RESEARCH REPORT

Workplace Ostracism and Employee Creativity: An Integrative Approach Incorporating Pragmatic and Engagement Roles

Ho Kwong Kwan
Tongji University

Xiaomeng Zhang
Cheung Kong Graduate School of Business

Jun Liu
Renmin University of China

Cynthia Lee
Northeastern University

Extending an extant dynamic componential perspective, we propose an integrative model of how and why workplace ostracism exhibited by supervisors relates to employees' creativity through pragmatic (task resources) and engagement (creative process engagement) effects. Specifically, we predict that workplace ostracism negatively relates to creativity through reduced task resources and creative process engagement. Perceived organizational support plays a key role in buffering the negative effects of workplace ostracism in both pragmatic and engagement domains. Three-wave, supervisor–subordinate, dyadic data from a bank in China support these hypotheses. We discuss the implications of these results for both research and practice.

Keywords: workplace ostracism, task resources, creative process engagement, perceived organizational support, creativity

Ongoing trends of globalization and rapid technological changes enhance the ways that employee creativity—defined as the generation of novel and useful ideas by an employee or a group of employees working together—can contribute to whether an organization remains competitive and successful (Shalley, Zhou, & Oldham, 2004). Recently, Amabile and Pratt (2016) proposed a dynamic componential theory of creativity, highlighting the key role that the social environment plays in hindering or facilitating individual creativity. Research in this area mostly considers the effects of social network characteristics on creativity (Baer, 2010; Perry-Smith, 2006; Zhou, Shin, Brass, Choi, & Zhang, 2009),

whereas the relationships of other social phenomena, such as workplace ostracism, with creativity are far less investigated. *Workplace ostracism* is pervasive across ages, genders, occupations, and cultures (Ferris, Brown, Berry, & Lian, 2008), and it happens when "an individual or group omits to take actions that engage another organizational member when it is socially appropriate to do so" (Robinson, O'Reilly, & Wang, 2013, p. 206).

Robinson et al. (2013) call for ostracism researchers to go beyond examining the direct relationship between ostracism and psychological and behavioral outcomes. This narrow focus limits understanding of how to mitigate the negative effects of ostracism or explain why ostracism pertains to outcomes of interests. Accordingly, they propose testing for ostracism's pragmatic effects, which occur because an ostracized person misses out on task-related resources or information that results from being connected to others. Therefore, drawing from Amabile and Pratt's (2016) dynamic componential perspective that social environments can foster or hinder creativity through resources and/or creativity-relevant processes, we examine the mediating roles of pragmatic (task resources) and engagement (creative process engagement) effects on the link between ostracism and creativity. In this perspective, a resource is anything transacted in an interpersonal situation or any item—concrete (e.g., goods, services) or symbolic (e.g., status, information), tangible or intangible—that can become the object of exchange through social interactions. Task resources are the basic or raw materials available that can aid creative work (e.g., infrastructure, information; Amabile & Pratt, 2016). They provide a foundation for employees to identify problems and

generate alternatives, which can contribute to their creativity. For example, having a computer facilitates work, so a computer is a task resource. But information about how to acquire and use appropriate software and applications also constitutes task resources, because it enhances the worker's effectiveness and ability to generate creative solutions.

To deploy creativity-relevant processes effectively, employees also need to engage in persistent and energetic work (Amabile & Pratt, 2016). We thus predict that *creative process engagement* is an important indicator; it refers to individual involvement in creativity-relevant processes, including problem identification (e.g., expending substantial effort to understand the nature of the problem), information search and encoding (e.g., consulting a wide variety of information), and idea generation (Zhang & Bartol, 2010). This engagement in turn determines the level of flexibility and attention in the pursuit of creative solutions. Zhang and Bartol (2010) also identify the critical role that leaders play in employees' engagement in creative processes. Being ostracized by supervisors may hinder employees' ability to obtain task resources and dampen their creative process engagement. In response to Ferris et al.'s (2008) call for researchers to differentiate sources of ostracism, we focus on supervisor ostracism rather than general or coworker ostracism, because supervisors have a strong influence on employee creativity (Zhou & Hoever, 2014).

Although research has demonstrated some negative effects of workplace ostracism, we still know little about what organizations can do to mitigate its detrimental effects. Being ostracized by supervisors essentially blocks the task resources that employees can use to solve problems and demotivates their creative engagement. Employees ostracized by supervisors might turn to alternative sources of support, such as their organization, to get their jobs done. Robinson et al. (2013, p. 223) point out that "if employees are cognizant of when they are being ostracized, they have an opportunity to seek to respond to the lost resources in alternative ways." We argue that perceived organizational support (POS), or employees' general perception that the organization values their contributions and cares about their well-being (Rhoades & Eisenberger, 2002), can mitigate the negative effects of workplace ostracism on their access to task resources and their creative process engagement.

Our integrative approach thus makes several theoretical and practical contributions. First, drawing from the dynamic componential perspective (Amabile & Pratt, 2016), we consider supervisor ostracism and its negative associations with both task resources and creative engagement processes, which in turn relate to creativ-

ity. Our overarching model provides a more comprehensive nomological framework that accounts for both pragmatic and engagement effects in the relationship between ostracism and employee creativity. Although the relationships between ostracism and in-role performance and between social network characteristics and creativity have motivated numerous studies in recent years (Zhou & Hoever, 2014), the potential mediating mechanisms related to the detrimental effects of supervisor ostracism on employee creativity have not been theorized or examined.

Second, guided by a substitution perspective (Huang & Zhang, 2013), which suggests that more than one resource can compete to achieve a common goal in any given situation, researchers also argue that resources can substitute for each other, to accomplish the same goal. We propose that the resources provided through POS might substitute for the lack of resources that results from being ostracized. In doing so, we answer Ferris, Lian, Brown, and Morrison's (2015) call for research that examines new ways to neutralize ostracism's negative effects. In practical terms, ostracism is costly for organizations (Ferris et al., 2008). Our findings, in addition to indicating that ostracism has negative implications for individual creativity, identify leverage points to alleviate these negative impacts. Aggregate employee creativity facilitates firm innovation (Liu, Gong, Zhou, & Huang, 2017); ostracism constitutes a significant workplace problem that warrants continued scholarly inquiry. We present our conceptual model in Figure 1.

