

**Investigating Social Exchange Relationships in Organizations:  
The Neglected Role of Gratitude**

by

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## Abstract

The study of gratitude has been missing from the literature of social exchange relationships in organizations. The present study aims to investigate the role of gratitude in social exchange processes within organizational context. Considering the distinction between *trait gratitude* (gratitude as a disposition) and *state gratitude* (gratitude as an emotional experience), two studies were proposed and conducted.

Study 1 focuses on the effect of trait gratitude on employee-organization social exchange relationship during organizational entry. A model was developed in which organizational newcomers' trait gratitude moderated the link between a newcomer intervention (i.e., *ROPES*; Wanous, & Reichers, 2000) and socialization outcomes. A field experiment with a group of new nurses was conducted to test this model. Participants were 74 newly hired nurses entering into a public hospital located in a northern city in China. These new nurses were randomly assigned to either a control condition ( $n = 37$ ) in which they went through a regular orientation program, or an experimental condition ( $n = 37$ ) in which they received *ROPES*. These nurses were followed up 6 months and 12 months post-entry. The results indicated that the *ROPES* intervention – POS link were stronger for newcomers with higher trait gratitude.

Study 2 focuses on the role of state gratitude in employee-organizational agent (e.g., supervisor, coworker) social exchange relationships. A cross-level multifocal model was developed in which state gratitude mediated the relationship between favorable treatment from the organizational agents and employees' positive attitudes and behaviors toward the agents. A daily diary study was conducted to test this model. Participants were 64 employees from various organizations recruited through Amazon Mechanical Turk (MTurk). They completed a preliminary screen survey and daily surveys for ten consecutive workdays. The

results showed that: (a) at the within-individual level, daily variations in supervisor/coworker helping and justice predicted daily variations in gratitude directed at supervisor/coworker, which then predicted daily variations in prosocial behaviors toward supervisor/coworker; (b) at the between-individual level, supervisor/coworker developmental feedback predicted mean levels of gratitude directed at supervisor/coworker and these mean levels of gratitude predicted communal exchanges with supervisor/coworker; (c) employees' humility moderated the relationship between supervisor developmental feedback and chronic gratitude directed at supervisor; and (d) employees' cynicism moderated the link between coworker developmental feedback and chronic gratitude directed at coworker.

The major findings, contributions, limitations, and future research directions were summarized and discussed for each study.

*Keywords:* social exchange, trait gratitude, state gratitude, employee-organization relationship, supervisor, coworker

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## **Introduction and Overview**

Social exchange theory has been among the most influential theories to describe and explain interactions between employees and their organization or its representatives/agents (e.g., supervisor, coworker) (Cropanzano & Mitchell, 2005; Walumbwa, Cropanzano, & Goldman, 2011). Social exchange relationships develop when organization or its agents provide support for the employees (e.g., when a leader takes care of the subordinates), and employees respond with positive work attitudes and behaviors, such as organizational citizenship behavior (OCB; Lynch, Eisenberger, & Armeli, 1999; Walumbwa, et al., 2011), higher job performance (Eisenberger, Armeli, Rexwinkel, Lynch, & Rhoades, 2001), reduced absenteeism (Eisenberger, Huntington, Hutchison, & Sowa, 1986), and greater organizational commitment (Eisenberger, et al., 2001). Low quality social exchange relationship is more like economic exchange based on mutually agreed on duties, while high-quality social exchange relationship is characterized by trust, support, loyalty, and commitment (Uhl-Bien & Maslyn, 2003).

Despite the numerous studies on social exchange relationships in organizations, the role of affect in these processes has been under-studied with a few exceptions (e.g., Nifadkar, Tsui, & Ashforth, 2012; Schaubroeck, Peng, & Hannah, 2013). As an example, Schaubroeck et al. (2013) examined an affect-based concept, termed as affect-based trust, referring to “an emotional attachment to the other party that reflects confidence that each party is concerned about other’s personal welfare” (p. 1149). They found that affect-based trust was positively related to organizational identification and role-related performance (Schaubroeck et al., 2013). Given theoretical arguments that emphasize a more central role of affect in social exchange processes (Lawler, 2001; Lawler & Thye, 1999), it is puzzling that relevant research has been limited. Affect is an umbrella term encompassing both traits and states. Traits are stable tendencies to feel and act in certain ways, while states are short-term

affective experiences (Watson & Clark, 1984). The affect theory of social exchange (Lawler, 2001; Lawler & Thye, 1999) suggests that affect pervades in exchange processes and is used as information to make inferences about the mutual relationship between the individual and the environment. Trait affect can make a difference in individuals' attachment and commitment to the social exchange relationship, and trust in the other party (Lawler, 2001). State affect is involuntarily felt as the result of social exchange interactions and can bring significant consequences for the exchange process and outcomes (Lawler, 2001). Through attribution and specification of affect to particular objects, affect would increase or decrease the strength and durability of relations (Lawler, 2001). However, previous relevant studies have mainly taken an outcome-oriented approach such that affect is a result rather than a part of the social exchange process (e.g., Lawler, 2001; Lawler & Thye, 2006; Lawler, Thye, & Yoon, 2008).

One of the most basic affect in social exchange process is gratitude. The basic premise of the present study is that gratitude, a specific positive affect, is very relevant in social exchange relationships. For instance, the investigation of gratitude could help us understand the process of how favorable treatment from an organization or its agents relates to employees' positive attitudinal and behavioral responses as an exchange (Cropanzano & Mitchell, 2005).

### **Definition of Gratitude: A Moral Affect**

Gratitude is a moral affect that arises when an individual perceives other people have intentionally acted in a way promotes the beneficiary's well-being (McCullough, Kilpatrick, Emmons, & Larson, 2001). Gratitude has been defined and studied as both trait-like and state-like affect (McCullough, Emmons, & Tsang, 2002; McCullough, Tsang, & Emmons, 2004). This distinction implies that, although the basic level of dispositional gratitude may

differ between people, state gratitude can fluctuate throughout a typical workday (Emmons & Mishra, 2011).

**Trait gratitude.** Trait gratitude, also termed as dispositional gratitude, has been defined as an individual disposition that reflects “a generalized tendency to recognize and respond with grateful emotion to the roles of other people’s benevolence in the positive experiences and outcomes that one obtains” (McCullough et al., 2002, p.112). In line with this definition, trait gratitude predisposes individuals to feel gratitude more frequently, more intensely, in more domains of life, and to more entities at a given point in time (McCullough et al., 2002). In short, trait gratitude has been recognized as a character strength or psychological resource for individuals (Emmons & Shelton, 2002; Snyder, Lopez, & Pedrotti, 2014)

Different measures were developed to measure trait gratitude. The first and perhaps the most influential scale is the Gratitude Questionnaire-6 (GQ-6; McCullough et al., 2002), which consists six items. Based on the same definition, McCullough et al. (2002) also developed a three-adjective measure of gratitude (i.e., grateful, thankful, and appreciative), which is called the Gratitude Adjective Checklist (GAC). Although the dominant view considers trait gratitude as a unidimensional construct, some researchers have specified multidimensions of trait gratitude. The most widely used multidimensional measure, the Gratitude Resentment and Appreciation Test (GRAT), is developed by Watkins, Woodward, Stone, and Kolts (2003). The full version consists 44 items with three dimensions: (1) *a sense of abundance*, which means that grateful people are less likely to experience feelings of deprivation with their life; (2) *simple appreciation*, which means that grateful people tend to appreciate simple pleasures in their life; (3) *appreciation of others*, which means that grateful people are prone to appreciate the contribution of others to their well-being. The 16-item short version GRAT is more commonly used.

**State gratitude.** State gratitude is a temporary emotional state or a momentary feeling elicited by a particularly helpful or beneficial event, and it is discrete and episodic (e.g., Ford, Wang, Jin, & Eisengerger, 2018). State gratitude is typically caused by two components: an event (i.e., receiving benefits), and the attributions to the event (i.e., intentional action to help) (Spence, Brown, Keeping, & Lian, 2014). In the first step, people recognize that they have received a benevolence associated with feelings of happiness; in the second step, people attribute their happiness to external sources, creating a link between their happiness and gratitude (Di Fabio, Palazzeschi, & Bucci, 2017; Weiner, 1986). People are most likely to feel grateful when they receive especially valuable benefits, and the effort exerted by the other party seems to have been intentional rather than accidental (McCullough et al., 2004). In sum, state gratitude is an emotional experience triggered by favorable treatment, the level of which may vary on an event basis.

There are only a few scales developed to measure state gratitude. Considering state gratitude to be unidimensional, Spence et al. (2014) developed the five-item State Gratitude Scale. To measure state gratitude directed toward the organization, Ford et al. (2018) developed a two-adjective measure of gratitude (i.e., grateful and thankful), with the instruction of asking workers about the extent to which they feel this way toward their organizations.

### **The Study of Gratitude in Organizations**

Gratitude has been a fundamental construct in the research of positive psychology (Seligman, 2002; Seligman & Csikszentmihalyi, 2000), and studies consistently found positive effects of gratitude on individuals' well-being and life satisfaction (e.g., Wood, Froh, & Geraghty, 2010; Wood, Joseph, & Maltby, 2009). As gratitude is seen as essential to human relationships, there have been several works investigating gratitude at work (e.g., Dik, Duffy, Allan, O'Donnell, Shim, & Steger, 2014; Emmons, 2003; Fehr, Fulmer, Awtrey, &

Miller, 2017; Ford et al., 2018; Grant & Wrzesniewski, 2010; Hu & Kaplan, 2014; Lanham, Rye, Rimsky, & Weill, 2012; Spence et al., 2014). Among the above works, four of them are theoretical reviews and the other four are empirical studies.

The theoretical reviews proposed multiple ways that gratitude could benefit employees and organizations. Emmons (2003) argued the benefits of gratitude could be generalized to organizations. Cultivating gratitude will create positive organizational climate and enhance employee well-being as well as reduce toxic emotions in workplace. Dik et al. (2014) pointed out that gratitude is a viable source for increasing purpose and meaning at work, which help improve career development. Hu and Kaplan (2014) compared gratitude with two other positive emotions (i.e., pride and interest), and reasoned that gratitude should promote relationship development and maintenance in organizations. They also argued that gratitude should be positively related to relationship-related job attitudes, psychological safety, and contextual performance.

In their comprehensive theoretical review, Fehr and his colleagues (2017) developed a multilevel model of gratitude in organizations. This model depicts that gratitude benefits organizations at different levels. At the organization level, gratitude has a direct effect on improving the organizational climate by strengthening reciprocity, teamwork, and altruism. Ultimately, it enhances organizational resilience and corporate social responsibility. At the individual level, gratitude is argued to increase employee well-being and foster communal exchange relationships. At the event level, gratitude predicts employees' organizational citizenship behaviors (OCB), which helps to maintain and improve the working environment. To conclude, these reviews contended that gratitude is a constructive affect in organizations.

There has been empirical evidence supporting the benefits of gratitude in organizations. The study by Grant and Wrzesniewski (2010) showed that other-oriented employees experienced higher levels of anticipated gratitude, which strengthened the positive

relationship between core self-evaluations and performance. In a sample of mental health professionals, Lanham et al. (2012) found that workplace-specific gratitude was positively related to job satisfaction, and negatively related to burnout. Using experience sampling techniques, Spence et al. (2014) examined the within-person relation between state gratitude and OCB. They found that state gratitude predicted OCB above and beyond trait gratitude.

In a recent longitudinal study, Ford and his colleagues (2018) focused on organization-directed gratitude, which refers to employees' grateful emotions targeted at their organizations. The authors distinguished between two types of organization-directed gratitude: *episodic gratitude* at the within-individual level, which varies from day to day based on momentary experience in organizations, and *chronic gratitude* at the between-individual level, which is relatively stable over time based on accumulated experience in organizations (Ford et al., 2018). Based on this distinction and their two-level framework, they reasoned and investigated the antecedents and consequences of episodic and chronic gratitude. Their results showed that episodic gratitude mediated the relationship between daily helping from supervisors and daily fluctuations in OCB; while chronic gratitude mediated the relationship between perceived organizational support (POS) and a stable tendency to initiate OCB.

Despite promising progress in the study of gratitude in the organizational context, several research questions remain open to further investigation. For the study of trait gratitude, very little attention has been given to its role in organizational context. As an individual difference related to giving and taking, trait gratitude may influence how an individual perceives and reacts to favorable treatments received in organizations (e.g., Watkins, 2014). With regard to state gratitude, most existing studies have measured gratitude in a general, non-directed way, while neglected the directedness of state gratitude. Unlike core positive affect (PA), which is diffuse, state gratitude tends to be directed toward a

particular entity in response to actions intended to benefit the recipient (e.g., Ford et al., 2018; Gray & Wegner, 2011).

To address the aforementioned research gaps, the present study aims to investigate the role of gratitude in social exchange processes within organizations. Taken into consideration the distinction between trait gratitude and state gratitude, two studies are proposed and conducted. Study 1 focuses on the role of trait gratitude in the context of employee-organization social exchange relationship. A field experiment was conducted to test whether trait gratitude moderated the effect of a newcomer orientation program on perceived organization support (POS) in a group of new employees. Study 2 focuses on the role of state gratitude in the context of employees' social exchange relationships with supervisor and coworkers. A daily diary study was conducted to test the mediating effect of target specific gratitude in the relationship between favorable treatment and positive reactions.

### **Study 1**

In study 1, I am interested in how employees' trait gratitude may influence employee-organization social exchange relationship. Specifically, this study is intended to investigate whether, how, and when a coping-focused orientation program (i.e., ROPES; Wanous & Reichers, 2000) might help reduce psychological contract breach in the newcomer entry context. Based on the functionalist perspective, I identified perceived organizational support (POS) as a symbolic mechanism and perceived stress as an instrumental mechanism of the coping orientation program. I also posited that trait gratitude should strengthen the intervention – POS link, whereas self-efficacy should strengthen the intervention – perceived stress link.

#### **Study 1 Overview**

Organizational socialization has been typically defined as the process through which newcomers acquire the knowledge, skills, attitudes, and behaviors required to adjust to their

work context (e.g., Fisher, 1985; Van Maanen & Schein, 1979). As part of the sense-making process, newcomers elaborate and modify their psychological contracts in line with organizational reality (Robinson, Kraatz, & Rousseau, 1994; DeVos, Buyens, & Schalk, 2003). *Psychological contracts* have been defined as the beliefs employees hold regarding the terms and conditions of the exchange agreement between themselves and their employers (e.g., Rousseau, 1989). As noted by researchers, it is during the entry process that newcomers begin to develop a clearer understanding of the mutual obligations and form their psychological contracts (Lapointe, Vandenberghe, & Boudrias, 2013). Psychological contracts thus lay at the foundation of employee-organization relationship (Shore et al., 2004; Taylor & Tekleab, 2004).

The concept of *psychological contract breach* is critical in understanding the consequences of psychological contract development, as they provide the primary explanations for why psychological contracts, if unfulfilled, may have negative influences on employees' feelings, attitudes, and behaviors (e.g., Dulac, Coyle-Shapiro, Henderson, & Wayne, 2008). Psychological contract breach refers to an employee's perception that his or her organization has failed to meet one or more obligations associated with perceived mutual promises (e.g., Morrison & Robinson, 1997). Empirical studies have shown that psychological contract breach has deleterious effects on both employees and organizations, including decreased employees' job satisfaction, decreased performance, and increased intentions to quit (e.g., Robinson, 1996; Robinson et al., 1994; Robinson & Morrison, 1995; Zhao, Wayne, Glibkowski, & Bravo, 2007). In the newcomer socialization context, newcomers tend to report increased psychological contract breach over time, which subsequently has a negative effect on their socialization outcomes (Tekleab, Orvis, & Taylor, 2013).

