Cross-Lagged Relations Between Mentoring Received From Supervisors and Employee OCBs: Disentangling Causal Direction and Identifying Boundary Conditions

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Although mentoring has documented relationships with employee attitudes and outcomes of interest to organizations, neither the causal direction nor boundary conditions of the relationship between mentoring and organizational citizenship behaviors (OCBs) has been fully explored. On the basis of Social Learning Theory (SLT; Bandura, 1977, 1986), we predicted that mentoring received by supervisors would causally precede OCBs, rather than employee OCBs resulting in the receipt of more mentoring from supervisors. Results from cross-lagged data collected at 2 points in time from 190 intact supervisor–employee dyads supported our predictions; however, only for OCBs directed at individuals (OCB-Is) and not for OCBs directed at the organization (OCB-Os). Further supporting our theoretical rationale for expecting mentoring to precede OCBs, we found that coworker support operates as a substitute for mentoring in predicting OCB-Is. By contrast, no moderating effects were found for perceived organizational support. The results are discussed in terms of theoretical implications for mentoring and OCB research, as well as practical suggestions for enhancing employee citizenship behaviors.

Keywords: mentoring, organizational citizenship behavior, workplace relationships, coworker support, perceived organizational support

Beliefs about the benefits gained from mentoring are commonly expressed in the organizational literature, among practicing managers (Singh, Bains, & Vinnicombe, 2002), and in leadership development programs (Solansky, 2010). Research documents a positive association between the receipt of mentoring and both employee work attitudes and career outcomes, such as organizational commitment, turnover intentions, promotion rates, income level, and career satisfaction (Allen, Eby, Poteet, Lentz, & Lima, 2004; Eby et al., 2013). However, few studies have investigated the association between mentoring received and prosocial outcomes, such as organizational citizenship behaviors (OCBs). This is surprising given that the provision of mentoring is a type of OCB (Allen, 2003; Tepper & Taylor, 2003), and role modeling is the primary way that individuals learn from a mentor (Kram, 1985).

Three studies have examined the relationship between mentoring and OCB, all operating under the assumption that employees engage in OCBs as a consequence of receiving mentoring (Donaldson, Ensher, & Grant-Vallone, 2000; Kwan, Liu, & Yim, 2011; Tepper & Taylor, 2003). These studies used different sources of reports on OCB in widely different settings (i.e., low-income workers, Chinese employees, military personnel), finding mixed results. A concern with all of these studies is the failure to examine causal direction and in so doing rule out the possibility that engaging in OCB leads an employee to receive more mentoring support. This is an important limitation, because those who engage in OCBs may be viewed as rising stars (Wanberg, Welsh, & Hezlett, 2003), which in turn elicits mentoring support because such employees bring something of value to the organization or relationship (Allen, 2008). Owing to limited empirical research, unique samples, and possible reverse causality, we concur with Organ, Podsakoff, and MacKenzie (2006) that “additional research is needed before any conclusive statements regarding the relationship between mentoring and OCBs can be made” (p. 227).

When reverse causality or bidirectional effects are possible, research adopting strong inference tests is recommended (Finkel, 1995;
work context in which employees will display OCBs (Lapierre, supervisors when providing mentoring support occurs in the same Naidoo, & Bonaccio, 2012), increasing the likelihood that the untested assumption that mentoring causes positive outcomes for both employees and organizations. Our study offers a rigorous examination of this fundamental but untested assumption and is directly pertinent to evaluating the value of mentoring to management theory and practice. More concretely, if the receipt of mentoring predicts OCBs, organizational efforts to promote mentoring relationships through formal organizational systems will be justified. By contrast, if individuals who engage in OCBs in turn receive greater mentoring, a critical reevaluation of the contribution of mentoring to management research and practice must be undertaken, emphasizing the role that the follower plays in eliciting mentoring. Understanding boundary conditions associated with the mentoring–OCB association is also important for understanding why, how, and under what conditions mentoring leads to employee citizenship behavior. Moreover, identifying the type of OCB most affected by mentoring, and how other forms of support influence the mentoring–OCB relationship, has ramifications for helping organizations identify potential leverage points to increase employee citizenship behaviors.

We chose to study mentoring received from supervisors (referred to as supervisory mentoring) because it is associated with more positive work attitudes (e.g., Payne & Huffman, 2005) and the receipt of greater support than is nonsupervisory mentoring (e.g., Burke & McKeen, 1997; Scandura & Williams, 2004). Although not all supervisors provide mentoring support to their employees, supervisors have greater opportunity for interaction with employees than do nonsupervisory mentors (Ragins & McFarlin, 1990) and can offer both employee development and performance-related guidance (Scandura & Williams, 2004). This makes supervisory mentoring relationships different from the typical employee–supervisor relationship in that the latter is more structured, more task-oriented, and less emotionally close than a supervisory mentoring relationship (Booth, 1996; Pan, Sun, & Chow, 2011). In addition, the helping behavior role modeled by supervisors when providing mentoring support occurs in the same work context in which employees will display OCBs (Lapierré, Naidoo, & Bonaccio, 2012), increasing the likelihood that the modeled behavior will be learned and reproduced.