Theoretical Background and Hypotheses

Pragmatic Effects of Ostracism: The Role of Task Resources

In general, employees with greater access to task resources in the workplace are perceived by others as influential and powerful and can use this perception to enhance their reputation within the organization (Brass & Burkhardt, 1993). These positive perceptions lead to higher levels of job satisfaction (Hackman & Oldham, 1980) and feelings of empowerment (Spreitzer, 1996), are critical to releasing employees' full potential (Seibert, Kraimer, & Liden, 2001), and motivate employees to experiment with new ways of doing things and solving task-related problems creatively (Alge, Ballinger, Tangirala, & Oakley, 2006).

Task-related resources come directly and indirectly from social interactions. Robinson et al. (2013) argue that even if people are unaware of being ostracized, the reduction in social interactions
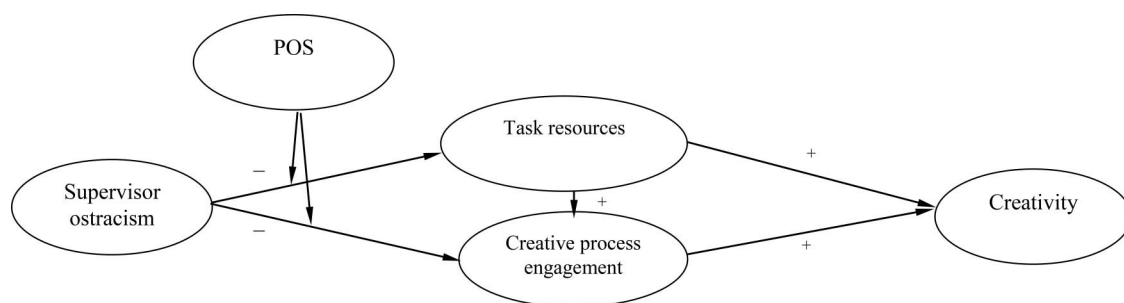

Figure 1. Conceptual model. POS = perceived organizational support.

can exert direct, substantial, pragmatic impacts. In this context, social interactions refer to informal contacts and identifications with other organizational members, such that they facilitate resource exchanges within the organization (Sheldon, 1971). Important task resources are often embedded in social interactions (Wu, Yim, Kwan, & Zhang, 2012), especially those controlled by supervisors. That is, social interactions between supervisors and employees create opportunities for resource exchanges, in which it is possible to leverage the employees' resources. In other words, these interactions provide a platform for employees to mobilize the potential resources that are linked to their supervisors. Being left out or excluded by supervisors prevents employees from receiving important task resources that are disseminated through meetings or other daily interactions (Jones & Kelly, 2013). When they are excluded from such interactions, technical workers do not know about or may not have access to the tools that would enable them to execute novel ideas; frontline service employees may lack access to customer information that could help them develop custom-made service packages. Lacking task-relevant resources may lead ostracized employees to perceive that they are not being held accountable by the larger group or that their contributions to the organization are not being recognized (Leung, Wu, Chen, & Young, 2011). Ostracized employees lose out on task-relevant resources, so their limited resources may inhibit these employees from generating the best possible solution, ultimately resulting in lower levels of creativity. We propose:

> *Hypothesis 1:* Task resources mediate the relationship between supervisor ostracism and employee creativity, such that supervisor ostracism is negatively associated with access to task resources, and access to task resources is positively associated with employee creativity.

Engagement Effects of Ostracism: The Role of Creative Process Engagement

Engagement in the workplace is "a positive, fulfilling, and work-related state of mind that consists of vigor, dedication, and absorption" (Bakker & Xanthopoulou, 2009, p. 1562). Engaged employees likely devote greater effort to their jobs, physically, emotionally, and cognitively, whereas employees who are disengaged may withdraw from their work (Kahn, 1990). In a creativity context, engagement in the creative process leads to higher levels of creativity by virtue of the enhanced intensity, direction, and persistence that people devote to identifying a problem and generating novel, useful ideas and solutions (Zhang & Bartol, 2010). In support of this view, studies demonstrate a positive relationship between creative process engagement and creativity (for a review, see Zhou & Hoever, 2014).

Supervisor ostracism is inherently inimical to creative process engagement. Rather than promoting dignity and respect, ostracism is characterized by avoidance, refusal, and ignoring behaviors; it implies a threat of removing the ostracized member from the group (Ferris et al., 2008). Rather than promoting a supportive workplace environment, ostracism produces an environment characterized by distrust between the employee and his or her supervisors (Scott, Restubog, & Zagenczyk, 2013). This negative environment provides little incentive for employees to engage in creative performance, because ostracism communicates to employees that they

are neither valued nor worthwhile. A dynamic componential theory of creativity suggests that creativity-relevant processes provide an important link between work environments and creativity within organizations (Amabile & Pratt, 2016). When employees are excluded by their supervisors, they are less likely to devote attention and effort to effectively or creatively completing their tasks. Thus, ostracism undermines creative process engagement and makes employees less willing to explore different alternatives, leading to lower levels of creativity. Accordingly, we propose the following hypothesis:

> *Hypothesis 2:* Creative process engagement mediates the relationship between supervisor ostracism and employee creativity, such that supervisor ostracism is negatively associated with creative process engagement, and creative process engagement is positively associated with employee creativity.

The dynamic componential perspective also suggests that task resources facilitate creativity through creativity-relevant processes (Amabile & Pratt, 2016). Creative process engagement captures the processes that employees undertake to develop ideas and produce work that has the potential to be considered creative. We theorize that task resources are positively associated with employees' engagement in creative processes. When they acquire sufficient task resources, employees should be willing to devote time and effort to understanding problems from diverse perspectives and integrating various sources of task-related information. Having task resources also encourages employees to perceive better chances of success, so they likely focus on ideas or problems more persistently. Accordingly,

> *Hypothesis 3:* Creative process engagement mediates the relationship between task resources and employee creativity, such that task resources are positively associated with creative process engagement, and creative process engagement is positively associated with employee creativity.