However, extant studies on psychological contract breach have largely focused on its consequences, with relatively less attention being devoted to what organizations can do to reduce psychological contract breach, particular within the newcomer entry context. Several survey studies found that inadequate provision of human resource (HR) practices was associated with psychological contract breach (Robinson & Morrison, 2000), and that newcomers' positive perceptions of socialization practices were positively related to perceived psychological contract fulfillment (DeBode, Mossholder, & Walker, 2017; Robinson and Morrison, 2000). Unfortunately, these few survey studies were all correlational in nature, thus unable to establish causal relationships. Moreover, because the survey questions cover many HR practices, it is unclear what specific practices contributed to psychological contract breach or fulfillment.

Addressing these limitations, the present study focused on a specific HR practice, newcomer orientation program. Well-designed orientation programs play a critical role in fulfilling newcomers' needs and has been found to positively relate to a number of socialization outcomes (Bauer, 2010; Fan, Buckley, & Litchfield, 2012). To boost internal validity, a field experiment was conducted to investigate whether, how, and when a coping-focused orientation program could reduce psychological contract breach. The coping-focused orientation is called Realistic Orientation Program for Entry Stress (ROPES; Wanous & Reichers, 2000). Drawing on the functionalist perspective, I posit that ROPES functions in two primary ways to exert its influence on psychological contract breach: A symbolic route and an instrumental route (Earnest, Allen, & Landis, 2011; Highhouse, Thornbury, & Little, 2007). The act of offering a beneficial orientation program like ROPES signals that the organization cares for newcomers, and this symbolic function facilitates the building of a high-quality employee-organization relationship. Meanwhile, the ROPES provides realistic information about the work environment and teaches newcomers how to cope, and this

instrumental function helps newcomers cope with entry stressors. Through both mechanisms, ROPES serves to protect newcomers' psychological contracts. Further, drawing on the interactionist perspective (e.g., Griffin, Colella, & Goparaju, 2000), I examined trait gratitude and adjustment self-efficacy as moderators of the ROPES effect. I posit that trait gratitude should strengthen the treatment effect on perceived organizational support (POS), whereas self-efficacy should strengthen the treatment effect on newcomer stress. Figure 1 depicts the conceptual model.

### **Psychological Contract Breach in Newcomer Entry Context**

Socialization scholars have noted that newcomers typically go through a “honeymoon” period after entering into an organization (e.g., Boswell, Boudreau, & Tichy, 2005). That means newcomers tend to start with positive expectations and attitudes toward new jobs and organizations. However, this honeymoon period is followed by “reality shocks” as newcomers settle into the organization and are exposed to less attractive aspects of the new job (e.g., Boswell et al., 2005; Louis, 1980). Boswell, Shipp, Payne, and Culbertson (2009) reported a marked reduction of newcomers' job satisfaction as they acquire more knowledge of their jobs.

This honeymoon-hangover effect is mainly due to two reasons. First, newcomers usually have unrealistically high expectations at the early stage of entry (Boswell et al., 2009). In the hiring process, organizations tend to present their most favorable side to newcomers, leading newcomers to perceive a particularly positive picture of the organization (Boswell et al., 2009; Van Maanen, 1975; Wanous, 1977; Ward & Athos, 1972). Building on positive, abstract, and tentative information provided by organizations, newcomers are likely to generate unrealistic positive expectations before entry. The tendency to portray their organizations and jobs in a positive light contributes to high expectations, leading to very positive initial attitudes (Ashforth, 2001). However, such high expectations are almost certain

to be disconfirmed after entry as newcomers experience organizational reality (Wanous, 1992). Second, newcomers tend to experience reduced organizational support as they become settled, engaging in more mundane job activities (Boswell et al., 2009; Van Vianen & De Pater, 2012). Newcomers often receive much attention and support from their organizations and coworkers in the initial entry period. However, this social support tends to decrease once newcomers have learned the basics of their new jobs (Van Vianen & De Pater, 2012). Jokisaari and Nurmi (2009) found that supervisors' support of newcomers declined over time, which negatively influenced their subsequent job satisfaction. Another study similarly found that newcomers experienced decreased support from coworkers and supervisors within the first 3 months of entry (Kammeyer-Mueller, Wanberg, Rubenstein, & Song, 2013).

Studies on newcomer psychological contract development demonstrated that during the socialization process, newcomers came to perceive that their employers owed them more than they owe to their employers (e.g., Robinson et al., 1994; Thomas & Anderson, 1998). In other words, newcomers tend to perceive that their organization has failed to fulfill their promises adequately; in contrast, they have met their obligations to organizations, but their contributions have not been recognized. Consistent with this notion, Tekleab et al. (2013) found in a longitudinal study that newcomers reported increased psychological contract breach over an eight-month period. Thus, it appears that newcomers are bound to experience psychological contract breach. The present study looked at whether a coping orientation program (i.e., ROPES) can reduce psychological contract breach, why, and when.

### **ROPES Approach to Newcomer Orientation**

During the last two decades, orientation programs that may facilitate newcomer socialization have been receiving considerable attention (for a review, see Fan et al., 2012). As echoed by many socialization scholars (e.g., Bradt & Vonnegut, 2009; Bauer, 2010), most on-boarding programs only provide newcomers with information that is abstract, impractical,

and impossible for new employees to incorporate within a short period. Based on the notion of inoculating newcomers from entry stress, Wanous and colleagues developed the ROPES approach to newcomer orientation (Wanous, 1993; Wanous & Reichers, 2000). The primary objective of ROPES is to expand the newcomer's coping capabilities in a new working environment (Fan & Wanous, 2008). Every ROPES agenda is developed for a specific organization through intensive interviews with both veteran insiders and newcomers (Fan et al., 2012). Major entry stressors and effective coping strategies are identified by analyzing the qualitative data. Through ROPES, newcomers will be informed of major entry stressors, realistic information about the job, and common feelings newcomers tend to have when encountering those stressors (Fan & Wanous, 2008). Most importantly, ROPES teaches newcomers on how to cope with the major entry stressors (Wanous & Reichers, 2000).

Empirical studies have provided initial evidence that ROPES has positive effects on a few traditional socialization outcomes (e.g., turnover intention, job performance, and adjustment) in several newcomer populations (e.g., Waung, 1995; Fan & Wanous, 2008; Fan, Yao, Lai, Hou, & Zheng, 2017). However, we know little about the underlying mechanisms of ROPES other than stress reduction, and we also know little about the boundary conditions of ROPES effects. In the following we elaborate on the two hypothesized ROPES mechanisms (i.e., a symbolic route through boosted POS and an instrumental route through reduced stress), as well as how trait gratitude and adjustment self-efficacy moderate the two mechanisms, in affecting newcomers' psychological contract breach.

### **POS as a Symbolic Mechanism of ROPES**

During newcomer socialization, social exchange relationships are mutually constituted between the newcomer and the organization (Louis, 1980; Jones, 1983). Various socialization practices including orientation programs represent the organization's efforts to facilitate newcomers' transition, and this may generate obligations on the part of newcomers

to reciprocate positively. The process is captured by the social exchange theory, which has been among the most influential theories in describing and explaining interactions between employees and their organizations (Cropanzano & Mitchell, 2005; Walumbwa, et al., 2011). Social exchange relationships develop when organization provide support for the employees and employees respond with positive work attitudes and behaviors such as organizational citizenship behavior (OCB; Lynch, Eisenberger, & Armeli, 1999; Walumbwa, et al., 2011) and higher job performance (Eisenberger, et al., 2001). Low quality social exchange relationship is more like economic exchange based on mutually agreed on duties, while high-quality social exchange relationship is characterized by trust, support, loyalty, and commitment (Uhl-Bien & Maslyn, 2003).

We reason that high-quality relationship should contribute to psychological contract fulfillment. In theorizing antecedents of employees' psychological contract breach, Morrison and Robinson (1997) suggested two causes of psychological contract breach: *reneging* and *incongruence*. An organization may knowingly fail to meet its obligation (i.e., *reneging*), or it has different understandings from the employees about whether a given obligation exists (i.e., *incongruence*). The links between the two causes and psychological contract breach are moderated by *vigilance*, referred to as "the extent to which the employee actively monitors how well the organization is meeting the terms of his or her psychological contract" (Morrison & Robinson, 1997, p. 237). Morrison and Robinson (1997) noted that vigilant employees are not only more likely to detect true contract breach, but also likely to perceive a breach when the situation is ambiguous. Employees' vigilance is influenced by supportive relationships at work (e.g., Conway & Briner, 2009).

One construct reflecting supportive relationships at work from an employee's view is POS, which refers to employees' perception that their employer values their contributions and cares about their welfare and well-being (Eisenberger, et al., 1986). We suggest that

newcomers' POS should be enhanced by ROPES, which is distinguished from regular orientation programs that only provide the "general facts" (Fan et al., 2012). Because the development of a ROPES requires extra time and efforts of the organization, in newcomers' eyes, ROPES represents the organization's positive discretionary actions toward them, and it signals that the organization cares about them. According to the norm of social exchange, the positive actions will engender an obligation on the part of the newcomers to reciprocate the good deeds (Rhoades & Eisenberger, 2002).

One way newcomers could return the favor is that they may cognitively choose to be less suspicious of the organization's intentions to fulfill its obligations, behaviorally less inclined to monitor contract breaches, and affectively more willing to forgive minor discrepancies. In addition, employees with high POS might exhibit a positive bias in evaluating the organization's fulfillment of its obligations (e.g., Aselage & Eisenberger, 2003). For instance, employees in high-quality social exchange relationships with their organization often allow flexibility of obligations delivery and tend to interpret contract breach as a lapse and the fulfillment of promises is delayed rather than abandoned (Conway & Briner, 2009; Dulac et al., 2008). Empirical evidence also supports the negative association between POS and perceived psychological contract breach (e.g., Dulac et al., 2008). Thus, we expected that POS should mediate the link between ROPES and psychological contract breach. Therefore,

***Hypothesis 1:** POS mediates the effect of ROPES intervention on psychological contract breach in newcomers.*

### **Trait Gratitude as a Boundary Condition for the ROPES — POS Link**

The interactionist perspective implies that socialization is shaped by the joint effects of situational factors and individual factors (e.g., Griffin et al., 2000). Although prior research has examined the boundary conditions related to ROPES-socialization outcomes relationships

(e.g., Fan & Lai, 2014), the role of affect-related factors has been neglected. Given theoretical arguments that emphasize a more central role of affect in social exchange processes (Lawler & Thye, 1999; Lawler, 2001), it is puzzling that relevant research has been sparse. We suggest that trait gratitude is relevant to social exchange processes during newcomer socialization. Trait gratitude is a positive affect related to giving and taking, and it is defined as an individual disposition reflecting “a generalized tendency to recognize and respond with grateful emotion to the roles of other people’s benevolence in the positive experiences and outcomes that one obtains” (McCullough et al. , 2002, p.112). As such, trait gratitude predisposes individuals to feel gratitude more frequently, more intensely, in more life domains, and to more entities at a given point in time (McCullough et al., 2002).

Gratitude has been a fundamental construct in the research of positive psychology (Seligman & Csikszentmihalyi, 2000; Seligman, 2002), and studies have consistently found positive effects of gratitude on individuals’ well-being and life satisfaction (e.g., Wood et al., 2010; Wood et al., 2009). There has been an emerging research interest in gratitude among organizational scholars, who have begun to examine multiple ways that gratitude could benefit employees and organizations (e.g., Dik et al., 2014; Emmons, 2003; Fehr et al., 2017; Ford et al., 2018; Grant & Wrzesniewski, 2010; Hu & Kaplan, 2014; Lanham et al., 2012; Spence et al., 2014).

Individuals with high trait gratitude often experience appreciation in their life and feel obligated to reciprocate when benefits are received and attributed to the benevolence of others (McCullough et al., 2002). Additionally, grateful individuals are more aware of the good that others do for them, and the goodness is amplified by their benign view of the world (Algoe, 2012; Watkins, 2014). As noted by researchers, gratitude has important social functions to facilitate a high-quality relationship between a grateful person and the target of gratitude (Algoe, Haidt, & Gable, 2008). In the present context, we advance that trait

gratitude may influence how a newcomer perceives and reacts to ROPES. For grateful newcomers, going through ROPES is like receiving a benefit or gift from the organization; they should be more aware of the good that the organization does for them. In contrast, ungrateful newcomers might not be appreciative of the additional efforts the organization puts into developing the ROPES program. Thus, we expected that newcomers with higher trait gratitude should experience more POS after receiving ROPES than newcomers with lower trait gratitude. By extension, we also expected that trait gratitude should moderate the indirect link from ROPES to psychological contract breach through boosted POS.

***Hypothesis 2a:** Newcomer trait gratitude will moderate the effect of ROPES on POS such that the positive relationship between ROPES and POS will be stronger for newcomers with a high level of trait gratitude.*

***Hypothesis 2b:** Newcomer trait gratitude will moderate the indirect link of ROPES – POS – psychological contract breach such that the indirect effect will be stronger for newcomers with a high level of trait gratitude.*

### **Newcomer Stress as an Instrumental Mechanism of ROPES**

Considering that ROPES is primarily designed to reduce newcomer stress (e.g., Wanous & Reichers, 2000), and empirical evidence showed that stress reduction was a key factor for the effectiveness of ROPES (e.g., Fan & Wanous, 2008; Fan et al., 2017), I suggest that stress reduction may also mediate the effect of ROPES on newcomers' psychological contract breach. While POS reflects a symbolic mechanism, stress reduction is an instrumental mechanism.

Job stress is “the harmful physical and emotional responses that occur when the job requirements do not match the capabilities, resources, or needs of the worker” (National Institute for Occupational Safety and Health, 1999). It has been widely acknowledged among researchers that newcomers' early experience within an organization is very stressful (e.g.,

Ellis, Bauer, Mansfield, Erdogan, Truxillo, & Simon, 2015; Nelson, 1987; Saks & Gruman, 2012). Excessive newcomer stress has been linked to detrimental outcomes such as lowered job satisfaction and organizational commitment, and an elevated level of intention to quit (e.g., Ashforth & Saks, 1996; Saks, 1996). As described earlier, ROPES is based on the notion of stress inoculation. It goes beyond providing the “general facts” and includes realistic and detailed information about job stressors as well as strategies on how to cope with the stressors. It is plausible that with a ROPES training newcomers will be better equipped to cope with major entry stressors, and as a result, they should experience less stress. Empirical studies have documented the stress reduction effect of ROPES among new international students (e.g., Fan & Wanous, 2008) and new employees (e.g., Fan et al., 2017; Waung, 1995). Thus, I expected that ROPES should reduce newcomer stress.

