When and How Does Workplace Envy Promote Job Performance?
A Study on the Conditions and Mechanisms for the Functional Role of Envy in Workplace Behavior

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To my beloved family

Abstract

In this study, I develop and test a model that explains when and why workplace envy can enhance task performance and organizational citizenship behaviors. Drawing on counterfactual theory, I propose that workplace envy plays a functional role: employees who envy coworkers learn from their envied targets via systematic information processing, especially when the enviers have high core self-evaluations (CSE) or when the envied targets provide help to enviers. To further understand the social influence of envy in triggering interpersonal dynamic processes, I delineate the processes and conditions that will prompt targets of envy to help enviers. I propose that envied targets are likely to perceive envy and will try to appease enviers by extending help, especially when enviers have central positions in friendship networks and thus can potentially undermine the target's workplace social relationships. I collect data from Korean bank tellers and insurance sales agents and use a round robin design showing that the envy–learning relationship is contingent on CSE and received help from the target and that learning from coworkers contributes to job performance via work engagement. In addition, targets are likely to perceive the envy but are not motivated to extend help even when the envier has high friendship network centrality. I discuss the implications and limitations of the study.

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Chapter One: Statement of the Problem

People innately tend to compare themselves with others. They are likely to feel envy when they compare themselves with individuals who have superior qualities and advantages they desire but lack. Workplaces provide numerous triggers for envy such as performance appraisals, performance-based pay, and social interactions (Shaw, Dineen, Fang, & Vellella, 2009). Formal and informal opportunities abound for potential upward social comparisons that can automatically trigger envy (Takahashi, Kato, Matsuura, Mobbs, Suhara, & Okubo, 2009) and subsequently influence attitudes and behaviors. Despite this, research into workplace envy and its outcomes has been surprisingly limited to a few researchers (Duffy, Scott, Shaw, Tepper, & Aquino, 2012; Duffy, Shaw, & Schaubroeck, 2008; Menon & Thompson, 2010).

Existing literature on envy predominantly focuses on its destructive nature. With few exceptions (e.g., Cohen-Charash, 2009; Schaubroeck & Lam, 2004; Van de Ven, Zeelenberg, & Pieters, 2011), evidence on envy's effects mostly suggests that envy has detrimental consequences including schaudenfreude (e.g., Smith, Turner, Garonzik, Leach, Urch, & Weston, 1996; Van Dijk, Ouwerkerk, Goslinga, Nieweg, & Galluci, 2006), dislike (e.g., Schaubroeck & Lam, 2004), myriad forms of social rejection (e.g., Salovey & Rodin, 1984; Silver & Sabini, 1978), sabotage of work peers (e.g., Cohen-Charash & Mueller, 2007; Duffy et al., 2012; O'Neil & Mueller, 2011; Zizzo & Oswald, 2001), unethical behavior (e.g., Gino & Pierce, 2009), and social loafing in group work (e.g., Duffy & Shaw, 2000).

Despite these documented effects, initial evidence hints that envy can be also functional (Cohen-Charash, 2009; Duffy et al., 2008; Foster, 1972; Frank, 1999; Hill &

Buss, 2006; Tai, Narayanan, & McAllister, 2012; Van de Ven, Zeelenberg, & Pieters, 2009; Vecchio, 1995). Envy can motivate enviers to improve their positions to achieve what they desire. The potential functional role of envy at work including its contribution to individual and organizational success, however, has received surprisingly little attention (but see Cohen-Charash, 2009; Duffy, Dineen, Henle, & Lee, 2011; Schaubroeck & Lam, 2004 for exceptions).

Although employees may envy coworkers for various reasons, in this thesis, I focus on envy about workplace success. Envy has many forms in the workplace, just as it does elsewhere. Employees may envy colleagues for their good looks, fortune, or personal attributes, but envy about workplace success is perhaps the most common and important type of envy in an organizational setting (Schaubroeck & Lam, 2004) because workplace success has such important implications for self-evaluation (Tesser, 1988). As for outcomes of envy, I focus on one particularly important behavior for workplace success − job performance −"actions and behaviors that are under the control of the individual and contribute to the goal of the organization" (Rotundo & Sackett, 2002, p. 66). I focus on two positive forms of job performance: task performance − behaviors that are directly related to core job tasks and contribute to the organization's technical core (Borman & Motowidlo, 1993) − and organizational citizenship behavior (OCB) − behaviors that are not directly related to the technical core but contribute to the organization by fostering social and psychological environments (Motowidlo, Borman, & Schmit, 1997). As important components of overall performance (Rotundo & Sackett, 2002), task performance and OCB are important outcomes in understanding functional roles of workplace envy. By striving to enhance task performance and OCB, enviers can

cope with envy about others' success constructively through facilitating personal growth and attaining organizational rewards such as pay and promotion (Bretz, Milkovich, & Read, 1992; Rotundo & Sackett, 2002; Schaubroeck & Lam, 2002) as well as building a favorable relationship with supervisors (Gerstner & Day, 1997; Nahrgang, Morgeson, & Ilies, 2009; Tepper, Moss, & Duffy, 2011). Therefore, studying envy-performance relationships is an important step toward understanding the largely neglected, functional roles of envy at work. I aim to advance theory and research on envy in two important ways.

First, I focus on the functional role of workplace envy that previous literature has neglected. Focusing on the functional side of workplace envy rather than the dysfunctional role will complement our understandings of workplace envy effects. If we continue to characterize envy solely as a destructive emotion, we will continue to focus on removing organizational triggers of envy. If, however, we recognize that envy can trigger constructive responses, we will find it important to investigate conditions that promote envy's functionality. Studying conditions for constructive responses to envy is also important given the interdependent nature of group work. Organizational success largely depends on how well team members cooperate to achieve unified goals (DeChurch & Mesmers-Magnus, 2010). Studying the functional nature of envy by switching focus toward promoting enviers to perform better and subsequently contribute to team work will add to and balance our current knowledge (Duffy & Lee, 2012). Despite the call for studying the functional role of envy at work (e.g., Duffy et al., 2008; Tai et al., 2012), few studies have examined this issue.

Second, the literature on envy currently lacks guiding theoretical perspectives suggesting how envious employees can improve themselves through coping with envy. I study *when* and *why* workplace envy can promote job performance. Drawing upon a counterfactual theory, I propose that workplace envy can lead to better job performance as employees try to learn from multiple coworkers they envy. Because counterfactuals – regret about the unachieved outcome from past events – trigger learning processes about what should have been done in the past, envy as an upward counterfactual emotion (Coricelli & Rustichini, 2010) can provide a useful opportunity for learning to achieve the same success via systematic cognitive processing (e.g., attention and memory) of envied targets (Hill, DelPriore, & Vaughan, 2011). I examine whether envy leads to more systematic information processing about the envied targets than other coworkers as they try to have an accurate and deep understanding about envied targets' behavior. I further propose that work engagement − focus of attention, absorption, and energy directed toward work-related tasks (Rothbard & Patil, 2011) − explains why learning leads to better job performance. Researchers have suggested that effective modulation of energies into work roles is more important than other job attitudes as a key motivational mechanism in job performance (Christian, Garza, & Slaughter, 2011; Rich, LePine, & Crawford, 2010): enviers will learn the exemplary attitudes and behaviors of successful coworkers and thus be motivated to engage themselves at work to achieve the same advantages.

I do not argue that the proposed mechanisms of learning and work engagement are the only processes that explain why envy can increase job performance. Rather I suggest that envy as an upward counterfactual emotion alerts individuals that they occupy

inferior statuses and that others have superior statuses, and drives them to learn the actions that they could or should have taken but the successful others have taken. Certain conditions can facilitate the proposed learning process.

To address *when* envy can promote job performance through learning, I propose that personal – core self-evaluation – and situational factors – help provided from targets to enviers – will play crucial roles in setting the conditions for the learning mechanism to operate. First, enviers who have high core self-evaluation (CSE) – positive views about themselves and their functioning in the world (Judge, Erez, & Bono, 1998) – will react to envy by "moving up" to align themselves with envied others. Enviers who believe in their ability and hold positive views about themselves are more likely to respond to envy constructively by striving to improve themselves. Because high-CSE enviers see themselves as worthy and are confident that they exhibit the same exemplary behaviors as others, they will capitalize on their envy (Judge & Hurst, 2007; 2008) and cope with envy through learning. Second, I consider that through interpersonal dynamics envied targets can play important roles in facilitating enviers' learning. Specifically, by interpersonally helping enviers, targets signal their willingness to form positive relationships with the enviers, create liking and trust, and thus increase the likelihood enviers will learn targets' behaviors and attitudes.

Given that emotions are a driver of social influence (Hareli & Rafaeli, 2008), help from the envied target can be understood as a product of interpersonal dynamics between the envier and the target. To further understand the processes and conditions that can cause envy to persuade the target to offer help, I investigate interpersonal dynamics between enviers and targets. Individual emotions influence perceptions about others'

behaviors, and these reactions can, in turn, influence the individual's future behaviors (Hareli & Rafaeli, 2008). However, previous research on envy failed to consider the role of envied targets (Duffy et al., 2008). I propose that because envy poses social threats, targets can perceive envy through various social cues. I expect that the target's perception of coworker envy, in turn, will trigger interpersonal helping behavior to attenuate envy. I further argue that envier's potential influence in disrupting the target's social life increases the likelihood that targets will help enviers. I focus on the envier's centrality in the friendship network, a network with social ties characterized by affective-based trust that transmits negative social information. By investigating the conditions and processes that lead to targets choosing to help the envier, I aim to disentangle the interpersonal dynamics that envy may trigger and emphasize the role of envied targets in promoting enviers' learning and development.

In sum, in this thesis I develop and test a model that explains when and why envy promotes job performance. I test whether envy plays a functional role of enhancing job performance through learning, which in turn is mediated by work engagement. I further examine the conditions that reinforce the likelihood that enviers will learn from the envied targets. Specifically, I study 1) a personal trait of core self-evaluation and 2) a situational variable of help provide from target to envier and 3) delineate the process and conditions that lead envied targets to help the enviers via an examination of interpersonal dynamics between enviers and targets. I first examine whether envied targets perceive that they are envied. In addition, I examine whether the perception of envy will in turn motivate the target to extend helping behavior toward the envier as an appeasement

strategy and whether this relationship will be strengthened by the envier's centrality in

friendship network. The research model is presented in Figure 1.

Chapter Two: Theoretical Framework

Conceptualizing Envy of Others at Work

Envy is among the unpleasant emotions that humans most dislike experiencing. At the core of envy is the envier's desire for various possessions *and* perception that others have what the envier wants. Envy is defined as an emotional state that occurs "when a person lacks another's superior quality, achievement, or possession and either desires it or wishes the other lacked it" (Parrot & Smith, 1993, p. 906).

Traditionally, scholars conceptualized envy by focusing on its malicious nature. Smith and Kim (2007), for instance, argued that ill will is the core ingredient of envy. They defined envy as "an unpleasant, often painful emotion characterized by feelings of inferiority, hostility, and resentment produced by an awareness of another person or group of persons who enjoy a desired possession" (p. 47). According to this view, malicious envy is the "proper" type of envy and nonmalicious or benign envy that is free of hostility is similar to admiration. Parrot and Smith (1993) also stressed negative affective elements residing in envy. They characterized envy as a constellation of inferiority, resentment of the situation, and ill will toward the target.

Recently, however, emphasis turned to the importance of including benign envy in envy research, showing that benign envy differs from admiration, and that malicious and benign forms of envy produce different outcomes (Van de Ven et al., 2009; 2011): "it is not the case that envy merely leads to different behaviors in different situations, but that the entire experience of malicious and benign envy is different" (p. 426). According to this view, the two types of envy elicit different thoughts, feelings, and actions. Benign and malicious envy both contain frustration, but benign envy motivates enviers to "level

up" rather than to "level down." Thus envy is known to have important positive consequences, but more research is still needed to avoid potential confusion about envy and its outcomes; that is, what envy *is* and what envy *does*.

In Tai et al.'s (2012) more recently developed model, pain at another's good fortune is at the core of envy. They proposed that a common characteristic in seemingly different malicious or benign envy experiences is the sensation of pain occurring from upward comparison with others. Focusing on pain as the core nature of envy allows a possibility that different behaviors can be observed in given situations for the same individuals. That is, enviers, to avoid pain, can behave destructively, for example by interpersonally harming coworkers, while *at the same time* engaging in constructive behaviors for the self, such as by trying harder to improve performance. This conceptualization frees one to focus on a more positive side of envy.

The experience of envy has been conceptualized in three ways (Duffy et al., 2012). First, individuals can show differences in their tendencies toward feeling envy (Gold, 1996; Smith, Parrott, Diener, Hoyle, & Kim, 1999). According to the view of envy as a dispositional characteristic, some individuals are more likely to experience envy across situations and respond with envy when exposed to comparisons. Second, envy can be studied with regard to a single episodic event toward a specific target (Cohen-Charash, 2009; Cohen-Charash & Mueller, 2007). Even people who are low in dispositional envy may occasionally, if not always, experience envy from comparisons and respond in certain ways in specific situations of envy. Third, envy can be conceptualized as situational or a general envy of multiple comparators (Duffy et al., 2012; Duffy & Shaw, 2000; Vecchio, 1995; 2000; 2005; 2007). Individuals can experience envy from "the

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desired patterns of successes of multiple others in the environment" (Duffy et al., 2012, p. 645). Given multiple coworker referents for comparison, individuals' experience of envy *at work* can be better conceptualized as a current state of multiple inferior comparisons (Duffy et al., 2012; Vecchio, 2005), which differs from an emotional experience regarding one specific event or a dispositional tendency to experience envy in general across contexts inside and outside the workplace.