The Buffering Effect of POS

Thus far, little attention has been devoted to identifying organizational contextual factors that may mitigate the negative influence of ostracism in pragmatic and engagement domains. On the one hand, employees establish and maintain relationships with and acquire resources from their supervisors in dyadic interactions to achieve their task goals (Anand, Vidyarthi, Liden, & Rousseau, 2010). On the other hand, employees develop relationships with the organization at a global level (Eisenberger, Huntington, Hutchison, & Sowa, 1986). POS thus refers to a global belief about the extent to which the organization values employees' contributions and cares about their well-being (Eisenberger et al., 1986). We argue that POS is an important moderator that can mitigate the negative effects of ostracism. As Robinson et al. (2013, p. 223) note, if the employee is ostracized, "one may possibly obtain resources by seeking out support or information from neutral or supportive others at work." In this sense, POS provides employees with reassurance that the organization will provide them with alternative resources and other forms of aid to help them do their jobs (George, Reed, Ballard, Colin, & Fielding, 1993). It thus might substitute for a lack of task resources provided by a supervisor and spur employee creative process engagement. Because

supervisors sometimes act as agents of the organization, we acknowledge that employees may regard supervisors' favorable orientation toward them as an indicator of organizational support (Rhoades & Eisenberger, 2002). But the organization and supervisor represent different levels, so employees also may perceive their organization is supportive, despite believing their supervisor is not, or vice versa (Rhoades & Eisenberger, 2002).

Applying this substitutive perspective to the effects of supervisor ostracism and organizational support on task resources, we posit that employees are more likely to turn to their organization for alternative resources when they perceive that their supervisors are ostracizing them. At high levels of POS, employees have relatively more opportunities to acquire alternative resources from the organization. In turn, their reliance on supervisors for task resources decreases, and the potential harm of losing task resources because ostracism is lower. Thus, the negative relationship between supervisor ostracism and task resources might be alleviated by POS. We propose:

Hypothesis 4: POS moderates the negative relationship between supervisor ostracism and task resources, such that the relationship is weaker when the level of POS is high rather than low.

We also argue that POS can mitigate the negative effect of supervisor ostracism on creative process engagement. If employees perceive that their work surroundings will affirm their positive self-image (Kahn, 1990), supervisor ostracism is less likely to undermine their engagement. Because POS provides continuing affirmation and recognition of employees' worth at the organizational level, employees are less likely to avoid efforts to generate and produce novel and useful ideas. Furthermore, engagement theory argues that employees who feel less valued likely become disengaged, because rather than investing in their work role, they direct their attention toward managing their heightened self-consciousness about their (poor) fit with the social systems (Kahn, 1990). Therefore, employees who perceive a low degree of POS are more likely to disengage in the face of supervisor ostracism, because they cannot acquire positive evaluations from the larger support system to protect their positive self-views. These employees are particularly vulnerable to supervisor ostracism's effects and tend to disengage from the creative process. We propose the following hypothesis:

Hypothesis 5: POS moderates the negative relationship between supervisor ostracism and creative process engagement, such that the relationship is weaker when the level of POS is high rather than low.

These arguments suggest an integrated model, in which task resources and creative process engagement mediate the negative relationship between supervisor ostracism and creativity, and POS moderates the effect of supervisor ostracism on task resources and creative process engagement. Accordingly, we propose that POS also moderates the strength of the mediating mechanism for task resources and creative process engagement in the relationship between supervisor ostracism and creativity—a moderated mediation model, wherein the mediating effect is stronger or weaker depending on the level of the moderator (Edwards & Lambert, 2007). Because we expect weaker linkages of supervisor ostracism with task resources and creative process engagement when employees perceive a high degree of POS, we predict that the mediating effects of task resources and creative

process engagement on the relationship between supervisor ostracism and creativity also will be weaker among these employees. Formally,

Hypothesis 6: POS moderates the mediating effect of task resources on the relationship between supervisor ostracism and creativity, such that the mediating effect of supervisor ostracism on creativity through task resources is weaker when the level of POS is high rather than low.

Hypothesis 7: POS moderates the mediating effect of creative process engagement on the relationship between supervisor ostracism and creativity, such that the mediating effect of supervisor ostracism on creativity through creative process engagement is weaker when the level of POS is high rather than low.

Method

Sample and Procedures

The study participants were financial products salespeople and their immediate supervisors in a commercial bank in China. The organizational goals were to help customers manage their investments through high-quality financial products. Thus, the organization encouraged salespeople to acquire new clients and make sales in creative ways, such as by designing custom-made financial products to meet customers' special needs or using advanced technology to increase the sales force's reach. However, supervisors could withhold information that pertained to the salespeople's immediate line of business, which thereby would undermine their creative process engagement and their creative performance.

All procedures were conducted in compliance with the American Psychological Association (APA) ethics code and approved by the first author's school, although the school did not have a formal institutional review board. The company's human resource manager provided us with a list of 380 supervisors. On average, eight employees reported to one supervisor. To avoid respondent fatigue, we asked each supervisor to rate only one subordinate, whom we selected randomly. We used translation–back-translation procedures (Brislin, 1980) to ensure the equivalence of the Chinese and English versions. The completed questionnaires were returned to a box in the human resource department.