While POS may decrease newcomers’ vigilance in detecting psychological contract breaches, I posit that stress, on the contrary, could increase newcomers’ vigilance. In other words, stress makes employees more sensitive to unfulfilled promises by the organization. As documented by previous studies, stress is characterized by feelings of uncertainty (Monat, Averill, & Lazarus, 1972), which is an uncomfortable feeling that something is unknown and/or out of control. Uncertainty often create tension and motivate individuals to seek information to reduce uncertainty (Berger & Calabrese, 1975). Research has consistently found that uncertainty is related to monitoring for information (Berger, 1979; Miller & Jablin, 1991; Morrison, 1993). As pointed out by Robinson and Morrison (2000), employee facing uncertainty tend to vigilantly monitor how well the organization is fulfilling his or her psychological contracts. Accordingly, vigilant employees are more likely to detect contract breaches when there is an actual contract transgression, and they are more likely to perceive contract breaches when the situations are ambiguous (Robinson & Morrison, 2000). Xavier and Jepsen (2014) found a positive association between stress and psychological contract

breach. Taken together, I expected stress to mediate the relationship between ROPES and psychological contract breach. Thus,

***Hypothesis 3:** Newcomer stress mediates the effect of ROPES intervention on psychological contract breach.*

### **Adjustment Self-Efficacy as a Boundary Condition for the ROPES — Stress Link**

Consistent with the interactionist perspective, individual factors may influence the effectiveness of intervention effects. In this study, I contend that adjustment self-efficacy should moderate the link between ROPES and stress. Self-efficacy refers to an individual's beliefs that he or she is capable of performing a particular task successfully (Bandura, 1977), and adjustment self-efficacy is individuals' self-efficacy in new environment adjustment. According to Bandura (1997), self-efficacy has powerful effects on individuals' learning, motivation, and performance, as people often try to learn and carry out those tasks that they believe they will be able to perform successfully. Because of the benefits that it has on personal accomplishments and well-being, positive psychologists have identified self-efficacy as one of the four elements of psychological capital (e.g., Luthans, Luthans, & Luthans, 2004). Organizational researchers have devoted considerable attention to the direct and indirect influence of self-efficacy on work-related personal and organizational effectiveness (e.g., Bandura, 2004). Empirical studies and meta-analyses (e.g., Sadri & Robertson, 1993; Stajkovic & Luthans, 1998) consistently demonstrate that employees' self-efficacy contribute significantly to their level of motivation and performance (Bandura & Locke, 2003), training effectiveness (e.g., Gist, Stevens, & Bavetta, 1991), work adjustment (e.g., Saks, 1995), etc.

Prior studies on self-efficacy as a moderator of training effectiveness showed that self-efficacy either strengthens or weakens training effects, depending on the features of the training program (e.g., Eden & Aviram, 1993; Fan & Lai, 2014). In a field experiment with a

group of new international students, Fan and Lai (2014) tested the interaction between ROPES and social self-efficacy, which is a domain-level self-efficacy concept (Fan & Lai, 2014). They contended that social self-efficacy would accentuate the ROPES-stress link, because ROPES requires newcomers to cope with stressors on their own without follow-ups. As such, a one-time intervention like ROPES may have limited benefits to newcomers who lack the psychological resources (e.g., self-efficacy) to implement and carry through the recommended coping strategies in their socialization processes. The results confirmed their argument and ROPES was related to stress reduction only among those with high social self-efficacy. Based on previous findings, I argue that the effect of ROPES on stress reduction is also stronger for newcomers with higher adjustment self-efficacy for two reasons. First, high adjustment self-efficacy newcomers have the psychological resources to implement the coping strategies suggested in ROPES that help them deal with stressors (Fan & Lai, 2014). Second, high adjustment self-efficacy newcomers tend to persist when encountering setbacks and be able to benefit from ROPES in the end (Fan & Lai, 2014). By extension, I also expected that adjustment self-efficacy moderates the indirect link from ROPES to psychological contract breach through reduced stress. Thus,

***Hypothesis 4a:** The effect of ROPES intervention on stress is moderated by newcomer adjustment self-efficacy. Specifically, when adjustment self-efficacy is higher, the negative relationship between ROPES and stress is stronger.*

***Hypothesis 4b:** The indirect link of intervention – stress – psychological contract breach is moderated by newcomer adjustment self-efficacy. Specifically, the indirect link is stronger for newcomers with higher adjustment self-efficacy.*

## **Study 1 Methods**

### **Development of ROPES Program**

Fan et al. (2017) developed a ROPES intervention specifically for new nurses entering into a hospital in China. During program development, these authors interviewed new nurses individually, who were asked about major stressors they tended to experience, their feelings, reactions, and how effective (or ineffective) their coping strategies were. Veteran nurses were then interviewed in a group setting, who were asked to verify the major stressors new nurses likely face, comment on the effectiveness of coping strategies used by new nurses, and suggest additional more effective coping strategies based on their own experience. Next, Fan et al. (2017) summarized interview data and sorted the major entry stressors into several major categories, along with recommended coping strategies. The ROPES intervention was then developed and pilot tested with new and experienced nurses, before it was finalized. In conducting the ROPES intervention, multiple training methods (e.g., lecture, case studies, and small group discussions) and training techniques (e.g., information, cognitive methods, and modeling) were used.

Given the identical newcomer population (new nurses) and extremely similar entry context, we have decided to use a modified version of Fan et al.'s (2017) ROPES intervention in the present study. The key difference was that whereas Fan et al.'s (2017) original ROPES program was half-day long, we were only given two hours by the current hospital to run the ROPES program. As a result, we had to remove some of the two-way communication components such as the small group discussions to fit the granted time schedule. In other words, the current study used an abbreviated version of the ROPES intervention.

### **Sample and Procedure**

Participants were 73 new nurses entering a public hospital located in a northern city in China. All participants were female; the mean age was 21.67; 68% had college education;

none had prior full-time working experience. All new nurses first went through a hospital-wise orientation program offered to all new employees, and then received a five-day special training for new nurses mandated by the Nursing Department. The special training focused primarily on technical aspects of the nursing job. The last section of the special training was a wrap-up session which entailed a quick and brief review of what has been covered throughout the special training. We worked with the Nursing Department and randomly assigned the participants into one of the two conditions. Participants in the control condition ( $n = 37$ ) attended the wrap-up session, and participants in the experimental condition ( $n = 36$ ) attended the ROPES session. Participants were told that the reason for dividing them into two groups was for better pedagogical purposes. The wrap-up session was conducted by a senior nurse, and the ROPES session was conducted by the second author.

Before the last section of the special training, new nurses completed a survey including demographic variables, trait gratitude, and adjustment self-efficacy measures (T1). Immediately after the intervention, new nurses completed an initial expectations measure as a manipulation and a POS measure. Six months (T<sub>2</sub>) and twelve months (T<sub>3</sub>) post-intervention, we mailed follow-up surveys to all participants. The two follow-up surveys included measures of stress, POS, and psychological contract breach. Each participant was paid approximately 5 USD for completing each follow-up survey. The response rates of the two follow-up surveys were 100% and 97%, respectively.

## **Measures**

Measures for trait gratitude, stress, POS, and psychological contract breach were originally in English. We applied the back-translation technique (cf., Brislin, 1993) to translate the measures into Chinese (Mandarin).

**Trait gratitude.** Trait gratitude was measured by the *sense of abundance* subscale from the Gratitude Resentment and Appreciation Scale<sup>1</sup> (GRAT; Watkins et al., 2003). One sample item is, “There never seems to be enough to go around, and I never seem to get my share.” Items were rated on a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The coefficient alpha was .81.

**Adjustment Self-efficacy.** We developed a 5-item scale measuring new nurses’ adjustment self-efficacy. One sample item is, “I believe I can fit in ABC hospital’s working environment.” Items were rated on a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The coefficient alpha was .90 in the current sample.

**Perceived stress.** The Perceived Stress Scale — 10-Item Version (PSS-10; Cohen, Kamarck, & Mermelstein, 1983) was used to measure newcomer stress. One sample item is, “During the last six months, have you been upset because of something that happened unexpectedly?” Items were rated on a 7-point scale, ranging from 1 (*never*) to 7 (*always*). We removed one item that had a low item-total correlation. After removing this item, the coefficient alpha was .85 at the 6-month follow-up.

**Perceived organizational support (POS).** Waung’s (1995) four-item survey was used to measure POS. One sample item is, “This hospital is supportive of new nurses.” Items were rated on a 7-point scale ranging from 1(*strongly disagree*) to 7(*strongly agree*). The coefficient alpha was .99 in the 6-month follow-up survey.<sup>2</sup>

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<sup>1</sup> We measured the sense of abundance and appreciating others dimensions of GRAT, but not the dimension of simple appreciation, as it is not theoretically relevant to the current context. The results supported sense of abundance, but not appreciation for others as a significant moderator of ROPES effect. The results associated with appreciating others as a ROPES moderator are available upon request from the authors. We discuss this null finding in the Discussion section.

<sup>2</sup> We also measured POS immediately after the intervention. An independent-sample t-test indicated that the two treatment groups had similar means of POS:  $M$  (ROPES) = 6.12,  $M$  (Control) = 6.20;  $t(71) = -.41, p = .69$ . This result pattern suggested a ceiling effect, which was consistent with the well-documented honeymoon effect (e.g. Bowell et al., 2005; 2009).

***Psychological contract breach.*** Psychological contract breach was measured by a five-item scale developed by Robinson and Morrison (2000). An example item is, “I have not received everything promised to me in exchange for my contribution.” Items were rated on a 7-point Likert-type scale from 1 (*strongly disagree*) to 7 (*strongly agree*). The coefficient alphas was .81 at the 12-month follow-up survey.

***Initial expectations.*** We measured initial expectations as a manipulation check using an eight-item scale by Fan et al. (2017). A sample item is, “I expected to be treated with respect by patients and their families.” Items were rated on a 7-point Likert-type scale from 1 (*strongly disagree*) to 7 (*strongly agree*). The coefficient alphas was .73.

### **Analytical Strategy**

Given the modest sample size, we tested our hypotheses using path analysis instead of structural equation modeling with Mplus 7.0 (Muthén & Muthén, 1998-2017). Considering the common method effects among variables measured at the same time, we allowed the residuals of stress and POS at Month 6 to be correlated. Except for the dichotomous variable *intervention (i.e., ROPES vs. control)*, all other study variables approximately follow normal distribution, and no significant outliers were detected. Accordingly, they were treated as continuous variables and maximum likelihood (ML) method was used to estimate parameters.

### **Study 1 Results**

As a randomization check, a series of independent t-tests comparing the ROPES and control groups were conducted on the demographics. Results indicated that the two groups did not differ on any of these demographic variables: Age, educational background, and department in the hospital. Thus, the randomization seems to a success and the treatment effects we examined subsequently were not influenced by these demographic variables.

We also measured newcomers’ initial expectations immediately after the intervention as a manipulation check. An independent t-test indicated that the ROPES group had a

significantly lower level of initial expectations than the control group (4.95 vs. 5.53,  $t = -3.64$ , Cohen's  $d = -.84$ ,  $p < .01$ ). The finding suggested that the manipulation was successful, as whereas the control program wrapped up technical training content, the ROPES program addressed inflated initial expectations by providing realistic information about the job and the new organization.

Descriptive statistics are presented in Table 1. The overall model fit was not acceptable:  $\chi^2 (df = 8) = 32.45$ ,  $p < .01$ ; RMSEA = .20, 90% CI [.13, .28]; CFI = .74; TLI = .41; SRMR = .08. The modification indices suggested that a path should be added between trait gratitude and stress at Month 6. This is in line with previous findings that gratitude is positively related to personal well-being and negatively related to stress (e.g., Wood et al., 2010). This is mainly because grateful individuals tend to adopt positive stress coping actions (e.g., positive reinterpretation, seeking social support) rather than negative actions (Wood, Joseph, & Linley, 2007). Based on the theoretical reason and empirical evidence, we thus added such a path. The modified model yielded good fit:  $\chi^2 (df = 7) = 7.13$ ,  $p = .42$ ; RMSEA = .02, 90% CI [.00, .15]; CFI = 1.00; TLI = 1.00; SRMR = .06. Figures 2 shows the path analysis results.

In support of Hypothesis 1 that POS mediates the effect of ROPES on psychological contract breach, the results showed that the indirect effect was significant ( $B = -.39$ , 95% CI of [-.69, -.20]). Hypothesis 2a predicted that trait gratitude moderates the effect of ROPES on POS. The results indicated that the treatment  $\times$  trait gratitude interaction was significant ( $B = .53$ ,  $p < .05$ ). Conditional analysis and Figure 3 showed that the intervention – POS path was stronger for newcomers with higher trait gratitude ( $B = 1.82$ ,  $p < .01$ ) than for newcomers with lower trait gratitude ( $B = .79$ ,  $p < .05$ ). Thus, Hypothesis 2a received support. Hypothesis 2b predicted that the indirect link of intervention – POS – psychological contract breach should be stronger for newcomers with higher trait gratitude. The path analysis

yielded a significant moderated mediation index (estimate =  $-.16$ , 95% CI  $[-.37, -.02]$ ).

Conditional analyses showed that the indirect effect was stronger for newcomers with higher trait gratitude ( $B = -.54$ , 95% CI of  $[-.97, -.27]$ ) than for newcomers with lower trait gratitude ( $B = -.24$ , 95% CI of  $[-.52, -.05]$ ). Therefore, H2b also received support.

Hypothesis 3 that stress mediates the effect of ROPES on psychological contract breach was not supported, as the results indicated that the indirect effect was non-significant ( $B = .01$ , 95% CI of  $[-.03, .04]$ ). Hypothesis 4a predicted that the ROPES effect on stress is stronger among newcomers with high vs. low adjustment self-efficacy. The results revealed that the interaction effect was significant ( $B = -.15$ ,  $p < .05$ ). Conditional analysis and Figure 4 showed that the intervention – stress path was negative and non-significant for newcomers with higher adjustment self-efficacy ( $B = -.12$ ,  $p = .29$ ), but was positive and significant for newcomers with lower adjustment self-efficacy ( $B = .21$ ,  $p = .06$ ). Thus, Hypothesis 4a was only partially supported, as the interaction pattern was not what exactly we had hypothesized. Hypothesis 4b predicted that the indirect link of intervention – stress – psychological contract breach would be stronger for newcomers with high vs. low adjustment self-efficacy. The path analysis yielded a non-significant moderated mediation index (estimate =  $.01$ , 95% CI  $[-.05, .06]$ ). Therefore, Hypothesis 4b was not supported.

## Discussion

Newcomers tend to experience a honeymoon-hangover effect in the early stage of organizational entry. Accordingly, their perceived psychological contract breach tends to increase overtime. Despite substantial studies on the consequences of psychological contract breach, we do not know much about what organizations can do to prevent it from happening. Taken a functionalist perspective, the present study investigated the mediating roles of POS and stress reduction in the relationship between a coping-focused orientation program (i.e., ROPES) and newcomers' psychological contract breach, along with trait gratitude and

adjustment self-efficacy as moderators of ROPES effects. A longitudinal field experiment was conducted with a group of new nurses to test the conceptual model.

We found that POS mediated the effect of ROPES on newcomers' psychological contract breach. In addition, newcomers' trait gratitude accentuated the ROPES effect on POS and the indirect link of intervention – POS – psychological contract breach. The finding implies that gratitude would amplify individuals' positive perceptions to orientation programs designed to help newcomers. This amplification effect of gratitude facilitates a high-quality employment relationship. It should also be noted that this moderation effect was found for the dimension of *sense of abundance*, but not for *appreciation for others* (GRAT; Watkins et al., 2003). The null effect might be attributed to the directional nature of gratitude. As gratitude is a moral emotion with specific foci and is often directed toward a particular entity in response to actions intended to benefit the recipient (Gray & Wegner, 2011), the dimension of *appreciation for others* may not capture newcomers' gratitude directed toward their organization. We replicated previous finding that POS predicted decreased psychological contract breach (e.g., Dulac et al., 2008), but we also firmly established the temporal order of these two variables.

In contrast, we did not find stress reduction as a mediator between ROPES and psychological contract breach. This might be attributed to the fact that the program we delivered in this study was a shorter version of the original ROPES program, and thus not comprehensive and potent enough to help reduce stress among newcomers in highly stressful jobs such as nurses. Because we had limited time to implement this program, which is common in field study settings, we had to trim down the original ROPES. In the brief version, we only had a one-way lecture and didn't include any two-way communication components such as the small group discussions to help newcomers to deeply process,

practice, and consolidate the recommended coping strategies. This might have decreased the effectiveness of ROPES on stress reduction.