Theoretical Overview

Bandura’s (1971, 1977, 1986) classic work on learning proposes that behavior is influenced by both direct and vicarious experience. A major tenet of Social Learning Theory (SLT) is that individuals learn through role modeling (Bandura, 1971). For this to happen, both imaginal and verbal representational systems must be activated. Imagery formation occurs through repeated exposure to the modeled behavior so that relatively enduring and retrievable behavioral representations are later evoked, even when the stimulus (the actual role model) is no longer present. Verbal coding of observed events is also believed to enhance both the speed of learning and long-term recall. In other words, it is not just watching someone behave, but also the verbal exchange (e.g., instruction, advice, encouragement) that leads the target to engage in similar behavior in the future. Bandura (1969) further describes several subprocesses that facilitate learning. This includes attentional processes (awareness of the modeled behavior), retention processes (opportunity to respond to the modeled behavior), motoric reproduction processes (opportunity to engage in behavior similar to that which was modeled), and incentive or motivational processes (positive reinforcement for engaging in the modeled behavior).

Mentoring is a strategy intended to transfer knowledge and facilitate learning (Eby, Brown, & George, 2014) and consistent with SLT, role modeling is a key aspect of mentoring (Kram, 1985; Ragins & McFarlin, 1990; Scandura, 1992). Mentoring represents a summative construct that captures both the imaginal processes (i.e., the more mentoring, the greater the exposure to modeled behavior) and verbal processes (i.e., the more mentoring, the greater the advice, encouragement, and confirmation provided) outlined in SLT. The receipt of mentoring is also likely to trigger the subprocesses identified by Bandura. Attentional processes are activated by mentoring, because this type of support is both directed at, and desired by, employees. Employees are also likely to retain knowledge learned through mentoring because of repeated exposure. There is also ample opportunity to reproduce the modeled behavior by helping others in the organization. Finally, because OCBs are valued (Organ, 1988; Podsakoff, Whiting, Podsakoff, & Blume, 2009) and rewarded (Podsakoff, Mackenzie, Paine, & Bachrach, 2000), motivational processes are likely to be activated when employees receive mentoring support.

Using SLT as our theoretical guide, we expect that employees learn helping behaviors from supervisors who offer mentoring support. The proposition that being the recipient of mentoring may lead one to engage in OCBs is based on the learning that occurs through the role modeling process (Kram, 1985). With regard to the prediction of OCBs in particular, Bandura (1977) asserts that “those with higher status, competence, and power are more effective in promoting others to behave similarly” (p. 88, emphasis added). This suggests that supervisors who provide mentoring support may influence employees’ helping behavior toward others. Although SLT can only be used to predict that the direction of causal influence is from mentoring to OCB, reverse causality is still plausible. In their critique of the OCB literature, Organ et al. (2006) discuss the untested assumption that leader behavior causes OCBs, arguing that OCBs may actually operate as the causal variable. Likewise, the rising star hypothesis (Wanberg et al., 2003) suggests that this may be the case with mentoring; employees that are more motivated, proactive, and helpful are more likely to receive mentoring. The rationale for this prediction comes from Signaling Theory (Spence, 1973), which argues that individual attributes collectively contribute to an image that an individual portrays to an employer, which influences opportunities that are provided to that individual. Applied to mentoring, this suggests that supervisors may provide greater mentoring support to employees who engage in valued helping behaviors. Although this alternative explanation is provocative, both the rising star hypothesis and the application of signaling theory to mentoring has been used to understand whether or not one gains
access to an informal mentor, not the amount of mentoring received. Moreover, the preponderance of theory suggests that mentoring is a precursor of OCB (see Bandura, 1977, 1986; Kram, 1985). Therefore, we predict that:

Hypothesis 1: There is a significantly stronger time-lagged effect of mentoring received on OCBs compared with the time-lagged effect of OCBs on mentoring received.

Type of OCBs as a Boundary Condition

OCBs include interpersonal helping behaviors that benefit individuals (OCB-Is) and impersonal helping behaviors that benefit the organization as a whole (OCB-Os; Williams & Anderson, 1991). Although positively correlated, these two types of OCBs are conceptually and empirically distinct (Lee & Allen, 2002; Williams & Anderson, 1991). Because the mentoring that is modeled to employees by supervisors (e.g., giving advice, offering help to achieve career goals; Ragins & McFarlin, 1990) shares more behavioral similarities with OCB-I (e.g., helping coworkers, providing emotional support) than OCB-O (e.g., adhering to rules, conserving property; Williams & Anderson, 1991), we expect that mentoring received will have a greater positive effect on OCB-Is than OCB-Os. This is supported by Lavelle, Rupp, and Brockner’s (2007) target similarity model, which contends that relationships are stronger when constructs have similar targets and foci. This boundary condition only holds for the proposed causal direction outlined in Hypothesis 1 (i.e., that mentoring leads to OCB). If the alternative causal direction is supported (i.e., OCB leads to mentoring) type of OCB is inconsequential because both types of OCB are valuable to organizations (Podsakoff et al., 2009). Thus, we propose:

Hypothesis 2: There is a significantly stronger time-lagged effect of mentoring received on OCB-Is compared with the time-lagged effect of mentoring on OCB-Os.