In this thesis, I study envy as an interpersonal emotion of one focal person toward a target in multiple dyadic relationships within a work group. As noted, envy arises when individuals desire what another has or when individuals wish that the other lacked the desired possession, suggesting that envy inherently arises in dyadic relationships. Importantly, individuals have multiple dyadic relationships in work groups, so envy levels can differ depending on the referents because of the relationship-specific experiences accumulated in the dyad. Therefore, I study envy and reactions occurring in multiple dyads in a work group while treating envy toward each referent separately. That procedure allows me to study envy and subsequent interpersonal dynamics in alignment with theory and conceptualization of envy (Krasikova & LeBreton, 2012) while more fully considering individuals' multiple experiences of envy in an immediate environment (Vecchio, 2005; Wood, 1996).

Envy and Job Performance

Envy aims very high.

–   Ovid

If a co-worker gets a project or a promotion that you wanted, then don't spend time stewing over it or lamenting that it should've been yours. Instead, turn the opportunity around. Use the situation to motivate yourself to work harder, to achieve more so that next time you'll be the one who gets the

chance to make the big deal or who gets the big client or the big raise…Use
someone else's success to fuel your own motivation.

– Donald J. Trump (Xu, 2007)

Emotions are a part of a coordinated internal response system alerting individuals

that something in the environment requires attention (Cosmides & Tooby, 2000; Frijda,

1986; 1988; Lazarus, 1991; Nabi, 1999; Roseman, 1984). Negative emotions are

especially powerful in controlling attentional and cognitive processing, motivation, and

behaviors because they signal threats to survival (Baumeister, Bratslavsky, Finkenauer, &

Vohs, 2001; Lieberman, Gaunt, Gilbert, & Trope, 2002; Taylor, 1991). Some discrete

emotions are not manifested simply by one action tendency (Frijda, Kuipers, & ter

Schure, 1989): envy also can engender two broad action tendencies to reduce the gap

with an envied target (e.g., Cohen-Charash, 2009; Duffy et al., 2008; Foster, 1972; Frank,

1999; Hill & Buss, 2006; Tai et al., 2012; Van de Ven et al., 2009; Vecchio, 1995).

Specifically, envy not only generates a threat-oriented action tendency that focuses on

depriving others of advantages and reducing envy-laden negative emotions, such as by

venting anger, but also produces challenge-oriented action tendencies such as making

constructive efforts to improve positions and achieve the same advantages as the targets

(Tai et al., 2012; Van de Ven et al., 2009).

From the evolutionary perspective, *strategic interference theory* (Buss, 1989;

Haselton, Buss, Oubaid, & Angleitner, 2005; Hill & Buss, 2006; 2008) suggests that envy,

although painful, can be functional in terms of improving performance. Painful feelings

of envy play an adaptive function because they signal that something is threatening an

individual's survival and competitive success and that the individual must take action to

remedy the threat. Specifically, envy (1) focuses attention on the source of strategic

interference while temporarily screening out low priorities for solving the focal problem, (2) promotes storing relevant information in memory, and (3) motivates coping with current strategic interference as well as preventing future interference. Consequently, strategic interference theory suggests that enviers, compared with non-enviers, would act more adaptively by taking actions to attain the same advantages as envied targets (Hill & Buss, 2008). Therefore, I expect that workplace envy plays a functional role that promotes job performance because performance improvement is an important and constructive way that enviers can attain the same advantages and reduce the pain from inferior comparison.

Evidence on envy-performance relationships has shown that envy can motivate individuals to perform better. For example, recent evidence shows that promotion envy increases job performance (Schaubroeck & Lam, 2004). Specifically, bank tellers who were passed over for a promotion and were highly envious of promotees exhibited higher job performance. In another study, participants recalled that in the situation of envy of other coworkers they tried to improve their positions by working harder, trying to learn from the envied target, and striving to win the support of other coworkers (Cohen-Charash, 2009). In another field study, envious job applicants showed more constructive efforts by applying for more internships (Duffy et al., 2011). In a lab study (Van de Ven et al., 2011), participants primed with benign envy free of hostile meaning (Smith & Kim, 2007) planned to devote more time for studying in the upcoming semester and performed better on a test assessing intelligence and creativity compared with those primed with malicious envy or admiration. (No difference was found among malicious envy and admiration condition.)

In sum, strategic interference theory and existing empirical evidence on envy support the contention that envy plays a potentially functional role by enhancing performance. When individuals compare themselves unfavorably with successful coworkers, they feel pain. To avoid that pain they can act to enhance their job performance. Current knowledge about workplace envy, however, lacks evidence suggesting how envy can contribute to their job performance. In the following sections, I propose learning as a key mechanism that explains the functional role of envy in contributing to job performance. By learning about exemplary behaviors and effective strategies for success from envied targets, enviers will be able to enhance job performance partly because they are propelled toward more work engagement. I will first explain when and why envy leads to learning and then explain how an individual's learning from coworkers promotes job performance through work engagement.

Envy and Learning from the Target

> *If someone at work gets the promotion or recognition you feel you deserve instead, examine why this person may have nabbed the accolades…What did he or she do that you didn't do?…It's telling you that you have something to learn.*
> - *Marcia Reynolds* (Bruzzese, 2011)

Counterfactuals are thoughts about alternatives to past events (thoughts of "what might have been") (Roese, 1997; Roese & Olson, 2014). Upward counterfactuals are functional because they facilitate learning what actions individuals should have taken in the past, which influences subsequent intention and behaviors to correct situations (Epstude & Roese, 2008). Envy is a social and upward counterfactual emotion that motivates learning from others. Envy considers "actions that we could have taken, we did not take but someone else did, and for which we got to know the outcome that the other

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person obtained" (Coricelli & Rustichini, 2010, p. 242). It signals that enviers may have chosen a less effective way than envied targets did to achieve what the enviers desire. This counterfactual nature of envy in a social context (Rustichini, 2008) motivates enviers to learn about alternative ways that might be more effective in attaining outcomes (Coricelli & Rustichini, 2010; DeRue, Ashford, & Myers, 2012; Johnson & Sherman, 1990; Roese, 1997; Zoogah, 2010). In this study, I use the term learning to denote systematic information processing, that is, whether individuals use a systematic, thorough, and effortful information processing compared to a quick, heuristic, and effortless information processing (Chaiken & Trope, 1999; Eagly & Chaiken, 1993; Petty & Cacioppo, 1986) as this is the proximal learning process that is triggered by envy and instigates subsequent motivational process for improvement (i.e., work engagement).[1]

Due to the limited cognitive capacity individuals selectively allocate cognitive resources for information search and processing (Fiske & Taylor, 1991). That is, individuals use a systematic and deep information processing in some situations whereas they employ a heuristic and quick information processing in other situations (Chaiken & Trope, 1999). If this holds, a coworker who triggers a strong upward counterfactual emotion of envy will be more attended to and thoroughly processed by the focal employee as the envy motivates the employees to change the current, inferior situation by adopting behaviors that they could have taken. In contrast, coworkers who do not trigger envy will less likely receive attention from the focal employee and be less deeply

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[1] To explain observational learning, Bandura (1977b) used the term "modeling", the process of which includes attention, retention, reproduction, and motivation. To effectively learn, a person pays attention to the learning source (attention), stores the information obtained through learning (retention), practices the learned behavior (reproduction), and is motivated to imitate the behavior that has been modeled (motivation). From this framework, information processing I use in this study applies to attention and retention stage and work engagement applies to motivation stage.

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processed as the related emotion does not trigger a strong counterfactual thinking. Therefore, an employee is more likely to learn from a coworker whom the employee is more envious of, compared to a coworker whom the employee is less envious of.

Hypothesis 1: A's envy of B will be positively related to A's learning from B.

Core Self-evaluation as a Moderator in the Relationship between Envy and Learning from the Target

Core self-evaluation (CSE) represents fundamental evaluations that individuals hold about their self-worth, competence, and capabilities (Judge, Locke, & Durham, 1997). Judge et al. (1997) suggested that an individual's CSE may influence appraisals across various situations, although individuals may not be consciously aware that some of their personal traits represent their fundamental self-evaluation. To indicate CSE, individual traits should involve self-evaluation, should be central to the self-concept, and should be broad in scope. Researchers proposed four individual traits − self-esteem, locus of control, generalized self-efficacy, and emotional stability – and subsequent empirical evidence supported that they are highly correlated (e.g., Judge & Bono, 2001; Judge, Erez, Bono, & Thoresen, 2002) representing a higher-order factor (e.g., Judge, Bono, & Locke, 2000; Judge, Locke, Durham, Kluger, 1998). CSE has also been shown to have an incremental validity over the four CSE components in predicting variables relevant to performance, goal setting, and motivation (Erez & Judge, 2001).

Although researchers have not studied CSE's role in reaction to envy or upward comparison, indirect evidence on CSE components suggests that high-CSE individuals may react more constructively to envy. The emotion of envy is derived from upward social comparison (Smith, 2000), and empirical evidence in upward social comparison

shows that self-esteem and emotional stability influence responses to upward social comparison. When cancer patients compared themselves with other patients who were better off, those who were high in self-esteem were less likely to feel uneasy (Buunk, Collins, Taylor, VanYperen, & Dakof, 1990), and those who were high in emotional stability showed a more positive affective response (Van der Zee, Buunk, & Sanderman, 1998). In addition, when individuals generated upward counterfactual thoughts as in the case of envy (Baron, 2000), individuals with high self-efficacy felt more positive affect than those with low self-efficacy when they expected events to reoccur (e.g., Sanna, 1997). High self-efficacy participants further felt that they were more prepared to perform an upcoming task than low self-efficacy participants. Finally, those with a dispositional tendency to believe that they have more control over their external environment showed different cognitive, affective, and behavioral reactions (see Ng, Sorensen, & Eby, 2006, for meta-analytic results). Those with internal locus of control tended to react constructively to unfavorable social comparison situations and perceive them as opportunities to learn and grow (e.g., Baron, Cowan, Ganz, & McDonald, 1974). In another study, student participants who believed that they had control over their own improvement were more likely to experience benign envy in upward comparison and to show higher motivation to spend time studying (Van de Ven et al., 2011).

In the unflattering upward comparison situation of envy, I argue that high-CSE employees will capitalize on the situation by trying to learn from successful coworkers. Individuals accept others as learning targets because they represent what the individuals want to attain (Gibson, 2004). Because high-CSE individuals believe that they are worthy and in control of their lives, they will believe that they deserve to enjoy the same

advantage as the targets. They will be confident that they can carry out actions necessary for success as the targets did, and that learning from successful envied targets will improve the current situation (Erez & Judge, 2001; Judge & Illies, 2002). Learning from the envied targets is a painful experience as it keeps reminding of the envious person's inferiority. The positive view of the self and the confidence about ability, however, will help envious employees to better attend to and process the envied target's exemplary behaviors while persisting in the face of setback and pain. Evidence suggests that high-CSE individuals respond more constructively to stressful situations in ways that benefit the self in the long term. They use more problem-solving coping such as actions that focus on the cause of the problems but rely less on avoidance coping such as trying not to think about the problem (e.g, Kammeyer-Mueller, Judge, & Scott, 2009). In addition, it was shown that high-CSE individuals are more committed to improve themselves when they receive negative or discrepant performance feedback (e.g, Bono & Colbert, 2005). Therefore, enviers with high CSE will actively learn from the target to solve their situation in a way that helps their own development rather than avoiding the opportunity of learning for fear of failure or pain. Those observations suggest the next hypothesis:

> *Hypothesis 2: CSE will moderate the positive relationship between A's envy of B and A's learning from B such that the relationship will be stronger when A has high CSE rather than low CSE.*

Envy and Target's Perception of Envy

As noted, envy drives individuals to take actions to deal with their currently inferior competitive status. Envy is a social emotion that envied targets can sense and that can affect the target's behaviors. People are able to detect and recognize others'

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expressions of emotions, and those perceptions influence feelings, thoughts, and behaviors of the targets and as well as the individuals who expressed the original emotion (Hareli & Rafaeli, 2008). In this way, communicated emotion signals intentions and needs of the individual expressing the emotion and change the pattern of interaction and the nature of the relationships (De Rivera & Grinkis, 1986). To the extent that the envied target detects envy, the target's behavior, such as providing help to the envier, can be better understood as a reaction to envy occurring in interpersonal dynamics. In this section, I will first explain how targets can perceive envy before I move on to explain what targets would do to appease envy and how these actions would moderate the envy-learning relationship in the subsequent sections.

On one hand, the target might encounter difficulty in perceiving envy. Envy is self-sanctioned emotion (Dunn & Schweitzer, 2006). Because it signals that people feel inferior, they are generally reluctant to admit their feelings of envy (Berman, 2007; Habimana & Massé, 2000) and often suppress expressions to avoid their shame (Silver & Sabini, 1978). Despite the motivation to deny and hide inferiority, once individuals experience envy they find it difficult to control, hide, or change their feelings (Kim, O'Neill, & Cho, 2010; Parrott, 1991). They may express envy directly, indirectly, overtly, or subtly (e.g., Cohen-Charash & Mueller, 2007; Duffy et al., 2012; Foster, 1972; Rodriquez-Mosquera, Parrott, & de Mendoza, 2010). For example, people often frankly admit "I envy you" (Rodriquez-Mosquera et al., 2010), or outwardly compliment the target (Foster, 1972), or engage in interpersonal harm through criticism or gossip (Cohen-Charash & Mueller, 2007; Duffy et al., 2012; Dunn & Schweitzer, 2006).