On the other hand, the results indicated a significant moderating effect of adjustment self-efficacy on ROPES-stress link. This link was negative but non-significant among newcomers with high adjustment self-efficacy, and it was positive among newcomers with low adjustment self-efficacy. This finding implies that, for newcomers who lack the psychological resources to carry out the coping strategies, the brief version ROPES could even become an additional source of stress. This is because ROPES encourages newcomers to take initiatives and be proactive in the new environment; however, newcomers with low adjustment self-efficacy may feel stressful when trying to implement and persist these strategies without guidance.

It is also noteworthy that a direct and negative link was found between trait gratitude and stress. This finding replicated previous finding that gratitude is positively related to personal well-being and negatively related to psychological strains (e.g., Wood et al., 2010). We did not find support for the indirect link of intervention – stress – psychological contract breach. This is mainly because the relationship between stress and psychological contract breach was non-significant. Using a time-lagged design, we did not replicate previous finding that stress is positively associated with psychological contract breach in a cross-sectional study (Xavier & Jepsen, 2014). It implies that the association between stress and psychological contract breach is less evident in a time-lagged way.

### **Contributions**

The present study makes several important contributions. First, to our knowledge, this is the first study demonstrating that newcomers' psychological contract breach could be causally lowered by an orientation program. Impressively, such a beneficial effect was observed even at one-year post-entry. This finding strongly suggests that organization's

investment on employees during their early tenure (upon their arrival) pays off in the long run.

Second, this study identified POS as a symbolic mechanism of ROPES on psychological contract breach. This finding deepens our understanding of why ROPES works. That is, ROPES may facilitate the building of high-quality employment relationships, which in turn would lead to better socialization outcomes. In doing so, this study addressed the call for examining mechanisms of various newcomer orientation programs (Saks & Gruman, 2012).

Third, taking an interactionist perspective of newcomer socialization, this study found that trait gratitude plays a role in social exchange processes in organizations. As an affect relevant to giving and taking, gratitude functions to strengthen a high-quality social exchange relationship, which in turn benefits both parties. Consistent with previous findings (e.g., Li, Fan, Yao, & Zheng, 2018), our finding supports the notion that newcomers' affective traits may influence their interpretation of and reactions to various socialization events. This study thus addressed the call to study affect in newcomer socialization context (e.g., Ashforth & Saks, 2002; Nifadkar et al., 2012).

Forth, we found a significant interactional effect of ROPES intervention and adjustment self-efficacy on newcomer stress. This finding enhances our understanding of ROPES' effect on stress reduction. Although ROPES incorporates information about entry stressors and strategies to cope with stressors, it requires newcomers to have psychological resources such as adjustment self-efficacy to carry out these strategies and carry through. To improve the effectiveness of ROPES, the delivery of this program should not only include information about stressors but also comprise components of how to carry through the recommended coping strategies. In other words, future ROPES developers should incorporate components that facilitate training transfer.

## **Limitations and Future Research Directions**

This study has a few limitations. The first limitation concerns external validity. Because participants were female nurses from a Chinese hospital, the findings might not generalize to newcomers in other occupations or other countries. Future research is thus needed to replicate the results in various newcomer populations and cultures. For instance, research showed that compared with men, women are more likely to experience gratitude and derive greater psychological benefits from gratitude (Kashdan, Mishra, Breen, & Froh, 2009). As the participants in the current study are all women, the moderation effect of gratitude on the relationship between the intervention and POS needs to be replicated in male samples or gender-balanced samples.

A second limitation is that the follow-up surveys captured newcomers' experiences only at two time points, six- and twelve-month post intervention, because the hospital offered limited opportunities for the research team to conduct follow-ups. It's possible that more detailed dynamics of POS, stress, and psychological contract breach might have been missed. For example, ROPES may help reduce entry stress at a different time point other than the six months after intervention. On the other hand, researchers have generally agreed that newcomer socialization unfolds during the first year (Bauer, Bodner, Erdogan, Truxillo, & Tucker, 2007), so the six-and twelve-month follow-ups seem to be consistent with common practice in the field. In any event, future researchers are encouraged to follow up newcomers at multiple time points to more fully capture treatment dynamics.

In future studies, researchers may explore other psychological factors underlying newcomer orientation programs like ROPES. Findings from this study imply that POS might indeed explain only part of ROPES' effects on newcomers' psychological contract breach, and other potential mediators may also be worthy of consideration. In addition, future research is needed to examine other ways that newcomers could benefit from orientation

programs. Instead of only focusing on traditional indicators of socialization (e.g., job performance, turnover), it is also meaningful to investigate the effects of orientation programs on other socialization outcomes such as person-organization fit and work engagement.

### **Practical Implications**

As showed by previous studies, newcomers may experience a honeymoon-hangover effect, and their psychological contract breach perceptions may increase after organizational entry with negative influences on their socialization outcomes (e.g., Zhao et al., 2007). To facilitate newcomers' organizational socialization, it is better to prevent psychological contract breach from happening. Findings of the present study showed that, orientation plays an important role. Orientation programs which go beyond the general facts and provide realistic information, may help reduce ambiguity and build high-quality relationships between newcomers and organizations. This in turn may decrease the likelihood of psychological contract breach. Organizations are suggested to provide orientations that increase the congruence between newcomers' expectations and organizational reality.

## **Study 2**

In study 2, I investigated the role of state gratitude in the social exchange relationships between employee and organizational agents (i.e., supervisor, coworker). A cross-level multifocal model was developed to test the potential mediating role of state gratitude in the effects of favorable treatment on employee's positive attitudes and behaviors toward the organizational agents.

### **Study 2 Overview**

Over the years, researchers have begun to investigate the role of state gratitude in the social exchange processes within organizations (e.g., Ford et al., 2018; Spence et al., 2014). State gratitude is experienced as a sense of thankfulness, appreciation, and felt obligation to reciprocate when benefits are received and attributed to the benevolence of others (McCullough et al., 2002). Gratitude represents one of the most prominent emotions directed toward other entities that involve moral praise, and it elicits action tendencies that involve the restoration of justice by reciprocating or passing on favorable treatment (Carver & Harmon-Jones, 2009; Gordon, Impett, Kogan, Oveis, & Keltner, 2012; Grant & Gino, 2010). As such, gratitude fulfills essential functions in social exchange relationships within organizations. However, despite the considerable interest and important advance made in understanding the effect of state gratitude, previous studies suffer from the following limitations.

First, the directedness nature of state gratitude has been overlooked. State gratitude tends to be triggered by and directed toward specific targets that are responsible for helpful and morally commendable behavior (Ford et al., 2018; Gray & Wegner, 2011). This feature is crucial because gratitude directed toward an organizational agent may be powerful motivating forces in employee intentions to help the organizational agent. Conceptually, gratitude directed toward a target should be closely tied to events that are attributed to the target's intent and influence discretionary behavior directed toward this target. As such, it is

worth considering the antecedents and consequences of state gratitude directed at specific organizational agents. Although there has been some recent work showing that organization-directed gratitude (Ford et al., 2018) or general, nonspecific gratitude (Spence et al., 2014) is a psychological mechanism underlying the social exchange processes, there has been little if any research on the gratitude felt by employees towards specific organizational agents (i.e., supervisor, coworker). Additionally, research on social exchange suggests that employees have different social exchange relationships with the whole organization, and with specific individuals or groups within the organization (Lavelle, Rupp, & Brockner, 2007). Therefore, research is needed to specify the target of employees' gratitude through a multifocal perspective.

Second, studies are limited in examining gratitude at multiple levels. Based on the multilevel model of gratitude in organizations (Fehr et al., 2017), state gratitude conceptually exists at three levels. At the *event* level, gratitude reflects discrete episodes of favorable treatment from organizational agents (Ford et al., 2018). At the *individual* level, gratitude reflects chronic, structural features of the employee-organization relationship and thus are relatively stable and constant from day to day (Ford et al., 2018). Gratitude also exists at the *organizational* level, reflecting a collective emotion shared by the members of an organization (Müceldili, Erdil, Akgün, & Keskin, 2015). Fehr and colleagues' (2017) model shows that gratitude at different levels has different antecedents and outcomes, and employees' gratitude needs to be understood using a multilevel approach. However, no empirical study to date has ever tested these propositions.

Third, the contingencies of gratitude emergence in organizations have not been tested. According to Fehr and colleagues' (2017) multilevel model of gratitude in organizations, favorable treatment does not necessarily elicit gratitude; rather, it greatly depends on how an individual interprets the favorable treatment. That is, individual differences such as humility

(Fehr et al., 2017) may moderate the link between favorable treatment and feeling of gratitude. Nevertheless, there has been no empirical study testing the potential moderating effects.

To address the above limitations, the present study will develop and test a cross-level multifocal model where the experience of favorable treatment from the organizational agents lead to gratitude directed toward the organizational agents, which in turn influences both stable and day-to-day variation in employee's attitudes and behaviors. Furthermore, the contingencies of gratitude emergence will be empirically tested. In doing so, this study highlights the mediating role of gratitude in the employee-organizational agent social exchange relationships. See Figure 2 for the theoretical model.

### **Episodic and Chronic Gratitude toward Organizational Agents**

As discussed earlier, state gratitude tends to direct at a specific target that is responsible for the helpful and morally commendable behavior (e.g., Gray & Wegner, 2011). The current study will focus on supervisor and coworker as the targets of employees' gratitude, as they are the most prominent and salient organizational agents for most employees. Supervisors are in an especially good position to provide guidance and information on work role expectations, enable subordinates to understand job and task expectations better (Bauer & Green, 1998). Similarly, coworkers play a critical role in workplace interactions. Beneficial contacts with coworkers help employees learn social norms, organizational culture, task-related information and expected behaviors in organizations (Chiaburu & Harrison, 2008; Moreland & Levine, 2001; Morrison, 1993).

Further, based on the multilevel perspective of gratitude within organizations (Fehr et al., 2017; Ford et al., 2018), there should be two types of gratitude directed toward supervisor or coworker: episodic gratitude at the event level, and chronic gratitude at the individual level. Episodic gratitude varies from day to day based on discrete interactions with

organizational agents, while chronic gratitude is relatively stable over time based on accumulated experience with organizational agents (Ford et al., 2018).

Taken together, the present study will distinguish four types of gratitude: episodic gratitude toward supervisor, chronic gratitude toward supervisor, episodic gratitude toward coworker, and chronic gratitude toward coworker.

### **Antecedents to Episodic and Chronic Gratitude**

Previous research has differentiated antecedents to episodic gratitude from antecedents to chronic gratitude (Ford et al., 2018). Ford and his colleagues (2018) argued that episodic gratitude, which is fleeting, should be influenced by organizational episodic events that vary from day to day (or moment to moment). In contrast, chronic gratitude, which is more stable, should be influenced by chronic features that are relatively stable across time. Following this distinction, I reason that experience of helpfulness and interactional justice that fluctuate across time will contribute to variance in gratitude at the event level (i.e., episodic gratitude). In contrast, developmental feedback of the organizational agents that are relatively stable will contribute to variance in gratitude at the individual level (i.e., chronic gratitude).

**Episodic Gratitude.** Gratitude is suggested to be elicited by the receipt of supportive or helpful treatment, particularly when it goes beyond that is considered obligatory or normative (McCullough et al., 2001; Wood, Brown, & Maltby, 2011). The most basic events that employees experience daily benefits from the organizational agents are helping and interactional justice (Ford et al., 2018).

The daily experience of *helping* from organizational agents falls within the moral domain as it reflects the most fundamental moral principle of help (Graham, Nosek, Haidt, Iyer, Koleva, & Ditto, 2011; Gray & Wegner, 2011; Rai & Fiske, 2011). When supervisor and coworker help employees with work tasks or personal problems, this represents the

positive intent of the organizational agents and contributes a positive moral dyadic relationship between the organizational agents and the employee (Gray, Waytz, & Young, 2012). Taken into consideration the directedness of gratitude, it is reasonable to expect that helping from one's supervisor should elicit gratitude toward the supervisor while helping from one's coworker should evoke gratitude toward the coworker. As empirical evidence, Ford et al. (2018) found that supervisor's helping positively predicted employees' gratitude toward the organization on a daily basis. Following this finding, helping behavior will be measured on a daily level because helping is event-based and is likely to show fluctuations, which may explain day-to-day variation in gratitude toward the organizational agents.

***Hypothesis 5a:** Helping from the supervisor is positively related to episodic gratitude toward the supervisor.*

***Hypothesis 5b:** Helping from the coworker is positively related to episodic gratitude toward the coworker.*

Interactional justice, referring to the extent the employee is treated with respect, dignity, truthfulness, and propriety by organizational agents (Bies & Moag, 1986; Colquitt, 2001), also has a critical effect on employees' episodic gratitude (Ford et al., 2018). The daily experience of interactional justice from organizational agents fulfills moral needs, and this should elicit gratitude directed at the organizational agents. When the supervisor/coworker act respectfully, employees will likely view this as favorable treatment and direct their gratitude toward the supervisor/coworker. Like helping, interactional justice tends to vary substantially on a daily level, with 35-50 percent of the variance in interactional justice varying from day to day (Ferris, Spence, Brown, & Heller, 2012; Loi, Yang, & Diefendorff, 2009). Thus, supervisor/coworker interactional justice is a potential source of daily variation in gratitude directed at the supervisor/coworker.

***Hypothesis 6a:** Supervisor interactional justice is positively related to episodic gratitude toward the supervisor.*

***Hypothesis 6b:** Coworker interactional justice is positively related to episodic gratitude toward the coworker.*

**Chronic Gratitude.** While helping and interactional justice represent possible sources of variances in gratitude at the event level, accumulated experiences with organizational agents explain gratitude at the individual level (Ford et al., 2018). Researchers have noted that employees may feel thankful for the personal growth and competencies they develop through their work experience (Fehr et al., 2017; Hackman & Oldham, 1976). Drawing from this literature, Fehr and his colleagues (2017) propose through their model that developmental feedback could increase gratitude. However, no empirical study has tested this proposition so far.

Developmental feedback refers to an organizational insider's efforts to provide employees with practical information allowing them to learn and improve their skills (Li, Harris, Boswell, & Xie, 2011; Zhou, 2003). As prior research showed, interactions with more experienced insiders such as mentoring are positively associated with employees' thriving at work, helping them develop their skills and become the best people they can be (Fehr et al., 2017; Moss & Sanchez, 2004; Ragins, 2012). Developmental feedback is a signal to employees that organizational insiders care about their personal and professional well-being, leading employees to become aware of the benefits provided by the organization and its members for their self-development (Fehr et al., 2017). Both supervisors and coworkers can give developmental feedback (Li et al., 2011), and it tends to be relatively stable as it is based on accumulated experience and is likely to be given on a regular basis.

***Hypothesis 7a:** Supervisor developmental feedback is positively related to chronic gratitude toward the supervisor.*

***Hypothesis 7b:** Coworker developmental feedback is positively related to chronic gratitude toward the coworker.*

### **Contingencies of Gratitude Emergence**

Favorable treatments do not necessarily lead to gratitude. Subjective interpretation also plays a role in the emergence of gratitude (Fehr et al., 2017). That is to say, the emergence of gratitude requires the joint effects of favorable treatment (a situational factor) and personal interpretation (an individual factor). As noted by researchers (Wood, Maltby, Gillett, Linley, & Joseph, 2008), to feel grateful toward a benefactor, a beneficiary must (a) be aware of the benefits he or she receives, (b) perceive the intentions of the benefactor to be genuine, and (c) perceive the received benefits to be costly to the benefactor. Based on this notion, Fehr et al. (2017) argued that at least three individual differences should moderate the link between favorable treatment and feeling of gratitude: attentiveness to alternative outcomes, benevolent attributions, and humility.

