Group & Organization Management http://gom.sagepub.com/

Employees' Social Context and Change-Oriented Citizenship: A Meta-Analysis of Leader, Coworker, and Organizational Influences

Dan S. Chiaburu, Natalia M. Lorinkova and Linn Van Dyne Group & Organization Management 2013 38: 291 originally published online 13 March 2013

DOI: 10.1177/1059601113476736

The online version of this article can be found at: http://gom.sagepub.com/content/38/3/291

Published by: (\$)SAGF

http://www.sagepublications.com

Additional services and information for *Group & Organization Management* can be found at:

Email Alerts: http://gom.sagepub.com/cgi/alerts

Subscriptions: http://gom.sagepub.com/subscriptions

Reprints: http://www.sagepub.com/journalsReprints.nav

Permissions: http://www.sagepub.com/journalsPermissions.nav

Citations: http://gom.sagepub.com/content/38/3/291.refs.html

>> Version of Record - Jun 7, 2013

OnlineFirst Version of Record - Mar 13, 2013

What is This?

Employees' Social
Context and ChangeOriented Citizenship:
A Meta-Analysis of
Leader, Coworker, and
Organizational Influences

Group & Organization Management 38(3) 291–333
© The Author(s) 2013
Reprints and permissions: sagepub.com/journalsPermissions.nav
DOI: 10.1177/1059601113476736
gom.sagepub.com

Dan S. Chiaburu¹, Natalia M. Lorinkova², and Linn Van Dyne³

Abstract

Change-oriented citizenship depends on support received from employees' social context. Meta-analytic tests based on 131 independent samples and 38,409 employees confirmed positive relationships between leader, coworker, and organizational support and change-oriented citizenship, even after accounting for employees' attitudes and intentions (i.e., job satisfaction, organizational commitment, and intention to quit). Moderator analyses indicated that specific coworker and organizational support had stronger relationships with change-oriented citizenship than generic support. In contrast, specific and generic leader support were equally important predictors of change-oriented citizenship.

Keywords

change-oriented citizenship, organizational citizenship behaviors (OCBs), coworker support, organizational support, leader support, meta-analysis

Corresponding Author:

Dan S. Chiaburu, Department of Management, Mays Business School, Texas A&M University, 483 Wehner, College Station, TX 77843-4113, USA. Email: dchiaburu@mays.tamu.edu

¹Texas A&M University, College Station, TX, USA

²Wayne State University, Detroit, MI, USA

³Michigan State University, East Lansing, MI, USA

Change-oriented citizenship behavior is defined as proactive actions aimed at identifying and implementing changes in work processes, products, and services (Bettencourt, 2004; Choi, 2007; Van Dyne, Cummings, & McLean Parks, 1995). Change-oriented citizenship includes behaviors such as voice (speaking up with suggestions for change; Van Dyne & LePine, 1998), creative performance (Bettencourt, Gwinner, & Meuter, 2001; Zhou & George, 2001), adaptive performance (Han & Williams, 2008; Pulakos, Arad, Donovan, & Plamondon, 2000), positive proactive behavior (Griffin, Neal, & Parker, 2007), personal initiative to solve problems (Frese & Fay, 2001), and taking charge (Morrison & Phelps, 1999).

Although research on these change-oriented citizenship behaviors is increasing, it is limited by its focus on development and refinement of conceptual frameworks (Bindl & Parker, 2010; Chiaburu, Marinova, & Van Dyne, 2008; Grant & Ashford, 2008; Van Dyne, Ang, & Botero, 2003; Van Dyne et al., 1995) and reporting results of primary studies. Unfortunately, relying on frameworks and primary studies prevents accumulation of knowledge and does not facilitate a comprehensive understanding of what drives change-oriented citizenship. More important, although scholars acknowledge that engaging in change-oriented citizenship can be risky for employees (Bolino & Turnley, 2005; Frese Fay, Hilburger, Leng, & Tag, 1997; Morrison & Phelps, 1999; Van Dyne, Kamdar, & Joireman, 2008; Van Dyne & LePine, 1998), the literature has not yet provided an integrated framework of how different types of support from the social context enhance change-oriented citizenship behavior. Such absence of meta-analytic integration is problematic because prior research demonstrates that various types of support derived from the social context as well as employee attitudes and intentions predict change-oriented citizenship, without providing insights into the relative importance of different types of support or the importance of support compared to attitudes and intentions.

Drawing on prior research, we identify three key sources of support in work contexts: leaders, coworkers, and the organization (Ng & Feldman, 2012; Ng & Sorensen, 2008; Tekleab & Chiaburu, 2011). For example, research demonstrates the importance of leader support (Detert & Burris, 2007; Van Dyne et al., 2008), coworker support (Griffin et al., 2007; Parker, Williams, & Turner, 2006), and organizational support (Baer & Frese, 2003) for change-oriented citizenship and suggests the value of research that provides a more integrated perspective on these three aspects of the social context at work and change-oriented citizenship. In addition, mixed findings and inconsistencies in the literature, reviewed below, limit researchers' understanding of how different types of support influence change-oriented citizenship.

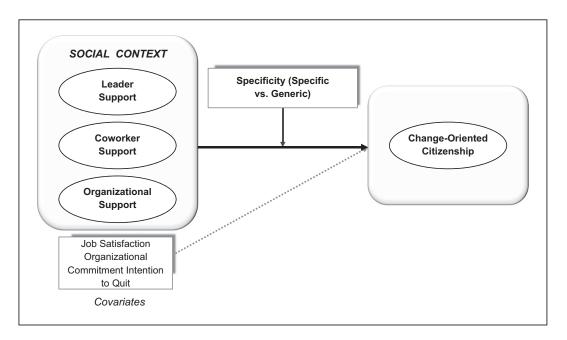


Figure 1. Theoretical framework.

Thus, our objective is to propose and meta-analytically test a model of how three types of support from employees' social context at work predict change-oriented citizenship, above and beyond attitudes and intentions (see Figure 1). We aim to add to the literature in three related ways. First, we present effect sizes for support as predictors of change-oriented citizenship across a wide variety of samples and settings. More important, we assess the extent to which support from the social context drives employees' change-oriented citizenship relative to their attitudes (e.g., job satisfaction and organizational commitment) and intentions (e.g., intention to quit). To our knowledge the current study is the first to address this research question, and, thus, results can be used as a foundation for thinking about the generalizability of support relative to other predictors of these increasingly important behaviors. Such comparisons are especially important given the risky nature of changeoriented citizenship and the increasing evidence that employees often remain silent or passive and withhold their ideas, information, and opinions (Burris, 2012; Ryan & Oestreich, 1991; Tangirala & Ramanujam, 2008).

From a managerial standpoint, new knowledge about predictors of changeoriented citizenship can help practitioners design interventions for managing employees' change-oriented citizenship. From a scholarly perspective, cumulative information on the relative importance of different predictors of change-oriented citizenship will help to avoid replication of well-established relationships and highlight underinvestigated predictors where future research is needed (Neuliep, 1991).

Second, we aim to refine theoretical understanding of the social context and the role of different types of support in predicting change-oriented citizenship. Thus, we test the *relative importance* of support provided by leaders, coworkers, and the organization. This comparative approach provides a structured way of conceptualizing support and has the added benefit of addressing inconsistencies in the literature. For example, although theoretical arguments suggest a positive relationship between leader support and employee change-oriented citizenship (e.g., Burris, Detert, & Chiaburu, 2008; Janssen, 2005), results are not always consistent. Ohly, Sonnentag, and Pluntke (2006), for example, found that supervisor support was negatively related to the number of subordinate suggestions. Parker and colleagues' (2006) results unexpectedly showed no relationship between leader support and proactive behaviors. Thus, they noted that "focusing on supervisory behaviors alone is unlikely to be sufficient for developing a more proactive workforce" (p. 647). Building on their suggestion to go beyond leader support, we include support from leaders together with support from coworkers and the organization. More important, our meta-analysis tests the relative importance of these three types of support as predictors of change-oriented citizenship.

Third, our theoretical model tests another contingency effect—whether specific or generic support from each of the three sources (leaders, coworkers, and the organization) is a stronger predictor of change-oriented citizenship. For example, in the realm of supervisor support, emphasizing specific employee behaviors such as being self-managing (e.g., "encourages us to expect a lot from ourselves"; Parker et al., 2006, p. 651) and self-reliant ("encourages employees to participate in important decisions" or "to speak up when they disagree with a decision"; Oldham & Cummings, 1996, p. 634) is notably different from more generic forms of managerial support ("praises good work"; Oldham & Cummings, 1996, p. 634). Generically supportive (yet diffuse) leader behaviors such as consideration (Schnake, Cochran, & Dumler, 1995), while conducive of subordinate effectiveness, may be of secondary importance for subordinate change-oriented citizenship. Thus, although generic leader support may influence positive employee attitudes and intentions, it may be less likely to facilitate risky behavior such as change-oriented citizenship. Overall, our model differentiates source of support and specificity of support with greater precision than prior research and aims, through accumulation of results across numerous primary studies, to clarify ambiguous relationships and stimulate future research.

Change-Oriented Citizenship: Conceptual Clarification

While affiliative, or prosocial, forms of citizenship are well researched (Organ, Podsakoff, & MacKenzie, 2006, for a review), change-oriented citizenship has received less research attention. Van Dyne and colleagues (1995) differentiated promotive affiliative behavior, such as helping citizenship, from promotive challenging behavior, such as voice citizenship. Both behaviors are promotive because they proactively and constructively cause things to happen as opposed to preventing actions. For example, Chiaburu, Oh, Berry, Li, and Gardner (2011) noted that these behaviors "change and enhance organizational aspects by bringing about positive modifications (change-oriented citizenship)" (p. 1141). More recently, researchers have shifted their focus from challenging to change-oriented behaviors because the change-oriented designation is consistent with Van Dyne and colleagues' (1995) original conceptualization yet is broader and more inclusive (Choi, 2007; McAllister, Kamdar, Morrison, & Turban, 2007; Van Dyne et al., 2008). Over time, researchers have identified a number of change-oriented behaviors. Examples include constructively intended proactive personal initiative, defined as taking an active and self-starting approach to work and going beyond what is formally required on the job (Frese et al., 1997); taking charge, presented as discretionary and inherently change-oriented and aimed at improvement (Morrison & Phelps, 1999); creative performance, proactively making suggestions or reacting to dissatisfaction with creative suggestions (Bettencourt et al., 2001; Zhou & George, 2001); and adaptive performance, behaviors demonstrating the ability to cope with change and to transfer learning as job demands vary (Allworth & Hesketh, 1999; Pulakos et al., 2000).

A related stream of research focuses on positive proactive actions aimed at bringing about change (Grant & Ashford, 2008; Griffin, Parker, & Mason, 2010; Parker, Bindl, & Strauss, 2010; Parker & Collins, 2010). Proactive behaviors have been conceptualized broadly as employee efforts "to bring about change, including change to the situation [a]nd/or change within him- or herself" (Bindl & Parker, 2010, p. 568). Consistent with Van Dyne and colleagues' (1995) emphasis on promotive behaviors that proactively facilitate change aimed at benefiting others, we focus on proactive work behaviors "aimed at bringing about change in the internal organization" (Parker et al., 2010, p. 633) rather than on proactive efforts to change one's own personal performance and career development. In

sum, our meta-analytic approach aims to integrate the primary research on these different promotive change-oriented behaviors.

Social Context and Change-Oriented Citizenship: A Theoretical Framework

To date, research has demonstrated relationships between support from the work social context—from leaders (Van Dyne et al., 2008), coworkers (Griffin et al., 2007), and the organization (Baer & Frese, 2003)—and change-oriented citizenship but has not provided an integrated conceptual framework or empirical comparison of the relative importance of different types of support. A comparison is nevertheless important because changeoriented citizenship is risky and support from various sources can be critical when employees decide whether or not to engage in the behavior. The importance of the social context is magnified because proactively suggesting (voice; Van Dyne & LePine, 1998) or enacting (personal initiative; Frese et al., 1997) change has higher personal costs and risk than engaging in affiliative behaviors such as altruism, compliance, loyalty, or helping (Organ et al., 2006; Van Dyne & Ellis, 2004). Responding to the need for a more integrated approach to support and change-oriented citizenship, we present an initial framework for thinking about support and present arguments for leader support, followed by coworker support and organizational support as predictors.

A number of studies have demonstrated that leader support is related to employee change-oriented citizenship. Transformational leaders, for example, enhance subordinates' feelings of responsibility (Detert & Burris, 2007; Liu, Zhu, & Yang, 2010; Wang, Oh, Courtright, & Colbert, 2011) and their creative performance (Shin & Zhou, 2003); high-quality leader-subordinate relationships increase employees' psychological attachment (Burris et al., 2008) and willingness to engage in voice behavior (Edmondson, 2003; Van Dyne et al., 2008). Leader openness and ethical leadership facilitate voice (Detert & Burris, 2007; Walumbwa & Schaubroeck, 2009), leader vision enhances adaptive and proactive performance (Griffin et al., 2010), and leader fairness and support predict innovative work behavior (Janssen, 2000, 2005) and taking charge (Moon, Kamdar, Mayer, & Takeuchi, 2008). Empowering leadership predicts proactive behaviors (Raub & Robert, 2010); support and coaching from team leaders facilitates independence, taking charge, and voice (Edmondson, 2003; Morrison & Phelps, 1999) as well as a sense of felt responsibility for constructive change (Fuller, Marler, & Hester, 2006), proactive behavior (Strauss, Griffin, & Rafferty, 2009), and creative performance (Tierney, Farmer, & Graen, 2000; Williams, 2004).

