**	.04	.00	.11	.16**	.31**	.11	.19**	.30**	.13*	.34**	-.02	.46**	.78	
18. Conscientiousness	3.96	0.49	.18**	.03	.19**	.12*	.23**	.20**	.23**	.19**	.25**	.00	.01	.25**	.28**	.14*	.10	.18**	.14*	.80

Note: proactive behaviors $N = 622$; proactive behaviors and antecedents $N = 303$. The diagonal shows Cronbach's alpha coefficients for each scale. * $p < .05$. ** $p < .01$.

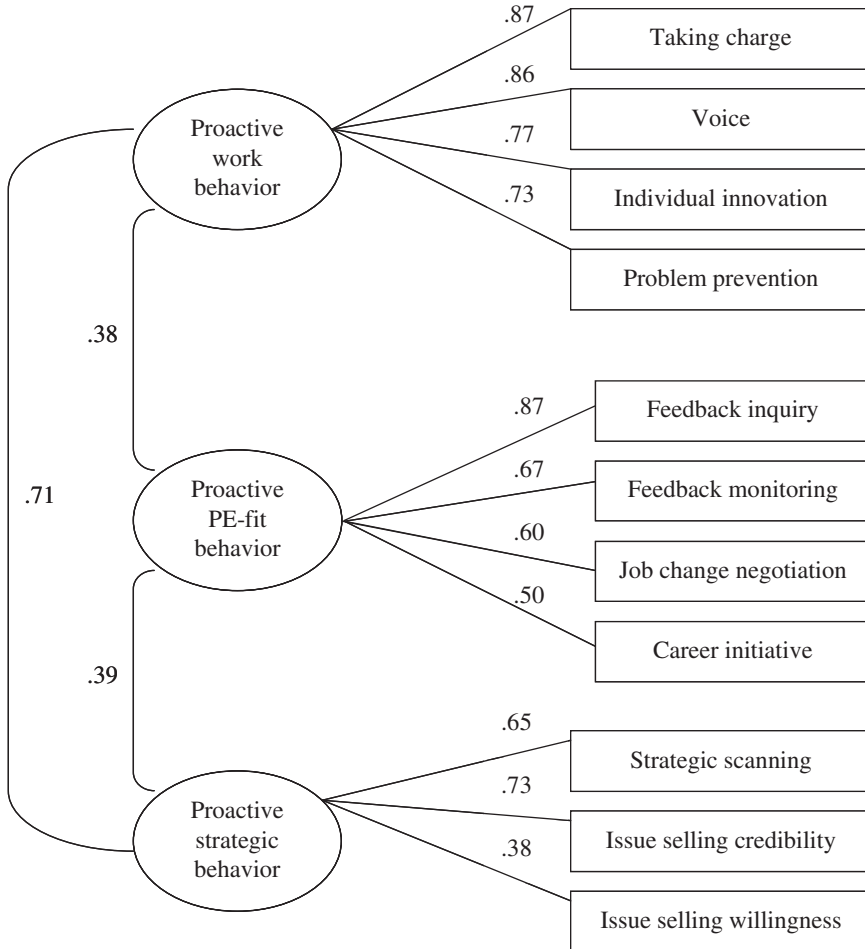
To further assess the structure, we used CFA to compare alternative models (see Table 4), including a model with a single higher-order category of behavior (Model M4); a plausible two-category model where proactive work behavior and proactive strategic behavior are combined into a single higher-order category, with a separate category of P-E fit behavior (Model M5); and a model with the hypothesized three higher-order categories (Model M6). As recommended by Marsh et al. (2002), in the higher-order models, correlations between first-order factors are constrained to be zero, and relations among these first-order factors are explained only in terms of higher-order categories. Model M6, the hypothesized three-category higher-order model, was the best fitting model and was a better fit than Model M4 or Model M5. For this model, all of the first-order factors had loadings greater than .35 on the higher-order dimensions (see Figure 1). Overall, the hypothesized higher-order structure is an acceptable representation of the data.

It is important to observe that the correlated first-order model (Model M3A), according to the chi-square difference statistic, provides better fit indices than Model M6, the three-category higher-order model. This situation is to be expected because higher-order models are nested under first-order models. Marsh et al. (2002) suggested that "if the fit of the higher-order model approaches that of the first-order model . . . then one might argue for the higher-order model on the basis of its greater parsimony" (p. 383). In the current case, both models appear acceptable. In circumstances where parsimony is preferable, the higher-order structure is a reasonable way of summarizing proactive behaviors. However, for a more nuanced understanding of different proactivity behaviors, the first-order structure is preferable.