Other Sources of Work Support as Boundary Conditions

Examining other sources of support as moderators of the mentoring to OCB relationship may help to better understand when mentoring is likely (unlikely) to have effects on OCBs. According to social exchange theory, if an individual receives valued resources such as coworker support or POS, he or she will be motivated to give back in the form of OCBs. Meta-analytic research on both coworker support (Chiaburu & Harrison, 2008) and POS (Rhoades & Eisenberger, 2002) supports this assertion. When considering how multiple sources of support work together to engender OCBs, both social exchange theory (Blau, 1964) and research on substitutes for leadership (Howell & Dorfman, 1981; Jermier & Berkes, 1979; Kerr, 1977) suggest that the receipt of mentoring support is positively related to OCBs only when other sources of support that also make one feel valued and validated (i.e., coworker support, POS) are less prevalent (see Crotzpanzo & Mitchell, 2005). The reason for this is that if the motive to engage in OCBs is already triggered by these other sources of support, then the addition of mentoring does little to elevate the already higher levels of OCBs. Thus, the presence of other sources of support may substitute or compensate for mentoring. Consistent with this prediction, several studies document that getting support from one source is sufficient to achieve positive outcomes for OCBs (see Anand, Vidyarthi, Liden, & Rousseau, 2010 and Li, Chiaburu, Kirkman, & Xie, 2013; for career and job satisfaction, see Erdogan, Kraimer, & Liden, 2004; for self-efficacy, see Hu & Liden, 2013) because the motivational system responsible for cueing helping behavior is already activated. In addition, the prediction of substitution effects only holds theoretically if mentoring leads to OCB. Thus, we predict:

Hypothesis 3: The time-lagged effect of mentoring received on OCBs is moderated by coworker support. Specifically, when coworker support is lower, the positive relationship between mentoring and OCBs is stronger.

Hypothesis 4: The time-lagged effect of mentoring received on OCBs is moderated by POS. Specifically, when POS is lower, the positive relationship between mentoring and OCBs is stronger.

Sample and Procedures

Data for this project were collected as part of a larger multiyear study. Although none of the relationships examined here are reported in previously published research and the sample of matched supervisor–employee dyads is unique to this study, there are other publications using various subsamples of this (and another companion) longitudinal dataset (Baranik, Roling, & Eby, 2010; Butts, Hurst, & Eby, 2013; Curtis & Eby, 2010; Eby, Burk, & Maher, 2010; Eby & Laschober, 2013; Eby, Laschober, & Curtis, 2014; Eby & Rothrauff-Laschober, 2012; Laschober & de Tormes Eby, 2012; Laschober, de Tormes Eby, & Sauer, 2012; Laschober, Eby, & Kinkade, 2013; Rothrauff & Eby, 2011; Rothrauff, Eby, & the Public Health Service, 2011; Rothrauff-Laschober, Eby, & Sauer, 2013; Spell, Eby, & Vandenberg, 2014). Twenty-six behavioral health care organizations provided data for the study (26% in the East, 11% in the Midwest, 26% in the South, and 37% in the West). The majority was nonprofit (88.5%), accredited (69.2%), and nongovernment owned (96.2%). The average organization had 171.9 total full-time employees. Participants were direct care providers to patients with a variety of behavioral health problems (e.g., depression, anxiety, substance abuse) employed in both inpatient and outpatient settings.

Prior to data collection, we obtained a list of all employees providing direct care to patients and their supervisor from a human resources representative. This ensured that we were not just sampling those experiencing high (or low) levels of mentoring. Surveys were prepared with identifiers to match supervisors and employees. Prior to the survey, a member of the team verbally confirmed with each participant his or her supervisor (or employee). Surveys were administered by a trained research assistant (in separate sessions for employees and supervisors) at two points

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1 Thanks to an anonymous reviewer for alerting us to the literature on substitution effects with regard to LMX and support predicting employee outcomes.
in time, about 1 year apart. At both Time 1 and Time 2, employees reported mentoring received from the supervisor, coworker support, and POS. Supervisors provided ratings of employee OCBs at Time 1 and Time 2. At Time 1, 739 employees and 194 supervisors completed surveys (80% and 88% response rate, respectively). At Time 2, 659 employees and 184 supervisors completed surveys (73% and 91% response rate, respectively). The data set consisted of 190 supervisor–employee dyads (190 employees and 100 supervisors).