From the envied targets' perspective, accurately detecting others' emotions is a basis for appropriate interpersonal reactions and therefore plays adaptive social functions (Eisenberg, 2000; Sy & Cote, 2004). People are biologically predispositioned to detect and interpret others' emotions (Oatley & Jenkins, 1992) and can fairly accurately judge those emotions (e.g., Ambady, Hallahan, & Rosenthal, 1995) based on various cues including vocal expression (e.g., Bachorowski, 1999), facial expression (e.g., Moreno, Borod, Welkowitz, & Alpert, 1993), and physical posture (e.g., Riskind & Gotay, 1982). From an evolutionary point of view, negative emotional expression is more quickly and accurately processed by the recipeints (Baumeister et al., 2001; Hansen & Hansen, 1988; Pratto & John, 1991; Suslow, Junghanns, & Arolt, 2001) because negative events are potentially more threatening to survival and thus demand resolution more urgently. People detect negative faces faster than they detect positive faces (e.g., White, 1995; Fox, Lester, Russo, Bowles, Pichler, & Dutton, 2000) and more accurately (e.g., Oehman, Lundqvist, & Esteves, 2001).

I propose that because envy is a negative emotion that poses social threats, targets are likely to detect it. Because envy poses interpersonal threats such as dislike (e.g., Schaubroeck & Lam, 2004), social rejection (e.g., Salovey & Rodin, 1984; Silver & Sabini, 1978; Smith, 2004), and social undermining (e.g., Duffy et al., 2012; Dunn & Schweitzer, 2006; O'Neil & Mueller, 2011), detection of envy will be critical for maintaining social relationships. Individuals fundamentally need to build and maintain social relationships (Baumeister & Leary, 1995). A self-monitoring system (SMS) has developed from the strong need for maintaining social relationships. The SMS continuously navigates the environment for cues to detect social threats and uses the cues

to facilitate social interactions and maintain inclusion status (Gardner, Pickett, Jefferis, &

Knowles, 2005; Pickett & Gardner, 2005). In the workplace where goals of "getting

ahead" and "getting along" (Hyland, 1989) are likely in conflict, detection of envy is

important as individuals worry that their relative advantages will trigger envy and

potential social threats (Exline & Lobel, 1999; Horner, 1968). Evidence shows that

people indeed use various social cues to detect envy. For example, in one study

participants reported that they were able to perceive envy toward them through verbal

and nonverbal cues (Rodriquez-Mosquera et al., 2010). The most frequently reported

marker of envy was that enviers acted less friendly such as by being less generous toward

or by ignoring the respondent. Other markers of envy included conversational changes,

sarcastic remarks, and facial expressions. Therefore, I propose that envied individuals

detect coworkers' envy.

> *Hypothesis 3: A's envy of B will be positively related to B's perception of A's*
>
> *envy.*

Target's Perception of Envy and Help Provided from the Target to the Envier

When individuals perceive that others feel negative emotions of envy toward

them, they are likely to find ways to cope with the envy. Two theoretical frameworks are

relevant in understanding how targets will react to envy. First, according to Foster's

(1972) theory of envy, being the target of envy can ambivalently have both desirable and

undesirable implications. People may view envy along two distinct axes. Being envied is

desirable because it signals that one is superior and thus enhances self-esteem. On the

other hand, being envied is undesirable because it threatens social bonds and well-being.

Although a certain axis may prevail and dominate responses, in most cases, the two axes

can be experienced simultaneously. For instance, envied targets may feel proud of their achievement but simultaneously worry about relationships. In terms of interpersonal relationships, targets are generally expected to be motivated to appease envy (e.g., Foster, 1972; Van de Ven, Zeelenberg, & Pieters, 2010). Second, Exline and Lobel (1999) provided a more general framework for understanding envied target's reactions indirectly, suggesting that being envied will cause interpersonal distress and prompt actions to attenuate the distress. According to their STTUC framework delineating theories of sensitivity about being the target of threatening upward comparisons, people may feel threatened when they perceive that they are the target of upward comparisons, when they realize that the comparisons threaten others, and when they care about the envier's response. The model suggests that although outperforming others can be privately pleasant and satisfying, it causes interpersonal strain and distress.

Foster's (1972) theory of envy and STTUC framework both suggest that targets will try to appease envy. One coping strategy to appease envy is to provide help to the envier. In one study, envied college students reported that they frequently used the copying strategy of being nice to the envier through compliments and dinner invitations (Rodriquez-Mosquera et al., 2010). In a laboratory study, participants who achieved better performance and could be envied targets acted more prosocially toward confederate enviers by providing time-consuming advice and helping them pick up erasers (Van de Ven et al., 2010). Thus in line with the two theories and existing evidence, I expect that when targets perceive envy, they are likely to provide help to enviers as an appeasement strategy.

Hypothesis 4: B's perception of A's envy will be positively related to help provided from B to A.

Moderating Role of the Envier's Friendship Network Centrality in the Relationship between the Target's Perception of Envy and Help from the Target to the Envier

Although I expect envied targets to provide help to enviers, I propose that the relationship can be more or less enhanced depending on the envier's social influence on the target. According to STTUC model (Exline & Lobel, 1999), distress from outperforming others becomes more intense when outperformers are concerned about potential damage to their own well-being or to the relationship with the person they have outperformed. I suggest that envied targets will be motivated to provide more help to the enviers when enviers have greater social influence on them. Specifically, I propose envier's friendship network centrality at work as a moderator in the relationship between target's perception of envy and help provided from target to envier.

A social network is a structure of relationships represented by a set of individuals and the set of ties between the individuals (Brass, Butterfield, & Skaggs, 1998; Wasserman & Faust, 1994). Individuals can have different levels of prominence (Wasserman & Galaskiewicz, 1994) or power (Brass & Burkhardt, 1993) in groups and organizations. In social networks, that power can be represented by the concept of centrality – an individual's position in the network relative to others (Rowley, 1997). The degree centrality measures the number of ties an individual has with others in the network, assuming that an individual with many direct connects to others in the network has better access to resources and more influence. Organizations have different types of networks, such as advice networks (e.g., Zagenczyk, Scott, Gibney, Murrell, & Thatcher, 2010) and

communication networks (e.g., Scott & Judge, 2009). In this study I focus on friendship networks to capture relatively informal and less task-relevant networks that are characterized by affect-based trust (Ibarra, 1993; Jehn & Shah, 1997; Zagenczyk et al., 2010).

How does the envier's centrality in the friendship network influence the relationship between the perception of being envied and the target's helping behavior toward the envier? As noted, being the target of envy signals superiority and increases pride and self-esteem, but targets also worry about potential harm to interpersonal relationships (Foster, 1972; Lee & Duffy, 2010; Rodriguez Mosquera et al., 2010). Envied individuals fear that they may face social rejection (e.g., Salovey & Rodin, 1984; Silver & Sabini, 1978) and social undermining (e.g., Duffy et al., 2012; Dunn & Schweitzer, 2006), and the concern about envy is intensified when the envier's socially harmful behaviors can actually effective. When enviers occupy central positions in the friendship network, they are better able to transmit negative as well as positive information to connected others because receivers have affective trust toward individuals holding central positions (Burt & Knez, 1996; Grosser, Lopez-Kidwell, & Labianca, 2010). In addition, because friends identify with their friends and value their opinions, friends are more likely to accept transmitted information from their friends (Jehn & Shah, 1997; Zagenczyk et al., 2010). Thus, reactions to envy can be shaped by the envier's positional status in the friendship network. When targets are envied by those who have high centrality in the friendship network and thus whose social behaviors can be more influential in disrupting the targets' social relationships at work, envied targets will more actively appease envy by providing help. Therefore, I expect:

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Hypothesis 5: A's network centrality will moderate the positive relationship between B's perception of A's envy and help provided from B to A such that the relationship will be stronger when A has high network centrality than when A has low network centrality.

Help Provided from the Target to the Envier as a Moderator in the Relationship between Envy and Learning from the Target

Prosocial behaviors undertaken to protect and enhance the welfare of others (Schwartz & Bilsky, 1990) are frequently used to recover relationships in situations of social threats. Excluded people engage in prosocial behaviors, such as rewarding and conforming, to gain group acceptance (e.g., Lakin & Chartrand, 2003; Maner, DeWall, Baumeister & Shannon, 2007; Williams, Cheung & Choi, 2000). Research on envy has shown that envied individuals act prosocially to protect themselves from envy's potentially destructive effects. In a recent lab study, participants who were potential targets of envy spent more time in advising potential enviers and helping them pick up erasers (Van de Ven et al., 2010). Prosocial behaviors such as giving encouragement and taking the envier out for dinner were also reported as coping strategies that envied targets used most frequently (Rodriguez Mosquera et al., 2010). However, little is known in terms of the influence of these reactions.

Through helping behaviors, the actor signals a willingness to form a positive relationship with the recipient (de Jong, Van der Vegt, & Molleman, 2007; Ferrin, Dirks, & Shah, 2006). Although employees often have self-enhancement motives for helping coworkers (Yun, Takeuchi, & Liu, 2007; Zellars & Tepper, 2003), evidence shows that prosocial motives (e.g., needs to be helpful and to build positive relationships) are the

strongest motivations of interpersonal helping at work (Rioux & Penner, 2001). I argue

that help provided from the envied target will increase envier's acceptability of the

envied person as a learning target as it attenuates the negative emotions but instill

positive attitudes toward the target. Although envy is a painful emotion occurring from

another's success, it is often transmuted to strong derogation or hostile resentment toward

the target individual (Heider, 1958; Salovey & Rodin, 1984; Schaubroeck & Lam, 2005;

Smith et al., 1994). Research suggest that interpersonal affect plays an important role in

approaching and learning from another such that an individual's strong dislike toward

others prevents using them as a source of learning even if they are competent and

valuable learning models (Casciaro & Lobo, 2008). Collins (1981) noted that a minimal

amount of positive affective toward the others are necessary for social interaction and it

comes from the perception of being welcomed by the others and the belief in enjoying

potential rewards from the interaction. Because the voluntary and cooperative behavior

sacrifices immediate self-interest for the benefit of the recipient, helping from the envied

target will attenuate the envier's hostile emotions but increases more favorable attitudes

about the target and their relationship. Evidence shows that help makes the recipient like

the helper better (e.g., Greenberg & Frisch, 1972; Greenglass, 1969; Gross & Lathane,

1974; Nemeth, 1970) and trust the helper more (e.g., de Jong et al., 2007; Ferrin et al.,

2006). In addition, by providing help to the enviers, envied targets are now perceived as

an available resource that helps the envier's success thus enviers perceiving benefits from

approaching and learning from the target. Thus, the envied target's help will facilitate the

envier's learning.

Hypothesis 6: Help provided from B to A will moderate the positive relationship between A's envy of B and A's learning from B such that the relationship will be stronger when B provides A high levels of help than when B provides A low levels of help.

Learning from Coworkers at an Individual-level and Job Performance: The Mediating Role of Work Engagement

Now I turn to explaining how learning contributes to enhancing job performance. As noted, an individual has multiple coworkers in a workgroup to be envious of. This means that the individual also has multiple coworkers who can potentially provide useful information for success given that envy triggers learning from the target. When individuals learn from multiple others in the immediate environment, they actively decide to adopt or reject the attributes of the others as certain attributes may not fit their needs or provide conflicting information to each other (Bucher & Stelling, 1977; Gibson, 1995; 2003; Ibarra, 1999). Therefore, as an envier attends to multiple coworkers in the workgroup, the envier creates and refines a pool of useful information based on which he or she can change behavior for development. To understand how learning can be effective for influencing an individual's motivation and performance, dyadic learning processes with regard to each coworker can be aggregated up to an individual-level.

According to social cognitive theory (Bandura, 1977a; 1986), individuals acquire and learn much of their behavior through observation and imitation of others in a social context. Learned behaviors are more likely to be actually performed when the behaviors can produce positive outcomes (Wood & Bandura, 1989). Learning from successful others influence the level of persistence and individual effort on a task (Bandura, 1982).

Studies have found that successful others positively influence individual task performance (e.g., Earley & Kanfer, 1985; Rich, 1997).

I suggest that learning from coworkers in the workgroup will be positively related to job performance through a motivation mechanism of work engagement. Initially theorized by Kahn (1990), work engagement refers to psychological presence performing the task (Kahn, 1990; 1992; Rothbard, 2001; Rothbard & Patil, 2011). Specifically, work engagement is "the personal focus of attention, their absorption, and their available energy directed toward work-related task" (Rothbard & Patil, 2011, p. 59). Although some definitional inconsistencies exist (e.g., Rich et al., 2010; Rothbard & Patil, 2011; Schaufeli, Salanova, Gonzalez-Roma, & Bakker, 2002), a common conceptualization of work engagement entails high levels of personal investment or energies on the job (Christian et al., 2011). As to the conceptualization of work engagement for this study, I emphasize two issues.

First, work engagement is a psychological motivational state rather than an attitude or performance (Rich et al., 2010; Rothbard & Patil, 2011; Saks, 2006; 2008). As a state of psychological presence or "being there," work engagement is about the *manner* in which employees conduct work, such as being attentive and absorbed (Saks, 2008). Work engagement has a discriminant validity from and a criterion-related validity over other job attitudes such as job satisfaction, organizational commitment, job involvement, and intrinsic motivation, in explaining task performance and OCB (e.g., Christian et al., 2011; Rich et al., 2010). Work engagement differs from job satisfaction (Weiss, 2002), which is an evaluative judgment toward an overall job, because work engagement involves activation in work tasks. Work engagement is also distinguished from job

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involvement (Kanungo, 1982), which is an individual's identification with the job and the importance of the job in an individuals' total life. Work engagement also differs from organizational commitment (Mowday, 1998), an emotional attachment to one's organization. In addition, work engagement is not a behavioral outcome. Rather it represents the willingness to dedicate oneself to the task and identifies the manner in which the task is performed (Saks, 2006; 2008).