To investigate the relationship between the antecedents and the proactive behaviors (Hypotheses 3 to 5), we conducted separate regression analyses with each proactive behavior as the dependent variable and the antecedents as independent variables (see Table 5).⁵ We chose this approach of separate analyses to predict each behavior because it enables a better map onto the existing literature, which has tended to consider one proactive outcome at a time. Hypothesis 3, regarding antecedents that would predict all proactive behaviors, was partially supported. Proactive personality predicted all proactive work behaviors as well as issue selling credibility, but it did not predict any P-E fit behaviors, nor strategic scanning or issue selling willingness. Consideration of future consequences was a significant predictor of most proactive behaviors. Prior to the entry of the mediating psychological states (role breadth self-efficacy and flexible role orientation), learning goal orientation predicted all proactive work behaviors except voice as well as two proactive P-E fit behaviors. Although each of these antecedents did not uniquely predict all behaviors, in most cases the zero-order correlations between these antecedents and proactivity were significant. In addition, each of the proactive behaviors was predicted by at least one of the three general antecedents in the regression analyses in Table 5.

Hypotheses 4 and 5 concerned more specific relationships. As proposed in Hypothesis 4, conscientiousness predicted most of the proactive P-E fit behaviors and, unexpectedly, issue selling credibility. Also, as proposed, role breadth self-efficacy and felt responsibility for change were significant predictors of all proactive work behaviors and half of the proactive strategic behaviors. As expected, these variables did not predict proactive P-E behaviors, with the one exception being that role breadth self-efficacy predicted job change negotiation. Although it was not the major purpose of the current study, it is worth noting that role breadth self-efficacy and felt responsibility for change appear to play a mediating role

Figure 1
Emerged Higher-Order Factor Model: A 12-Factor Orthogonal Model
With Three Higher-Order Categories of Proactive Behavior



Note: PE = person–environment.

between some of the dispositional antecedents and proactive work behavior. Finally, as predicted in Hypothesis 5, performance goal orientation was negatively associated with the proactive strategic behaviors and most proactive work behaviors yet, at the same time, was positively associated with feedback monitoring. It also predicted job change negotiation, which was unexpected.

Table 5
Relationships Among Antecedents and Types of Proactive Behavior

	Proactive Work Behavior				Proactive Strategic Behavior				Proactive Person-Environment Fit Behavior															
	Taking Charge		Individual Innovation		Problem Prevention		Voice		Issue Credibility		Strategic Scanning		Issue Selling Willingness		Feedback Inquiry		Feedback Monitoring		Job Change Negotiation		Career Initiative			
	$\beta 2$	$\beta 1$	$\beta 2$	$\beta 1$	$\beta 2$	$\beta 1$	$\beta 2$	$\beta 1$	$\beta 2$	$\beta 1$	$\beta 2$	$\beta 1$	$\beta 2$	$\beta 1$	$\beta 2$	$\beta 1$	$\beta 2$	$\beta 1$	$\beta 2$	$\beta 1$	$\beta 2$	$\beta 1$	$\beta 2$	
Step 1																								
Proactive personality	.15** (.26**)	.28** (.28**)	.23** (.24**)	.17** (.24**)	.14* (.20**)	.20** (.20**)	.14* (.20**)	.09 (.12)	.04 (.06)	.04 (.03)	.04 (-0.04)	.04 (-0.04)	.04 (-0.04)	.04 (-0.04)	.04 (-0.04)	.04 (-0.04)	.04 (-0.04)	.04 (-0.04)	.04 (-0.04)	.04 (-0.04)	.04 (-0.04)	.04 (-0.04)	.04 (-0.04)	.04 (-0.04)
Consideration of future consequences	.03 (.12*)	.13* (.07)	.07 (.08)	.08 (.08)	.14* (.14*)	.08 (.08)	.14* (.14*)	.19** (.19**)	.19** (.12**)	.12** (.09)	.09 (.14*)	.09 (.14*)	.09 (.14*)	.09 (.14*)	.09 (.14*)	.09 (.14*)	.09 (.14*)	.09 (.14*)	.09 (.14*)	.09 (.14*)	.09 (.14*)	.09 (.14*)	.09 (.14*)	.09 (.14*)
Learning goal orientation	.01 (.16**)	.04 (.13*)	.04 (.13*)	.04 (.13*)	.00 (.00)	-.05 (-0.05)	-.10 (-0.10)	.03 (.04)	.00 (.04)	.00 (.14*)	.16* (.16*)	.16* (.16*)	.16* (.16*)	.16* (.16*)	.16* (.16*)	.16* (.16*)	.16* (.16*)	.16* (.16*)	.16* (.16*)	.16* (.16*)	.16* (.16*)	.16* (.16*)	.16* (.16*)	.16* (.16*)
Performance goal orientation	-.08 (-0.14**)	-.09 (-0.13**)	-.01 (-0.03)	-.01 (-0.15**)	-.09 (-0.20**)	-.09 (-0.15**)	-.12* (-0.14*)	-.12* (-0.14*)	-.12* (-0.14*)	-.12* (-0.14*)	-.12* (-0.14*)	-.12* (-0.14*)	-.12* (-0.14*)	-.12* (-0.14*)	-.12* (-0.14*)	-.12* (-0.14*)	-.12* (-0.14*)	-.12* (-0.14*)	-.12* (-0.14*)	-.12* (-0.14*)	-.12* (-0.14*)	-.12* (-0.14*)	-.12* (-0.14*)	-.12* (-0.14*)
Conscientiousness	.04 (.08)	-.07 (-0.10)	.09 (.09)	.06 (.06)	.13* (.16**)	-.03 (-0.03)	-.07 (-0.07)	-.09 (-0.08)	-.09 (-0.08)	-.09 (-0.08)	.19** (.19**)	.19** (.19**)	.19** (.19**)	.19** (.19**)	.19** (.19**)	.19** (.19**)	.19** (.19**)	.19** (.19**)	.19** (.19**)	.19** (.19**)	.19** (.19**)	.19** (.19**)	.19** (.19**)	.19** (.19**)
Step 2																								
Role breadth self-efficacy	.15** (.15**)	.14* (.14*)	.14* (.14*)	.14* (.14*)	.23** (.23**)	.23** (.23**)	.23** (.23**)	.16** (.16**)	.10 (.10)	.10 (.10)	-.04 (-0.04)	-.04 (-0.04)	-.04 (-0.04)	-.04 (-0.04)	-.04 (-0.04)	-.04 (-0.04)	-.04 (-0.04)	-.04 (-0.04)	-.04 (-0.04)	-.04 (-0.04)	-.04 (-0.04)	-.04 (-0.04)	-.04 (-0.04)	-.04 (-0.04)
Felt responsibility for change	.42** (.42**)	.18** (.18**)	.22** (.22**)	.22** (.22**)	.15* (.15*)	.24** (.24**)	.24** (.24**)	.08 (.08)	.04 (.04)	.04 (.04)	-.03 (-0.03)	-.03 (-0.03)	-.03 (-0.03)	-.03 (-0.03)	-.03 (-0.03)	-.03 (-0.03)	-.03 (-0.03)	-.03 (-0.03)	-.03 (-0.03)	-.03 (-0.03)	-.03 (-0.03)	-.03 (-0.03)	-.03 (-0.03)	-.03 (-0.03)
Adjusted R ²	.35** (.15**)	.21** (.14**)	.22** (.13**)	.22** (.14**)	.22** (.14**)	.25** (.13**)	.25** (.14**)	.11** (.08**)	.06** (.05**)	.06** (.09**)	.09** (.10**)	.09** (.10**)	.09** (.10**)	.09** (.10**)	.09** (.10**)	.09** (.10**)	.09** (.10**)	.09** (.10**)	.09** (.10**)	.09** (.10**)	.09** (.10**)	.09** (.10**)	.09** (.10**)	.09** (.10**)
R ² change	.20** (.20**)	.06 (.06)	.08** (.08**)	.08** (.08**)	.12** (.12**)	.12** (.12**)	.08** (.08**)	.03** (.03**)	.01 (.01)	.01 (.01)	.00 (.00)	.00 (.00)	.00 (.00)	.00 (.00)	.00 (.00)	.00 (.00)	.00 (.00)	.00 (.00)	.00 (.00)	.00 (.00)	.00 (.00)	.00 (.00)	.00 (.00)	.00 (.00)