Sixty-two percent of employees were women, and 67% were Caucasian. On average, they were 43.6 years old (SD = 11.9), earned $32,999 annually, reported 4.8 years (SD = 5.0) organizational tenure, and had 3.9 years (SD = 4.5) job tenure. Eighty-three percent held at least a 4-year college degree. Most supervisors were women (66%) and Caucasian (85%). On average, supervisors were 48.2 years old (SD = 10.7), had 10.0 years (SD = 8.0) organizational tenure, 5.5 years (SD = 6.2) job tenure, and earned $52,086 annually. Eighty-seven percent held at least a 4-year college degree. Slightly over half (56%) of the supervisory relationships were same-sex, and 63% were same-race. Employees reported being in their supervisory relationships for an average of 2.7 years (SD = 2.7) and interacting with supervisors 7.7 hours per week (SD = 10.3).

Measures

All constructs were measured on a 5-point Likert-type scale (1 = strongly disagree to 5 = strongly agree). Employees completed Ragins and McFarlin’s (1990) 27-item measure, which captures five career-related (e.g., “My supervisor uses his or her influence to support my career goals”) and four psychosocial (e.g., “My supervisor serves as a role model for me”) aspects of mentoring support. Because of the high correlation between career-related and psychosocial mentoring in the sample (r = .88 and .92 at Time 1 and Time 2, respectively) and consistent with prior research (e.g., Eby, Butts, Durley, & Ragins, 2010), an overall measure of mentoring received was created (α = .97 and .97 for Time 1 and Time 2, respectively). Coworker support was measured with Cutrona and Russell’s (1987) 3-item measure at Time 1 (e.g., “I have a feeling of closeness with my coworkers”; α = .96). POS was measured at Time 1 using Eisenberger, Cummings, Armeli, and Lynch’s (1997) 8-item measure (e.g., “Help is available from my organization when I have a problem”; α = .91). Finally, employees completed a 2-item measure of relationship quality with their supervisor (adapted from Allen & Eby, 2003) and reported the number of months in their supervisory relationship (i.e., relationship length), both of which were used as control variables in all analyses. This allowed us to examine the unique associations between supervisory mentoring received and employee OCBs irrespective of overall relationship quality and relationship length. Supervisors provided ratings of employee OCBs using 12 items from Williams and Anderson’s (1991) measure. Six items assessed OCB-Is (e.g., “This employee helps others who have been absent”; α = .88 and .89 for Time 1 and Time 2, respectively) and 6 items assessed OCB-Os (e.g., “This employee conserves and protects organizational property”; α = .81 and .83 for Time 1 and Time 2, respectively).

Results

Following prior recommendations (Little, Preacher, Selig, & Card, 2007; Williams & Podsakoff, 1989), we used structural equation modeling (SEM) with Mplus 7.11 (Muthén & Muthén, 2010) to analyze our cross-lagged panel design. Cross-lagged panel analysis using SEM provides more evidence of causal precedence and stability than do any type of cross-sectional design (Lang, Bliese, Lang, & Adler, 2011). Also, because cross-lagged panel designs control for previous levels of a variable, they eliminate the need to control for demographics such as age and gender (Zapf, Dormann, & Frese, 1996). We did, however, control for overall relationship quality and relationship length to account for the possibility that cross-lagged effects may be affected by common relationship characteristics.

Consistent with previous research (e.g., Mathieu & Farr, 1991), we used a partial disaggregation approach when testing models. Parcels comprised of three items each were created for each of the nine dimensions of mentoring received (e.g., sponsorship, challenging assignments, counseling, role modeling). These nine indicators were then used to define the latent construct of mentoring received. Likewise, three parcels of randomly assigned items were each created for OCB-Is, OCB-Os, and POS (Landis, Beal, & Tesluk, 2000). Parceling was not necessary for coworker support since it was measured using only three items. In testing the models, we allowed for random intercepts that vary across supervisors to account for nonindependence in the data because of one supervisor having relationships with multiple employees. As such, the hierarchically nested nature of our data was accounted for in all statistical analyses.

Measurement Invariance

We began by examining measurement invariance, which is a precondition to adequately test cross-lagged effects (Finkel, 1995; Little et al., 2007). Results of tests for configural and metric invariance are provided in Table 1. Models specifying the same factor structure across time (configural invariance) all demonstrated acceptable to good fit to the data. Furthermore, setting the factor loadings equal across time (metric invariance) did not significantly change model fit for employee OCB-Is or OCB-Os, as demonstrated by the nonsignificant change in χ². There was a significant change in χ² for mentoring received, Δχ²(8) = 21.53, p < .01. After inspecting modification indices and freeing two items across time, partial metric invariance was demonstrated for mentoring received based on the nonsignificant change in χ², Δχ²(6) = 6.50, p > .05. In all analyses, we included these invariance constraints.