Second, following a recent conceptualization by Rothbard and Patil (2011), I include three components of *attention*, *absorption*, and *energy* to characterize work engagement. *Attention* is a resource-based motivational construct referring to material resources within a person applied to a given task. It means cognitive availability or time spent thinking about the task (Gardner, Dunham, Cummings, & Pierce, 1989). *Absorption* is defined as the intensity of applying those resources to a task. It represents the level of being engrossed in the task or intense focus without being distracted (Goffman, 1961). The first two components of attention and absorption are core elements in Kahn's (1990) initial theorizing on work engagement (Rothbard, 2001). The third component is a physical component of *energy*. "Being fully there" can be represented by a purposeful exertion of physical energy directed toward a task (Rich et al., 2010). Other researchers have characterized work engagement using different components. For instance, Schaufeli and Bakker (2004) included vigor, dedication, and absorption, and Rich and colleagues (2010) characterized work engagement as a construct comprising cognitive, emotional, and physical energies. According to Rothbard and Patil (2011), however, work engagement may not inherently include a positive affective state as represented by dedication (Schaufeli & Bakker, 2004) or emotional energy (Rich et al.,

2010). Engaging in a task may involve gratification and joy but may also entail stress and strain during goal striving or problem solving. In an empirical study, employees at a public university who paid more attention to a work task experienced *both* positive and negative affective experiences at work, suggesting positive emotional state is not an essential component of work engagement (Rothbard, 2001; for a different view see Bakker & Oerlemans, 2011; Macey & Schneider, 2008).

When employees attend to successful others and learn exemplary behaviors for successful performance at work, motivation to change follows (Lockwood, Jordan, & Kunda, 2002; Lockwood & Kunda, 1997; 1999). By accepting the influence of successful behaviors, employees will be motivated to engage in effective work behavior. They will expend their energies in improving their work performance (Bandura, 1977a; 1986; Rich, 1997). Their heightened attention and task persistence, in turn, will likely promote job performance. By investing themselves more fully at work, engaged employees not only fulfill their tasks responsibly but also willingly extend their energies to perform tasks that are not required but contribute to organizational functioning (i.e., OCB). Work engagement is reflected by heedfulness and connectedness to work, forming a mental frame that encompasses a wider range of behaviors (Kahn, 1992; Rich et al., 2010). Work engagement is a predictor of task performance and OCB (e.g., Bakker & Demerouti, 2009, Saks, 2006; Salanova, Agut, & Peiró, 2005) and plays a more important role than traditionally important job attitude variables (e.g., Christian et al., 2011; Rich et al., 2010). A meta-analytic study showed that work engagement had a mean corrected correlation of .39 with other-rated task performance and had an incremental validity beyond other

job attitudes of job satisfaction, organizational commitment, and job involvement, explaining an additional 19% of variance of task performance (Christian et al., 2011)

In sum, I propose that work engagement will mediate the relationship between an individual's learning from coworkers and job performance. Learning from successful coworker in the group will lead to a highly effective motivating state of work engagement characterized by strong attention focus, intense absorption, and high energy toward the task, which in turn translates to job performance.

Hypothesis 7: Learning from coworkers will be positively related to job performance (task performance and OCB) through the mediating effect of work engagement.

Chapter Three: Methodology

Samples and Procedures

For this study, I collected survey data from bank tellers and insurance sales agents who worked at branches of a bank and an insurance company in a South Korean metropolitan area. About six months before I administered the survey, I interviewed managers at each company to first assess whether the organizational settings would be appropriate. I found that the organizational settings offered two advantages for testing my hypotheses of this study. First, both of them are highly competitive contexts where envy is a frequent experience among employees. This was important because I used a relatively short time period for the two survey administration (i.e., one month between Time 1 and Time 2 survey) to assess envy as a state as well as its influence on outcomes. In both contexts, employees perform similar jobs, so they have a solid basis for comparing their performance. Bank teller participants sell bank products, conduct financial transactions, and provide services for clients. Insurance sales agent participants contact clients, sell one or more types of insurance, and customize or devise products for clients.

For the purposes of my study, I felt that it was essential that employees from both companies were well aware of coworkers' performance. I was assured of that basic condition by noting that insurance sales agents have regular daily team meetings for reporting activities from the previous day, and bank tellers balance the branch accounts after hours. Both companies have electronic systems employees can use to track others' performance and progress. Insurance sales agents are required to input information about closed sales into an organizational information system. Bank tellers' performance,

training records, certificates, and award histories are accessible through an organizational information system. Each branch also ranks employee performance monthly.

Both organizational settings are highly social contexts where employees have abundant opportunities to observe how coworkers perform and behave at work. The bank tellers are seated close together, and can see or hear how other tellers interact with clients, how they assist other tellers, or how they interact with the branch manager. The insurance agents also work in an open space and interact with teammates frequently so that they can observe how other agents prepare their sales presentations, such as by studying changes in tax and commercial law to provide customized products or by taking clients out for golfing outings. They can also observe how their high-performing teammates interact with clients outside the branch because the team leader often pairs agents with high performers for training.

Employees in both companies work more or less interdependently, but they are essentially working for a common team goal of enhancing performance under the same supervisor (Bashshur, Hernández, & González-Romá, 2011; Kozlowski & Bell, 2003, Sung & Choi, 2012). Therefore, I focused on the team as the focal unit for studying envy in relation to other team members.

Before I interviewed managers to assess the appropriateness of the organizational settings for this study, I contacted one manager at each company; explained the study objectives, voluntary nature of participation, and survey procedures; and assured them of confidentiality. The managers then helped me recruit other managers at managerial-level meetings.

Employees filled out two-wave surveys at Times 1 and 2, and their supervisors (team leaders) evaluated subordinates' performance at Time 2. At Time 1, employees completed surveys about envy, core self-evaluation, perception of others' envy, and control variables including demographics. At Time 2, approximately four weeks after Time 1, employees completed items about learning (information processing), help received from coworkers, and work engagement. I also provided a roster for insurance sales agents to check or for bank tellers to write their friends' names to assess friendship network centrality. Supervisors evaluated their subordinates' task performance, OCBI, and taking charge behaviors. Each survey took less than 15 minutes to complete and participants were paid 15,000 Korean Won (about $15 USD) for each completed survey.

At Time 1, I contacted 229 employees from 30 teams (152 employees from 18 teams for the insurance company; 77 employees from 12 teams for the bank). Among these, 220 employees from 30 teams (148 employees from 18 teams for the insurance company; 72 employees from 12 teams for the bank) participated in the first survey yielding a 96% participation rate (97% participation rate for the insurance company; 94% participation rate for the bank). At Time 2, I contacted those who participated in the Time 1 survey and their team leaders. All completed the second survey.[2] Missing data on the study variables reduced the sample size for the main analysis to 207 employees in 30 teams which includes 1,588 dyadic level data (e.g., A envies B; B envies A; A envies C). Team sizes ranged from 2 to 14 ($M = 9.04$, $SD = 3.70$). The average age was 36.89-years-old ($SD = 6.33$) and the average organizational tenure was 3.31 years ($SD = 3.78$). About

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[2] I suggest two reasons for the high participation rate. First, I had already conducted previous studies using the same participants, so they may have felt that they could trust me. Second, I paid them the equivalent of about $15, which is relatively high pay for completing survey questionnaires in Korea and may have motivated participation.

51% of the participants were women. Most (88.41%) had a bachelor's degree; 8.21% had a degree from a two-year college; and 3.38% had completed high school.

Measures

I followed Brislin's (1990) translation-back-translation procedures to translate original survey items from English to Korean. I took several steps to ensure the accuracy and acceptability of the translation. First, I translated the original English survey items to Korean. Next, a bilingual individual not affiliated with this study conducted a back-translation. The two parties then followed an iterative process to identify and resolve areas of concern.

I used a roster method to measure variables of envy, perception of envy, receipt of help, learning, and a control variable of admiration across employees' dyadic relationships within a team. I repeated the same questions for these variables under each team member's name already written or printed on the questionnaire. Participants answered all questions except the ones appearing under their own names. In studies relying on the roster method in which respondents answer the same questions regarding each coworker, multi-item scales are preferable, but researchers use single-item scales more often because of time constraints, fatigue, and poor response rates common in multi-item scales (Ferrin et al., 2006; Marsden, 1990; Umphress, Labianca, Brass, Kass, & Scholten, 2003; Venkataramani & Dalal, 2007; Venkataramani, Green, & Schleicher, 2010; Zagenczyk et al., 2010). Single-item scales measured receipt of help and the control variable of admiration. Following the suggestion that researchers provide unambiguous information for single-item measures (Sackett & Larson, 1990), I provided detailed explanations when measuring receipt of help (see Ferrin et al., 2006). The full

survey items are shown in Appendix I. Unless otherwise noted, participants responded to five Likert-type response options ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

Envy measures

A's Envy of B (Time 1; dyadic level). Envy was assessed with a four-item scale by Schaubroeck and Lam (2004). Participants were asked how they felt about each coworker on the team during the past few weeks; for example, "It is so frustrating to see this coworker succeed so easily," "Feelings of envy about this coworker constantly torment me," and "Frankly, his/her success makes me resent him/her." The coefficient alpha of the envy scale was .88.

B's Perception of A's Envy (Time 1; dyadic level). Perception of coworkers' envy was assessed with a three-item scale by Vecchio (2005). The measure was previously validated among a sample of first-level supervisors showing that other variables such as job satisfaction and leader–member exchange are distinctly associated with feelings of envy toward coworkers (see Vecchio, 2005). Participants reported their experience of perceiving that others envied them during the past few weeks. The three items are: "Because of my success at work, I am sometimes resented by this coworker," "This coworker is envious of my accomplishments," and "Because of the closeness of the working relationship I have with my supervisor, I am sometimes resented by this coworker." The coefficient alpha of the being envied scale was .83.

Mediators

A's Learning from B (Time 2; dyadic level). Learning was assessed with a three-item information processing scale by Van Kleef and colleagues (2004; 2013). The original items measure the degree of systematic and deliberate information processing

about the negotiation partner. I adapted the items to properly assess information processing about another employee in the workplace setting. Participants were asked whether they attended to and reflected on a colleague's behavior and whether they thought about how to change their behaviors during the past month. The items are: "I pay attention to carefully observing this coworker's behavior" (original item: "carefully monitor the behavior of my opponent"); "I reflect on this coworker's behavior" (original item: "reflect on how to use information about my counterpart"), and "I think about how to change some of my behaviors in accordance with this coworker's behavior" (original item: "think about how to modify my behavior in accordance with information about my counterpart"). The coefficient alpha of the learning scale was .98.

Work Engagement (Time 2). Work engagement was measured with a 15-item scale by Rothbard and Patil (2011). The scale consists of three components of attention (4 items), absorption (5 items), and energy (6 items). Attention and absorption scales were originally developed by Rothbard (2001). Sample items for attention are: "I focus a great deal of attention on my work," "I concentrate a lot on my work," and "I pay a lot of attention to my work." Sample items for absorption are: "When I am working, I am completely engrossed by my work," "When I am working, I am totally absorbed by it," and "Nothing can distract me when I am working." Energy was assessed with six items originally developed by Rich and colleagues (2010). The items are: "I work with intensity on my job," "I exert my full effort to my job," and "I devote a lot of energy to my job." The coefficient alpha of the work engagement scale was .98. Participants responded to seven Likert-type response options ranging from 1 *(strongly disagree)* to 7 *(strongly agree)*.

Moderators

  Core Self-evaluation (Time 1). The personal trait of core self-evaluation was measured using Judge, Erez, Bono, and Thoresen's (2003) 12-item scale. Sample items are: "I am confident I get the success I deserve in life," "When I try, I generally succeed," and "Sometimes I do not feel in control of my work (reverse coded)." The coefficient alpha of the work engagement scale was .91. Participants responded to seven Likert-type response options ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

  Help Provided from B to A (Time 2; dyadic level). To avoid potential common method bias, helping was measured in terms of the degree of received help using the coworker OCBIs scale (Ferrin et al., 2006). Smith, Organ, and Near (1983) developed the measure based on the OCB-altruism scale. Participants were asked if they received help during the past month using a single-item question with examples: "This coworker gives me assistance beyond what his or her job role requires. For example, he or she (1) helps me when I have a heavy work load or am absent; (2) helps me with my work even though it's not required; or (3) gives me innovative suggestions."

  A's Friendship Network Centrality (Time 2). Preliminary interviews before the survey administration revealed that bank tellers had friends only within their bank branch workgroup, whereas insurance sales agents had friends outside their workgroup as multiple workgroups are located within the branch. Following previous studies (e.g., Toegel, Anand, & Kilduff, 2007; Zagenczyk et al., 2010), insurance company participants were asked to identify and mark the names of friends using lists of branch employees. Bank participants were asked to write down the names of employees they consider friends. Following Zagenczyk and colleagues (2010), I asked, "Whom would

you consider to be your friends? Friends are people with whom you might choose to see

socially outside of work or when you are not working together." The answers were binary

coded (0 = not friend, 1 = friend) (Marsden, 1990) only for reciprocated ties (i.e., A and

B should nominate each other as a friend) and centrality in friendship network was

calculated by aggregating the scores for reciprocated ties with regard to each coworker

and then dividing it by the total number of possible network ties (i.e., branch size minus

one for the insurance company; team size minus one for the bank) (Barsness, Diekmann,

& Seidel, 2005).