Note: $N = 303$. Values in parentheses are standardized beta weights (R^2) at Step 1 in the regression equation. Values not in parentheses are standardized beta weights in the final step (Step 2) of the regression equation.
* $p < .05$. ** $p < .01$.

A further aim of the antecedent analyses was to assess the construct adequacy of the higher-order structure by assessing the consistency of antecedents across behaviors within the same category. For the proactive work behaviors, the pattern of relationships was quite cohesive. Proactive personality, role breadth self-efficacy, and felt responsibility for change were consistent positive predictors across all of the proactive work behaviors; learning goal orientation positively predicted all of these work role behaviors except voice, and performance goal orientation was a consistent negative predictor for all except problem prevention. For proactive strategic behaviors, consideration for future consequences was a consistent positive predictor, performance goal orientation was a consistent negative predictor, and learning goal orientation was a consistent nonpredictor, though for most other predictors issue selling credibility differed from the other two proactive strategic behaviors. Finally, the pattern for proactive P-E fit behaviors shows some common patterns (e.g., proactive personality and felt responsibility for change were unimportant in all cases and conscientiousness was important for all but career initiative), but there were some inconsistencies with regard to the other antecedents, suggesting important differences among the various ways of achieving P-E fit.

Discussion

In a field where there has been considerable growth in the number of concepts, we set out to integrate and clarify the relationships among key proactive behaviors. Our approach was deliberately broad, encompassing behaviors from areas as diverse as organizational change, careers, and innovation. An initial, and important, conclusion is that each of the proactive behaviors we considered here appears to be empirically distinguishable, based on both EFAs and CFAs. These findings suggest that there are indeed differences among the types of proactive behavior assessed in this study and that researchers from different domains are not using completely overlapping concepts.

Nevertheless, although distinguishable from one another, there is some overlap among the concepts at both the item and construct levels. At the item level, one item loaded on more than one factor, suggesting the need for care choosing items in the future. At the construct level, some of the behaviors were highly correlated with each other. Higher-order structural analyses, in combination with analyses of relationships with antecedents, supported greater interrelations between proactive behaviors if they had a similar intended target of impact.