First, the trigger of gratitude requires an individual to recognize the benefits he or she receives (Wood et al., 2008). The most direct way for people to maintain the recognition of benefits is to attend to alternative outcomes (Fehr et al., 2017). Attentiveness to alternative outcomes refers to a tendency of realizing how fortunate one's condition is and how it could have been otherwise (Frijda, 1988). When employees are dispositioned to attend to alternative outcomes, notably less desirable alternative outcomes, they are more likely to experience gratitude for the benefits they receive from the organizational agents, and less likely to habituate to the benefits they receive (Fehr et al., 2017).

***Hypothesis 8a:** Attentiveness to alternative outcomes moderates the relationships between favorable treatment and episodic gratitude toward the organizational agents. Specifically, the relationships will be stronger for employees with greater attentiveness to alternative outcomes.*

***Hypothesis 8b:*** *Attentiveness to alternative outcomes moderates the relationships between favorable treatment and chronic gratitude toward the organizational agents. Specifically, the relationships will be stronger for employees with greater attentiveness to alternative outcomes.*

Second, gratitude emergence requires an individual to recognize that the benefactor is acting benevolently, or is acting to improve the beneficiary's well-being (Wood et al., 2008). In Fehr et al. (2017)'s model, they argue benevolent human resource attribution is a necessary condition for employees to feel grateful toward their organizations. As the present study focuses on organizational agents rather than the organization itself as benefactors, human resource attribution does not seem to apply to this study context. Instead, an important indicator of an individual's attribution style, cynicism, will be examined. Cynicism is an inclination characterized by frustration, hopelessness, as well as contempt toward and distrust of a person, group, or institution (Andersson, 1996). Cynical individuals tend to perceive that the benefactor is acting instrumentally rather than benevolently (Fehr et al., 2017). When employees attribute favorable treatment from organizational agents to less benevolent motives, they are unlikely to feel grateful. Instead, they might experience negative emotions such as contempt (Fehr et al., 2017). Thus, I expect that cynicism will weaken the link between favorable treatment and gratitude emergence.

***Hypothesis 9a:*** *Cynicism moderates the relationships between favorable treatment and episodic gratitude toward the organizational agents. Specifically, the relationships will be weaker for employees with greater cynicism.*

***Hypothesis 9b:*** *Cynicism moderates the relationships between favorable treatment and chronic gratitude toward the organizational agents.*

*Specifically, the relationships will be weaker for employees with greater cynicism.*

Third, a beneficiary must perceive that the benefits he or she receives carry more costs for the benefactor than what might be fairly expected (Wood et al., 2008). Humility is likely to facilitate this process (Fehr et al., 2017). Humility generally refers to an attitude towards life that lacks egocentricity and involves the presence of empathy, modesty, and valuing of others (Davis, Worthington, & Hook, 2010). Humility reflects awareness and acceptance that something greater than the self exists (Ou, Tsui, Kinicki, Waldman, Xiao, & Song, 2014). It indicates a willingness to view oneself accurately, an appreciation of others' strengths and contributions, and an openness to new ideas (Owens, Johnson, & Mitchell, 2013). Individuals with greater humility are likely to perceive that others have exerted effort and have sacrificed to help them (Wood et al., 2008), which will strengthen the link between favorable treatment and gratitude emergence.

***Hypothesis 10a:*** *Humility moderates the relationships between favorable treatment and episodic gratitude toward the organizational agents.*

*Specifically, the relationships will be stronger for employees with greater humility.*

***Hypothesis 10b:*** *Humility moderates the relationships between favorable treatment and chronic gratitude toward the organizational agents.*

*Specifically, the relationships will be stronger for employees with greater humility.*

### **Effects of Episodic and Chronic Gratitude**

As a positive emotional experience, gratitude will benefit employees in multiple ways. According to the multilevel model of gratitude in organizations (Fehr et al., 2017), episodic gratitude will promote organizational citizenship behavior (OCB) at the event level,

while chronic gratitude will lead to increased well-being and communal exchanges at the individual level.

**Episodic gratitude and OCB.** OCBs involve discretionary activities by employees that go beyond their formal work role responsibilities and are of value to the organization and its members (e.g., Hoffman, Blair, Meriac, & Woehr, 2007). Because of their discretionary nature, OCB is a strong reflection of the motivation of the employee to “return the favor”. Scholars have specified the intended beneficiary of OCB, arguing that employees could direct their individual oriented OCB specifically toward their supervisor or coworker (e.g., Lavelle et al., 2007; Lee & Allen, 2002). This specification echoes the multifocal perspective that employees perceived social exchange with a particular party should affect their behaviors directed at that party (Masterson, Lewis, Goldman, & Taylor, 2000). Directed gratitude elicits a desire to reciprocate and help the moral agent responsible for the benefits received (Bartlett & DeSteno, 2006; McCullough et al., 2001). Therefore, supervisor/coworker-directed gratitude should be a strong predictor of supervisor/coworker-directed OCB. There has been empirical evidence showing that general non-directed gratitude is related to OCB (Spence et al., 2014). Consistent with the multilevel model of gratitude in organizations (Fehr et al., 2017), research has found that OCB from the same employee vary substantially from day to day (Dalal, Lam, Weiss, Welch, & Hulin, 2009), and episodic gratitude might explain some of these fluctuations in OCBs.

***Hypothesis 11a:** Episodic gratitude toward the supervisor is positively related to OCB toward the supervisor.*

***Hypothesis 11b:** Episodic gratitude toward the coworker is positively related to OCB toward the coworker.*

**Chronic gratitude and well-being.** Subjective well-being is a multifaceted phenomenon, defined by individuals’ evaluations of their lives as a whole (Diener, Diener, &

Diener, 1995). Individuals with high levels of subjective well-being are susceptible to experience low levels of anxiety, depression, and social dysfunction (Diener, Lucas, & Scollon, 2006). Employees' well-being is positively related to job performance and other work outcomes (Ford, Cerasoli, Higgins, & Decesare, 2011). As a positive hedonic state, gratitude should influence the overall pleasantness of work and life in general (Fehr et al., 2017). Gratitude not only draws attention to positive events (Lambert, Graham, & Fincham, 2009) but also promotes the use of effective coping strategies, including seeking social support and an inclination to identify growth opportunities (Wood et al., 2008; Wood et al., 2010). Accordingly, there has been evidence from both experimental and field studies that gratitude is positively related to subjective well-being (e.g., Cullough, 2003; Lambert, Fincham, & Stillman, 2012). In the current study context, I expect that the effects of supervisor- and coworker-directed gratitude on well-being should be as strong as that of general non-directed gratitude.

***Hypothesis 12:** Chronic gratitude toward the supervisor (H12a) and coworker (H12b) are positively related to employee well-being.*

**Chronic gratitude and communal exchanges.** Communal exchanges reflect high-quality social exchange relationships that are characterized by trust and closeness (Clark & Mills, 2011). Gratitude has been associated with the development and improvement of high-quality relationships for both parties (Kaplan, Bradley-Geist, Ahmad, Anderson, Hargrove, & Lindsay, 2014; Lambert, Clark, Durtschi, Fincham, & Graham, 2010). From the beneficiary's viewpoint, gratitude draws attention to the benevolence and warmth of the benefactors, creating a supportive context for developing their relationship (Clark, 1983; Fehr et al., 2017). From the benefactor's viewpoint, gratitude draws attention to the beneficiary's future intentions, letting the benefactor know that the beneficiary appreciative of the benefactor and is willing to do more to maintain their relationship (Algoe, 2012; Fehr et al., 2017). In such a

way, “gratitude drives a positive spiral of reciprocity and altruistic norms in relationships” (Fehr et al., 2017, p.373). In organizational settings, directed gratitude should facilitate building and preserving communal exchanges between employees and organizational agents. As noted earlier through the multifocal perspective, employees might establish distinct relationships with different organizational agents (e.g., Lavelle et al., 2007). Thus, supervisor-directed and coworker-directed gratitude should predict communal exchanges with supervisor and coworker, respectively.

*Hypothesis 13a: Chronic gratitude toward the supervisor is positively related to communal exchanges with the supervisor.*

*Hypothesis 13b: Chronic gratitude toward the coworker is positively related to communal exchanges with the coworker.*

## **Study 2 Methods**

### **Participants and Procedure**

A daily diary study was conducted to test the hypotheses. 100 participants were recruited through Amazon Mechanical Turk (MTurk). MTurk is an online crowd-sourcing marketplace for requesting individuals to complete online tasks for monetary compensation. Participant inclusion criteria include: (1) 18 years of age or older; (2) currently living in the United States; (3) being employed an average of 35 or more hours per week outside of MTurk and working Monday to Friday; (4) having opportunities to interact with coworkers and supervisor face-to-face every workday; (5) indicating that they would like to take daily surveys for ten consecutive workdays.

Interested participants received a description of this study and had the option to withdraw anytime. Participants who agreed to participate completed a preliminary survey measuring demographic variables (e.g., age, sex, occupation, work experience), individual differences (i.e., attentiveness to alternative outcomes, cynicism, and humility), supervisor

developmental feedback and coworker developmental feedback. After completing this preliminary survey, participants were invited to complete daily surveys for ten consecutive workdays (Day 1 to Day 10). Participants were notified by email sent through the MTurk system to complete a daily survey after work and before going to bed. The daily surveys were the same each day from Day 1 to Day 9, including measures of supervisor/coworkers interactional justice, helping from the supervisor/coworkers, supervisor-directed gratitude, coworkers-directed gratitude, supervisor-directed OCBs, and coworkers-directed OCBs. The survey on Day 10 additionally included measures of communal exchange with supervisor, communal exchange with coworker, and well-being. Every participant was compensated \$1.0 for the preliminary survey and \$0.5 for every daily survey. For participants who completed all the ten daily surveys, they received an extra bonus of \$10. Multiple surveys were matched by participant MTurk ID.

At least two responses to the daily surveys from the 100 participants were recorded. In the data cleaning process, I excluded participants who 1) responded to less than 5 daily surveys; and 2) provided the same answer to all the Likert type questions across the ten daily surveys. This resulted in 599 responses across the 64 participants, or an average of 9.36 surveys per person out of 10. The mean age of the participants was 35.31 years old ( $SD = 10.07$ ) with a range from 24 to 61. There were 28 women and 36 men in this sample. As for race, 45 had indicated Caucasian/White, 7 were African American/Black, 2 were Hispanic, and 10 were Asian American. The average tenure of participants with their organizations was 5.4 years ( $SD = 5.85$ ). Participants were from a variety of occupations and organizations, providing heterogeneity in occupational and organizational context.

### **One-time Measures**

*Attentiveness to alternative outcomes.* This variable was measured in the preliminary survey. As I did not find a direct measure of attentiveness to alternative outcomes, I followed

previous studies and used the 4-item non-referent downward counterfactuals scale (Rye, Cahoon, Ali, & Daftary, 2008) to measure this concept. A sample item is, “I count my blessings when I think about how much worse things could have been”. Items were rated on a scale ranging from 1 (strongly disagree) to 5 (strongly agree). The coefficient alpha for this scale was .86.

***Cynicism.*** This variable was measured in the preliminary survey. The eleven-item measure of cynicism by Turner & Valentine (2001) was used to measure cynicism in this study. A sample item is, “Big companies make their profits by taking advantage of working people”. Participants responded on a five-point scale from 1 (strongly disagree) to 5 (strongly agree). The coefficient alpha for this scale was .85.

***Humility.*** This variable was measured in the preliminary survey. The 15-item Humility Inventory (Brown, Chopra, & Schiraldi, 2013) was used to measure humility. A sample item is, “I believe most people are capable of great things”. Response choice for this scale ranged from 1 (strongly disagree) to 5 (strongly agree). The coefficient alpha for this scale was .92.

***Supervisor developmental feedback.*** This variable was measured in the preliminary survey. Zhou’s (2003) three-item scale was used to measure supervisor developmental feedback. A sample item is, “My supervisor provides me with useful information on how to improve my job performance.” Response choice for this scale were given on a scale from 1 (never) to 5 (always). The coefficient alpha for this scale was .70.

***Coworker developmental feedback.*** This variable was measured in the preliminary survey. The three-item scale adapted from Zhou and George (2001) was used to measure coworker developmental feedback. A sample item is, “My coworkers provide me with valuable information about how to improve my job performance.” Participants responded on a scale ranging from 1 (never) to 5 (always). The coefficient alpha for this scale was .93.

**Communal exchanges.** This variable was measured in the Day 10 survey. As I did not find any direct measure of this construct, a close measure of communal strength (ten-item) by Mills, Clark, Ford, & Johnson (2004) was used to measure communal exchanges with one's supervisor/coworkers. A sample item is, "I'm willing to go out of my way to do something for my supervisor/coworkers." Items were rated on a scale ranging from 1 (strongly disagree) to 5 (strongly agree). The coefficient alpha for this scale were .92 and .92 for supervisor and coworker, respectively.

**Well-being.** This variable was measured in the Day 10 survey. The six-item employee workplace well-being scale was used to measure well-being in this study (Zheng, Zhu, Zhao, & Zhang, 2015). A sample item is, "In general, I feel fairly satisfied with my present job." Participants responded on a seven-point scale from 1 (strongly disagree) to 5 (strongly agree). The coefficient alpha for this scale was .96.

### **Daily Measures**

Email reminders were sent to participants through MTurk system each evening following the workday and participants were instructed to complete and submit the surveys before going to bed. The daily survey included the following measures:

**Supervisor/coworker interactional justice.** Daily interactional justice from the supervisor or coworker were assessed with Colquitt's (2001) four-item scale. A sample item is, "My supervisor (or coworker) treated me in a polite manner today." Items were rated on a five-point scale from 1 (strongly disagree) to 5 (strongly agree). Cronbach's  $\alpha$  averaged across the 10 days were .90 and .92 for supervisor and coworker, respectively.

**Helping from the supervisor/coworker.** The four items measuring helping behaviors from Williams and Anderson's (1991) organizational citizenship behavior towards other individuals (OCBI) scale were used. An example is that participants will be asked about the extent to which their supervisor (or coworker) "helped me with my work today". Items were

rated on a five-point scale from 1 (strongly disagree) to 5 (strongly agree). Cronbach's  $\alpha$  averaged across the 10 days were .88 and .87 for supervisor and coworker, respectively.

***Gratitude toward the supervisor/coworker.*** The two-item measure of daily gratitude from Ford et al. (2018) was used to measure gratitude toward the supervisor/coworker. Participants responded on a 5-point scale the extent to which they felt "grateful" and "thankful" toward their supervisor/coworker on that day. Cronbach's  $\alpha$  averaged across the 10 days were .94 and .95 for supervisor and coworker, respectively.

***OCBs.*** To measure daily OCB beneficial to the supervisor or the coworker, a six-item scale by Dalal et al. (2009) was used. A sample item is, "I have tried to be available to my supervisor/coworker(s)". Responses were given on a five-point scale from 1 (never) to 5 (always). Cronbach's  $\alpha$  averaged across the 10 days were .88 and .88 for supervisor and coworker, respectively.

### **Analytical Strategy**

All the daily-measured variables included a within- and a between-individual component. Therefore I used *Mplus* 8 (Muthen & Muthen, 2017) to estimate within- and between-individual effects via multilevel path analysis, following the multilevel structural equation modeling (MSEM) approach developed by Preacher, Zyphur, and Zhang (2010).