Integrating these studies, we propose that meta-analytic results will demonstrate leader support to be positively related to change-oriented citizenship (Hypothesis 1a).

Individual studies also show that coworker support predicts change-oriented citizenship. For example, support from work group peers leads to positive citizenship and proactive behaviors (Chiaburu & Harrison, 2008; Griffin et al., 2007), emotional and informational support from coworkers create a pool of resources and enhance creative performance (Madjar, 2008), and dispersed leadership shared by coworkers also facilitates creative performance (Politis, 2005), as does the presence of creative peers (Zhou, 2003). Employees provide more ideas for improvement when they are centrally located in group networks, are satisfied with their coworkers, and when they work in self-managed work teams (LePine & Van Dyne, 1998; Venkataramani & Tangirala, 2010). High-quality relationships in teams promote learning and adaptive performance (Han & Williams, 2008) and innovation at work (Hülsheger, Anderson, & Salgado, 2009). Thus, we predict that meta-analytic analysis will demonstrate a positive relationship between coworker support and change-oriented citizenship (Hypothesis 1b).

A large number of primary studies also show that organizational support predicts change-oriented citizenship. Researchers have theorized that generic (perceived organizational support [POS]; Moorman, Blakely, & Niehoff, 1998) and specific support (support for innovation; Scott & Bruce, 1994) drive initiative. When employees believe that their organization provides resources to support new ideas, they feel more responsible for constructive change and provide suggestions for improvements (Fuller et al., 2006). Favorable voice climate as well as less bureaucratic systems coupled with more egalitarian organizational cultures facilitate voice (Erez, LePine, & Elms, 2002; Morrison, Wheeler-Smith, & Kamdar, 2011; Stamper & Van Dyne, 2001), climate for innovation predicts innovation (Baer & Frese, 2003), and supportive environments facilitate change-oriented citizenship (Choi, 2007). Supportive contexts enhance creative performance (George & Zhou, 2007; Oldham & Cummings, 1996), organizational support predicts self-management (Sturges, Conway, & Liefooghe, 2010) and voice (Tucker, Chmiel, Turner, Hershcovis, & Stride, 2008), and organizational justice facilitates taking charge (Moon et al., 2008). In sum, we predict a positive relationship between organizational support and change-oriented citizenship (Hypothesis 1c).

Even though support from the organization, leader, and coworkers present some degree of empirical overlap (Ng & Sorensen, 2008; Rhoades & Eisenberger, 2002), they are regarded as conceptually distinct. Furthermore,

although primary studies have assessed different types of support and various change-oriented citizenship behaviors as summarized above, metaanalytic analysis should provide a more integrative perspective on the overall pattern of relationships. Thus, for our first hypothesis, we propose,

Hypothesis 1: Leader (a), coworker (b), and organizational (c) support will have positive relationships with employee change-oriented citizenship.

Does the Social Context Matter? Social Context Versus Employee Attitudes

More important than the baseline predictions advanced in the first hypothesis, we also consider the incremental variance explained by support over and above employee attitudes and intentions. Prior research demonstrates that job satisfaction, organizational commitment, and intentions to stay with the organization predict change-oriented citizenship (e.g., Bindl & Parker, 2010; Burris et al., 2008; Liang, Farh, & Farh, 2012). Research, however, also demonstrates that support from the social context (leader support, coworker support, and organizational support) is related to employee attitudes (job satisfaction, organizational commitment, and intentions to stay). In addition, Harrison, Newman, and Roth's (2006) meta-analytic findings provide strong support for the relationship between employee attitudes—comprised of job satisfaction and organizational commitment—and work effectiveness. To advance research on change-oriented citizenship, it is important to consider the incremental prediction of support, after accounting for established effects of attitudes and intentions (Bindl & Parker, 2010).

Given the strong relationships for support demonstrated in primary studies, one can expect that leader, coworker, and organizational support will influence change-oriented citizenship over and above job satisfaction, organizational commitment, and intention to quit. If this prediction is supported and shows that the social context influences change-oriented citizenship even after accounting for attitudes and intentions, this finding will confirm the importance of support as a prominent driver of change-oriented citizenship. It can also trigger in-depth investigations of support. If, in contrast, our prediction is not supported, this disconfirmation will suggest less need for future research on support from the social context. In sum, on the basis of prior studies (Burris et al., 2008; Chiaburu & Harrison, 2008; Scott & Bruce, 1994), we expect positive relationships for leader, coworker, and organizational support with employee change-oriented citizenship, above and beyond attitudes and intentions.

Hypothesis 2: Leader (a), coworker (b), and organizational (c) support will have unique effects on employee change-oriented citizenship, over and above the influence of job satisfaction, organizational commitment, and intention to quit.

Leader, Coworker, and Organizational Support: Relative Importance

Although primary studies have established the importance of leader support (Burris et al., 2008; Van Dyne et al., 2008), coworker support (LePine & Van Dyne, 1998, 2001), and organizational support (Choi, 2007), these three types of support occur concurrently and may have differential effects. To date, however, despite the *simultaneous* presence of different types of support at work, no integrative research has assessed their comparative influence on change-oriented citizenship. Examining the relative influence of leader, coworker, and organizational support is important for both theoretical and practical reasons.

Theoretically, it is important to understand whether power differences in sources of support (e.g., leaders are considered more powerful than coworkers) differentially influence change-oriented citizenship (Morrison, 2011; Morrison & Rothman, 2009). If relative effects differ, future research should avoid grouping different types of support together or treating them equally because that would hide more nuanced relationships (Seers, McGee, Serey, & Graen, 1983). For example, if leader support—rather than coworker or organizational support—drives change-oriented citizenship, future research should focus specifically on leader support and the causal mechanisms that link different types of leader support with change-oriented citizenship. From a practical standpoint, managers can use this information to design organizational interventions aimed at enhancing change-oriented citizenship, such as leader training, socialization procedures, and changes in organizational policies. In sum, it is useful to examine the relative predictive validity of different types of support.

Given that leaders control resources and changes to procedures, we expect leader support to be more strongly related to change-oriented citizenship than coworker or organizational support. For example, employees may need supervisor support in the form of resources or permission to act (Detert & Burris, 2007) and employees often believe that they must not bypass the boss (Detert & Edmondson, 2011). Leader support can be instrumental by encouraging participation in decision making, genuinely soliciting suggestions for change, providing positive feedback, and rewarding employees for

demonstrating initiative, taking charge, creative performance, adaptive performance, or proactive behavior (Oldham & Cummings, 1996; Parker et al., 2006). As Ashford, Sutcliffe, and Christianson (2009; see also Ashford & Tsui, 1991) emphasized, leaders shape psychological processes that influence employee voice opportunities, voice instrumentality, and perceptions of the costs and benefits of voice. Extending their point to the broader construct of change-oriented citizenship behaviors, we predict,

Hypothesis 3: Leader support will have a stronger relationship with employee change-oriented citizenship than will coworker support and organizational support.

Specific Versus Generic Support: Relative Importance

Support from leaders, coworkers, and the organization can differ in specificity. Leaders can provide *specific* support that is directly relevant to change-oriented citizenship in attempts to stimulate subordinate attitudes and behaviors relevant for change (e.g., "encourages employees to participate in important decisions," "speak up when they disagree with a decision"; Oldham & Cummings, 1996, p. 634). Yet leaders can also provide generic support (e.g., "praises good work"; Oldham & Cummings, 1996, p. 634). Differentiating specific and generic leader support can shed light on prior mixed and nonsignificant findings for relationships between leader support and subordinate proactivity. Perhaps generally supportive (yet diffuse) leader support, such as consideration, is conducive to subordinate work effectiveness but less relevant to change-oriented citizenship. Conversely, *specific* change-oriented leader support will likely stimulate change-oriented citizenship. For example, Detert and Burris (2007) described leader openness as a form of change-oriented leadership and demonstrated that it facilitates change-oriented voice. In sum, we expect specific leader support to be a stronger predictor of change-oriented citizenship than generic leader support.

The above arguments for the importance of specific leader support also apply to coworker support. For example, generic coworker support, manifested through high-quality team-member exchange that represents a generally supportive environment (Seers, 1989), differs from specific coworker support, manifested through team learning climate (Han & Williams, 2008). Consistent with this notion, prior research demonstrates that high-quality team-member exchange is not necessarily conducive to innovative changes (Scott & Bruce, 1994). Instead, high-quality team-member exchange

predicts affiliative citizenship (e.g., helping) and may be less impactful for change-oriented citizenship (e.g., voice; Kamdar & Van Dyne, 2009). Conversely, team learning climate, a more specific predictor, is positively related to individual adaptive performance (Han & Williams, 2008). Overall, we propose that the specific coworker support will be more influential than generic support as a predictor of change-oriented citizenship.

Organizational support can also be differentiated into generic (e.g., organizational support; Eisenberger, Huntington, Hutchison, & Sowa, 1986) and specific support (e.g., specific system responsiveness—Frese, Teng, & Wijnen, 1999; climate for innovation—Baer & Frese, 2003). Consistent with the specificity argument, POS does not predict individual initiative (Moorman et al., 1998), whereas specific support such as system responsiveness (Frese et al., 1999), climate for initiative (Baer & Frese, 2003), and group voice climate (Morrison et al., 2011) show positive relationships with change-oriented citizenship. Based on existing theory and empirical findings, we hypothesize,

Hypothesis 4: Specific support from leaders (a), coworkers (b), and the organization (c) will have stronger relationships with change-oriented citizenship than generic support.

Method

To test our predictions, we collected and meta-analyzed primary studies focusing on change-oriented citizenship. We did not include studies on affiliative citizenship because this construct has been studied in other metaanalyses (Ilies, Nahrgang, & Morgeson, 2007; Ng & Sorensen, 2008). We applied the literature search and coding procedures outlined by Lipsey and Wilson (2001). Consistent with Chiaburu and coauthors (2011), we defined and operationalized change-oriented citizenship to include voice, creative and innovative performance, adaptive performance, personal initiative, positive proactive behavior, and taking charge. We excluded nonbehavioral constructs (e.g., proactive personality, role-breadth self-efficacy) and self-directed change behaviors (e.g., feedback seeking, career self-management) on conceptual grounds because they did not fit the definition of change-oriented citizenship. We also excluded constructs on the basis of scales that mixed change-oriented (e.g., "continues to look for new ways to improve the effectiveness of his or her work") and non-change-oriented items (e.g., "helps coworkers who have been absent"; Eisenberger, Armeli, Rexwinkel, Lynch, & Rhoades, 2001).

Table 1. Expert Ratings Differentiating Change-Oriented Citizenship, OCB-O, and OCB-I.

	Proportion of substantive agreement ^a , p _{sa}					
Dimensions	Change-OCB	ОСВ-О	OCB-I			
Creative performance	1.00	.00	.00			
Taking charge	.93	.07	.00			
Personal initiative	.93	.07	.00			
Proactive performance	.93	.07	.00			
Adaptive performance	.86	.14	.00			
Voice	.62	.38	.00			
Organizational loyalty	.00	1.00	.00			
Conscientiousness	.00	1.00	.00			
Compliance	.00	1.00	.00			
Sportsmanship	.00	.93	.07			
Job dedication	.00	.93	.07			
Conscientious initiative	.23	.69	.08			
Civic virtue	.36	.64	.00			
Altruism	.00	.00	1.00			
Courtesy	.00	.00	1.00			
Helping	.00	.00	1.00			
Personal support	.00	.00	1.00			
Teamwork	.00	.15	.85			
Interpersonal facilitation	.00	.23	.77			

Notes: Definitions for change-oriented citizenship (Change-OCB) constructs: creative performance (Zhou & George, 2001), taking charge (Morrison & Phelps, 1999), personal initiative (Frese & Fay, 2001), proactive performance (Griffin, Neal, & Parker, 2007, 2007), adaptive performance (Pulakos, Arad, Donovan, & Plamondon, 2000), and voice (Van Dyne & LePine, 1998). Definitions for OCB-O and OCB-I constructs: Organ et al. (Organ, Podsakoff, & MacKenzie, 2006, Appendix) and Borman et al. (Borman, Penner, Allen, & Motowidlo, 2001). ^aAnderson & Gerbing (1991, p. 734).