In particular, proactive work behavior is a reasonably clear higher-order category including taking charge, voice, individual innovation, and problem prevention. All of these behaviors concern taking control of, and aiming to bring about change within, the internal organization. For the most part, these behaviors had similar patterns of relationships with the antecedents. Proactive personality, role breadth self-efficacy, and felt responsibility for change were consistently positive predictors; learning goal orientation positively predicted all of these work role behaviors except voice; and performance goal orientation was a consistent negative predictor for all except problem prevention. Thus, there appear to be largely common processes underpinning these behaviors. It is interesting that limited attention has been given to these processes in some of the domains. For example, although self-efficacy has been identified as an important precursor of taking charge and similar behaviors (e.g.,

Axtell & Parker, 2003; Speier & Frese, 1997), it has received less attention as an influence on voice. Likewise, felt responsibility for change has been shown to predict taking charge (Morrison & Phelps, 1999) and voice (Fuller et al., 2006), yet it also appears to be important for innovation and problem prevention. The same argument applies to other antecedents. For example, an array of cognitively oriented variables (e.g., problem-solving style) has been shown to predict individual innovation (Unsworth & Parker, 2002), but such variables have not been investigated in relation to taking charge or voice.

The higher-order category of proactive strategic behavior was reasonably well identified by issue selling and strategic scanning. These behaviors were positively predicted by consideration of future consequences, which is not surprising given their focus on bringing about strategic change and alignment of the organization with its environment. Performance goal orientation was negatively associated with these behaviors, and learning goal orientation was a consistent nonpredictor. We recommend that future studies consider in this category other types of proactive strategic behavior, such as the dynamic strategies used by successful entrepreneurs (e.g., von Gelderen, Frese, & Thurik, 2000).

The higher-order category of proactive P-E fit behavior was reasonably well defined by those behaviors that are oriented toward achieving a better alignment between the individual and the organization, including feedback inquiry, feedback monitoring, job change negotiation, and career initiative. In addition to the higher-order structure supporting the grouping of these behaviors, they also had consistently moderately positive intercorrelations, and their antecedents were collectively quite different from those for the other proactive behaviors. In particular, proactive personality and felt responsibility for change were not important antecedents for any proactive P-E fit behavior; instead, as expected given its emphasis on achievement, conscientiousness played a bigger role. Proactivity in this domain thus appears to be driven by different motivations than proactivity in other spheres, which is perhaps not surprising given the greater emphasis on the self of these behaviors relative to proactive work behaviors or proactive strategic behaviors.

At the same time, however, there were some important ways that the proactive P-E fit behaviors are different from each other. In particular, although feedback inquiry was positively predicted by learning goal orientation, feedback monitoring was positively predicted by performance goal orientation. It appears that individuals with a strong performance goal orientation want to manage their P-E fit in indirect or covert ways that are the least “threatening” to their ego or, in Van de Walle’s (2003) terms, least costly for self-presentation. The two types of proactive feedback seeking appear to be quite distinct strategies, albeit with the same goal of obtaining performance feedback. We recommend further research on this issue, such as by examining indirect inquiry (Miller & Jablin, 1991), a third type of feedback seeking that involves indirect questions and using third parties to seek feedback. One would expect that those with strong performance orientations will also prefer this mode of obtaining feedback. A further difference is that, in contrast to the other P-E fit behaviors, job change negotiation was predicted by role breadth self-efficacy. We proposed earlier that job change negotiation is a “supply”-oriented form of P-E fit in which individuals attempt to change their job so that it better fits their skills and preferences. As such, it is more oriented toward changing the environment than the other P-E fit behaviors, which may explain why self-efficacy is important.

In summary, there appears to be a reasonably clear higher-order structure of proactive behavior according to intended target of impact. Although there are differences among

behaviors within categories, this higher-order framework is a useful starting point for identifying synergies and common processes across the related behaviors, especially because it is likely that common goals underpin the higher-order categories of behavior. From a methodological perspective, assessing a more restricted set of items focused on the higher-order dimensions might be sufficient when survey space is restricted and one's interest in proactivity is broad. At the same time, considering higher-level categories will sometimes be inadequate and will gloss over important differences. The choice between a more parsimonious set of higher-order measures and measures of more fine-grained behaviors will depend on the research question. This argument about specificity is analogous to the personality literature about bandwidth. For example, narrow bandwidth personality facets tend to be more predictive (Saucier & Ostendorf, 1999), but there are nevertheless advantages to focusing on "the big five."

In practical terms, an advantage of the "big three" proactive dimensions is that, rather than presenting managers with many proactive concepts that sound similar yet have different labels, one can use the higher-order framework to help structure thinking. Focusing managers' attention on understanding 3 broad types of proactivity with different targets of impact, rather than 15 or more, might help to more readily transfer research findings into practice. At the same time, the finding that the various concepts were distinct from each other alerts managers to the idea that staff can be proactive in one domain without being proactive in another. These findings can be used to counter halo effects. For example, managers might assume, incorrectly, that individuals who are engaging in proactive P-E fit behavior, which is perhaps the most visible, will also be proactive in improving the organization.