Specifically, to test within-individual main effects and mediation effects, I first estimated an MSEM model (Model 1) in which both within-individual effects and between-individual effects were calculated simultaneously without moderators. The within-individual model included relationships among supervisor/coworker helping and justice, gratitude directed at supervisor/coworker, and OCBs toward supervisor/coworker. The between-individual model specified supervisor/coworker developmental feedback as predictors of each employee's mean score on gratitude directed at supervisor/coworker and communal exchanges with supervisor/coworker, as well as well-being. The within-individual model

tested if these daily variations in supervisor/coworker helping and justice predict daily variations in gratitude directed at supervisor/coworker, which then predicted daily variations in OCBs toward supervisor/coworker. The between-individual model provided information if supervisor/coworker developmental feedback predicted mean levels of gratitude directed at supervisor/coworker and if these mean levels of gratitude predicted communal exchanges with supervisor/coworker and well-being. In this model, gratitude directed at supervisor/coworker varied within and between individuals and were included at both levels. For supervisor/coworker developmental feedback, communal exchanges with supervisor/coworker and well-being, which only varied between-individual, I included these variables only in the between-individual portion of the model. For supervisor/coworker justice and helping, as well as OCBs toward supervisor/coworker, I group-centered them so they only had variance at the within-individual level.

To test the cross-level moderation effects, I estimated a model (Model 2) in which the within-individual level variables and moderators were included. I specified the within-individual relationships between supervisor/coworker helping/justice and gratitude directed at supervisor/coworker as random effects and then include the random effects as outcome variables at the between-individual level. The random effects were regressed on the moderators. In this model, gratitude directed at supervisor/coworker varied within and between individuals and were included at both levels. Moderators were included only in the between-individual portion of the model. For supervisor/coworker justice and helping, as well as OCBs toward supervisor/coworker, I group-centered them so they only had variance at the within-individual level.

To test the between-individual level moderation effects, I estimated a model (Model 3) in which the within-individual level variables were not included. As both the moderators and predictors are at the same level, I created interaction terms of the predictors

(supervisor/coworker developmental feedback) and moderators at the between-individual level. In this model, gratitude directed at supervisor/coworker varied within and between individuals and were included at both levels.

## Study 2 Results

### Partition Variance

Table 2 shows the descriptive statistics of the study variables. Before hypotheses testing, the intraclass coefficients (ICC) of the variables measured on a daily basis were examined. These ICCs represent the proportion of between-individual variance in these constructs. Intraclass coefficients ranged between .148 and .154 and indicated that all these variables varied substantially within and between persons (see Table 2 for all intraclass coefficients). Accordingly, the daily survey approach is appropriate for examining the research questions.

### Hypotheses Tests

The Model 1, which included within-individual (Level 1) and between-individual (Level 2) predictors, had an acceptable fit:  $\chi^2(df = 17) = 61.11$ , RMSEA = .07, CFI = .96; TLI = .90, SRMR = .06 (within-individual) and 0.15 (between-individual). Table 3 shows the resulting coefficients from this model for each dependent variable, as well as the results from the analysis of indirect effects. Figure 6 displays the effects from the multilevel models.

**Antecedents of gratitude.** According to the results (see Table 3 and Figure 6), at the within-individual level, both supervisor helping and supervisor justice were significant predictors of episodic gratitude toward supervisor ( $\gamma = .44, p < .01$ ;  $\gamma = .42, p < .01$ ). The findings supported H5a and H6a. Also, both coworker helping and coworker justice positively predicted episodic gratitude toward coworker ( $\gamma = .42, p < .01$ ;  $\gamma = .49, p < .01$ ), supporting H5b and H6b. At the between-individual level, significant effects were found for supervisor developmental feedback on chronic gratitude toward supervisor ( $\gamma = .44, p < .01$ ) and for

coworker developmental feedback on chronic gratitude toward coworker ( $\gamma = .41, p < .01$ ). Thus, H7a and H7b were supported.

**Effects of gratitude on outcomes.** Based on the findings (see Table 3 and Figure 6), at the within-individual level, episodic gratitude toward supervisor was hypothesized to positively predict OCB toward supervisor. As the results indicated, this hypothesis (H11a) received support ( $\gamma = .20, p < .01$ ). As expected, episodic gratitude toward coworker was found to predict OCB toward coworker ( $\gamma = .18, p < .01$ ), providing support for H11b. At the between-individual level, the results showed that chronic gratitude toward supervisor positively predicted well-being ( $\gamma = .71, p < .01$ ) and communal exchange with supervisor ( $\gamma = .72, p < .01$ ). The results supported H12a and H13a. In addition, the results showed that gratitude toward coworker positively predicted communal exchange with coworker ( $\gamma = .53, p < .01$ ), but not well-being ( $\gamma = .28, p = .09$ ). Therefore, H13b was supported, but H12b was not.

**Indirect effects at both levels.** Although indirect effects were not hypothesized, I included estimations of the indirect effects in the Model 1. The results showed that, at the within-individual level, the indirect effect of supervisor helping on OCB toward supervisor through episodic gratitude directed at supervisor was significant (estimate = .09, 95% CI of [.04, .14]). The indirect effect of supervisor justice on OCB toward supervisor through episodic gratitude directed at supervisor was also significant (estimate = .08, 95% CI of [.04, .13]). As expected, the indirect effect of coworker helping on OCB toward coworker through episodic gratitude directed at coworker was significant (estimate = .07, 95% CI of [.03, .12]). The indirect effect of coworker justice on OCB toward coworker through episodic gratitude directed at coworker was significant (estimate = .09, 95% CI of [.04, .14]) as well. At the between-individual level, the indirect effect of supervisor developmental feedback on communal exchange with supervisor through chronic gratitude directed at supervisor was significant (estimate = .32, 95% CI of [.10, .54]). Also, the indirect effect of supervisor

developmental feedback on well-being through chronic gratitude directed at supervisor was significant (estimate = .31, 95% CI of [.10, .53]). In addition, the indirect effect of coworker developmental feedback on communal exchange with coworker through chronic gratitude directed at coworker was significant (estimate = .22, 95% CI of [.06, .37]). However, the indirect effect of coworker developmental feedback on well-being through chronic gratitude directed at coworker was not significant (estimate = .12, 95% CI of [-.04, .28]).

**Testing of moderation effects.** The Model 2 was fitted to test the cross-level moderation hypotheses. As showed in Table 4, none of the three hypothesized moderators significantly related to any of the random slopes at the within-individual level. Thus, no support was found for H8a, H9a, and H10a. The Model 3 was fitted to test if we have between-individual level moderating effects. The model fit was acceptable:  $\chi^2 (df = 40) = 76.96$ , RMSEA = .04, CFI = .88; TLI = .81, SRMR = .01 (within-individual) and 0.06 (between-individual). The results are shown in Table 5. Based on the findings, two out of the six hypothesized moderating effects were significant. Humility was found to moderate the link between supervisor developmental feedback and gratitude toward supervisor ( $\gamma = -.19, p < .01$ ). Conditional analysis showed that this relationship was stronger for employees with lower humility (estimate = 0.88,  $p < .01$ ) than for employees with higher humility (estimate = .62,  $p < .01$ ). The simple slopes were plotted at one standard deviation above and below the mean (see Figure 7). Cynicism was found to moderate the link between coworker developmental feedback and gratitude toward coworker ( $\gamma = .18, p < .01$ ). Conditional analysis showed that this relationship was stronger for employees with higher cynicism (estimate = .52,  $p < .01$ ) than for employees with lower cynicism (estimate = .25,  $p < .05$ ). The simple slopes were plotted at one standard deviation above and below the mean (see Figure 8). Therefore, H8b, H9b and H10b were not supported.

## Discussion

Using a daily diary design and data from 64 participants, Study 2 investigated a multilevel path model comprising favorable treatments from supervisor/coworker, state gratitude directed at supervisor/coworker, and positive attitudes and behaviors toward supervisor/coworker. State gratitude was supposed to mediate the effect of favorable treatments received from supervisor/coworker on attitudinal and behavioral outcomes toward supervisor/coworker. Additionally, employees' individual differences (i.e., attentiveness to alternative outcomes, cynicism, and humility) were theorized to moderate the links between favorable treatments and state gratitude.

Most hypotheses were supported by the results. At the within-individual level, supervisor/coworker helping and justice were positively related to episodic gratitude directed at supervisor/coworker, which then positively predicted employees' OCBs toward supervisor/coworker. The findings indicated that daily variations in supervisor/coworker helping and justice predicted daily variations in gratitude directed at supervisor/coworker, which then predicted daily variations in OCBs toward supervisor/coworker. The indirect effects of favorable treatment on OCBs through episodic gratitude were all significant, indicating that episodic gratitude mediated the links between favorable treatments and OCBs.

At the between-individual level, supervisor/coworker developmental feedback was positively associated with chronic gratitude directed at supervisor/coworker, which subsequently predicted employees' communal exchanges with supervisor/coworker. The results showed that supervisor/coworker developmental feedback predicted mean levels of gratitude directed at supervisor/coworker and these mean levels of gratitude predict communal exchanges with supervisor/coworker. As for the outcome well-being, we found a significant link between chronic gratitude directed at supervisor and well-being, but we did not find a significant link between chronic gratitude directed at coworker and well-being.

This finding suggested that well-being is more closely associated with gratitude toward supervisor than gratitude toward coworker.

Moreover, two significant moderating effects were found. First, employees' humility moderated the relationship between supervisor developmental feedback and chronic gratitude directed at supervisor. The relationship between supervisor developmental feedback and mean levels of gratitude directed at supervisor was stronger when employees had a lower level of humility. This moderation pattern is inconsistent with the H10b, which theorized that the associations should be stronger for employees with higher humility. Conditional analysis results (see Figure 7) showed that employees with greater humility had higher levels of chronic gratitude than those with lower humility. For high humility employees, their grateful feelings were less susceptible to situational factors such as supervisor developmental feedback. They tended to have a moderate to high level of gratitude no matter what the level of developmental feedback they received from their supervisor was. In contrast, low humility employees' grateful feelings highly depended on situational factors such as whether they received developmental feedback from their supervisors.

Second, employees' cynicism moderated the link between coworker developmental feedback and chronic gratitude directed at coworker. The relationship between coworker developmental feedback and mean levels of gratitude directed at coworker was stronger when employees had a higher level of cynicism. Again, this moderation pattern is inconsistent with the H9b, which reasoned that the links should be stronger for employees with lower cynicism. Conditional analysis results (see Figure 8) indicated that employees with greater cynicism generally had lower levels of chronic gratitude than those with lower cynicism. Based on the findings, high cynicism employees' grateful feelings were more susceptible to situational factors such as coworker developmental feedback. They had an equally high level of gratitude as low cynicism employees when they received developmental feedback from their

coworkers, but their gratitude level dropped when they did not receive sufficient developmental feedback. In contrast, low cynicism employees' gratitude levels were more stable. They tended to have a relatively high level of gratitude no matter whether they received developmental feedback from their coworkers.

### **Theoretical Implications**

The findings have several theoretical implications. First, the results showed that gratitude is a psychological mechanism underlying social exchange processes in the work settings. Introducing the key part of emotion in the exchange process, this study targeted emotional reactions (i.e., gratitude) to favorable treatments from organizational agents and investigated how this would lead to attitudinal and behavioral outcomes toward the agents. The daily diary design provided a dynamic picture concerning how the impact of favorable treatments on employee gratitude manifested. In particular, this study showed that on a specific workday, received helping and justice triggered state gratitude; this positive feeling then gave rise to OCBs toward specific organizational agents. Also, episodic gratitude transferred into enduring gratitude, and this enduring positive affect also mediated the relationships between accumulated experiences with organizational agents and outcomes that are relatively stable across time. Thus, reciprocation in social exchange does not only come from a feeling of obligation to reciprocate but also through positive emotion such as gratitude in the other party.

Second, taking a multifocal approach, this study distinguished and examined employees' gratitude targeted at different organizational agents. By specifying the target of employees' gratitude, this study empirically demonstrated that supervisor-directed gratitude mediated the relationship between favorable treatments received from supervisor and positive actions toward supervisor, and coworker-directed gratitude mediated the relationship between favorable treatments received from coworker and positive actions toward coworker. Such

findings enhanced our understanding of the directedness nature of gratitude and revealed the fact that gratitude directed toward a target should be closely tied to events that are attributed to the target's intent and influence discretionary behavior directed toward the target. The findings added empirical evidence to the argument on social exchange relationships that employees have different social exchange relationships with specific individuals or groups within the organization (Lavelle et al., 2007).

Third, following suggestions by researchers (Fehr et al., 2017), this study investigated the moderating effects of individual differences to see whether they influenced the way favorable treatments were interpreted by different employees. While most research has emphasized the positive influences of favorable treatments in the emergence of state gratitude, some researchers suggested that subjective interpretation also plays a role in the emergence of gratitude (Fehr et al., 2017; Wood et al., 2008). This study tested the moderating effects of three individual differences. The findings suggested that considering employees' individual differences in gratitude emergence contributed to our understanding of the variability in effects observed at the between-individual level. Individual differences such as cynicism and humility may determine how employees feel and react to favorable treatments received from organizational agents. Regardless of an organizational agent's intended behavioral approach in treating employees, it is the employee's interpretations of the agent's behavior that influence the employees' state gratitude toward that agent. The results that cynicism and humility moderated some links between developmental feedback from supervisor/coworker and gratitude directed at the corresponding agent partially supported the proposition that individual differences set boundary conditions for state gratitude emergence, and this deepened our understanding of the interactional effect of individual differences and contextual factors on state gratitude.

## **Limitations and Future Research Directions**

Despite the contributions, this study has some limitations that future research should acknowledge and address. The first limitation concerns the single-source, self-reported data, which may be subjected to common method bias. The daily diary design, to a certain extent, alleviated common method bias concerns. Furthermore, predictors, chronic gratitude, and outcomes were measured at different time points, reducing the influence of common method variance in the between-individual level model. Future research is suggested to consider collecting dyadic data, as the give-and-take processes are dyadic phenomena. For instance, asking the other dyad member (e.g., supervisors and coworkers) to report employees' OCBs and communal exchanges.

Second, even episodic gratitude levels were measured once every workday, the dynamics or fluctuations of episodic gratitude within a workday were not captured. In other words, we did not capture changes in gratitude at a momentary level. Future studies might consider including multiple shorter-term assessments of episodic gratitude during the day. For instance, the experience sampling method (ESM) would facilitate a more fine-grained analysis of episodic gratitude changes and allow researchers to test for the effects of discrete events rather than daily experiences.

Third, we didn't measure or control for any transient psychological states and exchange contexts that may influence the relationships among study variables. Prior research noted that general affective states in each exchange event may influence psychological perceptions and subsequent exchange behaviors of two exchange parties (Schaubroeck et al., 2013). Therefore, future research may consider including transient control variables, such as the affective mood of employees on a specific workday.

A couple of avenues for future research are suggested. Although significant moderating effects were found for cynicism and humility on some of the hypothesized links,

the psychological mechanisms of these moderations were not measured or tested. Future research may put more effort into uncovering the mechanisms of why some individual differences could moderate the links between favorable treatments received and gratitude emergence. For example, attribution style may play a role. In addition, state gratitude can be multifocal and there are targets beyond supervisor and coworker(s) in organizational settings. Future research may explore employees' gratitude directed at the organization, the job itself, clients and other human and non-human factors.

### **General Discussion**

The main purpose of this dissertation is to investigate the role of gratitude in social exchange processes within organizations. Two empirical studies were proposed and conducted. Study 1 focused on the role of trait gratitude in the context of employee-organization social exchange relationships. A field experiment was conducted and tested whether trait gratitude moderated the effect of a newcomer orientation program on perceived organization support (POS) in a group of newcomers. Study 2 focused on the role of state gratitude in the context of employees' social exchange relationships with organizational agents (i.e., supervisor and coworkers). A daily diary study was designed and tested the mediating effect of gratitude in the relationship between favorable treatment received and positive work outcomes.