Finally, 14 researchers (4 faculty members and 10 advanced PhD students), all unaware of the study objectives, provided expert ratings that classified 19 behaviors as change-oriented citizenship, affiliative citizenship directed at the organization (OCB-O), and affiliative citizenship directed at individuals (OCB-I). We provided raters with definitions of the 19 citizenship behaviors (see Table 1) and definitions of the three classification categories, on the basis of prior research (Chiaburu et al., 2011; Organ et al., 2006). As reported in Table 1, we calculated the proportion of substantive agreement among

raters (p_{sa} ; Anderson & Gerbing, 1991), using Formula 1 below, where n_c is the number of raters who assigned a measure to the a priori specified construct and N is the total number of raters.

$$p_{sa} = \frac{n_c}{N} \tag{1}$$

Agreement scores range from 0 to 1, with higher values indicating greater agreement. Expert ratings showed acceptable agreement, classifying creative performance (1.00), taking charge (0.92), personal initiative (0.92), positive proactive behaviors (0.92), adaptive performance (0.85), and voice (0.62) as change oriented. Raters also differentiated change-oriented citizenship from affiliative OCB-O and OCB-I. Having established the construct space through multiple methods—including literature review, review of existing constructs, examination of scales and items, and expert ratings—we searched for studies on change-oriented citizenship.

Literature Search and Coding

On the basis of the above conceptualization of change-oriented citizenship, we conducted a broad search for relevant published and unpublished studies using PsycInfo, ABI/INFORM, ERIC, and ProQuest databases as well as conference proceedings for unpublished studies. We used a range of keywords, including adaptive performance, advocacy participation, changeoriented citizenship, creative performance, individual initiative, innovative performance, issue selling, proactive behavior, personal initiative, speaking up, taking charge, and voice. After finding a relevant study (e.g., Bettencourt, 2004), we manually searched for other relevant studies (e.g., Bettencourt et al., 2001) because keyword searches may miss conceptually similar but differently labeled constructs. We also emailed scholars working in this research domain to obtain unpublished work, and we examined the references of published meta-analyses that included citizenship behaviors (e.g., Chiaburu & Harrison, 2008; Chiaburu et al., 2011; Dalal, 2005; Fassina, Jones, & Uggerslev, 2008; Hoffman, Blair, Meriac, & Woehr, 2007; Ilies, Fulmer, Spitzmuller, & Johnson, 2009; LePine, Erez, & Johnson, 2002; Organ & Ryan, 1995; Podsakoff, MacKenzie, Paine, & Bachrach, 2000) to identify additional studies on change-oriented citizenship.

We included primary studies that (a) empirically examined the relationships outlined in our hypotheses, (b) reported effect sizes or had sufficient data to calculate them, and (c) were based on samples of employees from organizations. After removing studies that did not match our conceptualization of the core constructs and were not within the scope of the inclusion and exclusion criteria, we had 126 studies with 131 independent samples and 38,409 employees that we used for the analyses (see Appendix A).

We developed a coding scheme (Lipsey & Wilson, 2001) to classify predictors into the three broad categories of support. Specifically, we coded constructs such as empowering leadership, leader-member exchange (LMX), transformational leadership, leader fairness, openness, and consideration (e.g., Detert & Burris, 2007; Gong, Huang, & Farh, 2009) as leader support. For coworker support, examples include intrateam support, team learning climate, group cohesiveness, and team—member exchange (de Jong & de Ruyter, 2004; Han & Williams, 2008; Kamdar & Van Dyne, 2009). Finally, organizational support examples are POS, fairness, climate for initiative, and innovation culture (e.g., Baer & Frese, 2003; Janssen, 2001; Miron, Erez & Naveh, 2004). For all support sources, we included the respective isomorphic constructs (e.g., the overall category of "leader support" included the discrete construct of "leader support"; Basu & Green, 1997). Appendix B provides a detailed breakdown of the classifications, with 71 independent samples for leader support and change-oriented citizenship, 34 for coworker support, and 71 for organizational support. Correlations extracted from the primary studies were considered as separate entries when they represented relationships between (a) distinctive sources of support and the dependent variable and (b) one source of support but from different samples (Arthur, Bennett, & Huffcutt, 2001).

We also coded for specific versus generic support. As examples, generic leader support included overall supportive and fair leadership, whereas specific leader support included leader openness, empowering leadership, and participation in decision making, which more directly support employee change-oriented behavior. Generic coworker support included group cohesiveness and supportive peers, whereas specific coworker support included team learning climate, history of innovation, and workgroup involvement. For generic organizational support we included organizational support and fairness, whereas for specific organization support we included innovative culture and climate for innovation, given their focus on facilitating change.

The first two authors coded the studies independently. They started by separately coding 20 studies randomly selected from the database. Interrater agreement based on the percentage of matching codes was 91%, and disagreements were resolved through discussion. Subsequent coding was done independently by the same two authors who held weekly meetings to discuss manuscripts coded that week and to clarify ambiguous coding.

Procedure

We used the strategy specified by Arthur et al. (2001), which is based on the random-effects model of Hunter and Schmidt. We first computed a sample-weighted mean correlation (r) for each target relationship. Following established practices (in order to ensure independence of effect sizes), we combined multiple estimates of correlations within a single sample (e.g., several same-source measures of the dependent variable) into one correlation coefficient using the composite correlation formula provided by Hunter and Schmidt (2004).

We computed the percentage of variance accounted for by sampling error (Hunter & Schmidt, 2004) and applied the chi-square test for homogeneity of observed correlation coefficients across studies (Rosenthal, 1991). We calculated the standard error of the sample-weighted mean correlation (Whitener, 1990), which we used to compute the 95% confidence interval (CI) around the sample-weighted mean correlation. The CI provides an estimate of variability in mean effect sizes (correlations between target relationships). A 95% CI that excludes zero shows a significant correlation.

We corrected for unreliability of measures to derive true-score correlation coefficients corrected for unreliability and measurement error (r_c ; Hunter & Schmidt, 2004). Specifically, predictor and outcome variables were corrected for measurement unreliability, using information from the original empirical studies (e.g., coefficient alphas; Hall & Brannick, 2002). Whenever the original studies did not report construct reliabilities, we used an imputation procedure on the basis of average values from primary studies examining the same relationship, as done in previous meta-analyses (Balkundi & Harrison, 2006; Ilies et al., 2007). We calculated variance and standard deviation of the estimated population correlation corrected for unreliability (r) to determine the 80% credibility interval (CV). The CV is based on the corrected standard deviation and provides an estimate of the variability of individual effect sizes across studies. The CV provides information about the distribution of effect sizes. Following estimation of the 80% CV, we calculated the Q statistic, on the basis of a chi-square distribution, to assess variance in the corrected population estimate. When the Q statistic was significant or the CV included zero, we performed subgroup analyses to examine a priori moderation (Cortina, 2003) with z tests of the difference between the corrected correlations to determine the statistical significance of the difference in magnitude (Bing, Davison, Minor, Novicevic, & Frink, 2011; Chang, Rosen, & Levy, 2009; Eatough, Chang, Miloslavic, & Johnson, 2011), with the meta-analytic standard error estimated based on Hunter and Schmidt.¹

$$z = \frac{(M\rho_1 - M\rho_2)}{\sqrt{(SE_1^2 + SE_2^2)}}$$
 (2)

$$SE = \frac{M_{\rho}}{M_{r}} * \frac{SD_{r}}{\sqrt{k}} \tag{3}$$

Because publication bias can threaten the robustness of meta-analytic results (Banks, Kepes, & McDaniel, 2012; Kepes, Banks, McDaniel, & Whetzel, 2012), we performed a trim and fill (funnel plot) analysis (McDaniel, Rothstein, & Whetzel, 2006). Results showed the observed means and the trim and fill adjusted means were essentially the same, providing evidence that publication bias effects were minimal.

As demonstrated in prior meta-analyses, aspects of the social context can covary. We followed the approach advocated by Johnson (2000) based on the epsilon statistic to determine the relative importance of predictors when they are correlated. The estimates derived from epsilon calculations, often labeled *relative weights*, sum to the model R^2 . Thus, the relative weights represent the proportionate contribution each predictor makes to R^2 , considering the predictor's direct effect and its effect when combined with other predictors. We also calculated the percentage of R^2 explained by each of our predictors (leader support, coworker support, organizational support) by dividing relative weight of each predictor by the total R^2 (Johnson & LeBreton, 2004; LeBreton, Binning, Adorno, & Melcher, 2004).

To test whether social context (leader support, coworker support, and organizational support) had unique associations with change-oriented citizenship beyond that of job satisfaction, organizational commitment, and intention to stay we built nine meta-analytic correlation matrices (3 x 3) consisting of corrected correlation coefficients (e.g., between leader support, job satisfaction, and change-oriented citizenship) using the current and previous meta-analytic results (Viswesvaran & Ones, 1995). We relied on primary studies in our meta-analytic database to estimate the true population correlation between job satisfaction, organizational commitment, intention to quit, and change-oriented citizenship. We used supplemental effect sizes from other meta-analyses to provide estimates for relationships not included in the current study (e.g., leader support: Ng & Sorensen, 2008; coworker support: Chiaburu & Harrison, 2008; and organizational support: Rhoades & Eisenberger, 2002). We utilized harmonic means of cell sample sizes (Viswesvaran & Ones, 1995) and performed regression tests based on the constructed matrices using LISREL 8.72 (Jöreskog & Sörbom, 2002) to estimate the unique association between our predictors (leader, coworker, and organizational support) with change-oriented citizenship. We

note that even though an omnibus test, controlling simultaneously for job satisfaction, organizational commitment, and intention to quit, would be ideal, this approach would require meta-analytic estimates of the intercorrelations among these three control variables. Given that these estimates are not currently available through existing meta-analytic work, we tested each covariate separately.

Results

We predicted that support from leaders, coworkers, and the organization would be positively related to change-oriented citizenship. As reported in Table 2, leader support had a significant, sample-weighted mean correlation with change-oriented citizenship (r = .28). After correcting for sampling and measurement error (32%), the estimated corrected population correlation (r_c) was .34. The 95% CI excluded zero, showing a significant relationship, and the 80% CV (.13, .56) excluded zero, indicating that the relationship between leader support and change-oriented citizenship was positive, as expected. One study was removed from our analysis (Borenstein, Hedges, Higgins, & Rothstein, 2009) and we failed to identify any one study as substantially influencing our results. Thus, results fully support Hypothesis 1a.

Supporting Hypothesis 1b, results showed a positive relationship between coworker support and change-oriented citizenship (r=.28). Sampling and measurement error accounted for 43% of the variance, and the estimated corrected correlation (r_c) was .35. Both the 95% CI and the 80% CV excluded zero (.10, .62), showing a significant positive relationship. No single study substantially influenced results based on one study removed analysis. Hypothesis 1c was also supported. Organizational support was positively related to change-oriented citizenship (r=.23), with the 95% CI and the 80% CV (.03, .54) excluding zero. After correcting for sampling and measurement error (37%), the estimated corrected population correlation (r_c) was .29. One-study-removed analysis indicated that no single study substantially influenced results. Overall, Hypothesis 1 was fully supported.

The significant Q statistics (see Table 2) suggest potential moderators. For example, the Q statistic for leader support and change-oriented citizenship, $Q_{(70)} = 617.45$, p < .001, shows the presence of between-study moderators. Accordingly, we examined whether the rating source of leader support (same source versus different source) influenced results. Subgroup analysis reported in Table 2 shows that same source ratings of leader support and change-oriented citizenship were stronger ($r_c = .42$, k = 25, n = 6,701) than different source ratings ($r_c = .32$, k = 46, n = 14,696; z = 7.87, p < .001). The 95% CI for the two subgroups did not overlap: same source (.29, .42) and different

	k	N	R	r	SD r _c	95% CI	80% CV	% SE	Q, df
Leader support	71	21,397	.28	.34	.17	[.25, .31]	[.13, .56]	32	617.45*, 70
Different source	46	14,696	.25	.32	.14	[.22, .28]	[.14, .49]	37	280.42*, 45
Same source	25	6,701	.35	.42	.20	[.29, .42]	[.16, .67]	29	279.63*, 24
Coworker support	34	14,834	.28	.35	.21	[.23, .34]	[.10, .62]	43	636.66*, 33
Different source	24	10,259	.26	.34	.15	[.21,.30]	[.14, .53]	49	234.06*, 23
Same source	10	4,575	.34	.44	.28	[.21, .48]	[.08, .78]	38	354.74*, 90
Organizational support	71	21,303	.23	.29	.20	[.19, .26]	[.03, .54]	37	864.67*, 70
Different source	37	9,681	.22	.29	.16	[.18, .26]	[.09, .49]	39	248.75*, 36
Same source	34	11,622	.23	.30	.22	[.17, .29]	[.01, .59]	36	611.38*, 33

Table 2. Meta-Analytic Results for Leader, Coworker, and Organizational Support Predicting Change-Oriented Citizenship With Same and Difference Source Analysis.

Note: k = number of effect sizes; n = number of respondents; r = mean, sample-weighted correlation; $r_c =$ estimate of the fully corrected population correlation; $SD r_c =$ standard deviation of the estimate of the fully corrected population correlation; 95% CI = 95% confidence interval around the mean sample-weighted correlation; 80% CV = 80% credibility interval around the corrected mean population correlation; SE = percentage of observed variance accounted for by sampling error and measurement error; CE = chi-square test for homogeneity of population correlations across studies.

source (.22, .28). The estimated population correlation for same source ratings of coworker support and change-oriented citizenship ($r_c = .44$, k = 10, n = 4,575) was higher than different source ratings ($r_c = .34$, k = 24, n = 10,259; z = 6.64, p < .001), but the 95% CI for the two subgroups overlapped: same source (.21, .48) and different source (.21, .30), suggesting that the difference was not significant. Likewise subgroup analysis showed no significant differences in the estimated true population correlations for same source ($r_c = .30$) and different source ($r_c = .29$) ratings of organizational support and change-oriented citizenship, and the 95% CI for the two subgroups overlapped.