Dependent Variables

Task Performance (Time 2; supervisor-rated). Task performance was

measured with a four-item role-based performance scale by Welbourne, Johnson, and

Erez (1998). Supervisors rated employees' performance during the past month in relation

to their job description. Sample items are: "This employee's quality of work output is...,"

"This employee's accuracy of work is…," and "This employee's customer service

provided (internal and external)…" The coefficient alpha for the task performance scale

was .99. Supervisors responded to five Likert-type response options, with 1 = *needs much*

improvement, 2 = *needs some improvement*, 3 = *satisfactory*, 4 = *good*, and 5 = *excellent*.

OCB (Time 2; supervisor-rated). During the preliminary interview, managers

from the two companies explained that they value employees' interpersonal, cooperative

behaviors such as backing up other tellers who have a high workload and giving advice to

other agents who have poor sales. Both managers also noted that they value constructive

challenges to procedures such as reporting problems regarding insurance sales or the

monthly goal-setting procedures with supervisors, although employees are not required to

make such suggestions. As a result, I included two forms of OCBs; an affiliative form (OCBI) and a challenging form (taking charge). OCBI was assessed with three items from previous studies (Coleman & Borman, 2000; Tsai, Chen, & Liu, 2007). Supervisors rated employees' altruistic behaviors toward other team members during the last month. Items are: "This employee helps other team members," "This employee cooperates with other team members," and "This employee assists other team members with personal matters." The coefficient alpha of this scale was .98. Taking charge was assessed with three items from Grant, Parker, and Collins (2009). Supervisors rated employees' constructive efforts for organizational functional changes during the last month. Items are: "This employee often tries to bring about improved procedures for the work unit or branch," "This employee often tries to institute new work methods that are more effective for the branch," and "This employee often tries to implement solutions to pressing organizational problems." The coefficient alpha of this scale was .97.

Control Variables

Based on a review of the relevant literature, I controlled variables that could provide alternative explanations. I controlled for age, gender, and tenure because those variables may influence perceptions of social comparisons, interactions, and status (Duffy, Ganster, Shaw, Johnson, & Pagon, 2006; Duffy et al., 2012; Lakey & Cassidy, 1990), and job performance (Kidder, 2002; Ng & Feldman, 2008; 2010). I controlled for team size because it may influence group processes (Richter, West, van Dick, & Dawson, 2006; Tse, Lam, Lawrence, & Huang, 2013) and for negative affectivity because it represents general tendencies to experience negative emotions and is associated with envy (Duffy et al., 2012). Negative affectivity may also be related to perception of being

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envied because it causes individuals to perceive others and their behaviors less favorably

(Forgas & Bower, 1987; Forgas, Bower, & Krantz, 1984). Negative affectivity was

measured with the Positive and Negative Affect Schedule (PANAS; Watson, Clark, &

Tellegen, 1988). Participants reported their general feelings based on ten negative

adjectives (e.g., irritable, distressed, upset, hostile, and jittery). The coefficient alpha for

this scale was .84. The items had five Likert-type response options from 1 (*usually do not*

feel this way) to 5 (*usually feel this way*). Second, I controlled for admiration about

coworkers. Envy can change to admiration (Schaubroeck & Lam, 2004; Parrott, 1991),

and it is possible to both envy and admire others (Fiske, Cuddy, Glick, & Xu, 2002).

Although admiration has no motivating effect on performance, admiration has a .28

correlation with malicious envy (Van de Ven et al., 2011). Participants reported their

admiration for each coworker during the past few weeks using a single-item of "I feel

admiration for this coworker." Organizational membership was also controlled because

analysis of variance showed significance differences on the study variables between the

two organizations. Thus, I created a dummy variable (coded 0 for the insurance company,

coded 1 for the bank) and controlled for the effect of the organizational membership.

Analysis Strategy

Hypotheses 1-6 include relationships at the dyadic level. To test these hypotheses,

I conducted a hierarchical linear modeling of social relations model (SRM; see Kenny,

1994; Snijders & Kenny, 1999). SRM is one form of multilevel analysis that considers

different sources of variance existing in the nested data where individuals are nested

within dyadic relationships and teams. SRM produces both random and fixed effects

coefficients. The random effects represent different sources of variance that are

attributable to actor (e.g., envier A), target (e.g., envied target B), dyad (e.g., A-B or B-A as a pair), and team. The fixed effects represent the relationships between independent and dependent variables that are interpreted in the same way as unstandardized regression coefficients in ordinary regression analysis (for examples see de Jong et al., 2007; Lam, Van der Vegt, Walter, & Huang, 2011; Tse et al., 2013). Specifically, I tested Hypotheses 1-6 using MLwiN 2.30 computer package (Rasbash, Browne, Healy, Cameron, & Charlton, 2014). Hypothesis 7 predicts relationships at the individual level—whether learning from coworkers relates to job performance via work engagement. To test Hypothesis 7, I performed hierarchical linear modeling (HLM) analyses with STATA 12.0 (Rabe-Hesketh, & Skrondal, 2008). To facilitate interpretation of results and obtain an unbiased estimate of envy and core-self-evaluation cross-level interactions, I followed recommendations (Enders & Tofighi, 2007; Hofmann & Gavin, 1998); that is, I centered Level 1 (dyadic level) predictors of envy, admiration, received help, and perception of being envied around the person's mean, and grand-mean centered the remaining predictors, except for gender and organizational membership.

Chapter Four: Results

Table 1 shows descriptive statistics and correlations among the study variables when values for the individual-level variables were disaggregated to each dyadic level data for the same individual. A's envy of B was negatively correlated with A's learning from B (-.30, $p < .01$), A's admiration of B (-.13, $p < .01$), and core self-evaluation (-.20, $p < .01$), and positively correlated with B's perception of A's envy (.32, $p < .01$). A's learning from B was positively related with work engagement (.38, $p < .01$), task performance (.23, $p < .01$), taking charge (.39, $p < .01$), and OCBI (.35, $p < .01$). B's perception of A's envy was negatively related with help provided from B to A (-.23, $p < .01$).

Variance Partitioning

Social relations modeling decomposes variance that can be attributable to actor, partner, dyads, or teams. Before testing the hypotheses, I checked how much variance of dependent variables can be explained by the characteristics of the actor, the partner, the dyad, and the team by running a "null" model that includes only the organizational membership predictor. As Table 2 shows, 37% of the variance in A's learning from B was attributable to dyadic effects, 11% to actor effects, 19% to partner effects, and 31% to group effects. In terms of B's perception of A's envy, 57% of the variance was attributable to dyadic effects, 4% to actor effects (i.e., envier), and 38% to partner effects (i.e., envied person).[3] In terms of help provided from B to A, 56% of the variance was attributable to dyadic effects, 3% to actor effects (i.e., receiver of help), 27% to partner effects (i.e., provider of help) and 15% to group effects. The results show that specific

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[3] Variance in B's perception of A's envy was not attributable to group effects, but that often occurs in social relations modeling (see de Jong et al., 2007; Kenny, Mannettii, Pierro, Livi, & Kashy, 2002).

relationships between the actors and the partners can explain a substantial portion of the variance in these variables measured at the dyadic level.

Response Bias Checks

To check potential response bias, I conducted a logistic regression analysis. I compared those removed because of missing data on the study variables (coded as 0, $N =$ 164, 13 individuals) with those included in the final analysis sample (coded as 1, $N =$ 1588, 207 individuals) on a range of variables that have no missing data. I used the coded dichotomous variable as a dependent variable and team size, gender, tenure, negative affectivity, organizational membership, task performance, OCBI, and taking charge as predictors in the logistic regression. Only tenure was significant: those with lower tenure were more likely to be included in the final sample than those with higher tenure (odd ratio = .93 < 1, $p < .05$). Tenure was included as a control in the analyses.

Hypothesis Tests

Hypothesis 1 predicted that A's envy of B will be positively related to A's learning from B. As Model 2 of Table 3 shows, after control variables were added, A's envy of B was not significantly related to A's learning from B (-.04, *n.s.*). Therefore, Hypothesis 1 was not supported. Hypothesis 2 predicted that A's core self-evaluation will strengthen the positive relationship between A's envy of B and A's learning from B. Model 3b of Table 3 shows that the interaction term between A's envy of B and A's core self-evaluation was significant and positive (.16, $p < .01$). To further examine the patterns of the interaction, I plotted simple slopes of the relationship at high (+1 *SD*) and low (-1 *SD*) levels of A's core self-evaluation (Aiken & West, 1991). As Figure 2 shows, A's envy of B was positively related to A's learning from B when A was high in CSE

(simple slope = .09, *p* < .05), whereas the relationship was negative when A was low in CSE (simple slope = -.14, *p* < .01). Therefore, Hypothesis 2 was partially supported: the nonsignificant main relationship became positive when A was high in CSE but became negative when A was low in CSE.

Hypothesis 3 predicted that A's envy of B will be positively related to B's perception of A's envy. Table 4 presents the result of the analysis supporting Hypothesis 3. Model 2 of Table 4 shows that A's envy of B was positively related to B's perception of A's envy (.12, *p* < .01).

Hypothesis 4 predicted that B's perception of A's envy will be positively related to help provided from B to A. Hypothesis 5 predicted that this positive relationship will be strengthened when A has many mutual friendship ties at work. Table 5 shows the results of this hypothesis testing. As Model 2 of Table 5 shows, B's perception of A's envy was not related to help provided from B to A (.01, *n.s.*). In Model 4, the interaction term between B's perception of A's envy and A's friendship network centrality was positive but not significant (.10, *n.s.*). Therefore Hypotheses 4 and 5 were not supported.

Hypothesis 6 predicted that help provided from B to A will strengthen the positive relationship between A's envy of B and A's learning from B. Table 3 shows the results of this hypothesis testing. As Model 4b of Table 3 shows, the interaction term between A's envy of B and help provided from B to A was positive and significant (.10, *p* < .05). To further examine the patterns of the interaction, I plotted simple slopes of the relationship at high (+1 *SD*) and low (-1 *SD*) levels of help provided from B to A (Aiken & West, 1991). As shown in Figure 3, A's envy of B was negatively related to A's learning from

B when B provided low help to A (simple slope = -.12, $p < .01$), but the relationship was not significant when B provided high help to A (simple slope = -.00, *n.s.*). Although the interaction effect was significant, the specific pattern of interaction was somewhat inconsistent with the hypothesized pattern. Therefore, Hypothesis 6 was partially supported.

Hypothesis 7 predicted that A's learning from coworkers will be positively related to job performance via the mediation of work engagement. To aggregate learning scores regarding each teammate up to the individual level and to test the mediation hypothesis at the individual level, I first checked whether the aggregation of learning scores up to the individual level can be justified. The results of ANOVA analysis showed a significant variance between individuals with regard to A's learning from B ($F (206, 1381) = 17.07$, $p <. 01$). In addition, as Table 2 shows, 11% of the variance in learning is attributable to individual differences. The intraclass correlation coefficients ($ICC_1 = 0.68$, $ICC_2 = 0.94$) also exceeded values reported in the literature (cf. Bliese, 2000). Therefore, I tested mediation at the individual level while taking into account its nested structure within teams using hierarchical linear modeling (HLM).

Table 6 shows the results of testing Hypothesis 7. As Model 2 shows, A's aggregated learning from coworkers was positively related to work engagement (.35, $p < .05$). In addition, work engagement was positively related to task performance (in Model 4, .85, $p<.01$), OCBI (in Model 6, .55, $p < .01$), and taking charge (in Model 8, .54, $p < .01$). To test the significance of indirect effects of aggregated learning on the three performance outcomes via work engagement, I bootstrapped 1,000 samples and obtained bias-corrected confidence intervals. The three indirect effects were all

significant and its 95% confidence intervals did not include zero (for task performance: .29, 95% CI [.10, .71]; for OCBI: .19, 95% CI [.07, .46]; for taking charge, .19, 95% CI [.06, .47]).

Supplemental Analyses

As reported, the interaction effect of B's perception of A's envy and A's friendship network centrality was not significant in predicting help provided from B to A (Hypothesis 5). As a supplemental analysis, I ran the analysis using mutual friendship between A and B as a moderator by coding the mutual friendship 1 if both A and B nominated each other as a friend and 0 otherwise.[4] As Model 4 of Table 7 shows, mutual friendship between A and B had a significant moderating effect on the relationship between B's perception of A's envy and help provided from B to A (.18, $p < .01$). Figure 4 shows the interaction pattern. The relationship between B's perception of A's envy and help provided from B to A was positive and significant when A and B were friends (simple slope = .15, $p < .05$), but nonsignificant when A and B were not friends.

Hypothesis 7 was supported in that the indirect effect of A's learning from coworkers on job performance via work engagement was positive and significant. It is possible that A's learning from B directly influenced and contributed to performance via work engagement rather than the aggregated learning from coworkers at the individual level. I checked this possibility by testing upward influence or bottom-up effect. That is, a variable at a lower level (i.e., A's learning from B) predicts a mediator (i.e., work engagement) and a dependent variable (i.e., job performance) at a higher level (1-2-2 mediation model; see Preacher et al., 2010). I ran multilevel structural equation modeling

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[4] Results were identical when I considered only whether B perceives A as a friend and used this variable as a moderator in the relationship.