Cross-Lagged Models

Table 2 provides descriptive statistics and correlations among the study variables, and Table 3 provides results of the cross-lagged panel models. Because of the potential for multicollinearity between the two dimensions of OCBs to bias results, we specified both separate bivariate cross-lagged panel models (Model 1 and Model 2 for employee OCB-Is and OCB-Os, respectively) and a cross-lagged panel model that included both dimensions of employee OCBs in one analysis. Each of these models includes four
types of parameter estimates: the stabilities of each latent construct across time, the cross-lagged effects, predictor correlations at Time 1, and correlations between disturbance terms at Time 2. Figure 1 provides results from Model 1, showing all of these described elements. Relationship quality and relationship length were included as control variables in all models. All three models tested provided good fit to the data and the results from the overall cross-lagged model (Model 3) closely mirror those from the separate bivariate cross-lagged models (Model 1 and Model 2; see Table 3). We focus on the results of Model 1 and Model 2 in evaluating Hypothesis 1, which predicts that the cross-lagged relationship between mentoring received at Time 1 and employee OCBs at Time 2 is stronger than the cross-lagged relationship between mentoring received at Time 1 and employee OCBs at Time 2. As shown in Model 1 (Table 3 and Figure 1), mentoring received at Time 1 was positively related to employee OCB-Is at Time 2 (β = .28, p < .05), but Time 1 employee OCB-Is was not related to mentoring received at Time 2 (β = -.05, ns). Also, after accounting for the stabilities and cross-lagged effects, there was not significant shared variance remaining between mentoring received and employee OCB-Is (r = .15, ns), providing evidence to rule out the possibility of omitted variables. Furthermore, when we constrained the structural path from Time 1 mentoring received to Time 2 employee OCB-Is to be equal to the path from Time 1 employee OCB-Is to Time 2 mentoring received, model fit decreased significantly, Δχ²(1) = 4.05, p < .05. This pattern of findings supports Hypothesis 1. However, as illustrated in Model 2 from Table 3, mentoring received at Time 1 was not related to employee OCB-Is at Time 2 (β = -.10, ns), and there was no relationship between OCB-Is at Time 1 and mentoring received at Time 2 (β = .01, ns). Taken together, these results provide partial support for Hypothesis 1 in that the causal direction seems to occur from mentoring to OCBs, at least for OCB-Is.

Hypothesis 2 predicts stronger cross-lagged effects for mentoring received to OCB-Is compared with the effects for mentoring received to OCB-Os. As shown in Model 3 from Table 3, mentoring received at Time 1 was positively related to employee OCB-Is at Time 2 (β = .27, p < .05), but not related to employee OCB-Os at Time 2 (β = -.09, ns). Also, when we constrained the structural path from Time 1 mentoring received to Time 2 employee OCB-Is to be equal to the path from Time 1 mentoring received to Time 2 employee OCB-Os, model fit decreased significantly, Δχ²(1) = 5.50, p < .05. This provides support for Hypothesis 2 in that mentoring received evidenced stronger cross-lagged effects with OCB-Is relative to OCB-Os.

### Table 1: Measurement Invariance Results

<table>
<thead>
<tr>
<th>Construct/model</th>
<th>χ²</th>
<th>df</th>
<th>CFI</th>
<th>NNFI</th>
<th>SRMR</th>
<th>Comparison</th>
<th>Δdf</th>
<th>Δχ²</th>
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<tr>
<td>Mentoring received</td>
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<td></td>
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<tr>
<td>Model 1: Configural invariance</td>
<td>366.50</td>
<td>125</td>
<td>.93</td>
<td>.91</td>
<td>.04</td>
<td>Model 2 vs. Model 1</td>
<td>8</td>
<td>21.53**</td>
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<tr>
<td>Model 2: Metric invariance</td>
<td>388.03</td>
<td>133</td>
<td>.92</td>
<td>.91</td>
<td>.07</td>
<td>Model 3 vs. Model 1</td>
<td>6</td>
<td>6.50</td>
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<td>Model 3: Partial metric invariance</td>
<td>373.00</td>
<td>131</td>
<td>.93</td>
<td>.91</td>
<td>.05</td>
<td></td>
<td></td>
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<tr>
<td>Employee OCB-Is</td>
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<tr>
<td>Model 1: Configural invariance</td>
<td>13.68</td>
<td>5</td>
<td>.99</td>
<td>.96</td>
<td>.04</td>
<td>Model 2 vs. Model 1</td>
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<td>.87</td>
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<tr>
<td>Model 2: Metric invariance</td>
<td>14.55</td>
<td>7</td>
<td>.99</td>
<td>.97</td>
<td>.05</td>
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<tr>
<td>Model 2: Metric invariance</td>
<td>3.90</td>
<td>5</td>
<td>1.00</td>
<td>1.01</td>
<td>.02</td>
<td>Model 2 vs. Model 1</td>
<td>2</td>
<td>7.2</td>
</tr>
</tbody>
</table>

**Note.** CFI = comparative fit index; NNFI = non-normed fit index; SRMR = standardized root mean square residual; OCB-Is = organizational citizenship behaviors directed at individuals; OCB-Os = organizational citizenship behaviors directed at the organization.