The findings suggested that gratitude, both at trait and state level, plays a role in social exchange processes within the workplace. The results from study 1 demonstrate that trait gratitude moderated the effect of a specific newcomer orientation program on newcomers' perceived organizational support. The treatment effect was stronger among newcomers with higher trait gratitude. The finding implies that trait gratitude facilitates the building of a high-quality employment relationship. Results from study 2 showed that state gratitude mediated the relationships between favorable treatments received from organizational agents and

positive attitudes and behaviors toward the specific agents. It indicated that state gratitude is a psychological mechanism underlying social exchange processes in the work settings.

With the increasing popularity of positive psychology in the workplace, researchers have increasingly paid more attention to the role of positive affect in the workplace (Sekera, Vacharkulksemsuk, & Fredrickson, 2012). Echoing this trend, the present study provided evidence that a specific positive affect, namely gratitude, may facilitate high-quality social exchange relationships within organizations. Overall, by investigating the role of gratitude in two empirical studies, this study addressed the call to examine affect in social exchange processes within organizations and provided some evidence that gratitude matters in social exchange relationships.

Finally, a few suggestions for future research on gratitude are proposed. First, researchers may put effort into integrating gratitude and other affect into theoretical frameworks of social exchange processes. This will systematically improve our understanding of how affect would influence social exchanges. The study 1 and 2 are only two specific examples. We still need to explore other ways that affect may play a role.

Second, in addition to gratitude feelings, researchers may also look at gratitude expressions. Although related, felt and expressed emotions are conceptually distinct phenomena (Ashforth & Humphrey, 1993; Staw, Sutton, & Pelled, 1994). The experience of gratitude does not necessarily lead to the expression of gratitude and the expression of gratitude is not necessarily preceded by the true feeling of gratitude. The study 2 investigated experienced gratitude because true feelings of gratitude may motivate employees to initiate prosocial action tendencies toward certain organizational agents. It is also intriguing to examine the expression of gratitude, as this may constitute a positive affective event for the other exchange party, and subsequently influence their behaviors. Expression of gratitude

may be more critical in studying interpersonal relationships and outcomes, while experience of gratitude may be more important in studying intrapersonal outcomes.

Third, gratitude has been studied as a positive factor in psychology and to my best knowledge, no study has ever considered the potential dark side of too much gratitude. There could be situations in organizations where gratitude could backfire. Every emotion, both positive and negative ones, has its unique functions for human survival. In certain cases, negative emotion such as anger may be more constructive than a positive emotion such as gratitude. Researchers could explore the disadvantages of gratitude in organizations aside from the advantages of gratitude. For example, too much gratitude directed at the supervisor may result in blind obedience and downplaying employees' own hard work and contributions.

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Table 1.

*Means, Standard Deviations, Reliabilities, and Correlations among Study 1 Variables*

	M	SD	1	2	3	4	5	6
1. Intervention	.50	.50	(—)					
2. Trait Gratitude	5.74	.97	-.01	(.81)				
3. Adjustment SE	5.50	1.09	-.11	.40**	(.90)			
4. POS_6m	4.96	1.37	.46**	.18	-.07	(.99)		
5. Stress_6m	2.66	.42	.08	-.60**	-.29*	-.29*	(.85)	
6. PCB_12m	2.78	.69	-.33**	-.19	.06	-.62**	.18	(.81)

*Note:*  $N = 73$ . Adjustment SE = adjustment self-efficacy. POS\_6m = perceived organizational support measured at 6-month post-entry. Stress\_6m = perceived stress measured at 6-month post-entry. PCB\_12m = psychological contract breach measured at 12-month post-entry.

\*  $p < .05$ . \*\*  $p < .01$ .

Table 2.

*Means, Standard Deviations, Intraclass Coefficients, Reliabilities, and Correlations among Study 2 Variables*

	Mean	SD	ICC	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. ATA0	3.29	.87	—	(.86)															
2. Cynicism	3.85	.71	—	.15	(.85)														
3. Humility	2.81	.75	—	.18	-.07	(.92)													
4. SDF	3.68	.89	—	.25	-.06	.20	(.70)												
5. CDF	3.58	.98	—	.17	.22	.45**	.40**	(.93)											
6. SCE	3.54	.93	—	.34**	.20	.30*	.40**	.32*	(.92)										
7. CCE	3.47	.94	—	.17	.09	.30*	.22	.53**	.65**	(.92)									
8. Well-being	3.66	1.06	—	.33*	-.02	.27*	.38**	.33*	.70**	.55**	(.96)								
9. SH	3.54	.63	.15	.24	.04	.40**	.47**	.44**	.42**	.23	.55**	(.88)	.48**	.70**	.73**	.44**	.30**	.33**	.43**
10. SJ	4.25	.51	.15	-.08	-.22	.37**	.26*	.11	.29*	.20	.40**	.49**	(.90)	.56**	.42**	.33**	.72**	.43**	.36**
11. SG	3.75	.70	.15	.22	.05	.47**	.47**	.45**	.46**	.15	.53**	.77**	.60**	(.94)	.69**	.42**	.37**	.51**	.45**
12. OCBS	3.50	.64	.15	.25*	.16	.43**	.48**	.41**	.52**	.27*	.49**	.82**	.42**	.76**	(.88)	.49**	.29**	.40**	.62**
13. CH	3.73	.57	.15	.18	-.04	.45**	.33**	.65**	.35**	.59**	.44**	.61**	.39**	.54**	.61**	(.87)	.48**	.70**	.76**
14. CJ	4.20	.54	.15	-.13	-.25*	.35**	.22	.17	.18	.35**	.36**	.32**	.86**	.43**	.30*	.50**	(.92)	.61**	.51**
15. CG	3.91	.64	.15	-.01	-.07	.37**	.28*	.51**	.33*	.51**	.48**	.40**	.53**	.62**	.48**	.79**	.66**	(.95)	.70**
16. OCBC	3.73	.60	.15	.13	.07	.41**	.32**	.53**	.42**	.61**	.47**	.55**	.39**	.54**	.72**	.87**	.53**	.80**	(.88)

*Note:* SD = standard deviation. ICC = intraclass correlations. Numbers on the diagonal are  $\alpha$  coefficients. Between-individual correlations are below the diagonal. Within-individual correlations are above the diagonal.  $N = 64$  for between-individual correlations and  $N = 599$  for within-individual correlations. ATA0 = attentiveness to alternative outcomes; SDF = supervisor developmental feedback; CDF = coworker developmental feedback; SCE = supervisor communal exchange; CCE = coworker communal exchange; SH = supervisor helping; SJ = supervisor justice; SG = gratitude toward supervisor; OCBS = organizational citizenship behavior toward supervisor; CH = coworker helping; CJ = coworker justice; CG = gratitude toward coworker; OCBC = organizational citizenship behavior toward coworker.

\*  $p < .05$ . \*\*  $p < .01$ .

Table 3

*Multilevel Path Analysis Coefficients (Study 2)*

Within-individual effects					
Variable	Dependent variable				
	Gratitude toward supervisor	Gratitude toward coworker	OCBS	OCBC	
Supervisor helping	.44** (.05)		.34** (.05)		
Supervisor justice	.42** (.07)		.15 (.08)		
Coworker helping		.42** (.08)		.27** (.05)	
Coworker justice		.49** (.08)		.25** (.06)	
Gratitude toward supervisor			.20** (.05)		
Gratitude toward coworker				.18** (.05)	
Indirect effects					
SH→SG→OCBS			.09** (.02)		
SJ→SG→OCBS			.08** (.03)		
CH→CG→OCBC				.07** (.02)	
CJ→CG→OCBC				.09** (.03)	
Between-individual effects					
Variable	Dependent variable				
	Gratitude toward supervisor	Gratitude toward coworker	SCE	CCE	Well-being
SDF	.44** (.13)		.10 (.11)		.10 (.12)
CDF		.41** (.11)		.28** (.08)	-.06 (.10)
Gratitude toward supervisor			.72** (.15)		.71** (.15)
Gratitude toward coworker				.53** (.10)	.29 (.17)
Indirect effects					
SDF→SG→SCE			.32** (.11)		
SDF→SG→Well-being					.31** (.11)
CDF→CG→CCE				.22** (.08)	
CDF→CG→Well-being					.12 (.08)

*Note:* Coefficients are unstandardized and are all based on a single multilevel path analysis. Standard errors are in parentheses. SDF = supervisor developmental feedback; CDF = coworker developmental feedback; SCE = supervisor communal exchange; CCE = coworker communal exchange; SG = gratitude toward supervisor; OCBS = organizational citizenship behavior toward supervisor; CG = gratitude toward coworker; OCBC = organizational citizenship behavior toward coworker.

\*  $p < .05$ . \*\*  $p < .01$ .

Table 4

*Cross-level Moderation Coefficients (Study 2)*

Random slope	Moderator		
	ATAO	Cynicism	Humility
SG on Supervisor helping	.01 (.07)	-.04 (.07)	-.08 (.09)
SG on Supervisor justice	-.13 (.10)	.14 (.11)	.09 (.10)
CG on Coworker helping	.07 (.07)	-.15 (.08)	-.04 (.09)
CG on Coworker justice	-.02 (.11)	.16 (.09)	.09 (.11)

*Note:* Coefficients are unstandardized and are all based on a single multilevel path analysis. Standard errors are in parentheses. ATA0 = attentiveness to alternative outcomes; SG = gratitude toward supervisor; CG = gratitude toward coworker.

Table 5

*Between-individual Level Moderation Coefficients (Study 2)*

Predictor	Dependent variable	
	Gratitude toward supervisor	Gratitude toward coworker
Supervisor developmental feedback	1.48** (.49)	
Attentiveness to alternative outcomes	.27 (.44)	
Cynicism	.40 (.34)	
Humility	1.11** (.18)	
Supervisor developmental feedback * Attentiveness to alternative outcomes	-.06 (.11)	
Supervisor developmental feedback * Cynicism	-.07 (.08)	
Supervisor developmental feedback * Humility	-.19** (.06)	
Coworker developmental feedback		-.12 (.36)
Attentiveness to alternative outcomes		-.35 (.44)
Cynicism		-.84** (.30)
Humility		.30 (.26)
Coworker developmental feedback * Attentiveness to alternative outcomes		.08 (.10)
Coworker developmental feedback * Cynicism		.18** (.06)
Coworker developmental feedback * Humility		-.06 (.07)

*Note:* Coefficients are unstandardized and are all based on a single multilevel path analysis. Standard errors are in parentheses.

\*  $p < .05$ . \*\*  $p < .01$ .

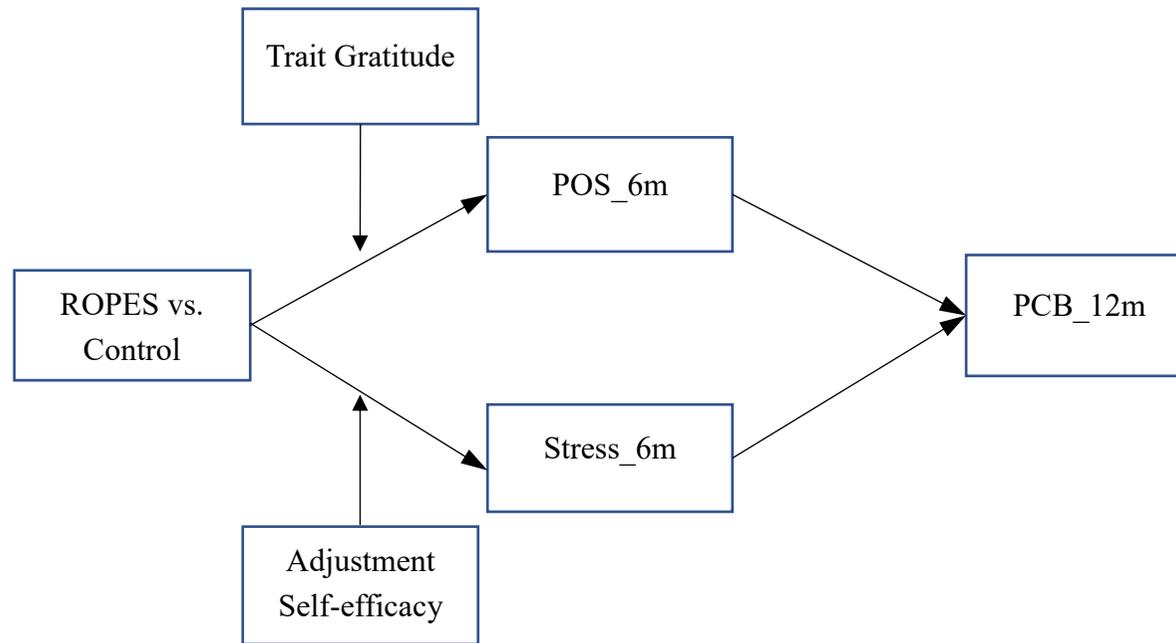


Figure 1. The conceptual model of Study 1. ROPES = realistic orientation program for entry stress; POS = perceived organizational support; PCB = psychological contract breach.

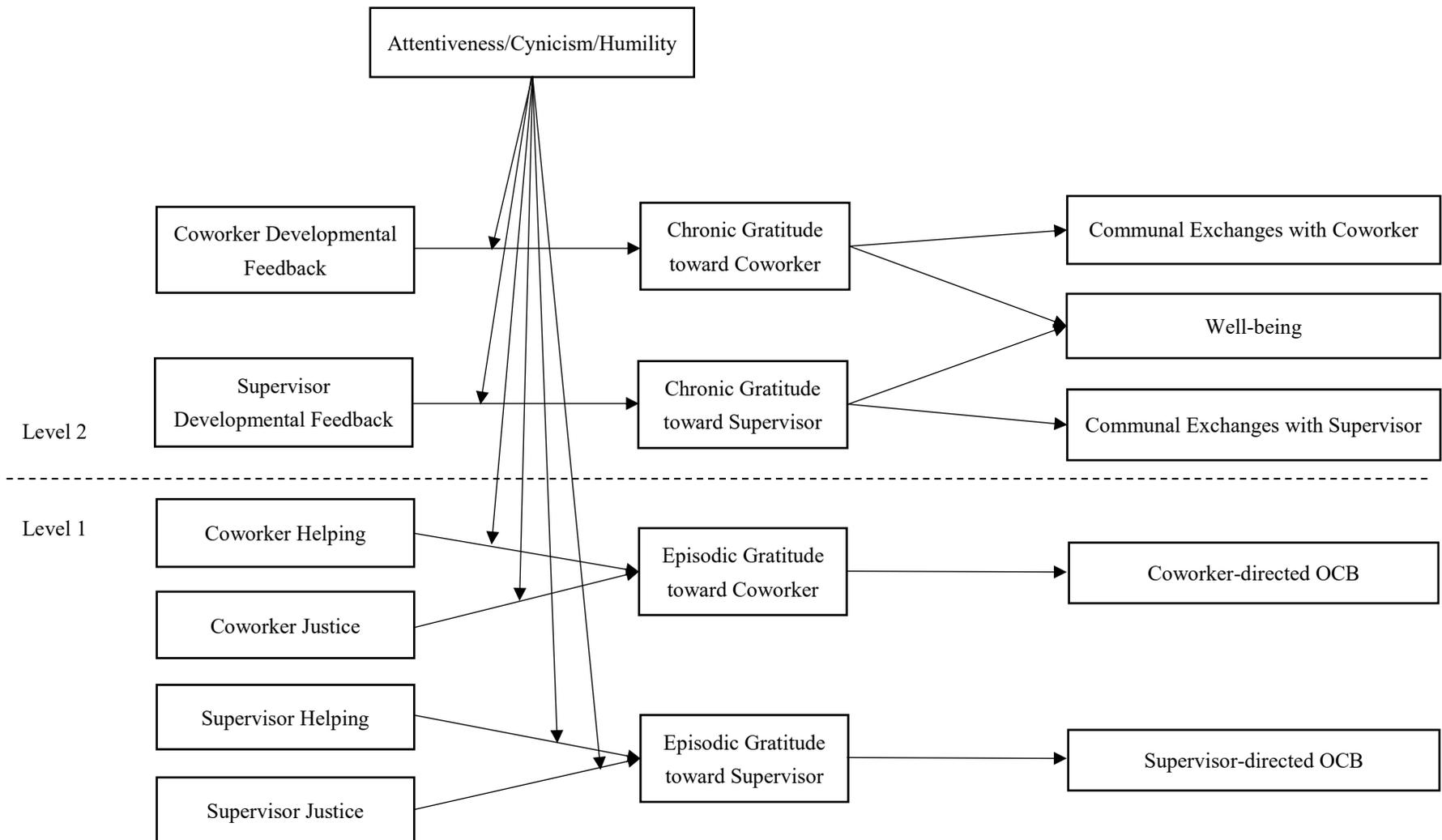


Figure 2. The conceptual model of Study 2. OCB = organizational citizenship behavior.