(MSEM) using a macro for the 1-2-2 mediation model (Preacher, Zyphur, & Zhang, 2010) by additionally taking into account the three-level structure of my dataset (i.e., dyadic relationships are nested within individuals who again are nested within teams). As Model 1 of Table 8 shows, the path from A's learning from B to work engagement was not significant (-.17, *n.s.*), and the path from work engagement to task performance was positive and significant (.90, $p < .01$). The indirect effect of A's learning from B on task performance via work engagement was not significant (-.15, *n.s.*, 95% CI [-1.04, .73]). As for OCBI, in Model 2 the path from A's learning from B to work engagement was not significant (-.26, *n.s.*), and the path from work engagement to OCBI was significantly positive (.58, $p < .01$). The indirect effect of A's learning from B on OCBI via work engagement was not significant (-.15, *n.s.*, 95% CI [-.62, .32]). As for taking charge, Model 3 shows that the path from A's learning from B to work engagement was not significant (-.26, *n.s.*) and the path from work engagement to taking charge was significantly positive (.59, $p < .01$). The indirect effect of A's learning from B on taking charge through work engagement was not significant (-.15, *n.s.*, 95% CI [-.61, .31]).

Possibly envy contributes to performance as a counterfactual by triggering prevention focus ("I don't want to lose again") or prompting promotion focus ("play to win"). These possibilities were checked with MSEM by using prevention focus and promotion focus as two mediators between envy and job performance. Prevention and promotion focus were measured with an 18-item scale developed by Neubert, Kacmar, Carlson, Chonko, and Roberts (2008). Specifically, I ran 1-(2, 2)-2 MSEM where envy at the dyadic level (level 1) predicts prevention focus and promotions focus at the individual level (level 2) which in turn relates to performance (level 2) while taking into account

that individuals are nested within teams (level 3). Table 9 presents results of this analysis.

As Table 9 shows, A's envy of B was not related to either prevention or promotion focus

in the models. Prevention focus was positively related to all three job performance

variables (for task performance: .59, $p < .01$; for OCBI : .43, $p < .01$; for taking

charge: .39, $p < .01$). Promotion focus was positively related only to OCBI (.24, $p < .10$).

The results yielded insignificant indirect effects of A's envy of B on performance

outcomes via prevention focus and promotion focus.

It is also possible that envious employees try to develop new skills over the longer

term (mastery goal orientation), strive to demonstrate skills they already have

(performance-prove orientation), or work to avoid appearing to lack skills or to be

incompetent (a performance-avoid orientation). I analyzed 1-(2, 2, 2)-2 MSEM to

examine whether the three types of goal orientations (level 2) mediate the relationship

between A's envy of B envy (level 1) and job performance (level 2). I measured goal

orientations with a 13-item scale by VandeWalle (1997). Table 10 shows the results for

this analysis. In any of the three models, A's envy of B was not significantly related to

any of the three goal orientations. Performance-prove orientation (PGO) was positively

related to all three job performance variables (for task performance: .82, $p < .01$; for

OCBI : .51, $p < .01$; for taking charge: .40, $p < .01$). These results produced insignificant

indirect effects of A's envy of B on performance outcomes via goal orientations.

The results for Hypothesis 3 showed A's envy of B to be positively related with

B's perception of A's envy. In one of the above supplemental analyses, I also found that

B's perception of A's envy was positively related to help provided from B to A when A

and B were friends. I further checked a possibility that received help is another

mechanism that explains why envy contributes to performance. Receiving help from teammates has been shown to increase willingness to work with others and share information and resources, thereby enhancing job performance (Lee & Ashforth, 1996; Tse, Lam, Lawrence, & Huang, 2013). I first checked whether the aggregation of received help up to the individual level is appropriate. The results of ANOVA analysis showed a significant variance between individuals with regard to received help from a teammate (F (206, 1381) = 7.60, $p < .01$). In addition, as Table 2 shows, 4% of the variance is attributable to recipients of help. The intraclass correlation coefficients (ICC_1 = 0.46, ICC_2 = 0.87) also exceeded values reported in the literature (cf. Bliese, 2000). Therefore, I used the aggregated score of received help to predict performance at the individual level. As Table 11 shows, A's received help from coworkers was positively related to task performance (.38, $p < .10$), OCBI (.48, $p < .01$), and taking charge (.38, $p < .05$) supporting a possibility that received help from coworkers is another mechanism that explains envy's functional effect on performance.

Chapter Five: Discussion

In this study, I develop and test a model to illustrate the functional role of workplace envy. Specifically, drawing on counterfactual theory (Coricelli & Rustichini, 2010; Epstude & Roese, 2008) I propose that envy as a social, upward counterfactual emotion motivates envious employees to observe and learn the behavior of envied teammates and consequently are engaged at work and perform better. I also theorize personal and situational factors that facilitate enviers' learning by proposing that envious employees who are high in core self-evaluation or receive more help from the envied target are more likely to learn from the target. To better understand how envy may encourage targets to help enviers, I draw on theory that regards emotion as a driver of social influence (Hareli & Rafaeli, 2008) and propose that interpersonal dynamics will cause envied targets to help enviers because the target, perceiving the envy, is motivated to appease it by providing help. I propose that envied targets will provide more help to enviers especially when enviers have high social power as a result of having many friends at work.

The results do not support the main relationship prediction that envious employees are more likely to learn from envied targets. However, the results partially support the prediction that personal and situational factors moderate the envy–learning relationship. Envy was positively related to learning when enviers had high core self-evaluation but negatively related to learning when they had low core self-evaluation. The envy–learning relationship was negative when enviers received less help from targets, but the negative relationship was attenuated when targets gave more help. The results confirm that targets perceive envy directed toward them, but that does not mean that they

provide more help to enviers. Envied employees' help toward the enviers was also not influenced by whether enviers have many friends at work or not. Last, enviers' learning from team members enhanced their engagement and work performance.

Theoretical Implications

This study contributes to two broad recent research streams on envy and emotion. The first contribution is to examine the mechanism and conditions by which envy conveys adaptive benefits. Positive emotions play a functional role by facilitating tendencies to approach and broaden attention (Fredrickson, 2001; Fredrickson & Branigan, 2005). Negative emotions are not inherently dysfunctional, however; they can be protective by focusing our attention on imminent threats so that we take actions to counter dangers (Frijda, 2005; Izard, 2001). Although employees can suffer pain when they perceive that others have what they desire, they can deal with unfavorable social comparisons either positively or negatively: they can work to improve their social position or they can try to damage the envied target's position. Because envy can cause negative reactions, it has been generally understood as a destructive emotion. Characterizing envy solely as a dysfunctional emotion in which individuals focus on suppressing or avoiding envy is problematic, however, because it fails to recognize that envy is potentially functional. Drawing on counterfactual theory (Coricelli & Rustichini, 2010; Epstude & Roese, 2008), this study suggests that individuals can deal with envy constructively if they use it as an opportunity to learn from the successful envied targets. By investigating why envy can enhance performance, I advance recent literature that is beginning to recognize that envy may generate positive outcomes (e.g., Cohen-Charash, 2009; Schaubroeck & Lam, 2004; Van de Ven et al., 2011).

Based on counterfactual theory and evidence that envy may positively affect performance (e.g., Cohen-Charash, 2009; Schaubroeck & Lam, 2004; Van de Ven et al., 2011), I hypothesize that envy has a functional effect by provoking learning. The insignificant main effect I find in the envy–learning relationship may possibly have occurred because threat-oriented and action-oriented tendencies may have opposing effects that cancel one another out in affecting learning. Envy may motivate enviers to learn about the envied target's successful strategies but observing successful targets may remind enviers of their inferiority, which may then aggravate negative feelings toward the target and elicit destructive rather than constructive reactions, such as undermining the target or venting anger. Envy has often been associated with injustice perceptions (Schaubroeck & Lam, 2004). Thus, rather than making additional efforts, enviers may try to restore the balance by reducing their input compared with their outcome (Tai et al., 2012). It is, however, too early to draw this conclusion because the research on envy's functional effects is still in its embryonic stage. It is also important to consider that the potential offsetting effects may be limited to information processing and not to other outcomes or other types of learning behavior.

Although I find no main relationship between envy and learning, I find significant moderating effects of personal and situational factors that I hypothesized would facilitate enviers' learning. First, I find that enviers with high CSE respond to their envy more constructively so that they learn from the target rather than from other coworkers. Interestingly, employees with low CSE learned less from the envied targets than they learned from other coworkers and therefore failed to fully take advantage of the learning opportunity. In line with previous studies (Judge & Hurst, 2007; 2008), the results

suggest that high-CSE individuals are better able to capitalize on opportunities when envy, although painful, directs their attentional and cognitive resources toward the successful target, but only enviers with high CSE capitalize on the learning opportunity. Enviers who have low CSE may have difficulty facing and overcoming envy because they feel inferior and lack psychological resources and resilience. This also aligns with previous findings that low CSE individuals use less problem-solving coping and more avoidance coping (Kammeyer-Mueller et al., 2009).

Second, regarding help received from envied targets, although received help moderated the envy–learning relationship, I failed to find the hypothesized interaction pattern. That is, envy and learning were not positively related when envied targets provided a high degree of help. Apparently, a high degree of received help is not powerful enough to encourage enviers to learn more from the target but instead the help attenuates the envy–learning relationship by preventing enviers from turning away from the envied targets as useful learning sources. I proposed that if envied targets gave a high degree of help, then enviers might like the target better, and those positive feelings would facilitate learning. However, help from the target may reduce the enviers' negative attitudes but still fail to generate positive attitudes. It is also possible that when enviers dislike targets, they may interpret the help as an insincere self-enhancement effort to make the envier look bad (Tepper, Duffy, Hoobler, & Ensely, 2004; Yun et al., 2007). Another explanation is based on the threat-to-self-esteem model (Fisher, Nadler, & Whitcher-Alagna, 1982). That is, if envied targets appease envy by providing unsolicited help, enviers may react negatively because the imposed help decreases recipients' freedom of choice about how they want to work.

In explaining how envy contributes to job performance in certain conditions, information processing about teammates plays a key role. Although accurate and deep understanding about successful teammates can be an important step for learning to succeed, the effects of systematic information processing are limited in the context of negotiation (e.g., Van Kleef et al., 2013) and group-decision making (e.g., Scholten, van Knippenberg, Nijstad, & De Dreu, 2007; Winquist & Larson, 1998). This study expands our understanding about the role of information processing to the context of envy–performance by showing that envy influences how we use our attentional and cognitive resources to accurately understand envied targets, and this information processing about teammates contributes to job performance.

The second contribution is that I examine interpersonal dynamics in envier–envied relationships. A recent theory of emotion cycles (Hareli & Rafaeli, 2008) suggests that envy may drive social influence in organizations. That is, envied targets perceive the envy, which then influences their thoughts and actions and in turn influences enviers' behavior. Envy has been typically studied as one-directional, within-person experiences in which, for example, enviers undermine coworkers. Finding that targets sharply perceive envy is an important finding because it suggests that we must consider targets' reactions. For instance, enviers might be more likely to undermine targets if targets react unwisely and aggravate the hostility.

Unlike previous findings from a lab study showing that envied targets used more prosocial behavior toward enviers (e.g., Van de Ven et al., 2010), I failed to find a significant relationship between perceptions of being envied and the likelihood of helping the envier. One possible reason for the insignificant finding is that providing help in

organizations costs time and energy, potentially impairing the helper's performance. According to a theory of cognitive resource allocation (Kanfer & Ackerman, 1989), performance is largely determined by the amount of allocated cognitive resources. Field studies have shown that when employees spend time helping teammates, the employees perform at lower levels (e.g., Barnes et al., 2008; Mueller & Kamdar, 2011). In the lab study by Van de Ven and colleagues (2010) the costs for helping behavior (i.e., picking up erasers, giving advice) could be minimal as it does not sacrifice subsequent performance or reward received. A second possible reason is that helping coworkers requires more careful approaches because of repeated interactions at work. As noted, recipients of helping may suspect that the helper is insincere, which can damage the interpersonal relationship. Because envied coworkers risk the potential that they will make envious colleagues look bad and feel inferior, they may be reluctant to offer help.

In addition, I find that enviers' friendship network centrality has no significant moderating effect on the relationship between perceptions of being envied and help provided to the envier. The reasoning behind the hypothesis was that envied targets may fear envy from those with high social power as indicated by having more friends at work for sharing negative information about the envied employees—and thus be motivated to appease envy by providing help. However, a more powerful condition may prompt envied targets to help; rather than fear of social power, the impetus may be the direct relationship between the envier and the target. For instance, a motivation for helping an envious employee may come from a desire to maintain a good relationship with a personally valued friend. As noted, helping envious employees requires a careful approach. Friendship between the envied and the envier may encourage the envied

employee to use helping in reaction to envy, because friends share trust-based

relationships that usually involve help exchanges.

Practical Implications

Many organizations use human resource practices that induce social comparison

and that contribute to organizational effectiveness (Duffy & Lee, 2010; Shaw et al., 2009).

For instance, "best practice" HR practices include performance-based pay which

inevitably induces envy among employees. However, many organizations consider envy

to be a dysfunctional emotional experience, and many managers are reluctant to

recognize its existence (Menon & Thompson, 2010). Researchers have suggested that to

counter the detrimental effects of envy on individuals and groups, managers should try to

avoid it by assigning distinct tasks, rotating duties, and alternating leadership roles to

minimize bases for social comparison (Menon & Thompson, 2010; Ochstein, 2007).