**p < .01.

### Table 2: Means, SDs, and Correlations Among Study Variables

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Mentoring received (T1)</td>
<td>3.53</td>
<td>.77</td>
<td>(.97)</td>
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<td></td>
<td></td>
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<tr>
<td>2. Employee OCB-Is (T1)</td>
<td>3.80</td>
<td>.64</td>
<td>.19**</td>
<td>(.88)</td>
<td></td>
<td></td>
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<tr>
<td>3. Employee OCB-Os (T1)</td>
<td>3.97</td>
<td>.62</td>
<td>.23**</td>
<td>.41**</td>
<td>(.81)</td>
<td></td>
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<tr>
<td>4. Mentoring received (T2)</td>
<td>3.37</td>
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<td>.60**</td>
<td>.09**</td>
<td>.17</td>
<td>(.97)</td>
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<td>5. Employee OCB-Is (T2)</td>
<td>3.89</td>
<td>.65</td>
<td>.30**</td>
<td>.51**</td>
<td>.46**</td>
<td>.27**</td>
<td>(.89)</td>
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<td>6. Employee OCB-Os (T2)</td>
<td>4.00</td>
<td>.69</td>
<td>.13</td>
<td>.20**</td>
<td>.62**</td>
<td>.27**</td>
<td>.46**</td>
<td>(.83)</td>
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<td></td>
</tr>
<tr>
<td>7. Coworker support (T1)</td>
<td>3.69</td>
<td>1.00</td>
<td>.31**</td>
<td>.04</td>
<td>.09</td>
<td>.21**</td>
<td>.17*</td>
<td>.04</td>
<td>(.96)</td>
<td></td>
</tr>
<tr>
<td>8. POS (T1)</td>
<td>3.46</td>
<td>.81</td>
<td>.38**</td>
<td>.03</td>
<td>.16</td>
<td>.27**</td>
<td>.11</td>
<td>.13</td>
<td>.25**</td>
<td>(.91)</td>
</tr>
</tbody>
</table>

**Note.** OCB-Is = organizational citizenship behaviors directed at individuals; OCB-Os = organizational citizenship behaviors directed at the organization; POS = perceived organizational support. N = 190. Coefficient alphas are reported in parentheses. Employee OCB-Is and OCB-Os are reported by supervisors. All other variables are reported by employees.

*p < .05. **p < .01.

### Moderating Effects of Coworker Support and POS

The next set of hypotheses predict that the time-lagged relationship between mentoring received at Time 1 and OCBs at Time 2...
is moderated by coworker support (Hypothesis 3) and POS (Hypothesis 4). We used Klein and Moosbrugger’s (2000) latent moderated structural (LMS) approach and specified a cross-lagged model including both OCB-I and OCB-O (Table 3, Model 3), as well as two-way interaction (mentoring received and coworker mentoring received, and POS). The interaction effects were tested in separate models because of model complexity relative to sample size. To determine the presence of moderation, we examined the paths from the two-way interaction term to OCB-I and OCB-O, as well as the improvement in fit of the moderated model compared with a model with the interaction effects constrained to zero based upon the log-likelihood difference test (Muthén & Muthén, 2010).

Comparing the proposed moderated model for coworker support to the model with the interaction effects constrained to zero con-

Table 3
Summary of Cross-Lagged Model Estimates

<table>
<thead>
<tr>
<th></th>
<th>Estimate</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
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<tr>
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<td>.70**</td>
<td>.71**</td>
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<tr>
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<td>.50**</td>
<td></td>
<td>.53**</td>
<td></td>
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<tr>
<td>Employee OCB-O</td>
<td></td>
<td>.67**</td>
<td>.64**</td>
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<tr>
<td>Mentoring received → employee OCB-I</td>
<td>.28*</td>
<td></td>
<td>.27*</td>
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<tr>
<td>Mentoring received → employee OCB-O</td>
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<td>-.09</td>
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<td><strong>Cross-lagged effects of employee OCBs</strong></td>
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<td>-.05</td>
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<td>-.03</td>
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<td>Employee OCB-O → mentoring received</td>
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<td>.17*</td>
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<td>.25**</td>
<td>.45**</td>
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<td>.32**</td>
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<td>$\chi^2/df$</td>
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<td>631.22/282</td>
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<tr>
<td>CFI</td>
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<td>.92</td>
<td>.91</td>
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<tr>
<td>NNFI</td>
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<td>.90</td>
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<tr>
<td>SRMR</td>
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<td>.06</td>
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Note. OCB-I = organizational citizenship behaviors directed at individuals; OCB-O = organizational citizenship behaviors directed at the organization; CFI = comparative fit index; NNFI = non-normed fit index; SRMR = standardized root mean square residual. Values shown are standardized parameter estimates. Model 1 includes OCB-I. Model 2 includes OCB-O. Model 3 includes both OCB-I and OCB-O. In all models, we controlled for the effects of relationship quality and relationship length on mentoring received and OCBs. For ease of interpretation, these effects are not presented. Interested readers may contact the first author for estimates of these effects.