To alleviate common method variance concerns, we collected three rounds of data with a 2-month time lag (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). In the first-wave survey (T_1), we sent questionnaires to all 380 salespeople and received 349 usable responses (response rate of 91.8%). Respondents provided demographic information (age, gender, and education level), their perceptions of supervisor ostracism, POS, and other control variables. In the second-wave survey (T_2), we received 322 responses (response rate of 92.3%). Salespeople rated their task resources and creative process engagement during the past two months. In the third-wave survey (T_3), we received 308 responses (response rate of 95.7%) from supervisors who rated their focal salesperson's creativity during the past two months. Thus, the final sample comprised 308 salespeople and their immediate supervisors. Of the salespeople, 57.1% were men. The mean age was 36.49 years ($SD = 7.64$). In addition, 27.8% held an associate's degree or less, 42.7% had a bachelor's degree, and 29.5% held at least a postgraduate degree. We followed Lance, Vandenberg,

and Self (2000) and conducted a subject attrition analysis. The results show no detectable differences created by attrition.[1]

Measures

Supervisor ostracism was measured using a 10-item scale originally developed by Ferris et al. (2008) and later adapted by Wu et al. (2015) to a Chinese setting. Response options ranged from 1 (*never*) to 5 (*always*). An example item is "My supervisor ignored me at work." We used Eisenberger, Cummings, Armeli, and Lynch's (1997) 8-item scale to measure *POS*. Response options ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). A sample item is "The management really cares about my well-being." We adapted a 3-item *task resources* scale developed by Airila et al. (2014). Response options ranged from 1 (*not at all*) to 5 (*very much*). A sample item is "Can you acquire knowledge and skills at work?" An 11-item scale developed by Zhang and Bartol (2010) in a Chinese setting was used to measure *creative process engagement*. Response options ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). A sample item is "I spend considerable time trying to understand the nature of the problem." We measured *employee creativity* with a 13-item scale developed by Zhou and George (2001) and used by Zhang and Bartol (2010) in a Chinese setting. Supervisors completed this measure. A meta-analytic study indicated that the majority of studies (60%) measured employee creativity using supervisor ratings, which is an effective method to reduce inflation caused by common method variance, because supervisor ratings of creativity have a smaller effect size than self-ratings (Ng & Feldman, 2012). Response options ranged from 1 (*not at all characteristic*) to 5 (*very characteristic*). A sample item is "This employee suggests new ways to achieve goals or objectives."

In line with prior literature (e.g., Shalley et al., 2004), we controlled for three demographic variables: age, gender, and education. *Intrinsic motivation* is the most frequently studied antecedent of creativity (Liu & Ghorbani, 2016; Shalley et al., 2004), so we controlled for intrinsic motivation using a 6-item scale developed by Warr, Cook, and Wall (1979) and applied by Zhang, Kwan, Zhang, and Wu (2014) in a Chinese setting. Response options ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). A sample item is "I take pride in doing my job as well as I can." We also controlled for *goal independence* using a 5-item scale developed by Chen and Tjosvold (2006) in a Chinese setting, for two reasons. First, goal independence constitutes a contextual factor that may facilitate ostracism (Wu et al., 2015). Second, research has indicated that interdependence relates positively to creative process engagement/creativity performance (Gilson & Shalley, 2004). Response options ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). A sample item is "My supervisor and I work for our own separate interests."

Results

Confirmatory Factor Analysis (CFA)

We used Mplus 7 to conduct a CFA and assess the distinctiveness of our key variables (supervisor ostracism, POS, task resources, creative process engagement, creativity, intrinsic motivation, and goal independence). Considering the small sample size

Table 1
Results of Confirmatory Factor Analysis

Model	χ^2	df	TLI	CFI	SRMR
Seven-factor model	161.55	168	.99	.99	.03
Five-factor model 1[a]	1,058.74	179	.75	.79	.10
Five-factor model 2[b]	909.55	179	.79	.82	.10
Two-factor model[c]	2,444.36	188	.39	.45	.16
One-factor model[d]	2,861.041	189	.28	.35	.17

Note. TLI = Tucker-Lewis index; CFI = comparative fit index; SRMR = standardized root mean square residual. $N = 308$.
[a] This model combines, from the seven-factor model, task resources, creative process engagement, and intrinsic motivation to form a Time 2 factor.   [b] This model combines, from the seven-factor model, supervisor ostracism, organizational support, and goal independence to form a Time 1 factor.   [c] We combined all items reported by employees to form an employee-rating factor, whereas creativity remained as another rating factor.   [d] We combined all measurement items into one grand factor.

relative to the measurement items (Landis, Beal, & Tesluk, 2000), we created item parcels to simplify the structural models. As shown in Table 1, the proposed seven-factor model showed a good overall measurement fit with $\chi^2(168) = 161.55$, *ns*, confirmatory factor index = .99, Tucker-Lewis index = .99, standardized root mean residual = .03. All the factor loadings were significant, indicating convergent validity. We tested the discriminant validity of the proposed 7-factor model by contrasting it with alternative CFA models. The fit indexes in Table 1 show that the proposed 7-factor model fits the data substantially better than any of the alternative models, confirming discriminant validity. We next applied Fornell and Larcker's (1981) method to check for convergent and discriminant validity. Table 2 reports the square roots of the average variance extracted for each latent construct. All the estimates exceeded the correlation between the factors comprising each pair. Therefore, we applied all the proposed constructs in our hypothesis tests. The descriptive statistics and correlations among the variables are in Table 2.

Hypothesis Testing

We conducted bootstrapping analyses with Mplus 7. Hypotheses 1 and 2 predicted mediating roles of task resources and creative process engagement in the relationship between supervisor ostracism and creativity. We regressed creativity on task resources and creative process engagement and, simultaneously, regressed task resources on supervisor ostracism and regressed creative process engagement on supervisor ostracism and task resources. Table 3 lists the estimates of the Stage I effects (independent variable [IV] → mediator [Me]), Stage II effects (Me → dependent variable [DV]), and indirect effects (IV → Me → DV). Supervisor ostracism's effects on task resources ($b = -.28$, 95% confidence interval [CI] [$-.544, -.096$]) and task resources' effects on creativity ($b = .14$, 95%CI [.014, .263]) were significant. Supervisor ostracism's effects on creative process engagement ($b = -.39$, 95% CI [$-.589, -.194$]) and creative process engagement's effects on creativity ($b = .15$, 95% CI [.021, .268]) were also significant. Meanwhile, both task resources (*indirect effect* = $-.04$, 95% CI [$-.115, -.002$]) and creative process engage-

---

[1] The results of the subject attribution analyses are available on request.