Although the main purpose of the antecedent analyses was to help us understand similarities and differences across several types of proactive behavior, these analyses also have implications for understanding the antecedents of proactivity. For example, proactive personality did not predict any of the proactive P-E behaviors, which is surprising given it has been shown to predict career initiative (Seibert et al., 2001). Closer inspection suggests the findings between the current study and this previous study are not so different (if our study, like Seibert et al. [2001], had included proactive personality as the only antecedent, we too would have concluded it was a significant predictor). The bandwidth of proactive personality appears too narrow for it to reliably predict proactive behaviors across all domains. Proactive personality focuses on seizing control to bring about environmental change, whereas proactive P-E fit behaviors are focused on taking control to achieve fit, which can be through changing the self rather than the environment.

Few studies have investigated the association between goal orientation and proactive behavior. Yet goal orientation appears to play a powerful role. Learning goal orientation predicted several proactive behaviors, which is perhaps not surprising given the high degree of effort, persistence, and recovery from setbacks that is required for proactive action. Even more intriguing is that performance goal orientation was negatively correlated with several proactive behaviors. Perhaps the stronger one's emphasis on demonstrating capability to protect and enhance self-worth, the more "risky" proactive behavior feels to that person. From a broader perspective, the current study suggests that if high levels of proactive work behavior or proactive strategic behavior are required, such as in the case of high-level executives, one approach is to select individuals with particular dispositions (e.g., proactive personality),

but another is to build individuals' role breadth self-efficacy and felt responsibility for change. Both of these motivational states were consistent and strong predictors of these behaviors. Previous evidence has found these states to be malleable (Axtell et al., 2000; Frese, Garst, & Fay, 2007; Parker, 1998, 2003), suggesting proactive behavior can be developed via these processes.

Study Limitations and Future Research

The current research relies on all self-report assessments, which means relationships could be inflated because of common-method variance. The conclusions could be strengthened with a multitrait-multimethod approach (Podsakoff et al., 2003). Nevertheless, we believe common-method variance is unlikely to be a major threat here. As discussed in the method section, we took steps in the design of the study to minimize biases. Moreover, to the extent that common-method variance is in operation, the differences among proactive behaviors would be obscured (Spector, 2006). Yet we found, using both EFAs and CFAs, differences among multiple proactive behaviors. Indeed, in relation to this point, the demonstration that all items are not just one factor has often been used as an argument against common-method variance (the Harman single-factor test; see Podsakoff et al., 2003). Common-method variance is more of an issue for the second part of the article, in which we investigated antecedents. However, in this respect, we showed differential relationships (e.g., proactive personality predicted some proactive behaviors but not others), which speaks against common-method variance (Spector, 2006). As Shadish, Cook, and Campbell (2002) recommended, given the enhanced complexities of multimethod approaches, often the most efficient process will be to first establish relationships with a mono-method study (as we have done here) and then, once established, to conduct further studies designed to control for the most likely biases.

The use of self-reports of proactive behavior has a further specific limitation, which is that we do not know if observers will be able to make the same distinctions in behavior. Individuals, more so than third-party observers, can often detect more fine-grained differences in their own actions (Lance et al., 1992; Lance et al., 1994). Further research is needed to ascertain whether observers can detect the same differences. At the same time, we advise caution with the use of observer ratings. In addition to some of the usual problems associated with using reports from third parties (e.g., halo effects; see Spector, 2006), proactive behavior often involves challenging the status quo and hence can be viewed negatively by supervisors or colleagues, rendering their ratings potentially less reliable than self-ratings (Frese & Fay, 2001). As Frese and Zapf (1999) suggested, in cases such as this, the job incumbent might be the most valid source of data.

The current research is also limited by its cross-sectional design, which means the findings concerning antecedents in particular need cautious interpretation. Having raised this issue, our main purpose was to clarify the relationships among multiple proactive behaviors, and we used relationships with theoretically derived antecedents to aid in this goal. A further limitation is the sample. We focused only on reasonably well-educated managers who were in an MBA program. Managers at this level typically have sufficient autonomy in their jobs to display proactive behavior. In other more constrained contexts, one might not observe the same degree of proactivity, nor the same degree of differentiation among proactive behaviors.

There remain several avenues for further inquiry. Existing research suggests proactive behaviors have different consequences, but just like studies on antecedents, most studies on outcomes tend to consider a single proactive behavior at a time. By including multiple related behaviors within the same study, one can identify the key drivers of particular outcomes. It is also important to consider additional proactive behaviors and how they might fit or extend the higher-order framework, such as proactive coping and proactive safety behavior. Further research may also identify unexplored proactive behaviors by expanding current constructs into different targets (Grant & Ashford, 2008). For example, the focus of taking charge may be expanded from the work focus to include bringing about strategic change (here, we focused on the behaviors as they are currently defined and operationalized). The higher-order structure supported in this article can be refined by considering it in relation to other behaviors. For example, as indicated earlier, personal initiative has been positioned as a cluster of behaviors (Frese & Fay, 2001), so perhaps this is a third-order, overarching construct. A related issue is that this study focused only on proactive behaviors that are constructive. However, employees can be proactively destructive (Moss, Valenzi, & Taggard, 2003). Campbell (2000), for example, suggested a paradox can occur when employees use their initiative in misguided ways.