My findings suggest a different approach. Envy also has a positive side and can

be a trigger for employees to learn and develop their full potential. Instead of treating

envy as a toxic destructive emotion and trying to remove the triggers of envy,

organizations should recognize its envy's functional potential and focus on how to utilize

envy wisely so that it plays a constructive role in enhancing performance. For example,

during performance appraisal, managers can discuss an employee's weakness in relative

to other high performing coworkers and use envy for learning and development. To

maximize the functional effect of envy, organizations can select employees who are high

in CSE, or managers can instill positive self-regard among employees through coaching

and feedback because high CSE employees have the potential to perform well (Chang,

Ferris, Johnson, Rosen, & Tan, 2010) and also may thrive on envy. In addition, helping

prevents enviers from turning away from targets who could be useful learning sources

and it also directly promotes engagement and performance. Managers should develop

employees' social identification and foster pride and respect about their group (Blader &

Tyler, 2009) so that while they compete against one another, they also see benefits from

cooperating and developing together. In addition, friendship among employees could be

beneficial as it makes it more likely that envied employees will help envious employees

when they are friends. Organizations can sponsor social events or team outings to

promote friendships among team members (Bowler & Brass, 2006).

Limitations and Future Directions

This study has some limitations. First, the time frame is an issue in studying and

measuring outcomes of emotions. In this study, one month after I assessed envy I

measured outcomes of envy—learning, work engagement, and performance. Possibly

envy effects might dissipate or change into other emotions over time. For instance,

individuals may have felt guilty about their envy of coworkers and then may have denied

or suppressed it, which could have weakened the observed effect of envy in this study.

Evidence, however, suggests that even with a longer time framework, the theorized effect

of envy lasts. For instance, envy was shown to be positively related with social

undermining after 4 months in one study and after 8 months in another (Duffy et al.,

2012). A study of performance effects showed that envy about coworkers' promotions

predicted job performance at 4 months after envy was measured (Schaubroeck & Lam,

2004). Future studies that further examine the outcome of envy with different time

designs will be fruitful. For example, researchers should examine how individuals

regulate the painful emotion of envy over time and identify who will be more likely to

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hoard envy. In addition, researchers may want to use longitudinal designs involving several data points of performance to determine whether envious employees perform worse as they try to learn and adopt new successful behaviors and what factors might help them overcome the deficits and improve their performance in the long term.

Second, I collected data from South Korea, which is characterized as a collectivistic culture (Hofstede, 2001). It is possible that Korean employees who value interpersonal harmony and solidarity may suppress negative emotions about teammates, such as envy, which would have weakened the observed functional effect of envy on learning. It is also plausible that employees from a collectivistic culture use envy more constructively by learning teammates' exemplary behaviors and contributing to team effectiveness. Further research should examine whether the findings of this study are generalizable to individualistic culture settings. Although empirical studies from both collectivistic and individualistic cultures are few, they seem to agree that envy has a functional effect on performance (e.g., Schabroeck & Lam, 2004; Van de Ven et al., 2011). Indeed, I find empirical support in a collectivist culture for a theory about envy that was developed in an individualistic culture, which bolsters the potential that the findings are generalizable across cultures.

Third, I focused on one under-examined positive mechanism of envy theorizing—that enviers look to targets to learn successful behaviors and perform better. Considering evidence that enviers sabotage their coworkers (e.g., Cohen-Charash & Mueller, 2007; Duffy et al., 2012), it is possible that enviers can increase their relative performance standings by pulling others down. The supplemental analyses showed that alternative mechanisms including learning orientation and regulatory focus were not linked to envy.

However, future studies should examine other functional mechanisms of envy that I did not consider in this study and integrate both positive and negative mechanisms to provide a full picture of how envy relates to performance.

Lastly, employees may envy coworkers for various reasons such as good looks, fortune, or personal attributes. Given that workplace success has important implications for employees' self-evaluation at work (Tesser, 1988), I focused on envy about work workplace success and measured it with a validated scale (Schaubroeck & Lam, 2004). Studies on envy for reasons beyond workplace success, however, would be an interesting avenue for future research.

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Table 1. Descriptive Statistics and Correlations for Study Variables

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Individual-level variables																		
1. Organizational membership	0.20	0.40																
2. Teamsize	10.75	3.34	-0.61															
3. Age	37.57	6.28	-0.37	0.31														
4. Gender	0.42	0.49	0.44	-0.37	-0.09													
5. Tenure	2.84	3.23	0.66	-0.32	0.02	0.26												
6. Negative affectivity	2.18	0.55	0.05	-0.07	-0.13	0.06	-0.05											
7. Core self-evaluation	4.48	0.69	0.21	-0.14	-0.10	0.13	0.16	-0.31										
8. Friendship network centrality	0.13	0.15	0.17	-0.33	-0.14	0.08	0.20	0.00	0.03									
9. Work engagement	4.04	1.08	0.44	-0.42	-0.23	0.13	0.29	-0.05	0.29	0.29								
10. Task performance	3.29	1.09	0.26	-0.22	-0.14	0.06	0.18	-0.06	0.30	0.25	0.75							
11. Taking charge	2.44	1.05	0.46	-0.38	-0.17	0.09	0.33	-0.06	0.22	0.32	0.66	0.62						
12. OCBI	2.91	0.96	0.42	-0.30	-0.19	0.03	0.31	-0.08	0.21	0.38	0.68	0.74	0.80					
Dyadic-level variables																		
13. A's admiration of B	2.20	0.69	0.37	-0.23	-0.20	0.11	0.09	-0.01	0.10	-0.05	0.13	0.07	0.14	0.15				
14. A's envy of B	2.00	0.52	-0.50	0.20	0.17	-0.19	-0.31	0.11	-0.20	0.01	-0.19	-0.09	-0.23	-0.22	-0.13			
15. B's perception of A's envy	2.00	0.55	-0.44	0.21	0.09	-0.12	-0.32	0.03	-0.10	-0.05	-0.18	-0.12	-0.22	-0.21	-0.19	0.32		
16. Help provided from B to A	2.50	0.82	0.63	-0.50	-0.30	0.25	0.37	0.05	0.09	0.16	0.35	0.21	0.36	0.34	0.34	-0.26	-0.23	
17. A's learning from B	2.38	0.76	0.73	-0.51	-0.29	0.32	0.50	0.09	0.10	0.19	0.38	0.23	0.39	0.35	0.32	-0.30	-0.29	0.72

N=1588 (207 individuals, 30 teams). All correlations are at the dyadic level, with individual-level variables assigned down to dyadic level. Correlations greater than .05 are significant at *p* < .10; those greater than .06 are significant at *p* < .05; those greater than .07 are significant at *p* < .01. OCBI=organizational citizenship behavior. Gender: female=1, male=0.

Table 2. Variance Partitioning for A's Learning from B, B's Perception of A's Envy, and Help Provided from B to A

Source of variance	A's learning from B			B's perception of A's envy			Help provided from B to A		
	Estimate	%	SE	Estimate	%	SE	Estimate	%	SE
Group variance	0.10	0.31	0.03	0.00	0.00	0.00	0.07	0.15	0.03
Actor variance	0.04	0.11	0.01	0.01	0.04	0.00	0.01	0.03	0.01
Partner variance	0.06	0.19	0.01	0.11	0.38	0.01	0.12	0.27	0.02
Dyadic variance	0.12	0.37	0.01	0.16	0.57	0.01	0.25	0.56	0.01

N=1588 (207 individuals, 30 teams).

Table 3. Results of Social Relations Model Analyses for A's Learning from B

	Model 1	Model 2	Model 3a	Model 3b	Model 4a	Model 4b
Organization membership	1.08^{**}	1.08^{**}	1.09^{**}	1.10^{**}	1.13^{**}	1.14^{**}
Teamsize	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
A's age	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
A's gender	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05
A's tenure	0.01	0.01	0.01	0.01	0.01	0.01
B's age	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
B's gender	-0.01	-0.00	-0.00	-0.00	0.01	0.00
B's tenure	0.02^{*}	0.02^{*}	0.02^{*}	0.02^{*}	0.01^{+}	0.01^{+}
A's negative affectivity	0.05	0.05	0.03	0.03	0.05	0.05
A's admiration of B	0.04^{+}	0.04^{+}	0.04^{+}	0.06^{*}	0.03	0.03
A's envy of B		-0.04	-0.04	-0.03	-0.05^{+}	-0.06^{*}
Core self-evaluation			-0.04	-0.04		
Help provided from B to A					0.30^{**}	0.29^{**}
A's envy of B x Core self-evaluation				0.16^{**}		
A's envy of B x Help provided from B to A						0.10^{*}
Deviance (-2 log likelihood)	1750.68	1748.89	1746.87	1732.68	1490.62	1485.06
$\Delta\chi^{2}(df)$	$61.74(10)^{**}$	1.79(1)	2.02(1)	$14.19(1)^{**}$	$258.27(1)^{**}$	$5.90(1)^{*}$

N=1588 (207 individuals, 30 teams). $^{+}p < 0.10$, $^{*}p < 0.05$, $^{**}p < 0.01$

Table 4. Results of Social Relations Model Analyses for B's Perception of A's Envy

	Model 1	Model 2
Organization membership	-0.92**	-0.92**
Teamsize	-0.01	-0.01
A's age	-0.01*	-0.01*
A's gender	0.10**	0.10**
A's tenure	0.00	0.00
B's age	-0.00	-0.00
B's gender	0.10*	0.10^{+}
B's tenure	0.03**	0.02**
B's negative affectivity	0.08*	0.09*
A's envy of B		0.12**
Deviance (-2 log likelihood)	1968.03	1958.10
$\Delta\chi^2$(*df*)	81.18(9)**	9.93(1)**

N=1588 (207 individuals, 30 teams). $^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$

Table 5. Results of Social Relations Model Analyses for Help Provided from B to A

	Model 1	Model 2	Model 3	Model 4
Organization membership	0.91**	0.91**	0.93**	0.93**
Teamsize	-0.05**	-0.05**	-0.05**	-0.05**
A's age	-0.01**	-0.01**	-0.01*	-0.01*
A's gender	-0.10**	-0.10**	-0.09**	-0.09**
A's tenure	-0.01	-0.01	-0.01+	-0.01+
B's age	-0.01+	-0.01+	-0.01+	-0.01+
B's gender	-0.04	-0.04	-0.04	-0.04
B's tenure	0.02+	0.02+	0.02+	0.02+
A's negative affectivity	-0.00	-0.00	-0.00	-0.00
B's perception of A's envy		0.01	0.01	0.01
A's friendship network centrality			0.16	0.16
B's perception of A's envy x A's friendship network centrality				0.10
Deviance (-2 log likelihood)	2631.61	2631.53	2630.35	2630.09
$\Delta\chi^2$(df)	70.61(9)**	0.08(1)	1.18(1)	0.26(1)

N=1588 (207 individuals, 30 teams). $^+ p < 0.10,\ ^* p < 0.05,\ ^{**} p < 0.01$

Table 6. Results of Hierarchical Linear Modeling Analyses Predicting Task Performance, OCBI, and Taking Charge from A's Aggregated Learning from Coworkers and Work Engagement

	DV: WE		DV: TP		DV: OCBI		DV: TC	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Organization membership	0.74^{**}	0.32	0.07	-0.13	0.64^{*}	0.49^{*}	0.70^{*}	0.57^{*}
Teamsize	-0.11^{**}	-0.10^{**}	-0.04	0.04^{*}	-0.03^{+}	0.02	-0.05^{**}	-0.00
A's age	-0.01	-0.01	-0.00	0.00	0.01	0.01	0.00	0.01
A's gender	-0.35^{*}	-0.32^{*}	-0.06	0.18	-0.27^{*}	-0.14	-0.24	-0.11
A's tenure	0.02	0.02	0.01	-0.01	0.00	-0.01	0.01	0.01
A's learning from coworkers		0.35^{*}	0.26	-0.09	0.23	0.00	0.20	-0.02
Work engagement				0.85^{**}		0.55^{**}		0.54^{**}
Deviance (-2 log likelihood)	544.79	541.35	583.18	423.51	498.31	406.24	531.83	455.20
$\Delta\chi^2(df)$	$37.77(5)^{**}$	$3.44(1)^{*}$	$20.21(6)^{**}$	$159.67(1)^{**}$	$39.94(6)^{**}$	$92.07(1)^{**}$	$47.20(6)^{**}$	$76.63(1)^{**}$
Indirect effect			$.29^{**}$; 95% CI[.10, .71]		$.19^{**}$; 95% CI[.07, .46]		$.19^{**}$; 95% CI[.06, .47]	

N=207 (30 teams). $^{+}p < 0.10$, $^{*}p < 0.05$, $^{**}p < 0.01$. WE=work engagement. TP=task performance. OCBI=organizational citizenship behavior toward individual. TC=taking charge. CI=confidence interval.