Hypothesis 2 predicted that the influence of leader support (Hypothesis 2a), coworker support (Hypothesis 2b), and organizational support (Hypothesis 2c) on change-oriented citizenship would hold over and above job satisfaction, organizational commitment, and intention to quit. We tested these predictions with hierarchical multiple regression as described in the Method section. To test the unique effect of leader support on change-oriented citizenship, we entered job satisfaction, organizational commitment, and intention to quit in Step 1 of three separate regression analyses and then entered leader support in Step 2. We conducted similar analyses for Hypothesis 2b (coworker support) and Hypothesis 2c (organizational support).

As expected, leader support (Hypothesis 2a) accounted for unique variance in change-oriented citizenship over and above job satisfaction (β = .29, p < .01; ΔR = .05), organizational commitment (β = .25, p < .01; ΔR = .06), and intention to quit (β = .33, p < .01; ΔR = .10). Hypothesis 2a was fully supported.

Table 3. Relative Importance of Leader, G	Coworker, and Organizational Support in
Predicting Change-Oriented Citizenship.	

Social context	β	RW	% RW
Leader support	.19	.060	34.26
Coworker support	.24	.073	39.81
Organizational support	.10	.047	25.93
Total R ²		.180	
ΔR^2	.02 (ns)		
ΔR^2 LS over CWS and OS ΔR^2 CWS over OS and LS ΔR^2	.04 (ns)		
ΔR^2 OS over LS and CWS	.00 (ns)		

Note: β = standardized regression weights; RW = relative weight (Johnson, 2000); % RW = percentage of relative weights—calculated by dividing individual relative weights by their sum and multiplying by 100; ΔR^2 = incremental change in variance explained by the specific predictor over variance explained by the other two predictors; LS = leader support; CWS = coworker support; OS = organizational support. Correlation matrix includes true-score correlation (fully corrected estimated population correlations) between leader support and organizational support (r_c = .64, k = 12, n = 5,383) from Rhoades and Eisenberger (2002), true-score correlation between coworker support and organizational support (r_c = .46, k = 5, n = 5,653), and between coworker support and leader support (r_c = .36, k = 33, n = 15,241) from Ng and Sorensen (2008, Table 2).

Coworker support also had unique effects in predicting change-oriented citizenship over and above job satisfaction (β = .30, p < .01; ΔR = .13), organizational commitment (β = .28, p < .01; ΔR = .07), and intention to quit (β = .33, p < .01; ΔR = .13). This set of findings support Hypothesis 2b and show that coworker support is important (significant) even after accounting for the effects of attitude and intention covariates. Results support two of the three predictions in Hypothesis 3. Organizational support had unique effects on change-oriented citizenship after accounting for job satisfaction (β = .23, p < .01; ΔR = .03) and intention to quit (β = .29, p < .01; ΔR = .06) but failed to reach conventional significance (p < .05) for commitment (β = .14, p < .10; ΔR = .01). Thus, there is partial support for Hypothesis 2c, with significant effects for leader support and coworker support above and beyond the covariates of job satisfaction, organizational commitment, and intention to quit.

Relative Importance and Moderators

Hypothesis 3 predicted that leader support would be more strongly related to change-oriented citizenship than coworker and organizational support. Table 3 summarizes the epsilon statistics (Johnson, 2000) and relative weights analysis. It also reports the percentage of relative weights explained by each type

Predictors ^a	Κ	n	R	rc	SD _c	95% CI	80% CV	% SE	Q, df
Leader support									
Generic	32	6,822	.26	.33	.18	[.22, .31]	[.11, .56]	38	226.91*, 31
Specific	27	9,243	.28	.34	.18	[.23, .34]	[.11, .57]	32	360.48*, 26
Coworker support									
Generic	15	6,650	.26	.33	.24	[.15, .36]	[.01, .64]	28	480.31*, 14
Specific	13	6,725	.32	.46	.12	[.28, .36]	[.30, .61]	66	99.39*, 12
Organizational support									
Generic	41	12,108	.19	.24	.18	[.13, .24]	[.01, .49]	34	551.38*, 40
Specific	24	8,306	.31	.37	.20	[.24, .38]	[.12, .63]	32	351.92*, 23

Table 4. Meta-Analysis Results for Generic Versus Specific Leader, Coworker, and Organizational Support Predicting Change-Oriented Citizenship.

Note: k = number of effect sizes; n = number of respondents; r = mean, sample-weighted correlation, r_c = estimate of the fully corrected population correlation; SD_c = standard deviation of r_c ; 95% CI = 95% confidence interval around the mean sample-weighted correlation; 80% CV = 80% credibility interval around the corrected mean population correlation; % SE is the percentage of observed variance accounted for by sampling error and measurement error; Q = chi-square test for homogeneity of population correlations across studies.

of support (leader support, coworker support, and organizational support) in predicting change-oriented citizenship. Leader support explained 34.26% of the total variance in change-oriented citizenship, coworker support explained 39.81%, and organizational support explained 25.93%. Leader support explained 2% additional variance (.02, p > .10) in change-oriented citizenship over and above coworker support and organizational support, but the incremental variance explained was not significant. Similarly, coworker support explained 4% additional variance (.04, p > .05), but this increment was not significant, either. Finally, organizational support did not explain additional variance beyond leader and coworker support. Thus, results fail to support Hypothesis 3.

Hypothesis 4 predicted that specific support (Hypothesis 4a: leader; Hypothesis 4b: coworker, Hypothesis 3c: organizational) would have stronger relationships with change-oriented citizenship than generic support. Table 4 shows that specific leader support ($r_c = .34$, k = 27, n = 9,243) and generic leader support ($r_c = .33$, k = 32, n = 6,822; z = .04, p > .10) were equally important predictors of change-oriented citizenship. Thus, Hypothesis 4a was not supported. Results support Hypothesis 4b because specific coworker support ($r_c = .46$, k = 13, n = 6,725) was more strongly related to change-oriented

^aFor independence of the observations compared, we excluded studies that provided estimates of both generic and specific sources of support, thus only comparing correlations measured on independent groups of subjects.

^{*}p < .001.

citizenship than generic coworker support ($r_c = .33, k = 15, n = 6,650; z = 8.93, p < .001$). Likewise, specific organizational support ($r_c = .37, k = 24, n = 8,306$) had a stronger relationship with change-oriented citizenship than generic organizational support ($r_c = .24, k = 41, n = 12,108; z = 10.08, p < .001$). In sum, results support Hypothesis 4b and Hypothesis 4c but not Hypothesis 4a.

Discussion

Change-oriented citizenship behaviors increasingly attract researchers' attention, as evidenced by numerous theoretical models and frameworks (Bindl & Parker, 2010; Ellis & Van Dyne, 2009; Grant & Ashford, 2008; Greenberg & Edwards, 2009; Kish-Gephart, Detert, Treviño, & Edmondson, 2009; Rank, Pace, & Frese, 2004). This strong conceptual interest contrasts with the lack of cumulative research. More important, while current reviews point out inconsistencies in the literature (e.g., mixed results for supervisor support; Bindl & Parker, 2010), examination of data from *multiple*, rather than individual, studies has not been attempted. Responding to these issues, our objective was to provide meta-analytical tests for social context predictors of change-oriented citizenship. Below, we highlight our findings and implications.

Findings and Implications for Theory and Research

First, results demonstrated positive relationships between the three social context antecedents and change-oriented citizenship, exhibiting effect sizes around 0.30 and emerging as essentially equal predictors. Results remained robust after controlling for three other previously demonstrated predictors: job satisfaction, organizational commitment, and intention to quit. Our findings are consistent with prior meta-analyses in which social support has been shown to (negatively) predict work stress (Viswesvaran, Sanchez, & Fisher, 1999), burnout (Halbesleben, 2006), and turnover intentions (Feeley, Moon, Kozey, & Slowe, 2010), with effect sizes of similar magnitudes. Interestingly, effect sizes were slightly larger when POS predicted change-oriented citizenship (compared to its prediction of contextual performance; Rhoades & Eisenberger, 2002) and coworker support predicted change-oriented citizenship (compared to its prediction of affiliative citizenship; Chiaburu & Harrison, 2008). Even though the direct relationships and the effect size magnitudes are encouraging, additional research is necessary to uncover intervening processes.

Second, as revealed by the relative importance analyses, source of support did not make a significant difference when predicting change-oriented citizenship. Thus, our findings suggest that none of the sources of support emerges as a clear "winner" over the others. One important theoretical implication of this finding is the value of including predictors across the social context, rather than limiting research to one source of support (e.g., employees' direct leaders or their coworkers). Our finding extends the results and conclusions of an early influential primary study where Parker and colleagues (2006) warned researchers against using only one support source (i.e., employees' supervisor) to increase subordinates' proactivity. We echo their warning and back it up with further evidence, obtained across studies, employees, and settings.

We nevertheless note that even though our results are consistent with the idea that support sources (leader, coworkers, and the organization) influence change-oriented citizenship to a similar extent, it is yet to be determined *why* this is the case. For example, is it possible for one source of support, such as a supportive organization, to make other entities extending support, such as supervisors and coworkers, become more supportive, thus ultimately generating overall support across sources? Or could employees who receive support from only one source (e.g., supervisor) also perceive higher levels of support from other entities, such as coworkers or the organization? These specific processes need to be clarified in future studies.

We also proposed that specific forms of support would be better predictors of change-oriented citizenship than generic forms of support. Indeed, specific support originating from coworkers (r = .46) and the organization (r = .37)had stronger relationships with subordinate change-oriented citizenship than generic forms of support $(r_c = .33 \text{ and } r_c = .24, \text{ respectively})$ from these sources. Surprisingly, specific (r = .34) and generic (r = .33) leader support were equally predictive of change-oriented citizenship. These contrasts show the cumulative power and insights provided by meta-analytic studies. Thus, based on the current results, it would be premature to magnify the value of leader behaviors specifically directed toward change (e.g., being open to suggestions, involving subordinates in decisions, transformational leadership) while downplaying generic forms of support (e.g., leader consideration). From the available data, both generic and specific support are important for change-oriented citizenship when their respective effect sizes are compared. While it is unclear conceptually why this is the case, a number of plausible explanations nevertheless exist. Seen from social facilitation, symbolic, or attribution-based theoretical perspectives (Pfeffer, 1981; Zajonc, 1965), leaders may not need to expend much effort to influence followers; their mere presence, follower attributions, or general support could be sufficient. Thus, fruitful investigations can examine the extent to which subordinates are able to distinguish among conceptually distinct leader behaviors (e.g., Bono,

Hooper, & Yoon, 2012). If subordinates are capable to differentiate various leader influences, it may be useful to specify contingencies accentuating (or attenuating) leader influence (Grant, Gino, & Hofmann, 2011; Li, Chiaburu, Kirkman, & Xie, in press) and theorize on unique mediation paths connecting specific versus generic leader support with change-oriented citizenship.

Limitations

As with all research, our study has limitations. Because we meta-analyzed field studies rather than experiments, causal relationships remain undetermined, and experimental studies are necessary. Second, although we made a concerted effort to investigate more than direct relationships by testing hypotheses involving contingencies, future research needs to explore more complex models. For example, it is possible that support influences change-oriented citizenship though *specific* mediators (e.g., increased identification with the organization); unique mediation paths may also exist, as argued previously (e.g., Parker et al., 2006). Such models can be tested when more primary studies become available.

Yet the current meta-analysis has some strengths. We consider employee behaviors based on self- and other-reports (as presented in Table 2), use relative importance analyses to determine the strength of relationships, and propose moderators to clarify existing ambiguities. We extend other meta-analyses focused more specifically on voice (Ng & Feldman, 2012) or innovation (Hülsheger et al., 2009) and go further than prior meta-analyses where only personality traits were included as predictors (Chiaburu et al., 2011), support was not differentiated by source and specificity, and the relative importance of different predictors was not determined (Tornau & Frese, 2013).

Future Research

First, our comparison of generic and specific leader support and their influence on change-oriented citizenship revealed similar effect sizes. Given that our meta-analysis was not based on a direct comparison of support with different degrees of specificity assessed within the boundaries of the same study, follow-up research would be useful. Scholars could extend prior research by carefully specifying specific and generic leader influences and revisiting the conclusion of Detert and Burris (2007, p. 881) that "specific leader behaviors, rather than generically positive or personalized behaviors, may be needed to stimulate routine voice from subordinates". As our findings suggest, although there is value in separating coworker and organization support based on degree of

specificity, this separation of specific versus generic is less helpful for leader support. Future research examining specific and generic leader support in the same study can help to clarify this relationship.