*p < .05. **p < .01.

Figure 1. Cross-lagged model results for mentoring received and employee organizational citizenship behaviors directed at individuals (OCB-I). Values shown are standardized parameter estimates. In the interest of clarity, we omitted control variables (relationship quality and relationship length), factor loadings, error correlations between Time 1 and Time 2 items, and Time 2 disturbance terms. T1 = Time 1, T2 = Time 2. **p < .01. *p < .05.
Hypothesis 4 received no support.

Figure 2. Interaction between mentoring received and coworker support predicting employee organizational citizenship behaviors directed at benefitting individuals (OCB-Is).

Discussion

The purpose of this study was to examine the relationship between the receipt of supervisory mentoring and employee OCBs using a research design that provides more definitive conclusions about causal direction. We also examined several theoretically derived boundary conditions associated with the mentoring to OCB relationship. Three general conclusions are evident, all of which are consistent with our predictions derived from SLT. First, we found that mentoring received leads to employee OCBs, not that those who engage in OCBs subsequently receive more mentoring support. Second, the receipt of supervisory mentoring only predicted interpersonally oriented OCBs and not organizationally oriented OCBs. Third, coworker support moderated the relationship between mentoring received and OCB-Is such that coworker support seems to substitute for the effects of supervisory mentoring.

Boundary Conditions of the Mentoring–OCB Relationship

The finding that mentoring only predicted OCB-Is indicates that the role modeling effect of mentoring is restricted to employee behaviors that, like mentoring, are relational in nature. This is consistent with SLT and supports a multifoci approach to the study of OCBs (Brief & Motowidlo, 1986). It is also consistent with Bowler and Brass’ (2006) finding that work relationships influence both the receipt of, and decision to engage in, interpersonally oriented OCBs. Differential effects were also found for coworker support and POS. Coworker support moderated the mentoring to OCB-I relationship and appears to operate similarly to a substitute for leadership (Kerr, 1977). When coworker support is lower, mentoring support is necessary to motivate OCB-Is. By contrast, under conditions of higher coworker support, OCB-Is are maintained irrespective of mentoring support. This pattern aligns with the finding that employees engage in more altruistic behavior when they work in cohesive groups, regardless of leader behavior (Jermier & Berk, 1979). Also consistent with our findings, Podsakoff, MacKenzie, and Bommer’s (1996) meta-analysis found that leadership substitutes (which included workgroup cohesion) explained more unique variance in the prediction of altruism than did leader behaviors. Although Kerr’s (1977) leader substitutes...
framework has been recently applied beyond leadership (e.g., Stewart, Courtright, & Barrick, 2012), we are not aware of any research examining substitution effects in the mentoring literature. However, some research in the area of leader-member exchange (LMX) has found that other forms of support, such as employee i-deals (Anand et al., 2010) and team identification (Li et al., 2013), can substitute for LMX in predicting OCBs. In light of our findings and the small to moderate effects found for mentoring (Allen et al., 2004; Eby et al., 2013), further examination of substitutes for mentoring seems warranted.

By contrast, POS did not emerge as a significant moderator when considered alongside mentoring received. One explanation is that POS reflects a general belief about the organization and is not as relationally focused as mentoring, OCB-Is, and coworker support. This is consistent with research by Kim, Van Dyne, Kamdar, and Johnson (2013), which suggests that coworker support represents a psychologically stronger contextual factor than organizational support because coworkers are more proximal and visible to employees in comparison to the organization. However, before abandoning this line of research completely, it may be beneficial to examine whether specific aspects of mentoring that have a more explicit organizational focus (e.g., sponsorship, exposure and visibility) may interact with POS in predicting OCBs.

Implications for Theory

Mentoring research has been criticized for relatively little attention to theory development (Allen et al., 2008). Good theory rests on core assumptions, which are described conceptually and tested empirically. The present study adds to mentoring theory by establishing helping behavior aimed at others as an important outcome of receiving mentoring support. These findings can direct mentoring researchers to social-psychological theories of helping to identify antecedents, correlates, and consequences of the provision of mentoring support and employee helping in response to such support that have not been examined to date.

The identification of the type of OCBs and coworker support as two boundary conditions suggests that relational theories may be particularly useful in understanding how mentoring influences protégé OCB-Is. For example, Aron’s (2003) social-personality analysis argues that close relationships fundamentally change how we view the self. This occurs through the process of behavioral confirmation (e.g., engaging in OCB-Is confirm what we think mentors expect of us; Darley & Fazio, 1980) and self-esteem enhancement (e.g., mentors favorably evaluate OCB-Is and we value their opinions; Leary, 1999). Close relationships can also lead to cognitive shifts where close others are incorporated into cognitive representations of the self (Aron, Aron, & Norman, 2001), which experimental research has linked to spontaneous helping (Cialdini, Brown, Lewis, Luce, & Neuberg, 1997) and acting for the benefit of close others (Aron, Aron, Tudor, & Nelson, 1991). Drawing from these theories may help us better understand the relationally oriented underpinnings of, and association between, mentoring received and OCB-Is.