Table 2
Means, SDs, and Correlations

Variables	1	2	3	4	5	6	7	8	9	10	11	Square root AVE
1. Age												
2. Gender	−.00											
3. Education	−.19**	.11										
4. Tenure	.44**	.04	−.29**									
5. Intrinsic motivation	−.01	.09	.04	−.17**	(.91)							(.83)
6. Goal independence	.00	−.03	−.01	.06	−.08	(.85)						(.79)
7. Supervisor ostracism	.04	−.01	−.02	.11	−.17**	.12*	(.87)					(.68)
8. POS	−.06	.04	.01	−.13*	.23**	−.13*	−.34**	(.91)				(.78)
9. Task resources	.00	.05	−.04	−.02	.25**	−.03	−.18**	.20**	(.85)			(.88)
10. Creative process engagement	−.15*	.07	.04	−.19**	.46**	.11	−.27**	.23**	.36**	(.92)		(.75)
11. Creativity	.04	.09	.09	−.15**	.36**	−.09	−.29**	.32**	.29**	.34**	(.89)	(.67)
M	36.49	1.43	1.99	6.96	3.68	2.52	2.12	3.72	3.73	3.63	3.86	
SD	7.64	.50	.76	5.29	.75	.64	.54	.56	.73	.73	.54	

Note. n = 308. Bracketed values on the diagonal are the Cronbach's alpha value of each scale. The square root of average variance extracted (AVE) is based on the factor loadings and the error variance of each construct, obtained from the confirmatory factor analysis results. Gender: 1 = *male*, 2 = *female*; Education: 1 = *employees held junior college degree or below*, 2 = *employees held bachelor degree*, 3 = *employees held postgraduate degree or above*; POS = *perceived organizational support*.
* $p \leq .05$. ** $p \leq .01$.

ment (*indirect effect* = −.06, 95% CI [−.140, −.008]) exerted significant mediation effects on the relationships between supervisor ostracism and creativity. Thus, the results support Hypotheses 1 and 2. In addition, Hypothesis 3 predicted a mediating role of creative process engagement in the relationship between task resources and creativity. As hypothesized, creative process engagement exerted significant mediating effects on the relationship between task resources and creativity (*indirect effect* = .06, 95%CI [.012, .113]).

We conducted further bootstrapping analyses to test how POS moderates the main effects of supervisor ostracism on task resources (Hypothesis 4) and creative process engagement (Hypothesis 5), as well as the mediating effects of task resources (Hypothesis 6) and creative process engagement (Hypothesis 7). Table 4 contains the indirect effects for employee groups with low and high POS and their effect comparison. Supervisor ostracism's effects on task resources (*difference* = .41, 95% CI [.135, .773]) and creative process engagement (*difference* = .50, 95% CI [.103, .872]) differed significantly, in support of Hypotheses 4 and 5. Figure 2 shows the interaction plots, which are consistent with our predictions: When the level of POS was low, the main effects of supervisor ostracism on task resources and creative process engagement were stronger. In addition, the mediating effect of task resources was moderated by POS (*difference* = .06, 95% CI [.011, .148]), in support of Hypothesis 6. However, POS did not have moderating effects on the mediating effect of creative pro-

cess engagement (*difference* = .01, 95% CI [−.076, .105]), rejecting Hypothesis 7.

Discussion

By integrating ostracism and creativity literature, we show that supervisor ostracism relates negatively to employee creativity, through task resources and creative process engagement. As a buffering mechanism, POS is key to neutralizing the negative effects of supervisor ostracism in both pragmatic and engagement domains. Our hypothesized integrative model thus makes important contributions to ostracism and creativity literature.

Theoretical Contributions

First, we establish a synergy between the pragmatic and engagement effects of supervisor ostracism. Our integrative model thus extends previous ostracism research, beyond its focus on psychological results. The pragmatic effects of reduced task resources relate to exclusion by supervisors and are associated with employees' behavioral outcomes. Second, motivational literature in general and the dynamic componential perspective in particular indicate that creative process engagement is one of the most important determinants of employee creativity in the workplace (Amabile & Pratt, 2016). By

Table 3
Indirect Effects of Supervisor Ostracism on Creativity Through Task Resources and Creative Process Engagement

Indirect path	Stage 1 effect	Stage 2 effect	Indirect effect
Mediating role of task resources			
Supervisor ostracism → task resources → creativity	−.279** [−.544, −.096]	.141* [.014, .263]	−.039* [−.115, −.002]
Mediating role of creative process engagement			
Supervisor ostracism → creative process engagement → creativity	−.385** [−.589, −.194]	.148* [.021, .268]	−.057* [−.140, −.008]
Task resources → creative process engagement → creativity	.371** [.235, .516]	.148* [.021, .268]	.055* [.012, .113]

Note. N = 308. The square brackets contain 95% confidence intervals.
* $p \leq .05$. ** $p \leq .01$.

Table 4

Moderating Role of Perceived Organizational Support (POS)

Variable	High POS employees	Low POS employees	Difference
Simple paths			
Supervisor ostracism → task resources	−.001 [−.203, .250]	−.415** [−.627, −.183]	.414** [.135, .773]
Supervisor ostracism → creative process engagement	−.058 [−.259, .205]	−.561** [−.802, −.309]	.503* [.103, .872]
Task resources → creative process engagement	.433** [.250, .629]	.136 [−.003, .273]	.297* [.063, .559]
Task resources → creativity	.025 [−.069, .127]	.151* [.027, .286]	−.126 [−.300, .033]
Creative process engagement → creativity	.144** [.033, .254]	.027 [−.122, .167]	.117 [−.029, .263]
Indirect effects			
Supervisor ostracism → task resources → creativity	.000 [−.013, .014]	−.063* [−.145, −.013]	.063* [.011, .148]
Supervisor ostracism → creative process engagement → creativity	−.008 [−.048, .027]	−.015 [−.114, .065]	.007 [−.076, .105]
Supervisor ostracism → task resources → creative process engagement → creativity	.000 [−.014, .017]	−.002 [−.015, .005]	.001 [−.014, .023]
Total indirect effect	−.008 [−.058, .040]	−.079 [−.177, .020]	.071 [−.032, .182]
Direct effect	−.078 [−.225, .046]	−.253* [−.467, −.033]	.175 [−.079, .423]
Total effect	−.086 [−.228, .034]	−.332** [−.539, −.126]	.246* [.023, .467]

Note. $N = 308$. The square brackets contain 95% confidence intervals.
* $p \leq .05$.   ** $p \leq .01$.

examining the mediating roles of task resources and creative process engagement, our results explain why workplace ostracism, especially being ostracized by the supervisor, has a consistent negative relationship with employee outcomes, including creativity.