In some work contexts, sources of support may present opposite patterns of covariation, such as high coworker support, combined with high support from the organization and low support from leaders (or other combinations). Additional theoretical development is necessary to capture the joint influence of such inconsistent patterns of support on change-oriented citizenship and other outcomes. Quasi-experimental or experimental designs crossing support from different sources may provide additional insights on the extent to which different sources of support—leaders, coworkers, and the organization—complement or supplement one another. One implication of the current metanalysis is that conclusions cannot be reliably derived when models are underspecified and include only the influence of one source of support.

Future research may be needed to clarify the scope of change-oriented citizenship, a mega-construct with multiple subdimensions. Based on prior research, change-oriented citizenship behaviors are typically seen as (a) constructive; (b) directed toward identifying and implementing functional changes; (c) with changes targeting work methods, policies, and procedures; (d) taking place in a context consisting of jobs, units, or organizations (Bettencourt, 2004; Choi, 2007; Van Dyne et al., 1995); (e) extra-role (Morrison & Phelps, 1999; Van Dyne et al., 1995); and (f) challenging the status quo.

While innovative performance (Bettencourt, 2004; Parker & Collins, 2010) and creative performance (as indicated by the results of the rating task in this study) match some of the core aspects of the definition above (Points a-d), additional research is needed to examine the extent to which other behaviors, such as problem prevention (Parker & Collins, 2010) or knowledge sharing (Bal, Chiaburu, & Diaz, 2011), are consistent with the conceptualization of change-oriented citizenship. As illustrated in Table 1, raters agree that creative performance is representative of change-oriented behaviors to a greater extent than they situate voice in the same domain, a counterintuitive finding. More important, the extra-role aspect of change-oriented citizenship behaviors, which features prominently in earlier research (Frese et al., 1997; Morrison & Phelps, 1999; Van Dyne et al., 1995), needs to be conceptually and empirically reassessed.

Conclusion

A number of primary studies have demonstrated the importance of social exchanges and context as predictors of affiliative citizenship (Cardona,

Lawrence, & Bentler, 2004; Cohen & Keren, 2008; Zagenczyk, Gibney, Murrell, & Boss, 2008). Prior meta-analyses have clarified the factor structure (LePine et al., 2002), antecedents (e.g., individual differences, Ilies et al., 2009; leader behaviors, Wang et al., 2011), and consequences (Podsakoff, Whiting, Podsakoff, & Blume, 2009) of affiliative citizenship. With few exceptions (e.g., Chiaburu et al., 2011), cumulative research on change-oriented citizenship has been underdeveloped. Responding to calls for integrative research (Parker et al., 2006), we examined employees' social context as antecedent of change-oriented citizenship. On the basis of data from more than 130 independent samples, we demonstrated the importance of all three aspects of the social context (support from leaders, coworkers, and the organization) for employees' change-oriented citizenship and uncovered several specific patterns concerning support specificity. Our meta-analysis can guide future studies that aim to uncover mechanisms mediating these relationships or posit related boundary conditions.

Appendix A: Primary studies used in the current meta-analysis

The following are the references included in our meta-analyses: Axtell et al., 2000; Baer & Oldham, 2006; Basu & Green, 1997; Bettencourt, 2004; Bettencourt, Gwinner, & Meuter, 2001; Blakely, Andrews, & Fuller, 2003; Blakely, Andrews, & Moorman, 2005; Bolino & Turnley, 2005; Botero & Van Dyne, 2009; Burnett, 2007; Burris et al., 2008; Burton, 2003; Chan, 2008; Chen & Tang, 2009; Chen, Shih, & Yeh, 2009; Chen, Aryee, Tse, & Huang, 2008; Choi, 2007; Choi, Anderson, & Veillette, 2009; Cirka, 2000; Coyle-Shapiro, 2002; Daly, 1998; De Stobbeleir, 2008; de Jong & de Ruyter, 2004; Deckop, Circka, & Andersson, 2003; Den Hartog & Belschak, 2007; Detert & Burris, 2007; Dewett, 2002; Edmondson, 2003; Farmer, Tierney, & Kung-McIntyre, 2003; Fay, Lührmann, & Koh, 2004; Fellenz, 1996; Fischer & Smith, 2006; Freser, Teng, & Wijnen, 1999; Fritz & Sonnentag, 2009; Fuller, Barnett, Hester, Relyea, & Frey, 2007; Fuller et al., 2006; Fuller, Hester, & Marler, 2007; Gebbia, 1999; George & Zhou, 2001, 2007; Gong et al., 2009; Graham & Van Dyne, 2006; Grant & Berry, 2011; Griffin, Neal, & Parker, 2007; Hagedoorn, Van Yperen, Van de Vliert, & Buunk, 1999; Han & Williams, 2008; Hoffi-Hofstetter & Mannheim, 1999; Janssen, 2000, 2001, 2003, 2004, 2005; Janssen, De Vries, & Cozijnsen, 1998; Kam Dar & Van Dyne, 2009; Kark & Carmeli, 2009; Kassing, 1998; Kernodle, 2007; Kramer, Skarlicki, & Barclay, 2002; Koritko, 2002; Leck & Saunders, 1992; LePine &

(continued)

Appendix A (continued)

Van Dyne, 2001; Liang, 2007; Lin, Hung, & Chiu, 2008; Madjar, 2008; Madjar, Oldham, & Pratt, 2002; Marinova, 2007; Marks & Kath, 2008; McAllister et al., 2007; McGonagle, Mathieu, & Kath, 2008; Miron, Erez, & Naveh, 2004; Moon, Kamdar, Mayer, & Takeuchi, 2008; Moorman, 1991; Moorman & Blakely, 1995; Moorman et al., 1998; Morrison & Phelps, 1999; Newton, Blanton, & Will, 2008; Ohly, Sonnentag, & Pluntke, 2006; Oldham & Cummings, 1996; Ortiz-Walters, 2005; Palmer, 2005; Politis, 2005; Premeaux & Bedeian, 2003; Rank, Carsten, Unger, & Spector, 2007; Raub, 2008; Raub & Robert, 2010; Ristig, 2004; Robben, 1998; Saunders, Shepard, Knight, & Roth, 1992; Scott & Bruce, 1994; Scott & Zweig, 2008; Seibert, Kraimer, & Crant, 2001; Shalley, Gilson, & Blum, 2009; Shin & Zhou, 2003; Stamper & Van Dyne, 2001; Strauss, Griffin, & Rafferty, 2009; Suazo, 2009; Takeuchi, Chen, & Cheung, 2012; Tallman & Bruning, 2008; Tangirala & Ramanujam, 2008; Tepper, Lockhart, & Hoobler, 2001; Tierney & Farmer, 2002, 2004; Tierney, Farmer, & Graen, 2000; Tröster, Thau, van Knippenberg, & Wittek, 2008; Tröster & Van Knippenberg, 2008; Tucker, 2007; Tucker, Chmiel, Turner, Hershcovis, & Stride, 2008; Turnley & Feldman, 1999; Vakola & Bouradas, 2005; Van den Berg & van der Velde, 2005; Van Dyne, Graham, & Dienesch, 1994; Van Dyne, Jehn, & Cummings, 2002; Van Dyne, Kamdar, & Joireman, 2008; Van Dyne & LePine, 1998; van Veldhoven & Dorenbosch, 2008; Vigoda-Gadot, 2001; Vinarski-Peretz & Carmeli, 2010; Walumbwa & Schaubroeck, 2009; Wang, Kuo, Lin, Tsai, & Cheng, 2009; Wang, Oh, Courtright, & Colbert, 2011; Williams, 2004; Xu, 2007; Yang, 2005; Yuan, 2008; Zhou, 2003; Zhou & George, 2001; Zhou, Shin, & Canella, 2008.

Appendix B: Breakdown of studies by source of support and specific dependent variables^a

a. Leader support and change-oriented citizenship: 71 independent samples, 26 reported leader support correlations with voice, 15 with proactive/ innovative behaviors, 13 with creativity/creative performance, 9 with personal/ individual initiative/proactivity, and 8 with other dependent variables, such as organizational change-oriented citizenship and taking charge, which we closely examined at the item level to include only samples which operationalize change-oriented citizenship.

(continued)

Appendix B (continued)

b. Coworker support and change-oriented citizenship: 34 independent samples, 14 reported coworker support correlations with voice, 6 with proactive/innovative behaviors, 4 with creativity/creative performance, 6 with personal initiative/ proactivity, and 4 with other dependent variables, such as taking charge and adaptive performance, which we closely examined at the item level to include only samples which operationalize change-oriented citizenship.

c. Organizational support and change-oriented citizenship: 71 independent samples, 19 reported organizational support correlations with voice, 11 with proactive/innovative behaviors, 13 with creativity/creative performance, 14 with personal initiative/proactivity, 6 with taking charge, and 8 with other dependent variables, such as proactive extra-role behavior and suggested system improvements, which we closely examined at the item level to include only samples that operationalize change-oriented citizenship.

^aStudies providing separate correlations for different relationships (e.g., a correlation for leader support and change-oriented citizenship and a correlation for coworker support and change-oriented citizenship) were used as separate correlations (effect sizes) in the respective category. No study was used twice in a particular category unless it reported data from two separate samples (e.g., Griffin, Neal, & Parker, 2007).

Acknowledgments

The authors benefited from the editorial guidance of Gayle Baugh and numerous suggestions from three anonymous reviewers. They would also like to thank In-Sue Oh for his analytical guidance and helpful suggestions.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

Note

1. In the formula above ρ_1 and ρ_2 refer to the estimated population corrected for unreliability of the two compared groups (r_s)

References

- Allworth, E., & Hesketh, B. (1999). Construct-oriented biodata: Capturing changerelated and contextually relevant future performance. *International Journal of Selection and Assessment*, 7, 97-111.
- Anderson, J. C., & Gerbing, D. W. (1991). Predicting the performance of measures in a confirmatory factor analysis with a pretest assessment of their substantive validities. *Journal of Applied Psychology*, 76, 732-740.
- Arthur, W., Jr., Bennett, W., Jr., & Huffcutt, A. I. (2001). *Conducting meta-analysis using SAS*. Mahwah, NJ: Erlbaum.
- Ashford, S. J., Sutcliffe, K. M., & Christianson, M. K. (2009) Speaking up and speaking out: The leadership dynamics of voice in organizations. In J. Greenberg, M. S. Edwards & C. T. Brinsfield (Eds.), *Voice and silence in organizations* (pp. 175-202). Bingley, UK: Emerald.
- Ashford, S. J., & Tsui, A. S. (1991). Self-regulation for managerial effectiveness: The role of active feedback seeking. *Academy of Management Journal*, *34*, 251-280.
- 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.
- Baer, M., & Frese, M. (2003). Innovation is not enough: Climates for initiative and psychological safety, process innovations, and firm performance. *Journal of Organizational Behavior*, 24, 45-68.
- Baer, M., & Oldham, G. R. (2006). The curvilinear relation between experienced creative time pressure and creativity: Moderating effects of openness to experience and support for creativity. *Journal of Applied Psychology*, *91*, 963-970.
- Bal, P. M., Chiaburu, D. S., & Diaz, I. (2011). Does psychological contract breach decrease proactive behaviors? The moderating effect of emotion regulation. *Group & Organization Management*, *36*, 722-758.
- Balkundi, P., & Harrison, D. A. (2006). Ties, leaders, and time in teams: Strong inference about network structure effects on team viability and performance. *Academy of Management Journal*, 49, 49-68.
- Banks, G. C., Kepes, S., & McDaniel, M. A. (2012). Publication bias: A call for improved meta-analytic practice in the organizational sciences. *International Journal of Selection and Assessment*, 20, 182-196.
- Basu, R., & Green, S. G. (1997). Leader-member exchange and transformational leadership: An empirical examination of innovative behaviors in leader-member dyads. *Journal of Applied Social Psychology*, 27, 477-499.
- Bettencourt, L. A. (2004). Change-oriented organizational citizenship behaviors: The direct and moderating influence of goal orientation. *Journal of Retailing*, 80, 165-180.

Bettencourt, L. A., Gwinner, K. P., & Meuter, M. L. (2001). A comparison of attitude, personality, and knowledge predictors of service-oriented organizational citizenship behaviors. *Journal of Applied Psychology*, 86, 29-41.