We also encourage researchers to continue to compare proactive behaviors with broader models of work performance (Griffin et al., 2007), such as how proactive work behaviors are distinct from task performance, adaptive performance, and citizenship. Perhaps there are some settings where the distinctions among these behaviors are most important. There is also a relative lack of investigation into the processes underpinning proactive behaviors, such as whether proactivity is preceded by some kind of internal cost–benefit analysis (Ashford & Cummings, 1983; Crant, 2000) or is strongly driven by goals (Grant & Ashford, 2008). We hope that the integrative framework presented here will facilitate such theoretical extensions.

Notes

1. Additional elements have been included in the definition of some forms of proactive behavior. Frese and Fay (2001) included persistence as a defining element of personal initiative. Although being proactive can indeed involve persistence, persistence per se is not always proactive (e.g., one might be persistent at asking a supervisor for help). Being constructive and/or prosocial is also sometimes highlighted as a feature of proactive behavior (e.g., taking charge is defined as constructive). However, too much, or misguided, proactive behavior can also be dysfunctional and counterproductive (Bateman & Crant, 1993; Campbell, 2000).

2. Note that some dimensions of adaptive performance identified by Pulakos et al. (2000) fit closely with our definition of proactive behavior, such as the dimension of solving problems creatively (an example behavior is “developing innovative methods of obtaining resources”).

3. One concept we did not include was personal initiative, which, when assessed via self-report questionnaire, is highly correlated with proactive personality (which was included in our study as an antecedent). Fay and Frese (2001) reported a disattenuated correlation, corrected for unreliability, between proactive personality and personal initiative of .96.

4. We chose items that focused on the act of communicating, including speaking up and listening to ensure voicing opinions would be informative. We did not include items that were likely to overlap with other behaviors. For example, the item “speaks up in this group with ideas for new projects or changes in procedures” overlaps with taking charge.

5. The antecedents were placed into the regression in two steps. Step 1 was the dispositions; step 2 was the proactive psychological states. This approach was important given that many researchers postulate that proactive psychological states mediate the relationship between the dispositions and proactive behavior (Morrison & Phelps, 1999; Parker et al., 2006).

References

- Ashford, S. J. 1986. Feedback-seeking in individual adaptation: A resource perspective. *Academy of Management Journal*, 29: 465-487.
- Ashford, S. J., & Black, J. S. 1996. Proactivity during organizational entry: The role of desire for control. *Journal of Applied Psychology*, 81: 199-214.
- Ashford, S. J., Blatt, R., & Van de Walle, 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., Rothbard, N. P., Piderit, S. K., & Dutton, J. E. 1998. Out on a limb: The role of context and impression management in issue selling. *Administrative Science Quarterly*, 43: 23-57.
- Axtell, C. M., Holman, D. J., Unsworth, K. L., Wall, T. D., Waterson, P. E., & Harrington, E. 2000. Shopfloor innovation: Facilitating the suggestion and implementation of ideas. *Journal of Occupational and Organizational Psychology*, 73: 265-285.
- Axtell, C. M., & Parker, S. K. 2003. Promoting role breadth self-efficacy through involvement, work redesign and training. *Human Relations*, 56: 112-131.
- Bateman, T. S., & Crant, J. M. 1993. The proactive component of organizational behavior: A measure and correlates. *Journal of Organizational Behavior*, 14: 103-118.
- Block, J. 1995. A contrarian view of the five-factor approach to personality description. *Psychological Bulletin*, 117: 187-215.
- Bollen, K. A. 1989. *Structural equations with latent variables*. New York: John Wiley.
- Button, S. B., Mathieu, J. E., & Zajac, D. M. 1996. Goal orientation in organizational research: A conceptual and empirical foundation. *Organizational Behavior and Human Decision Processes*, 67: 26-48.
- Campbell, D. J. 2000. The proactive employee: Managing workplace initiative. *Academy of Management Executive*, 14: 52-66.
- Caplan, R. D. 1987. Person-environment fit theory and organizations: Commensurate dimensions, time perspectives, and mechanisms. *Journal of Vocational Behavior*, 31: 248-267.
- Carless, S. A., & Bernath, L. 2007. Antecedents of intent to change careers among psychologists. *Journal of Career Development*, 33: 183-200.
- Colquitt, J. A., & Simmering, M. J. 1998. Conscientiousness, goal orientation, and motivation to learn during the learning process: A longitudinal study. *Journal of Applied Psychology*, 83: 654-665.
- Costa, P. T. J., & McCrae, R. R. 1992. *Revised NEO Personality Inventory and New Five-Factor Inventory: Professional manual*. Odessa, FL: Psychological Assessment Resources.
- Crant, J. M. 1996. The proactive personality scale as a predictor of entrepreneurial intentions. *Journal of Small Business Management*, 34: 42-49.
- Crant, J. M. 2000. Proactive behavior in organizations. *Journal of Management*, 26: 435-462.
- Den Hartog, D. N., & Belschak, F. D. 2007. Commitment, affect and initiative at work. *Journal of Occupational and Organizational Psychology*, 80: 601-622.
- Dutton, J. E., & Ashford, S. J. 1993. Selling issues to top management. *Academy of Management Review*, 18: 397-428.
- Dweck, C. S. 1986. Motivational processes affecting learning. *American Psychologist*, 41: 1040-1048.
- Edwards, J. R. 1996. An examination of competing versions of the person-environment fit approach to stress. *Academy of Management Journal*, 39: 292-339.
- Fay, D., & Frese, M. 2001. The concept of personal initiative: An overview of validity studies. *Human Performance*, 14: 97-124.
- Frese, M., & Fay, D. 2001. Personal initiative: An active performance concept for work in the 21st century. *Research in Organizational Behavior*, 23: 133-187.
- 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., & Zapf, D. 1999. On the importance of the objective environment in stress and attribution theory. Counterpoint to Perrewé and Zellars. *Journal of Organizational Behavior*, 20: 761-765.