Third, to the best of our knowledge, this study is the first to theoretically bridge research on ostracism and creativity. Previous research has focused predominately on the detrimental effects of workplace ostracism on employees' performance, prompting researchers to call for theory and research that links ostracism to other organizationally relevant criteria (Robinson et al., 2013). Our findings show that supervisor ostracism is negatively associated with employees' access to task resources and creative process engagement, because it thwarts their sense of self-value and psychological safety, which in turn relate to employee creativity. Adding creativity to an integrative model of workplace ostracism advances this literature

stream, by clarifying why ostracism is so detrimental to employees and organizations.

Fourth, based on the substitution principle, we investigated ways to cope with ostracism; previous research identifies ostracism as a uniquely painful experience (Eisenberger, 2012). Effective coping strategies help mitigate its negative experience, thus alleviating its pervasively detrimental effects on employees' psychological needs, affect, attitudes, motivation, and subsequent behavioral outcomes. Although POS does not moderate the mediating effect of supervisor ostracism on creativity through creative process engagement, other mediators, such as knowledge sharing, that represent creativity-relevant processes (Amabile & Pratt, 2016) might contribute to the moderating role of POS in the mediating mechanism between workplace ostracism and creativity.

Practical Implications

The study of workplace ostracism is of practical importance to both organizations and employees; ostracism can cost organizations billions of dollars every year (Bennett & Robinson, 2000) and creates significant employee stress (Wu et al., 2012), prompting them to engage in undesirable behaviors, such as acting rudely, withholding assistance (Scott et al., 2013), or responding to others in uncooperative or aggressive manners (Thau, Aquino, & Poortvliet, 2007; Wu, Wei, & Hui, 2011). As our results show, supervisor ostracism hinders employees' access to task resources that are fundamental to their daily tasks. Because work-relevant resources are essential for employees to engage in creative processes (Zhang & Bartol, 2010), employees who lack these resources are likely to underperform and deliver lower levels of creative outcomes (Amabile, 1996). Organizations thus should train managers to be more inclusive and provide resources to improve employee work engagement and unit performance.

Our results also suggest that POS can neutralize the negative effects of ostracism. It enhances employees' sense of obligation to help the organization achieve its goals. This buffering effect balances out the detrimental effects of ostracism, and therefore, it is important for organizations to support and treat their employees favorably. Doing so will ensure that employees have access to the task resources they need to accomplish their tasks and increase
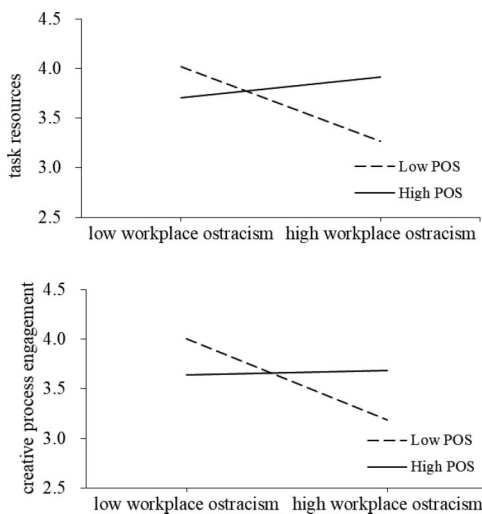

Figure 2. Moderating effect of perceived organizational support (POS) on the relationship between workplace ostracism and task resources and creative process engagement.

their engagement in their work, which relates to higher levels of creativity and eventually benefits the organization with greater productivity.

Limitations and Research Directions

Our study has several limitations. First, though we collected field data from employees and their supervisors and used a multiwave, time-lagged design (Podsakoff et al., 2003), we cannot completely rule out common method bias. Second, collecting data at three time points cannot confirm the direction of causality. Ostracism may result from employees' low performance levels. Further research should employ a longitudinal design with the same measures in each time period to establish causality.

Third, workplace ostracism is a somewhat infrequent phenomenon with a generally low mean score (1.48 to 2.30 on a 7-point response scale among North American samples; e.g., Balliet & Ferris, 2013; Ferris et al., 2008, 2015). The mean score of 2.12 on a 5-point scale among our sample was slightly higher than the values from U.S. samples, but the similarities imply that workplace ostracism spans both collectivistic and individualistic cultures. Continued research could conduct cross-cultural studies to verify the generalizability of our findings. Cross-cultural comparisons also would help us understand how workplace ostracism—a universal experience (Ferris et al., 2008)—exerts different degrees of influence on employees' behavioral outcomes.

Fourth, employee creativity was rated by supervisors. Supervisor ratings of creativity are subjective and may be biased by various unobserved factors, including liking or employee performance. Thus, we call for research that uses objective data (e.g., creativity bonuses, patents filed) to measure employee creativity (Ng & Feldman, 2012).

Fifth, access to task resources will likely happen in multiple ways for various types of jobs. It can happen over direct contact with the supervisor—in person, via other technology-enabled communication channels, or can also happen without direct contact with the supervisor such as through line of command via another employee. For example, supervisor can instruct other employees to withhold resources to the target employee (overt denial) or simply to provide resources differently (hidden or implicit denial), all of which can be termed "social interactions." Future research could differentiate social interactions as direct and indirect or "outside-of-work" and "work-related" and to explore their differential effects on the target employee and other organizational members.