- Bindl, U. K., & Parker, S. K. (2010). Proactive work behavior: Forward-thinking and change oriented action in organizations. In S. Zedeck (Ed.), *APA handbook of industrial and organizational psychology* (pp. 567-598). Washington, DC: American Psychological Association.
- Bing, M. N., Davison, H. K., Minor, I., Novicevic, M. M., & Frink, D. D. (2011). The prediction of task and contextual performance by political skill: A meta-analysis and moderator test. *Journal of Vocational Behavior*, 79, 563-577.
- Blakely, G. L., Andrews, M. C., & Fuller, J. (2003). Are chameleons good citizens? A longitudinal study of the relationship between self-monitoring and organizational citizenship behavior. *Journal of Business and Psychology*, *18*, 131-144.
- Blakely, G. L., Andrews, M. C., & Moorman, R. H. (2005). The moderating effects of equity sensitivity on the relationship between organizational justice and organizational citizenship behaviors. *Journal of Business and Psychology*, 20, 259-273.
- Bolino, M. C., & Turnley, W. H. (2005). The personal costs of citizenship behavior: The relationship between individual initiative and role overload, job stress, and work-family conflict. *Journal of Applied Psychology*, *90*, 740-748.
- Bono, J. E., Hooper, A. C., & Yoon, D. J. (2012). Impact of rater personality on transformational and transactional leadership ratings. *Leadership Quarterly*, 23, 132-145.
- Borenstein, M., Hedges, L. V., Higgins, J. P. T., & Rothstein, H. R. (2009). *Introduction to meta-analysis*. United Kingdom: Wiley.
- Borman, W. C., Penner, L. A., Allen, T. D., & Motowidlo, S. J. (2001). Personality predictors of citizenship performance. *International Journal of Selection and Assessment*, *9*, 52-69.
- Botero, I. C., & Van Dyne, L. (2009). Predicting voice: Interactive effects of LMX and power distance in the U.S. and Colombia. *Management Communication Quarterly*, 23, 84-104.
- Burnett, M. (2007, August). Performance tip-sharing: When, and how, do employees share their insights? Paper presented at the Academy of Management Annual Meetings, Philadelphia.
- Burris, E. R. (2012). The risks and rewards of speaking up: Managerial responses to employee voice. *Academy of Management Journal*, *55*, 851-875.
- Burris, E., Detert, J., & Chiaburu, D. S. (2008). Quitting before leaving: The mediating effects of psychological attachment and detachment on voice. *Journal of Applied Psychology*, 93, 912-922.
- Burton, C. H. (2003). An empirical investigation of the interrelationships of organizational culture, managerial values, and organizational citizenship behaviors. Unpublished doctoral dissertation, George Washington University, Washington, DC.

- Cardona, P., Lawrence, B. S., & Bentler, P. M. (2004). The influence of social and work exchange relationships on organizational citizenship behavior. *Group & Organization Management*, 29, 219-247.
- Chan, D. (2008, August). Does paternalistic leadership lead to employee voice? The moderating role of information-sharing. Paper presented at the Academy of Management Annual Meeting, Anaheim, CA.
- Chang, C.-H., Rosen, C. C., & Levy, P. E. (2009). The relationship between perceptions of organizational politics and employee attitudes, strain, and behavior: A meta-analytic examination. *Academy of Management Journal*, *52*, 779-801.
- Chen, Z.-X., Aryee, S., Tse, H. H. M., & Huang, X. (2008, August). *Participative decision making and employee outcomes: Examining moderating effects in China*. Paper presented at the Academy of Management Annual Meeting, Anaheim, CA.
- Chen, C.-J., Shih, H.-A., & Yeh, Y.-C. (2009, August). *Individual initiative, skill variety, and creativity*. Paper presented at the Academy of Management Annual Meetings, Chicago, IL.
- Chen, C.-H. V., & Tang, Y.-Y. (2009, August). A multilevel investigation on mechanisms linking transformational leadership and innovative behavior. Paper presented at the Academy of Management Annual Meeting, Chicago, IL.
- Chiaburu, D. S., & Harrison, D. A. (2008). Do peers make the place? Conceptual synthesis and meta-analysis of coworker effects on perceptions, attitudes, OCBs, and performance. *Journal of Applied Psychology*, *93*, 1082-1103.
- Chiaburu, D. S., Marinova, S. V., & Van Dyne, L. (2008). Should I do it or not? An initial model of cognitive processes predicting voice behaviors. In L. T. Kane & M. R. Poweller (Eds.), *Citizenship in the 21st century* (pp. 127-153). New York: Nova Science Publishers.
- Chiaburu, D. S., Oh, I.-S., Berry, C. M., Li, N., & Gardner, R. G. (2011). The five-factor model of personality traits and organizational citizenship behaviors: A meta-analysis. *Journal of Applied Psychology*, *96*, 1140-1166.
- Choi, J. N. (2007). Change-oriented organizational citizenship behavior: Effects of work environment characteristics and intervening psychological processes. *Journal of Organizational Behavior*, 28, 467-484.
- Choi, J. N., Anderson, T. N., & Veillette, A. (2009). Contextual inhibitors of employee creativity in organizations: The insulating role of creative ability. *Group & Organization Management*, *34*, 330-357.
- Cirka, C. C. (2000). Compliance and constructive contributions: Effects of managerial control styles on proactive employee behaviors. Unpublished doctoral dissertation, Temple University, Philadelphia.
- Cohen, A., & Keren, D. (2008). Individual values and social exchange variables: Examining their relationship to and mutual effect on in-role performance and

- organizational citizenship behavior. *Group & Organization Management*, 33, 425-452.
- Cortina, J. M. (2003). Apples and oranges (and pears, oh my!): The search for moderators in meta-analysis. *Organizational Research Methods*, *6*, 415-439.
- Coyle-Shapiro, J. A.-M. (2002). A psychological contract perspective on organizational citizenship behavior. *Journal of Organizational Behavior*, 23, 927-946.
- Dalal, R. S. (2005). A meta-analysis of the relationship between organizational citizenship behavior and counterproductive work behavior. *Journal of Applied Psychology*, *90*, 1241-1255.
- Daly, C. L. (1998). Explaining the extra-role behavior of part-time and full-time workers: A matter of support? Unpublished doctoral dissertation, Michigan State University, East Lansing.
- de Jong, A., & de Ruyter, K. (2004). Adaptive versus proactive behavior in service recovery: The role of self-managing teams. *Decision Sciences*, *35*, 457-491.
- De Stobbeleir, K. E. M. (2008). *Employee proactivity in the feedback context: A study of the causes, mechanisms, and consequences of feedback-seeking behavior*. Unpublished doctoral dissertation, Ghent University, Gent, Belgium.
- Deckop, J. R., Cirka, C. C., & Andersson, L. M. (2003). Doing unto others: The reciprocity of helping behavior in organizations. *Journal of Business Ethics*, 47, 101-113.
- Den Hartog, D. N., & Belschak, F. D. (2007). Personal initiative, commitment and affect at work. *Journal of Occupational and Organizational Psychology*, 80, 601-622.
- Detert, J. R., & Burris, E. R. (2007). Leadership behavior and employee voice: Is the door really open? *Academy of Management Journal*, *50*, 869-884.
- Detert, J. R., & Edmondson, A. C. (2011). Implicit voice theories: Taken-for-granted rules of self-censorship at work. *Academy of Management Journal*, *54*, 461-488.
- Dewett, T. C. (2002). *Differentiating outcomes in employee creativity: Understanding the role of risk in creative performance*. Unpublished doctoral dissertation, Texas A&M University, College Station.
- Eatough, E. M., Chang, C.-H., Miloslavic, S. A., & Johnson, R. E. (2011). Relationships of role stressors with organizational citizenship behavior: A meta-analysis. *Journal of Applied Psychology*, *96*, 619-632.
- Edmondson, A. C. (2003). Speaking up in the operating room: How team leaders promote learning in interdisciplinary action teams. *Journal of Management Studies*, 40, 1419-1452.
- Eisenberger, R., Armeli, S., Rexwinkel, B., Lynch, P. D., & Rhoades, L. (2001). Reciprocation of perceived organizational support. *Journal of Applied Psychology*, 86, 42-51.
- Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology*, 71, 500-507.
- Ellis, J. B., & Van Dyne, L. (2009). Voice and silence as observer reactions to defensive voice: Predictions based on communication competence theory. In J. Greenberg,

- M. S. Edwards, & C. T. Brinsfield (Eds.), *Voice and silence in organizations* (pp. 37-61). Bingley, UK: Emerald Group.
- Erez, A., LePine, J. A., & Elms, H. (2002). Effects of rotated leadership and peer evaluation on the functioning and effectiveness of self-managed teams: A quasi-experiment. *Personnel Psychology*, *55*, 929-948.
- Farmer, S. M., Tierney, P., & Kung-McIntyre, K. (2003). Employee creativity in Taiwan: An application of role identity theory. *Academy of Management Journal*, 46, 618-630.
- Fassina, N. E., Jones, D. A., & Uggerslev, K. L. (2008). Relationship clean-up time: Using meta-analysis and path analysis to clarify relationships among job satisfaction, perceived fairness, and citizenship behaviors. *Journal of Management*, *34*, 161-188.
- Fay, D., Lührmann, H., & Kohl, C. (2004). Proactive climate in a post-reorganization setting: When staff compensate managers' weakness. *European Journal of Work and Organizational Psychology*, *13*, 241-268.
- Feeley, T. H., Moon, S.-I., Kozey, R. S., & Slowe, A. S. (2010). An erosion model of employee turnover based on network centrality. *Journal of Applied Communication Research*, *38*, 167-188.
- Fellenz, M. R. (1996). *Individual flexibility in organizations: A conceptual and empirical investigation*. Unpublished doctoral dissertation, University of North Carolina at Chapel Hill.
- Fischer, R., & Smith, P. B. (2006). Who cares about justice? The moderating effect of values on the link between organizational justice and work behavior. *Applied Psychology: An International Review*, 55, 541-562.
- 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., Fay, D., Hilburger, T., Leng, K., & Tag, A. (1997). The concept of personal initiative: Operationalization, reliability and validity in two German samples. *Journal of Occupational and Organizational Psychology*, 70, 139-161.
- Frese, M., Teng, E., & Wijnen, C. J. D. (1999). Helping to improve suggestion systems: Predictors of making suggestions in companies. *Journal of Organizational Behavior*, 20, 1139-1155.
- Fritz, C., & Sonnentag, S. (2009). Antecedents of day-level proactive behavior: A look at job stressors and positive affect during the workday. *Journal of Management*, *35*, 94-111.
- Fuller, J. B., Barnett, T., Hester, K., Relyea, C., & Frey, L. (2007). An exploratory examination of voice behavior from an impression management perspective. *Journal of Managerial Issues*, *19*, 134-151.
- Fuller, J. B., Hester, K., Barnett, T., Frey, L., Relyea, C., & Beu, D. (2006). Perceived external prestige and internal respect: New insights into the organizational identification process. *Human Relations*, *59*, 815-846.

Fuller, J. B., Hester, K., & Marler, L. E. (2007, August). Using performance-based theory to better understand proactive engagement at work. Paper presented at the Academy of Management Meeting, Philadelphia.

- Fuller, J. B., Marler, L. E., & Hester, M. 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.
- Gebbia, M. (1999). *Transforming the work environment: Do norms influence organizational citizenship behavior?* Unpublished doctoral dissertation, City University of New York, NY.
- George, J. M., & Zhou, J. (2001). When openness to experience and conscientiousness are related to creative behavior: An interactional approach. *Journal of Applied Psychology*, 86, 513-524.
- George, J. M., & Zhou, J. (2007). Dual tuning in a supportive context: Joint contributions of positive mood, negative mood, and supervisory behaviors to employee creativity. *Academy of Management Journal*, 50, 605-622.
- Gong, Y., Huang, J.-C., & Farh, J.-L. (2009). Employee learning orientation, transformational leadership, and employee creativity: The mediating role of employee creative self-efficacy. *Academy of Management Journal*, *52*, 765-778.
- Graham, J. W., & Van Dyne, L. (2006). Gathering information and exercising influence: Two forms of civic virtue organizational citizenship behavior. *Employee Responsibilities and Rights Journal*, 18, 89-109.
- Grant, A. M., & Ashford, S. J. (2008). The dynamics of proactivity at work. *Research in Organizational Behavior*, 28, 3-34.
- Grant, A. M., & Berry, J. (2011). The necessity of others is the mother of invention: Intrinsic and prosocial motivations, perspective-taking, and creativity. *Academy of Management Journal*, *54*, 73-96.
- Grant, A. M., Gino, F., & Hofmann, D. A. (2011). Reversing the extraverted leadership advantage: The role of employee proactivity *Academy of Management Journal*, *54*, 528-550.
- Greenberg, J., & Edwards, M. S. (2009). *Voice and silence in organizations*. Bingley, UK: Emerald Group.
- Griffin, M. A., Neal, A., & Parker, S. K. (2007). A new model of work role performance: Positive behavior in uncertain and interdependent contexts. *Academy of Management Journal*, *50*, 327-347.
- Griffin, M. A., Parker, S. K., & Mason, C. M. (2010). Leader vision and the development of adaptive and proactive performance: A longitudinal study. *Journal of Applied Psychology*, 95, 174-182.
- Hagedoorn, M., Van Yperen, N. W., Van de Vliert, E., & Buunk, B. P. (1999). Employees' reactions to problematic events: A circumplex structure of five categories of