Our findings may also have implications for relational theories of leadership. To date, this literature has assumed that high-quality relationships motivate employee OCBs (e.g., Anand et al., 2010; Hu & Liden, 2013; Li et al., 2013; Walumbwa, Cropanzano, & Goldman, 2011). However, we are not aware of any research that has definitively ruled out the alternative explanation; that employees who engage in more OCBs are better relational partners and therefore develop higher quality supervisory relationships. This is surprising given repeated calls for such research (e.g., Kamdar & Van Dyne, 2007; Li, Liang, & Crant, 2010; Podsakoff et al., 2000). Our finding that mentoring temporally precedes OCB, coupled with the finding that LMX perceptions form very quickly and relational factors such as liking and similarity are more highly related to subsequent LMX than performance (Liden, Wayne, & Stilwell, 1993), suggests that the causal direction between LMX and OCB is likely to be similar to what is reported here. Likewise, our finding of a moderating effect of coworker support on the mentoring to OCB relationship adds to cross-sectional LMX research focusing on the moderating effects of other forms of support on employee outcomes (e.g., Anand et al., 2010; Hu & Liden, 2013; Li et al., 2013).

Implications for Practice

Much of the effort directed at encouraging OCBs has focused on selection (Werner, 2000). Our findings suggest that employees can likely be taught or trained to engage in OCB-Is. Thus, we encourage formal leader training programs to focus on mentoring as a means to encourage employees to engage in OCB-Is. It is interesting that our results showed that supervisory mentoring does not seem to have an effect on OCB-Os. This suggests that to enhance behaviors commonly viewed as directed toward the organization (e.g., creative performance, safety performance), organizations might consider approaches other than mentoring. Finally, the finding that coworker support can substitute for a lack of supervisor mentoring suggests that methods commonly used to enhance coworker support, such as encouraging peer mentoring, rewarding collaborative behavior through performance management systems, and formally rewarding both team and individual performance, may be useful to maintain high levels of helping behaviors in the absence of supervisory mentoring.

Limitations and Directions for Future Research

Although 26 organizations provided data, all participants were from the health care industry. This may limit generalizability to other, less relationally oriented occupations. In addition, even though our response rates at each time point were high (ranging from 73% to 91%), not all employee data were used because we did not have matched supervisor ratings of OCBs for all employees. This study was part of a larger project, and it was not feasible for supervisors to complete surveys on all their employees. However, we did take precautions to reduce selection bias. Rather than having supervisors choose which employees to provide OCBs ratings on, we randomly selected employees from a list of dyads provided prior to data collection.

Another limitation is that were not able to control for LMX perceptions in testing the hypothesized associations. The concern here is that mentoring may be so highly correlated with LMX that it is not a distinct construct. To address this issue, we conducted a meta-analysis of the association between LMX and mentoring, controlling for unreliability in both variables. A total of 9 studies with a combined N = 2871 were identified that included the correlation between mentoring and LMX. One additional study...
was identified that only included a disattenuated factor correlation. We computed rho both with and without this latter study included. The meta-analytic correlation between LMX and mentoring is .50 based on 9 studies (combined N = 2,871) and .54 (combined N = 3,054) based on all 10 studies. This suggests that mentoring and LMX are, in fact, distinct constructs. A list of studies included in this meta-analysis and their respective study-level statistics is available from the first author.

Finally, we did not examine the possible mediating mechanisms linking supervisory mentoring to employee OCBs. Therefore, although mentoring captures a wide range of imaginal and verbal processes, we cannot pinpoint which one(s) were driving the observed effects. Future research might explicitly measure these processes and subprocesses described by SLT. Finally, the study was limited to the examination of supervisory mentoring. Although this decision was theoretically driven, we do not know whether the pattern or strength of effects is different in informal mentoring relationships or nonsupervisory mentoring relationships. This seems like an important boundary condition to examine in future research and the resultant findings would likely prove useful in refining mentoring theory even further.

We provide the first test of a core but previously untested assumption that the receipt of mentoring support is an effective strategy to enhance employee prosocial behavior. We also identified type of OCB and coworker support as boundary conditions of the mentoring–OCB relationship. Taken together, our results sub-

References


Correction to Eby et al. (2015)

In the article “Cross-Lagged Relations Between Mentoring Received From Supervisors and Employee OCBs: Disentangling Causal Direction and Identifying Boundary Conditions,” by Lillian T. Eby, Marcus M. Butts, Brian J. Hoffman, and Julia B. Sauer (Journal of Applied Psychology, Advance online publication. January 19, 2015. http://dx.doi.org/10.1037/a0038628), the correct citation for Singh, Ragins, and Tharenou (2009) should have been:


All versions of this article have been corrected.

http://dx.doi.org/10.1037/a0038977