Our results suggest that supervisor ostracism relates negatively to employees' creativity, through both pragmatic effects (task resources) and engagement effects (creative process engagement). Furthermore, POS is an important buffering mechanism that neutralizes the detrimental effects of supervisor ostracism. Further research drawing on the integrative model theorized in this study could advance understanding of additional mediating and moderating effects in the relationship between workplace ostracism and employee outcomes.

References

Airila, A., Hakanen, J. J., Schaufeli, W. B., Luukkonen, R., Punakallio, A., & Lusa, S. (2014). Are job and personal resources associated with work ability 10 years later? The mediating role of work engagement. *Work & Stress, 28,* 87–105. http://dx.doi.org/10.1080/02678373.2013.872208

Alge, B. J., Ballinger, G. A., Tangirala, S., & Oakley, J. L. (2006). Information privacy in organizations: Empowering creative and ex-

trarole performance. *Journal of Applied Psychology, 91,* 221–232. http://dx.doi.org/10.1037/0021-9010.91.1.221

Amabile, T. M. (Ed.). (1996). A theoretical framework. In *Creativity in context* (pp. 81–127). Boulder, CO: Westview Press.

Amabile, T. M., & Pratt, M. G. (2016). The dynamic componential model of creativity and innovation in organizations: Making progress, making meaning. *Research in Organizational Behavior, 36,* 157–183. http://dx.doi.org/10.1016/j.riob.2016.10.001

Anand, S., Vidyarthi, P. R., Liden, R. C., & Rousseau, D. M. (2010). Good citizens in poor-quality relationships: Idiosyncratic deals as a substitute for relationship quality. *Academy of Management Journal, 53,* 970–988. http://dx.doi.org/10.5465/AMJ.2010.54533176

Baer, M. (2010). The strength-of-weak-ties perspective on creativity: A comprehensive examination and extension. *Journal of Applied Psychology, 95,* 592–601. http://dx.doi.org/10.1037/a0018761

Bakker, A. B., & Xanthopoulou, D. (2009). The crossover of daily work engagement: Test of an actor-partner interdependence model. *Journal of Applied Psychology, 94,* 1562–1571. http://dx.doi.org/10.1037/a0017525

Balliet, D., & Ferris, D. L. (2013). Ostracism and prosocial behavior: A social dilemma perspective. *Organizational Behavior and Human Decision Processes, 120,* 298–308. http://dx.doi.org/10.1016/j.obhdp.2012.04.004

Bennett, R. J., & Robinson, S. L. (2000). Development of a measure of workplace deviance. *Journal of Applied Psychology, 85,* 349–360. http://dx.doi.org/10.1037/0021-9010.85.3.349

Brass, D. J., & Burkhardt, M. E. (1993). Potential power and power use: An investigation of structure and behavior. *Academy of Management Journal, 36,* 441–470. http://dx.doi.org/10.2307/256588

Brislin, R. W. (1980). Translation and content analysis of oral and written materials. In H. C. Triandis & J. W. Berry (Eds.), *Handbook of cross-cultural psychology* (pp. 389–444). Boston, MA: Allyn & Bacon.

Chen, Y. F., & Tjosvold, D. (2006). Participative leadership by American and Chinese managers in China: The role of relationships. *Journal of Management Studies, 43,* 1727–1752. http://dx.doi.org/10.1111/j.1467-6486.2006.00657.x

Edwards, J. R., & Lambert, L. S. (2007). Methods for integrating moderation and mediation: A general analytical framework using moderated path analysis. *Psychological Methods, 12,* 1–22. http://dx.doi.org/10.1037/1082-989X.12.1.1

Eisenberger, N. I. (2012). The pain of social disconnection: Examining the shared neural underpinnings of physical and social pain. *Nature Reviews Neuroscience, 13,* 421–434. http://dx.doi.org/10.1038/nrn3231

Eisenberger, R., Cummings, J., Armeli, S., & Lynch, P. (1997). Perceived organizational support, discretionary treatment, and job satisfaction. *Journal of Applied Psychology, 82,* 812–820. http://dx.doi.org/10.1037/0021-9010.82.5.812

Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology, 71,* 500–507. http://dx.doi.org/10.1037/0021-9010.71.3.500

Ferris, D. L., Brown, D. J., Berry, J. W., & Lian, H. (2008). The development and validation of the workplace ostracism scale. *Journal of Applied Psychology, 93,* 1348–1366. http://dx.doi.org/10.1037/a0012743

Ferris, D. L., Lian, H., Brown, D. J., & Morrison, R. (2015). Ostracism, self-esteem, and job performance: When do we self-verify and when do we self-enhance? *Academy of Management Journal, 58,* 279–297. http://dx.doi.org/10.5465/amj.2011.0347

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18,* 39–50. http://dx.doi.org/10.2307/3151312

George, J. M., Reed, T. F., Ballard, K. A., Colin, J., & Fielding, J. (1993). Contact with AIDS patients as a source of work-related distress: Effects of organizational and social support. *Academy of Management Journal, 36,* 157–171. http://dx.doi.org/10.2307/256516

Gilson, L. L., & Shalley, C. E. (2004). A little creativity goes a long way: An examination of teams' engagement in creative processes. *Journal of Management, 30,* 453–470. http://dx.doi.org/10.1016/j.jm.2003.07.001

Hackman, J. R., & Oldham, G. R. (1980). *Work redesign.* Reading, MA: Addison Wesley.