- responses, and the role of job satisfaction. *Journal of Organizational Behavior*, 20, 309-332.
- Halbesleben, J. R. B. (2006). Sources of social support and burnout: A meta-analytic test of the conservation of resources model. *Journal of Applied Psychology*, *91*, 1134-1145.
- Hall, S. M., & Brannick, M. T. (2002). Comparison of two random-effects methods of meta-analysis. *Journal of Applied Psychology*, 87, 377-389.
- Han, T. Y., & Williams, K. J. (2008). Multilevel investigation of adaptive performance: Individual-and team-level relationships. *Group & Organization Management*, 33, 657-684.
- Harrison, D. A., Newman, D. A., & Roth, P. L. (2006). How important are job attitudes? Meta-analytic comparisons of integrative behavioral outcomes and time sequences. *Academy of Management Journal*, 49, 305-325.
- Hoffi-Hofstetter, H., & Mannheim, B. (1999). Managers' coping resources, perceived organizational patterns, and response during organizational recovery from decline. *Journal of Organizational Behavior*, 20, 665-685.
- Hoffman, B. J., Blair, C. A., Meriac, J. P., & Woehr, D. J. (2007). Expanding the criterion domain? A quantitative review of the OCB literature. *Journal of Applied Psychology*, 92, 555-566.
- Hülsheger, U. R., Anderson, N., & Salgado, J. F. (2009). Team-level predictors of innovation at work: A comprehensive meta-analysis spanning three decades of research. *Journal of Applied Psychology*, *94*, 1128-1145.
- Hunter, J. E., & Schmidt, F. L. (2004). *Methods of meta-analysis: Correcting error and bias in research findings*. Thousand Oaks, CA: SAGE.
- Ilies, R., Fulmer, I. S., Spitzmuller, M., & Johnson, M. D. (2009). Personality and citizenship behavior: The mediating role of job satisfaction. *Journal of Applied Psychology*, *94*, 945-959.
- Ilies, R., Nahrgang, J. D., & Morgeson, F. P. (2007). Leader-member exchange and citizenship behaviors: A meta-analysis. *Journal of Applied Psychology*, 92, 269-277.
- Janssen, O. (2000). Job demands, perceptions of effort—reward fairness and innovative work behaviour. *Journal of Occupational & Organizational Psychology*, 73, 287-302.
- Janssen, O. (2001). Fairness perceptions as a moderator in the curvilinear relationships between job demands, and job performance and job satisfaction. *Academy of Management Journal*, 44, 1039-1050.
- Janssen, O. (2003). Innovative behavior and job involvement at the price of conflict and less satisfactory relations with co-workers. *Journal of Occupational and Organizational Psychology*, 76, 347-364.

Janssen, O. (2004). How fairness perceptions make innovative behavior more or less stressful. *Journal of Organizational Behavior*, 25, 201-215.

- Janssen, O. (2005). The joint impact of perceived influence and supervisor supportiveness on employee innovative behavior. *Journal of Occupational and Organizational Psychology*, 78, 573-579.
- Janssen, O., De Vries, T., & Cozijnsen, A. J. (1998). Voicing by adapting and innovating employees: An empirical study on how personality and environment interact to affect voice behavior. *Human Relations*, *51*, 945-967.
- Johnson, J. W. (2000). A heuristic method for estimating the relative weight of predictor variables in multiple regression. *Multivariate Behavioral Research*, 35, 1-19.
- Johnson, J. W., & LeBreton J. M. (2004). History and use of relative importance indices in organizational research. *Organizational Research Methods*, 7, 238-257.
- Jöreskog, K. G., & Sörbom, D. (2002). LISREL 8: Structural equation modeling with the SIMPLIS command language. Sandy, UT: Scientific Software.
- Kamdar, D., & Van Dyne, L. (2009, August). Motivational differences in predictors of helping and voice: The importance of social-exchange relationships and employee motives. Paper presented at the Academy of Management Annual Meeting, Chicago, IL.
- Kark, R., & Carmeli, A. (2009). Alive and creating: The mediating role of vitality and aliveness in the relationship between psychological safety and creative work involvement. *Journal of Organizational Behavior*, 30, 785-804.
- Kassing, J. W. (1998). Development and validation of the organizational dissent scale. *Management Communication Quarterly*, *12*, 183-229.
- Kepes, S., Banks, G. C., McDaniel, M., & Whetzel, D. L. (2012). Publication bias in the organizational sciences. *Organizational Research Methods*, *15*, 624-662.
- Kernodle, T. A. (2007). *Antecedents and consequences of organizational citizenship behavior: A hierarchical linear modeling study*. Unpublished doctoral dissertation, Touro University International, Cypress, CA.
- Kish-Gephart, J. J., Detert, J. R., Treviño, L. K., & Edmondson, A. C. (2009). Silenced by fear: The nature, sources, and consequences of fear at work. *Research in Organizational Behavior*, *29*, 163-193.
- Kramer, J., Skarlicki, D. P., & Barclay, L. (2002). Speaking up in the Canadian military: The roles of voice, being heard, and generation in predicting civic virtue. *Canadian Journal of Behavioral Science*, *34*, 122-130.
- Koritko, L (2002). *Psychological contracts: Inherent contact characteristics and consequences of violations*. Unpublished doctoral dissertation, North Carolina State University, Raleigh.
- LeBreton, J. M., Binning J. F., Adorno, A. J., & Melcher K. M. (2004). Importance of personality and job-specific affect for predicting job attitudes and withdrawal behavior. *Organizational Research Methods*, 7, 300-325.

- Leck, J. D., & Saunders, D. M. (1992). Hirschman's loyalty: Attitude or behavior? Employee Responsibilities and Rights Journal, 5, 219-229.
- LePine, J. A., Erez, A., & Johnson, D. E. (2002). The nature and dimensionality of organizational citizenship behavior: A critical review and meta-analysis. *Journal of Applied Psychology*, 87, 52-65.
- LePine, J. A., & Van Dyne, L. (1998). Predicting voice behavior in work groups. *Journal of Applied Psychology*, 83, 853-868.
- LePine, J. A., & Van Dyne, L. (2001). Voice and cooperative behavior as contrasting forms of contextual performance: Evidence of differential relationships with Big Five personality characteristics and cognitive ability. *Journal of Applied Psychology*, 86, 326-336.
- Li, N., Chiaburu, D. S., Kirkman, B., & Xie, Z.-T. (in press). Spotlight on the followers: Moderators of relationships between transformational leadership and subordinates' citizenship and taking charge. *Personnel Psychology*.
- Liang, J. (2007). *Voice behavior in organizations: Scale development, psychological mechanisms, and cross-level modeling.* Unpublished doctoral dissertation, Hong Kong University of Science and Technology, Hong Kong, PRC.
- Liang, J., Farh, C. E. C., & Farh, J. L. (2012). Psychological antecedents of promotive and prohibitive voice: A two-wave examination. *Academy of Management Journal*, 55, 71-92.
- Lin, C.-P., Hung, W.-T., & Chiu, C.-K. (2008). Being good citizens: Understanding a mediating mechanism of organizational commitment and social network ties in OCBs. *Journal of Business Ethics*, *81*, 561-578.
- Lipsey, M. W., & Wilson, D. B. (2001). *Practical meta-analysis*. Thousand Oaks, CA: SAGE.
- Liu, W., Zhu, R., & Yang, Y. (2010). I warn you because I like you: Voice behavior, employee identifications, and transformational leadership. *Leadership Quarterly*, 21, 189-202.
- Madjar, N. (2008). Emotional and informational support from different sources and employee creativity. *Journal of Occupational and Organizational Psychology*, 81, 83-100.
- Madjar, N., Oldham, G. R., & Pratt, M. G. (2002). There's no place like home? The contributions of work and nonwork creativity support to employees' creative performance. *Academy of Management Journal*, 45, 757-767.
- Marinova, S. V. (2007, August). *Emotional intelligence, relationship building and employee effectiveness*. Paper presented at the Academy of Management Annual Meeting, Philadelphia.
- Marks, K., & Kath, L. M. (2008, April). What predicts employees' comfort in raising safety concerns with their supervisors? Antecedents of upward safety communica-

tion. Paper presented at the Society for Industrial and Organizational Psychology Annual Meeting, San Francisco, CA.

- McAllister, D. J., Kamdar, D., Morrison, E. W., & Turban, D. B. (2007). Disentangling role perceptions: How perceived role breadth, discretion, instrumentality and efficacy relate to helping and taking charge. *Journal of Applied Psychology*, 92, 1200-1211.
- McDaniel, M. A., Rothstein, H. R., & Whetzel, D. L. (2006). Publication bias: A case study of four test vendors. *Personnel Psychology*, *59*, 927-953.
- McGonagle, A. K., Mathieu, J. E., & Kath, L. M. (2008, April). The impact of employee attitudes and incivility climate on upward safety communication. Paper presented at Society for Industrial and Organizational Psychology Annual Meeting, San Francisco, CA.
- Miron, E., Erez, M., & Naveh, E. (2004). Do personal characteristics and cultural values that promote innovation, quality, and efficiency compete or complement each other? *Journal of Organizational Behavior*, 25, 175-199.
- Moon, H., Kamdar, D., Mayer, D. M., & Takeuchi, R. (2008). Me or we? The role of personality and justice as other-centered antecedents to taking charge. *Journal of Applied Psychology*, *93*, 84-94.
- Moorman, R. H. (1991). Relationship between organizational justice and organizational citizenship behaviors: Do fairness perceptions influence employee citizenship? *Journal of Applied Psychology*, 76, 845-855.
- Moorman, R. H., & Blakely, G. L. (1995). Individualism-collectivism as an individual difference predictor of organizational citizenship behavior. *Journal of Organizational Behavior*, 16, 127-142.
- Moorman, R. H., Blakely, G. L., & Niehoff, B. P. (1998). Does perceived organizational support mediate the relationship between procedural justice and organizational citizenship behaviors? *Academy of Management Journal*, *41*, 351-357.
- Morrison, E. W. (2011). Employee voice behavior: Integration and directions for future research. *Academy of Management Annals*, *5*, 373-412.
- Morrison, E. W., & Phelps, C. C. (1999). Taking charge at work: Extra-role efforts to initiate workplace change. *Academy of Management Journal*, 42, 403-419.
- Morrison, E. W., & Rothman, N. B. (2009). Silence and the dynamics of power. In J. Greenberg, M. S. Edwards, & C. T. Brinsfield (Eds.). *Voice and silence in organizations* (pp. 111-133). Bingley, UK: Emerald.
- Morrison, E. W., Wheeler-Smith, S., & Kamdar, D. (2011). Speaking up in groups: A cross-level study of group voice climate and voice. *Journal of Applied Psychology*, *96*, 183-191.
- Neuliep, J. W. (1991). *Replication research in the social sciences*. Newbury Park, CA: SAGE.

- Newton, S. K., Blanton, J. E., & Will, R. (2008). Innovative work and citizenship behaviors from information technology professionals: Effects of their psychological contract. *Information Resource Management Journal*, 21, 27-48.
- Ng, T. W. H., & Feldman, D. C. (2012). Employee voice behavior: A meta-analytic test of the conservation of resources framework. *Journal of Organizational Behavior*, 33, 216-234.
- Ng, T. W. H., & Sorensen, K. L. (2008). Toward a further understanding of the relationships between perceptions of support and work attitudes: A meta-analysis. *Group & Organization Management*, *33*, 243-268.
- Ohly, S., Sonnentag, S., & Pluntke, F. (2006). Routinization, work characteristics and their relationships with creative and proactive behaviors. *Journal of Organizational Behavior*, 27, 257-279.
- Oldham, G. R., & Cummings, A. (1996). Employee creativity: Personal and contextual factors at work. *Academy of Management Journal*, *39*, 607-634.
- Organ, D. W., Podsakoff, P. M., & MacKenzie, S. B. (2006). *Organizational citizenship behavior: Its nature, antecedents, and consequences*. Thousand Oaks, CA: SAGE.
- Organ, D. W., & Ryan, K. (1995). A meta-analytic review of attitudinal and dispositional predictors of organizational citizenship behavior. *Personnel Psychology*, 48, 775-802.
- Ortiz-Walters, R. (2005). *Developing creativity: Exploring the roles of various sources of developmental supports*. Unpublished doctoral dissertation, University of Connecticut, Storrs-Mansfield.
- Palmer, J. W. (2005). *Innovative behavior of frontline employees in the public sector*. Unpublished doctoral dissertation, University of Cincinnati, Cincinnati, OH.
- Parker, S. K., Bindl, U. K., & Strauss, K. (2010). Making things happen: A model of proactive motivation. *Journal of Management*, *36*, 827-856.
- Parker, S. K., & Collins, C. G. (2010). Taking stock: Integrating and differentiating multiple proactive behaviors. *Journal of Management*, *36*, 633-662.
- Parker, S. K., Williams, H. M., & Turner, N. (2006). Modeling the antecedents of proactive behavior at work. *Journal of Applied Psychology*, *91*, 636-652.
- Pfeffer, J. (1981). Management as symbolic action: The creation and maintenance of organizational paradigms. *Research in Organizational Behavior*, *3*, 1-52.
- Podsakoff, P. M., MacKenzie, S. B., Paine, J. B., & Bachrach, D. G. (2000). Organizational citizenship behaviors: A critical review of the theoretical and empirical literature and suggestions for future research. *Journal of Management*, 26, 513-563.
- Podsakoff, N. P., Whiting, S. W., Podsakoff, P. M., & Blume, B. D. (2009). Individual-and-organizational-level consequences of organizational citizenship behaviors: A meta-analysis. *Journal of Applied Psychology*, *94*, 122-141
- Politis, J. D. (2005). Dispersed leadership predictor of the work environment for creativity and productivity. *European Journal of Innovation Management*, 8, 182-204.