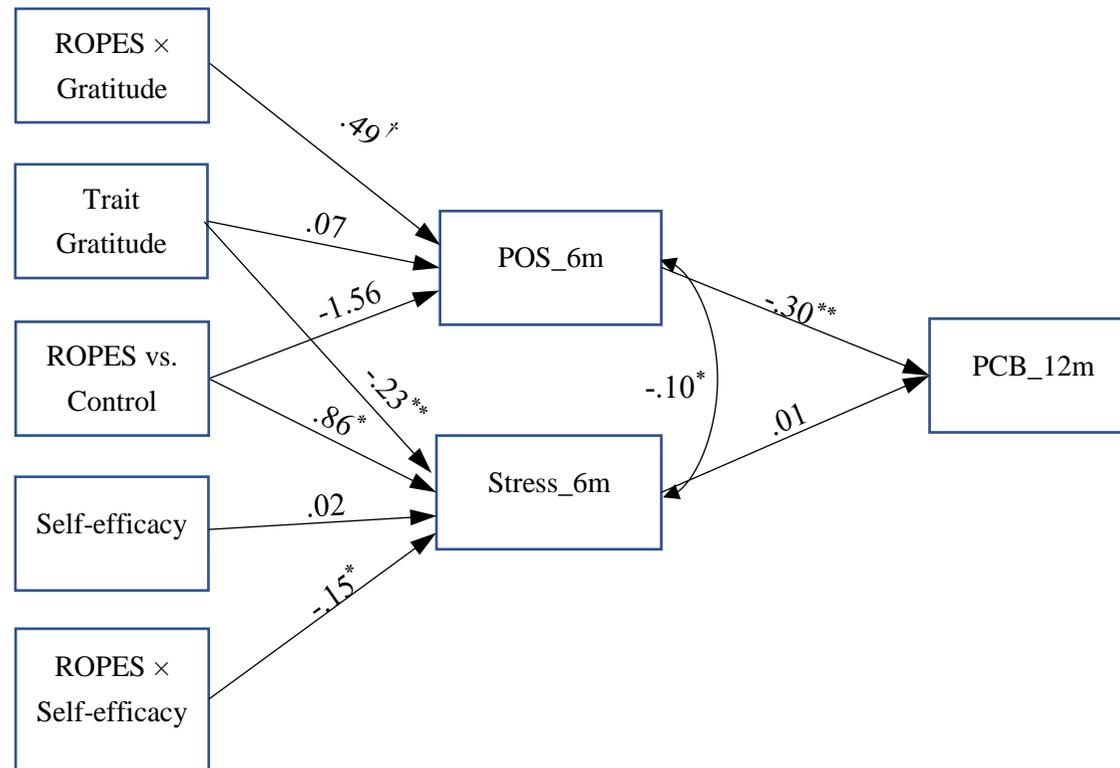


Figure 3. The path analysis results of Study 1. POS = perceived organizational support, PCB = psychological contract breach. †  $p < .10$ . \*  $p < .05$ . \*\*  $p < .01$ .

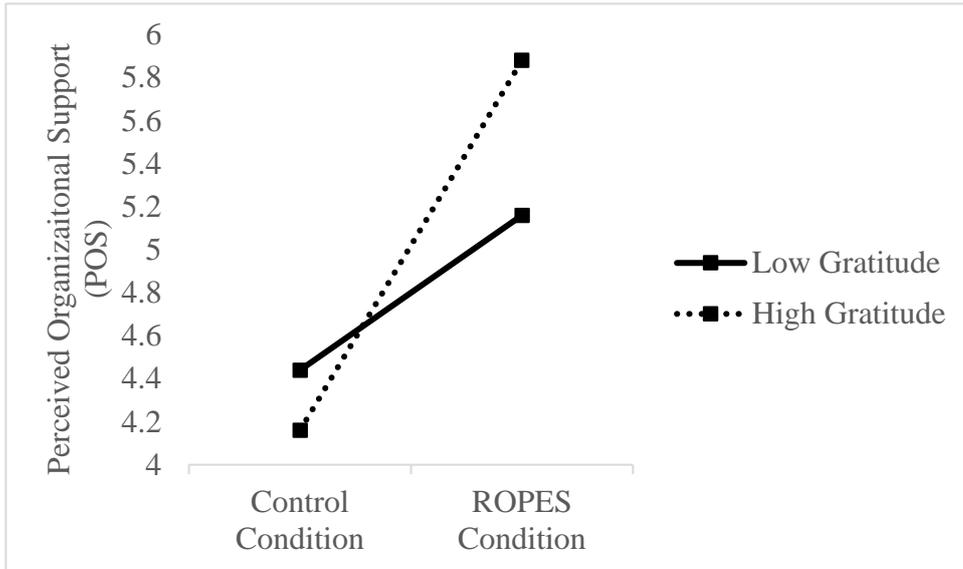


Figure 4. Trait gratitude as a moderator of the intervention—POS link (Study 1).

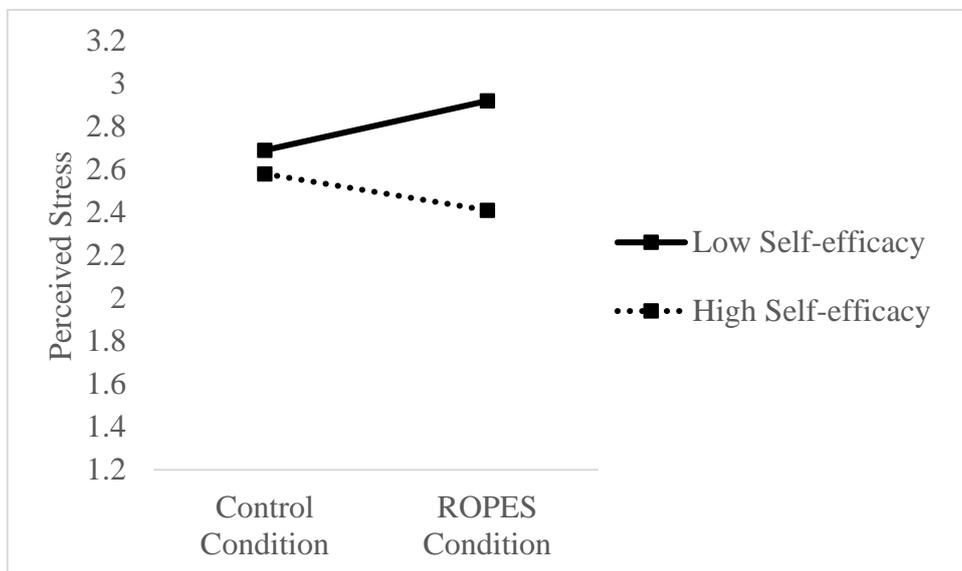


Figure 5. Self-efficacy as a moderator of the intervention—stress link (Study 1).

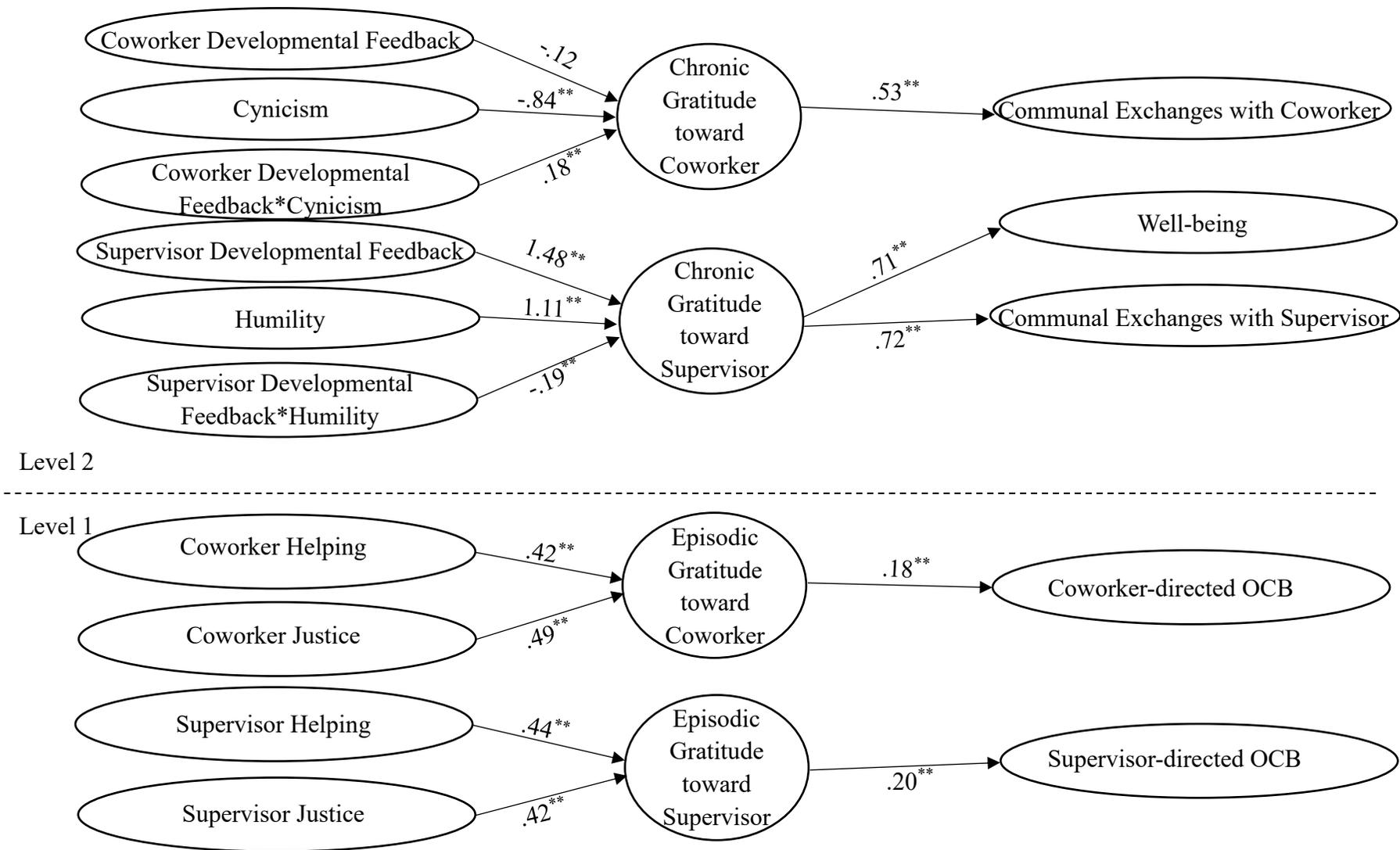


Figure 6. Significant effects from multilevel models (unstandardized coefficients; Study 2). OCB = organizational citizenship behaviour.

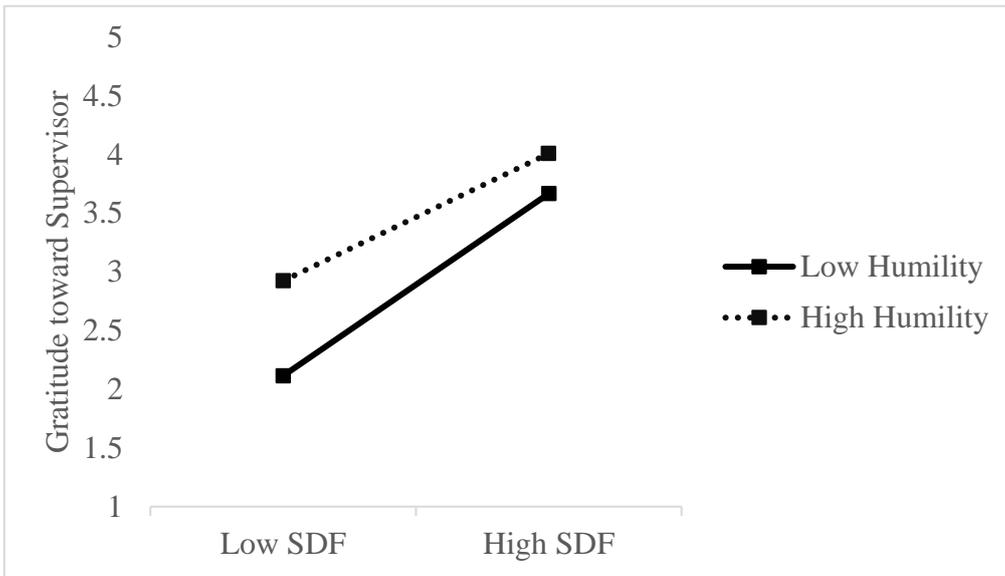


Figure 7. Humility as a moderator of the supervisor developmental feedback (SDF) —gratitude link (Study 2).

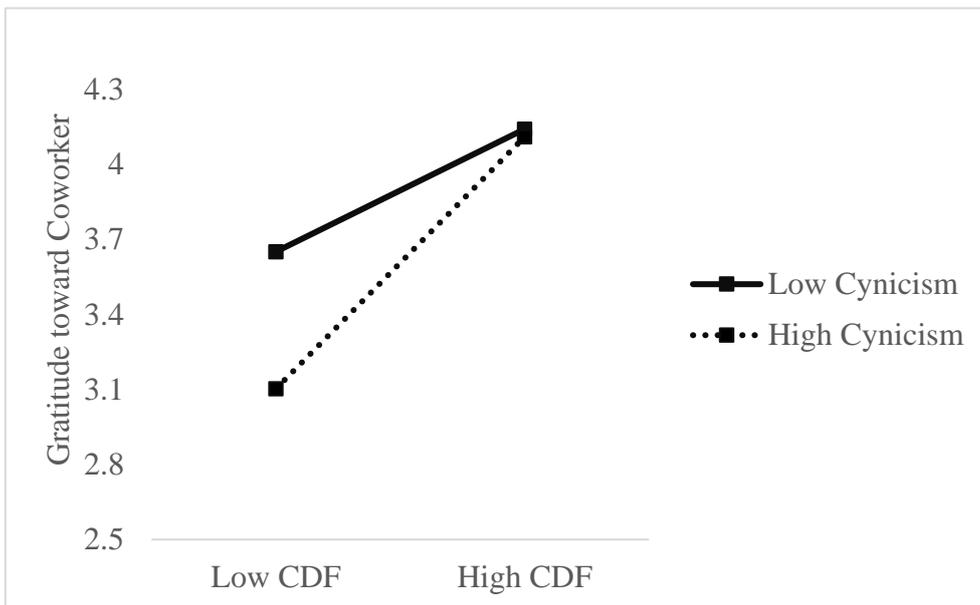


Figure 8. Cynicism as a moderator of the coworker developmental feedback (CDF) —gratitude link (Study 2).