Huang, S.-C., & Zhang, Y. (2013). All roads lead to Rome: The impact of multiple attainment means on motivation. *Journal of Personality and Social Psychology, 104,* 236–248. http://dx.doi.org/10.1037/a0031039

Jones, E. E., & Kelly, J. R. (2013). The psychological costs of knowledge specialization in groups: Unique expertise leaves you out of the loop. *Organizational Behavior and Human Decision Processes, 121,* 174–182. http://dx.doi.org/10.1016/j.obhdp.2013.02.002

Kahn, W. A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal, 33,* 692–724. http://dx.doi.org/10.2307/256287

Lance, C. E., Vandenberg, R. J., & Self, R. M. (2000). Latent growth models of individual change: The case of newcomer adjustment. *Organizational Behavior and Human Decision Processes, 83,* 107–140. http://dx.doi.org/10.1006/obhd.2000.2904

Landis, R. S., Beal, D. J., & Tesluk, P. E. (2000). A comparison of approaches to forming composite measures in structural equation models. *Organizational Research Methods, 3,* 186–207. http://dx.doi.org/10.1177/109442810032003

Leung, A. S. M., Wu, L. Z., Chen, Y. Y., & Young, M. N. (2011). The impact of workplace ostracism in service organizations. *International Journal of Hospitality Management, 30,* 836–844. http://dx.doi.org/10.1016/j.ijhm.2011.01.004

Liu, D., Gong, Y., Zhou, J., & Huang, J.-C. (2017). Human resource systems, employee creativity, and firm innovation: The moderating role of firm ownership. *Academy of Management Journal, 60,* 1164–1188. http://dx.doi.org/10.5465/amj.2015.0230

Liu, L., & Ghorbani, M. (2016). The effect of normative expectations on employees' intrinsic interest in creativity: Is there also a mediating mechanism? *Frontiers of Business Research in China, 10,* 19–49.

Ng, T. W. H., & Feldman, D. C. (2012). A comparison of self-ratings and non-self-report measures of employee creativity. *Human Relations, 65,* 1021–1047. http://dx.doi.org/10.1177/0018726712446015

Perry-Smith, J. E. (2006). Social yet creative: The role of social relationships in facilitating individual creativity. *Academy of Management Journal, 49,* 85–101. http://dx.doi.org/10.5465/AMJ.2006.20785503

Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88,* 879–903. http://dx.doi.org/10.1037/0021-9010.88.5.879

Rhoades, L., & Eisenberger, R. (2002). Perceived organizational support: A review of the literature. *Journal of Applied Psychology, 87,* 698–714. http://dx.doi.org/10.1037/0021-9010.87.4.698

Robinson, S. L., O'Reilly, J., & Wang, W. (2013). Invisible at work: An integrated model of workplace ostracism. *Journal of Management, 39,* 203–231. http://dx.doi.org/10.1177/0149206312466141

Scott, K. L., Restubog, S. L. D., & Zagenczyk, T. J. (2013). A social exchange-based model of the antecedents of workplace exclusion. *Journal of Applied Psychology, 98,* 37–48. http://dx.doi.org/10.1037/a0030135

Seibert, S. E., Kraimer, M. L., & Liden, R. C. (2001). A social capital theory of career success. *Academy of Management Journal, 44,* 219–237. http://dx.doi.org/10.2307/3069452

Shalley, C. E., Zhou, J., & Oldham, G. R. (2004). The effects of personal and contextual characteristics on creativity: Where should we go from here? *Journal of Management, 30,* 933–958. http://dx.doi.org/10.1016/j.jm.2004.06.007

Sheldon, M. E. (1971). Investments and involvements as mechanisms producing commitment to the organization. *Administrative Science Quarterly, 16,* 143–150. http://dx.doi.org/10.2307/2391824

Spreitzer, G. M. (1996). Social structural characteristics of psychological empowerment. *Academy of Management Journal, 39,* 483–504. http://dx.doi.org/10.2307/256789

Thau, S., Aquino, K., & Poortvliet, P. M. (2007). Self-defeating behaviors in organizations: The relationship between thwarted belonging and interpersonal work behaviors. *Journal of Applied Psychology, 92,* 840–847. http://dx.doi.org/10.1037/0021-9010.92.3.840

Warr, P., Cook, J., & Wall, T. (1979). Scales for the measurement of some work attitudes and aspects of psychological well-being. *Journal of Occupational Psychology, 52,* 129–148. http://dx.doi.org/10.1111/j.2044-8325.1979.tb00448.x

Wu, L.-Z., Ferris, D. L., Kwan, H. K., Chiang, F., Snape, E., & Liang, L. H. (2015). Breaking (or making) the silence: How goal interdependence and social skill predict being ostracized. *Organizational Behavior and Human Decision Processes, 131,* 51–66. http://dx.doi.org/10.1016/j.obhdp.2015.08.001

Wu, L., Wei, L., & Hui, C. (2011). Dispositional antecedents and consequences of workplace ostracism: An empirical examination. *Frontiers of Business Research in China, 5,* 23–44. http://dx.doi.org/10.1007/s11782-011-0119-2

Wu, L.-Z., Yim, F. H.-K., Kwan, H. K., & Zhang, X. (2012). Coping with workplace ostracism: The roles of ingratiation and political skill in employee psychological distress. *Journal of Management Studies, 49,* 178–199. http://dx.doi.org/10.1111/j.1467-6486.2011.01017.x

Zhang, H., Kwan, H. K., Zhang, X., & Wu, L.-Z. (2014). High core self-evaluators maintain creativity: A motivational model of abusive supervision. *Journal of Management, 40,* 1151–1174. http://dx.doi.org/10.1177/0149206312460681

Zhang, X., & Bartol, K. M. (2010). Linking empowering leadership and employee creativity: The influence of psychological empowerment, intrinsic motivation, and creative process engagement. *Academy of Management Journal, 53,* 107–128. http://dx.doi.org/10.5465/AMJ.2010.48037118

Zhou, J., & George, J. M. (2001). When job dissatisfaction leads to creativity: Encouraging the expression of voice. *Academy of Management Journal, 44,* 682–696. http://dx.doi.org/10.2307/3069410

Zhou, J., & Hoever, I. J. (2014). Research on workplace creativity: A review and redirection. *Annual Review of Organizational Psychology, 1,* 333–359. http://dx.doi.org/10.1146/annurev-orgpsych-031413-091226

Zhou, J., Shin, S. J., Brass, D. J., Choi, J., & Zhang, Z.-X. (2009). Social networks, personal values, and creativity: Evidence for curvilinear and interaction effects. *Journal of Applied Psychology, 94,* 1544–1552. http://dx.doi.org/10.1037/a0016285