Premeaux, S. F., & Bedeian, A. G. (2003). Breaking the silence: The moderating effects of self-monitoring in predicting speaking up in the workplace. *Journal of Management Studies*, 40, 1537-1562.

- Pulakos, E. D., Arad, S., Donovan, 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.
- Rank, J., Pace, V. L., & Frese, M. (2004). Three avenues for future research on creativity, innovation, and initiative. *Applied Psychology: An International Review*, 53, 518-528.
- Raub, S. (2008). Does bureaucracy kill individual initiative? The impact of structure on organizational citizenship behavior in the hospitality industry. *International Journal of Hospitality Management*, *27*, 179-186.
- Raub, S., & Robert, C. (2010). Differential effects of empowering leadership on in-role and extra-role employee behaviors: Exploring the role of psychological empowerment and power values *Human Relations*, 63, 1743-1770.
- Rhoades, L., & Eisenberger, R. (2002). Perceived organizational support: A review of the literature. *Journal of Applied Psychology*, 87, 698-714.
- Ristig, K. (2004). *Antecedents and consequences of trust within organizations*. Unpublished doctoral dissertation, Louisiana Tech University, Ruston.
- Robben, M. A. (1998). A study of the determinants of individual innovative behavior in a high-technology product development organization. Unpublished doctoral dissertation, Nova Southeastern University, Fort Lauderdale, FL.
- Rosenthal, R. (1991). *Meta-analytic procedures for social research*. Newbury Park, CA: SAGE.
- Ryan, K. D., & Oestreich, D. K. (1991). *Driving fear out of the workplace*. San Francisco, CA: Jossey-Bass.
- Saunders, D. M., Shepard, B. H., Knight, V., & Roth, J. (1992). Employee voice to supervisors. *Employee Responsibilities and Rights Journal*, 5, 241-259.
- Schnake, M., Cochran, D. S., & Dumler, M. P. (1995). Encouraging organizational citizenship: The effects of job satisfaction, perceived equity, and leadership. *Journal of Managerial Issues*, 7, 209-221.
- 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.
- Scott, K. A., & Zweig, D. (2008, April). *Organizational cynicism, voice, and job satis-faction: Exploring relationships*. Paper presented at the Society for Industrial and Organizational Psychology Annual Meeting, San Francisco, CA.

- Seers, A. (1989). Team-member exchange quality: A new construct for role-making research. *Organizational and Behavior and Human Decision Processes*, 43, 118-135.
- Seers, A., McGee, G. W., Serey, T. T., & Graen, G. B. (1983). The interaction of job stress and social support: A strong inference investigation. *Academy of Management Journal*, *26*, 273-284.
- 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*, 845-674.
- Shalley, C. E., Gilson, L. L., & Blum, T. C. (2009). Interactive effects of growth need strength, work context, and job complexity on self-reported creative performance. *Academy of Management Journal*, *52*, 489-505.
- Shin, S., & Zhou, J. (2003). Transformational leadership, conservation, and creativity: Evidence from Korea. Academy of Management Journal, 46, 703-714.
- Stamper, C. L., & Van Dyne, L. (2001). Work status and organizational citizenship behavior: A field study of restaurant employees. *Journal of Organizational Behavior*, 22, 517-536.
- Strauss, K., Griffin, M. A., & Rafferty, A. E. (2009). The role of team leaders and organizational leaders in supporting proactive employees. *British Journal of Management*, 20, 279-291.
- Sturges, J., Conway, N., & Liefooghe, A. (2010). Organizational support, individual attributes, and the practice of career self-management behavior. *Group & Organization Management*, *35*, 108-141.
- Suazo, M. M. (2009). The mediating role of psychological contract violation on the relations between psychological contract breach and work-related attitudes and behaviors. *Journal of Managerial Psychology*, *24*, 136-160.
- Takeuchi, R., Chen, Z., & Cheung, S. Y. (2012). Applying uncertainty management theory to employee voice behavior: An integrative investigation. *Personnel Psychology*, 65, 283-323.
- Tallman, R. R. J., & Bruning, N. S. (2008). Relating employees' psychological contracts to their personality. *Journal of Managerial Psychology*, 23, 688-712.
- Tangirala, S., & Ramanujam, R. (2008). Employee silence on critical work issues: The cross-level effects of procedural justice climate. *Personnel Psychology*, 61, 37-68.
- Tekleab, A. G., & Chiaburu, D. S. (2011). Social exchange: Empirical examination of form and focus. *Journal of Business Research*, *64*, 460-466.
- Tepper, B. J., Lockhart, D., & Hoobler, J. (2001). Justice, citizenship, and role definition effects. *Journal of Applied Psychology*, 86, 789-796.
- Tierney, P., & Farmer, S. M. (2002). Creative self-efficacy: Its potential antecedents and relationship to creative performance. *Academy of Management Journal*, 45, 1137-1148.

Tierney, P., & Farmer, S. M. (2004). The Pygmalion process and employee creativity. *Journal of Management*, *30*, 413-432.

- Tierney, P., Farmer, S. M., & Graen, G. B. (2000). An examination of leadership and employee creativity: The relevance of traits and relationships. *Personnel Psychology*, *52*, 591-620.
- Tornau, K., & Frese, M. (2013). Construct clean-up in proactivity research: A meta-analysis on the nomological net of work-related proactivity concepts and their incremental validities. *Applied Psychology: An International Review*, 62, 44-96.
- Tröster, C., Thau, S., van Knippenberg, D., & Wittek, R. (2008, April). The influence of coworkers on employee voice: The role of centrality in communication networks. Paper presented at the Society for Industrial and Organizational Psychology Annual Meeting, San Francisco, CA.
- Tröster, C., & Van Knippenberg, A. (2008). *Employee voice in culturally-diverse management teams*. Paper presented at the Academy of Management Annual Meeting, Anaheim, CA.
- Tucker, A. L. (2007). An empirical study of system improvement by frontline employees in hospital units. *Manufacturing and Service Operations Management*, *9*, 492-505.
- Tucker, S., Chmiel, N., Turner, N., Hershcovis, M. S., & Stride, C. B. (2008). Perceived organizational support for safety and employee safety voice: The mediating role of coworker support for safety. *Journal of Occupational Health Psychology*, 13, 319-330.
- Turnley, W. H., & Feldman, D. C. (1999). The impact of psychological contract violations on exit, voice, loyalty, and neglect. *Human Relations*, *52*, 895-922.
- Vakola, M., & Bouradas, D. (2005). Antecedents and consequences of organisational silence: An empirical investigation. *Employee Relations*, *27*, 441-458.
- Van den Berg, P. T., & van der Velde, M. E. G. (2005). Relationships of functional flexibility with individual and work factors. *Journal of Business and Psychology*, 20, 111-129.
- Van Dyne, L., Ang, S., & Botero, I. C. (2003). Conceptualizing employee silence and employee voice as multidimensional constructs. *Journal of Management Studies*, 40, 1359-1392.
- Van Dyne, L., Cummings, L. L., & McLean Parks, J. (1995). Extra-role behaviors: In pursuit of construct and definitional clarity (a bridge over muddled waters). *Research in Organizational Behavior*, 17, 215-285.
- Van Dyne, L., & Ellis, J. B. (2004). Job creep: A reactance theory perspective on organizational citizenship behavior as over-fulfillment of obligations. In J. A. M. Coyle-Shapiro, L. M. Shore, M. S. Taylor, & L. E. Tetrick (Eds.), *The employment relationship: Examining psychological and contextual perspectives* (pp. 181-205). Oxford, UK: Oxford University Press.

- Van Dyne, L., Graham, J. W., & Dienesch, R. M. (1994). Organizational citizenship behavior: Construct redefinition, measurement, and validation. *Academy of Management Journal*, *37*, 765-802.
- Van Dyne, L., Jehn, K. A., & Cummings, A. (2002). Differential effects of strain on two forms of work performance: Individual employee sales and creativity. *Journal of Organizational Behavior*, 23, 57-74.
- Van Dyne, L., Kamdar, D., & Joireman, J. (2008). In-role perceptions buffer the negative impact of low LMX on helping and enhance the positive impact of high LMX on voice. *Journal of Applied Psychology*, *93*, 1195-1207.
- Van Dyne, L., & LePine, J. A. (1998). Helping and voice extra-role behaviors: Evidence of construct and predictive validity. *Academy of Management Journal*, 41, 108-119.
- van Veldhoven, M., & Dorenbosch, L. (2008). Age, proactivity and career development. *Career Development International*, 13, 112-131.
- Venkataramani, V., & Tangirala, S. (2010). When and why do central employees speak up? An examination of mediating and moderating variables. *Journal of Applied Psychology*, 95, 582-591.
- Vigoda-Gadot, E. (2001). Reactions to organizational politics: A cross-cultural examination in Israel and Britain. *Human Relations*, *54*, 1483-1518.
- Vinarski-Peretz, H., & Carmeli, A. (2010). Linking care felt to engagement in innovative behaviors in the workplace: The mediating role of psychological conditions. *Psychology of Aesthetics, Creativity, and the Arts*, *5*, 45-53.
- Viswesvaran, C., & Ones, D. S. (1995). Theory testing: Combining psychometric metaanalysis and structural equations modeling. *Personnel Psychology*, 48, 865-885.
- Viswesvaran, C., Sanchez, J. I., & Fisher, J. (1999). The role of social support in the process of work stress: A meta-analysis. *Journal of Vocational Behavior*, *54*, 314-334.
- Walumbwa, F. O., & Schaubroeck, J. (2009). Leader personality traits and employee voice behavior: Mediating roles of ethical leadership and work group psychological safety. *Journal of Applied Psychology*, *94*, 1275-1286.
- Wang, A.-C., Kuo, S.-T., Lin, T.-T., Tsai, C.-Y., & Cheng, B.-S. (2009, August 7-11). Paternalistic leadership and creativity: The moderating role of leader's gender. Paper presented at the Academy of Management Annual Meeting, Chicago, IL.
- Wang, G., Oh, I.-S., Courtright, S. H., & Colbert, A. E. (2011). Transformational leadership and performance across criteria and levels: A meta-analytic review of 25 years of research. *Group & Organization Management*, *36*, 223-270.
- Whitener, E. M. (1990). Confusion of confidence intervals and credibility intervals in meta-analysis. *Journal of Applied Psychology*, 75, 315-321.
- Williams, S. D. (2004). Personality, attitude and leader influences on divergent thinking and creativity in organizations. *European Journal of Innovation Management*, 7, 187-204.
- Xu, Q. (2007). A predictive model of employee self-development: The effects of individual and contextual variables. Unpublished doctoral dissertation, University of California, Irvine.

Yang, J. (2005). The relationships of the organizational culture, commitment to change, and to behavioral support for organizational change in Taiwan. Unpublished doctoral dissertation, Nova Southeastern University, Fort Lauderdale, FL.

- Yuan, F. (2008). *Individual innovation in the workplace: The role of performance and image outcome expectations*. Unpublished doctoral dissertation, Texas A&M University, College Station.
- Zagenczyk, T. J., Gibney, R., Murrell, A. J., & Boss, S. R. (2008). Friends don't make friends good citizens, but advisors do. *Group & Organization Management*, 33, 760-780.
- Zajonc, R. B. (1965). Social facilitation. Science, 149, 269-274.
- Zhou, J. (2003). When the presence of creative coworkers is related to creativity: Role of supervisor close monitoring, developmental feedback, and creative personality. *Journal of Applied Psychology*, 88, 413-422.
- Zhou, J., & George, J. M. (2001). When job dissatisfaction leads to creativity: Encouraging the expression of voice. *Academy of Management Journal*, 44, 682-696.
- Zhou, J., Shin, S. J., & Canella, A. A. (2008). Employee self-perceived creativity after mergers and acquisitions: Interactive effects of the threat opportunity perception, access to resources, and support for creativity. *Journal of Applied Behavioral Science*, 44, 397-421.

Author Biographies

Dan S. Chiaburu is assistant professor of management in the Mays Business School at Texas A&M University. His current research examines prosocial and proactive work behaviors and coworker exchanges. His recent work appeared or is in press at the *Journal of Applied Psychology, Journal of Management*, and *Personnel Psychology*.

Natalia M. Lorinkova is an assistant professor in the Management and IS department in the School of Business Administration at Wayne State University. She received her PhD in management from the R. H. Smith School of Business, University of Maryland. Her research interests include leadership and social exchanges, with an emphasis on change, developmental and empowering leadership, as well as growth modeling and meta-analytical techniques as methodological interests.

Linn Van Dyne (Professor, Michigan State University) researches proactive employee behaviors (including helping, voice, and silence), roles, and cultural intelligence. She is associate editor for OBHDP and is on editorial boards of AMJ, JAP, JOB, HR, MOR, and OPR. She is a Fellow in the Society of Organizational Behavior. Her works were published in *Academy of Management Journal, Academy of Management Review, Journal of Applied Psychology, Organizational Behavior and Human Decision Processes, Journal of Organizational Behavior, Research in Organizational Behavior, and other outlets.*