- 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.
- Gosling, S. D., Rentfrow, P. J., & Swann, W. B. 2003. A very brief measure of the big-five personality domains. *Journal of Research in Personality*, 37: 504-528.
- Grant, A. M., & Ashford, S. J. 2008. The dynamics of proactivity at work. In B. M. Staw & A. P. Brief (Eds.), *Research in organizational behavior* (Vol. 28). New York: Elsevier.
- 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*, 5: 327- 347.
- Jannsen, O., & Van Yperen, M. W. 2004. Employees goal orientation, the quality of leader-member exchange, and the outcomes of job performance and job satisfaction. *Academy of Management Journal*, 47: 368-384.
- Jones, G. R. 1986. Socialization tactics, self, and newcomers' adjustments to organizations. *Academy of Management Journal*, 29: 262-279.
- Jöreskog, K. G., & Sörbom, D. 1996. *LISREL 8: Users reference guide*. Mooreville, IN: Scientific Software International.
- Lance, C. E., LaPointe, J. A., & Fiscaro, S. A. 1994. Test of three causal models of halo rater error. *Organizational Behavior and Human Decision Processes*, 57: 83-96.
- Lance, C. E., Teachout, M. S., & Donnelly, T. M. 1992. Specification of the criterion construct space: An application of hierarchical confirmatory factor analysis. *Journal of Applied Psychology*, 77: 437-452.
- Lent, R. W., Brown, S. D., & Larkin, K. C. 1987. Comparison of three theoretically derived variables in predicting career and academic behavior: Self-efficacy, interest congruence, and consequence thinking. *Journal of Counseling Psychology*, 34: 293-298.
- LePine, J. A., & Van Dyne, L. 1998. Predicting voice behavior in work groups. *Journal of Applied Psychology*, 83: 853-868.
- Locke, E. A., & Latham, G. P. 1990. *A theory of goal setting and task performance*. Englewood Cliffs, NJ: Prentice Hall.
- Marsh, H. W., Ellis, L., & Craven, R. G. 2002. How do preschool children feel about themselves? Unravelling measurement and multidimensional self-concept structure. *Developmental Psychology*, 38: 376-393.
- Marsh, H. W., & Jackson, S. A. 1999. Flow experience in sport: Construct validation of multidimensional, hierarchical state and trait responses. *Structural Equation Modeling*, 6: 343-371.
- Merriam-Webster Online Dictionary. n.d. Retrieved June 7, 2008, from <http://www.merriam-webster.com/>
- Miller, V. D., & Jablin, F. M. 1991. Information seeking during organizational entry: Influences, tactics and a model of the process. *Academy of Management Review*, 16: 92-120.
- Mirvis, P. H., & Hall, D. T. 1996. New organizational forms and the new career. In D. T. Hall & Associates (Eds.), *The career is dead, long live career: A relational approach to careers*: 72-101. San Francisco: Jossey-Bass.
- Morrison, E. W. 1993. Longitudinal study of the effects of information seeking on newcomer socialization. *Journal of Applied Psychology*, 78: 173-183.
- Morrison, E. W. 1994. Role definitions and organizational citizenship behavior: The importance of employees perspectives. *Academy of Management Journal*, 37: 1543-1562.
- Morrison, E. W. 2002. Newcomers' relationships: The role of social networks during socialization. *Academy of Management Journal*, 45: 1149-1160.
- Morrison, E. W., & Phelps, C. C. 1999. Taking charge at work: Extrarole efforts to initiate workplace change. *Academy of Management Journal*, 42: 403-419.
- Moss, S. E., Valenzi, E. R., & Taggard, W. 2003. Are you hiding from your boss? The development of a taxonomy and instrument to assess the feedback management behaviors of good and bad performers. *Journal of Management*, 29: 487-510.
- Neale, M., & Griffin, M. A. 2006. A model of self-held work roles and role transitions. *Human Performance*, 19: 23-41.
- Nicholson, N. 1984. A theory of work role transitions. *Administrative Science Quarterly*, 29: 172-191.
- Nunnally, J. C. 1976. *Psychometric theory* (2nd ed.). New York: McGraw-Hill.
- Ohly, S., & Fritz, C. 2007. Challenging the status quo: What motivates proactive behavior? *Journal of Occupational and Organizational Psychology*, 80: 623-629.

- Orbell, S., Perugini, M., & Rakow, T. 2004. Individual differences in sensitivity to health communications: Consideration of future consequences. *Health Psychology, 23*, 388-396.
- 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., 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., & Turner, N. 2006. Modeling the antecedents of proactive behavior at work. *Journal of Applied Psychology, 91*, 636-652.
- Pinder, C. C. 1984. *Work motivation: Theory, issues, and applications*. Glenview, IL: Scott, Foresman.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. 2003. Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*, 879-903.
- Princeton University. 2003. *WordNet 2.0*. Retrieved June 7, 2008, from <http://wordnet.princeton.edu/>
- Pulakos, E. D., Arad, S., Dorovan, M. A., & Plamondon, K. E. 2000. Adaptability in the workplace: Development of a taxonomy of adaptive performance. *Journal of Applied Psychology, 85*, 612-624.
- Rank, J., Carsten, J. M., Unger, J. M., & Spector, P. E. 2007. Proactive customer service performance: Relationships with individual, task, and leadership variables. *Human Performance, 20*, 363-390.
- Roberts, B. W., Chernysheako, O. S., Stark, S., & Goldberg, L. R. 2005. The structure of conscientiousness: An empirical investigation based on seven major personality questionnaires. *Personnel Psychology, 58*, 103-139.
- Rogelberg, S. G., & Stanton, J. M. 2007. Introduction: Understanding and dealing with organizational survey non-response. *Organizational Research Methods, 10*, 195-209.
- Saucier, G., & Ostendorf, F. 1999. Hierarchical subcomponents of the big five personality factors: A cross-language replication. *Journal of Personality and Social Psychology, 76*, 613-627.
- Scott, S. G., & Bruce, R. A. 1994. Determinants of innovative behavior: A path model of individual innovation in the workplace. *Academy of Management Journal, 37*, 580-607.
- Seibert, S. E., Crant, J. M., & Kraimer, M. L. 1999. Proactive personality and career success. *Journal of Applied Psychology, 84*, 416-427.
- Seibert, S. E., Kraimer, M. L., & Crant, J. M. 2001. What do proactive people do? A longitudinal model linking proactive personality and career success. *Personnel Psychology, 54*, 845-875.
- Shadish, W. R., Cook, T. D., & Campbell, D. T. 2002. *Experimental and quasi-experimental designs for generalized causal inference*. New York: Houghton Mifflin.
- Sonnentag, S. 2003. Recovery, work engagement, and proactive behavior: A new look at the interface between non-work and work. *Journal of Applied Psychology, 88*, 518-528.
- Spector, P. E. 2006. Method variance in organisational research: Truth or urban legend. *Organizational Research Methods, 9*, 221-232.
- Speier, C., & Frese, M. 1997. Generalized self-efficacy as a mediator and moderator between control and complexity at work and personal initiative: A longitudinal study in East Germany. *Human Performance, 10*, 171-192.
- Strathman, A., Gleicher, F., Boninger, D. S., & Edwards, C. S. 1994. The consideration of future consequences: Weighing immediate and distant outcomes of behavior. *Journal of Personality and Social Psychology, 66*, 742-752.
- Sujan, H., Weitz, B. A., & Kumar, N. 1994. Learning orientation, working smart, and effective selling. *Journal of Marketing, 58*, 39-52.
- Tett, R. P. 1998. Is conscientiousness always positively related to job performance. *Industrial-Organizational Psychologist, 36*, 24-29.
- Tharenou, P., & Terry, D. J. 1998. Reliability and validity of scores on scales to measure managerial aspirations. *Educational and Psychological Measurement, 58*, 475-492.
- Thompson, J. A. 2005. Proactive personality and job performance: A social capital perspective. *Journal of Applied Psychology, 90*, 1011-1017.
- Tidwell, M., & Sias, P. 2005. Personality and informational seeking. *Journal of Business Communication, 42*, 51-77.
- Tuckey, M., Brewer, N., & Williamson, P. 2002. The influence of motives and goal orientation on feedback seeking. *Journal of Occupational and Organizational Psychology, 75*, 195-216.

- Unsworth, K., & Parker, S. K. 2002. Proactivity, creativity, and innovation: Promoting a new workforce for the new workplace. In D. Holman, T. D. Wall, C. W. Clegg, P. Sparrow, & A. Howard (Eds.), *The new workplace: A handbook and guide to the human impact of modern working practices*: 175-196. Chichester, UK: Wiley.
- Van de Walle, D. 2003. A goal orientation model of feedback-seeking behavior. *Human Resource Management Review*, 13: 581-604.
- Van de Walle, D., & Cummings, L. L. 1997. A test of the influence of goal orientation on the feedback-seeking process. *Journal of Applied Psychology*, 82: 390-400.
- Van Dyne, L., & LePine, J. 1998. Helping and voice extra-role behaviors: Evidence of construct and predictive validity. *Academy of Management Journal*, 41: 108-119.
- von Gelderen, M., Frese, M., & Thurik, R. 2000. Strategies, uncertainty and performance of small business start-ups. *Small Business Economics*, 15: 165-181.