Table 7. Results of Social Relations Model Analyses for Help Provided from B to A Using Mutual Friendship between A and B as a Moderator

	Model 1	Model 2	Model 3	Model 4
Organization membership	0.91^{**}	0.91^{**}	1.03^{**}	1.02^{**}
Teamsize	-0.05^{**}	-0.05^{**}	-0.04^{*}	-0.04^{*}
A's age	-0.01^{**}	-0.01^{**}	-0.01^{*}	-0.01^{*}
A's gender	-0.10^{**}	-0.10^{**}	-0.09^{**}	-0.09^{**}
A's tenure	-0.01	-0.01	-0.02^{*}	-0.02^{*}
B's age	-0.01^{+}	-0.01^{+}	-0.01^{+}	-0.01^{+}
B's gender	-0.04	-0.04	-0.04	-0.04
B's tenure	0.02^{+}	0.02^{+}	0.01	0.01
A's negative affectivity	-0.00	-0.00	-0.00	-0.010
B's perception of A's envy		0.01	-0.01	-0.04
Mutual friendship between A and B			0.51^{**}	0.50^{**}
B's perception of A's envy x Mutual friendship between A and B				0.18^{**}
Deviance (-2 log likelihood)	2631.61	2631.53	2496.75	2512.63
$\Delta\chi^2(df)$	$70.61(9)^{**}$	$0.08(1)$	$134.78(1)^{**}$	$3.85(1)^{*}$

N=1588 (207 individuals, 30 teams). $^{+}p < 0.10,$ $^{*}p < 0.05,$ $^{**}p < 0.01$

Table 8. Results of MSEM Analyses Predicting Task Performance, OCBI, and Taking Charge From A's Learning from B and Work Engagement (1-2-2 Mediation Models)

	Model 1		Model 2		Model 3	
	WE	TP	WE	OCBI	WE	TC
Organization membership	0.81^{**}	0.46^{**}	0.80^{**}	0.85^{**}	0.79^{**}	0.95^{**}
Teamsize	-0.10^{**}	-0.04^{**}	-0.10^{**}	-0.03^{*}	-0.10^{**}	-0.05^{**}
A's age	-0.01	0.01	-0.01	0.01	-0.01	0.01
A's gender	-0.45^{*}	0.19	-0.45^{*}	-0.12	-0.46^{*}	-0.04
A's tenure	0.02	0.24	0.02	-0.00	0.02	0.00
A's learning from B	-0.17	-0.12	-0.26	0.16	-0.26	0.06
Work engagement		0.90^{**}		0.58^{**}		0.59^{**}
Indirect effect	-.15; 95% CI[-1.04, .73]		-.15; 95% CI[-.62, .32]		-.15; 95% CI[-.61, .31]	

N=1588 (207 individuals, 30 teams). $^{+}p < 0.10$, $^{*}p < 0.05$, $^{**}p < 0.01$. WE=work engagement. TP=task performance. OCBI=organizational citizenship behavior toward individual. TC=taking charge. CI=confidence interval.

Table 9. Results of MSEM Analyses Predicting Task Performance, OCBI, and Taking Charge From A's Envy of B and Prevention and Promotion Focus (1-(2, 2)-2 Mediation Models)

	Model 1			Model 2			Model 3		
	PREV	PROMO	TP	PREV	PROMO	OCBI	PREV	PROMO	TC
Organization membership	1.31**	0.95**	0.54**	1.30**	0.94**	0.89**	1.29**	0.92**	0.98**
Teamsize	-0.07**	-0.06**	-0.04*	-0.07**	-0.06**	-0.03*	-0.07**	-0.06**	-0.05**
A's age	0.01	-0.01	0.01	-0.01	-0.01	0.01	-0.01	-0.01	0.01
A's gender	0.22	-0.40**	0.22	-0.43**	-0.39**	-0.12	-0.43**	-0.39**	-0.04
A's tenure	-0.00	-0.00	-0.00	-0.01	-0.00	0.00	-0.01	-0.00	0.01
A's negative affectivity	-0.06	-0.14	-0.06	-0.14	-0.13	-0.15+	-0.15	-0.14	-0.11
A's admiration of B	0.06	-0.18*	0.06*	-0.22**	-0.17*	0.05	-0.21**	-0.17*	-0.04
A's envy of B	0.10	0.16	0.14	0.11	0.16	-0.02	0.16	0.17	-0.10
Prevention focus			0.89**			0.43**			0.39**
Promotion focus			0.08			0.24+			0.27
Indirect effect via PREV	.14; 95% CI [-.08, .36]			.07; 95% CI [-.06, .19]			.06; 95% CI [-.05, .18]		
Indirect effect via PRMO	.01; 95% CI [-.05, .07]			.04; 95% CI [-.05, .13]			.05; 95% CI [-.07, .16]		

N=1588 (207 individuals, 30 teams). $^+ p < 0.10$, $^* p < 0.05$, $^{**} p < 0.01$. PREV=prevention focus. PROMO=promotion focus. TP=task performance. OCBI=organizational citizenship behavior toward individual. TC=taking charge. CI=confidence interval.

Table 10. Results of MSEM Analyses Predicting Task Performance, OCBI, and Taking Charge From A's Envy of B and Goal Orientations (1-(2, 2, 2)-2 Mediation Models)

	Model 1				Model2				Model3			
	LGO	PGO	AGO	TP	LGO	PGO	AGO	OCBI	LGO	PGO	AGO	TC
Organization membership	0.98**	1.12**	0.40+	0.51**	0.97**	1.11**	0.39+	0.87**	0.96**	1.10**	0.41+	0.98**
Teamsize	-0.04+	-0.04	0.01	-0.04**	-0.04*	-0.05*	0.01	-0.03*	-0.04**	-0.05*	0.01	-0.05**
A's age	-0.02	-0.01	-0.02*	0.00	-0.02	-0.01	-0.02**	0.00	-0.02+	-0.01	-0.02**	0.01
A's gender	-0.11	-0.18	-0.24	-0.06	-0.11	-0.18	-0.24+	-0.32**	-0.11	-0.19	-0.24	-0.23
A's tenure	-0.04+	-0.01	0.03	-0.00	-0.04*	-0.01	0.03	0.01	-0.04*	-0.01	0.03	0.01
A's negative affectivity	-0.13	-0.18	-0.04	-0.05	-0.13	-0.19*	-0.04	-0.15	-0.13	-0.19*	-0.03	-0.12
A's admiration of B	-0.09	-0.12	-0.00	-0.04	-0.09	-0.12	-0.01	-0.02	-0.09	-0.12	-0.01	-0.11
A's envy of B	-0.10	0.06	0.23	0.26	-0.10	0.06	0.23	0.08	-0.10	0.06	0.24	-0.01
LGO				-0.08				0.01				0.07
PGO				0.82*				0.51**				0.40**
PAO				-0.11				-0.08				0.00
Indirect effect via LGO	.01; 95% CI [-.04, .05]				-.00; 95% CI [-.02, .02]				-.01; 95% CI [-.04, .03]			
Indirect effect via PGO	.05; 95% CI [-.17, .26]				.03; 95% CI [-.10, .16]				.03; 95% CI [-.07, .12]			
Indirect effect via AGO	-.03; 95% CI [-.30, .25]				-.02; 95% CI [-.07, .03]				.00; 95% CI [-.03, .03]			

N=1588 (207 individuals, 30 teams). $^{+}p < 0.10$, $^{*}p < 0.05$, $^{**}p < 0.01$. LGO =learning goal orientation. PGO=performance-prove orientation. PAO=performance-avoid orientation. TP=task performance. OCBI=organizational citizenship behavior toward individual. TC=taking charge. CI=confidence interval.

Table 11. Results of Hierarchical Linear Modeling Analyses Predicting Task Performance, OCBI, and Taking Charge from A's Received Help from Coworkers

	Model 1 TP	Model 2 OCBI	Model 3 TC
Organization membership	-0.05	0.37	0.50
Teamsize	-0.03	-0.02	-0.04[+]
A's age	-0.00	0.01	0.00
A's gender	-0.02	-0.23[+]	-0.21
A's tenure	0.02	0.01	0.02
A's received help from coworkers	0.38[+]	0.48[**]	0.38[*]
Deviance (-2 log likelihood)	581.74	491.91	528.70
$\Delta\chi^2(df)$	21.65(6)[**]	46.34(6)[**]	50.33(6)[**]

N=207 (30 teams). [+] $p < 0.10$, [*] $p < 0.05$, [**] $p < 0.01$. TP=task performance.
OCBI=organizational citizenship behavior toward individual. TC=taking charge.

Figure 1. Thesis Model[a]
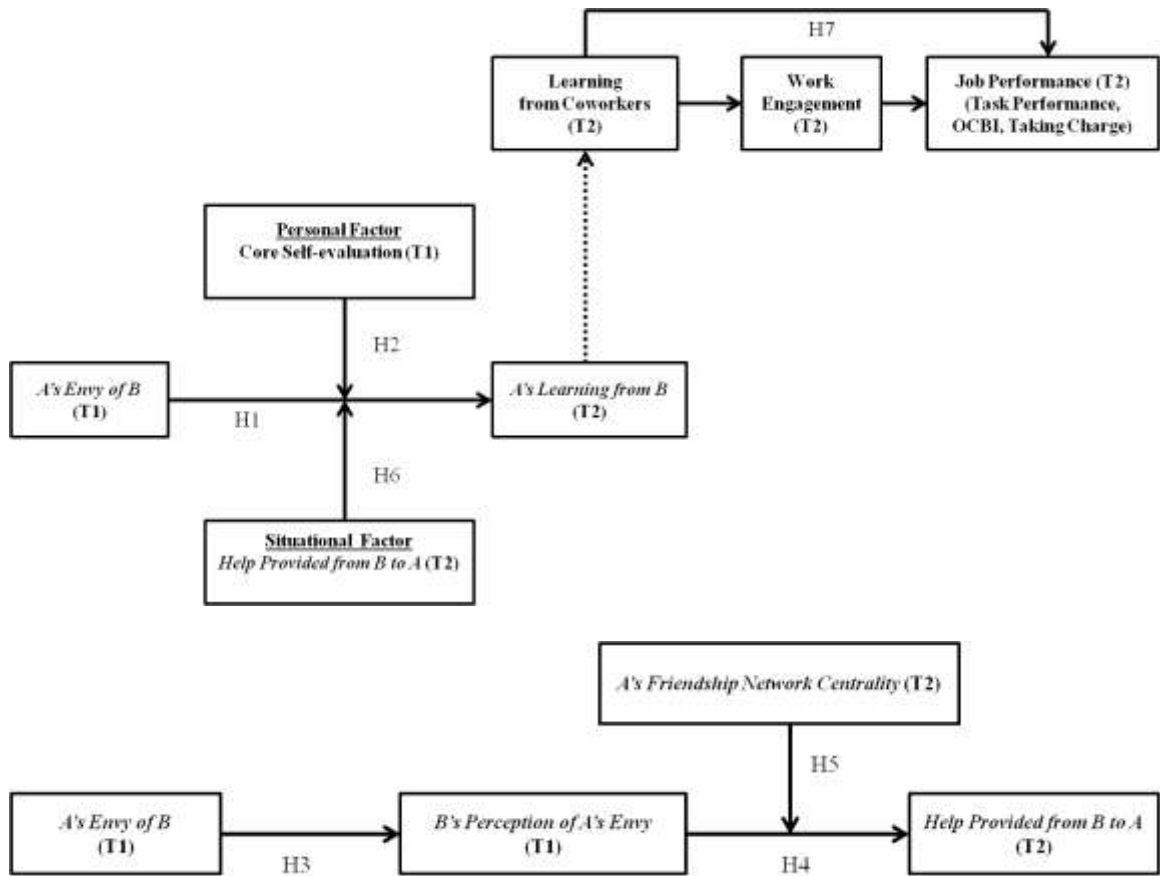
[a] Variables in *italics* indicate dyadic measures collected using roster method.

Figure 2. Moderating Role of A's Core Self-evaluation (CSE) on the Relationship between A's Envy of B and A's Learning from B
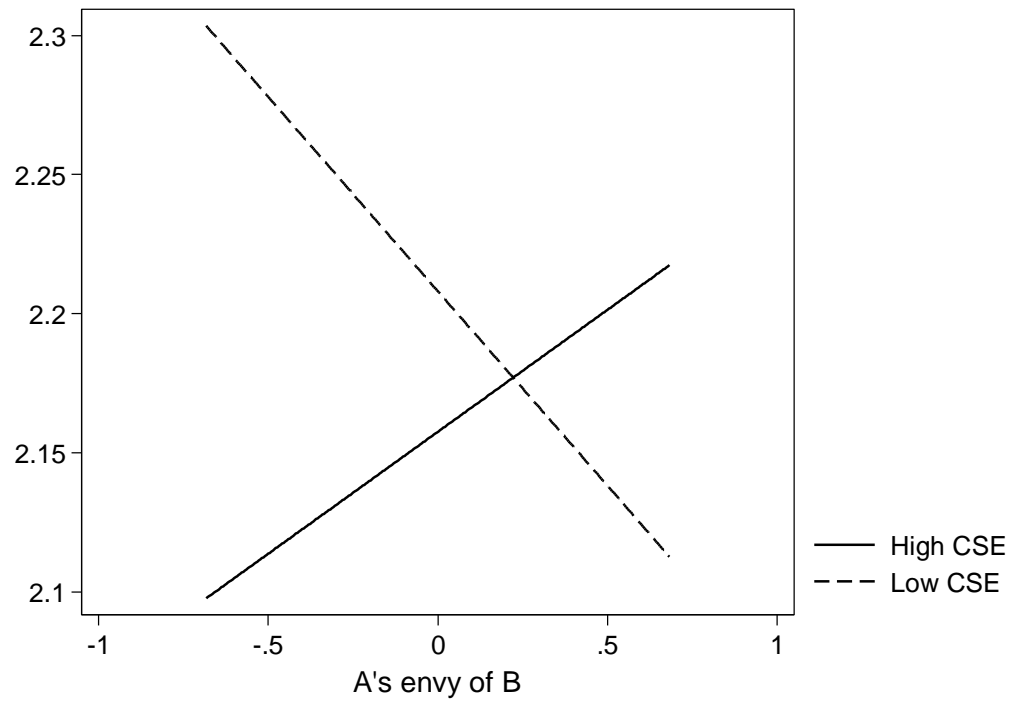
Figure 3. Moderating Role of Help Provided from B to A on the Relationship between A's Envy of B and A's Learning from B
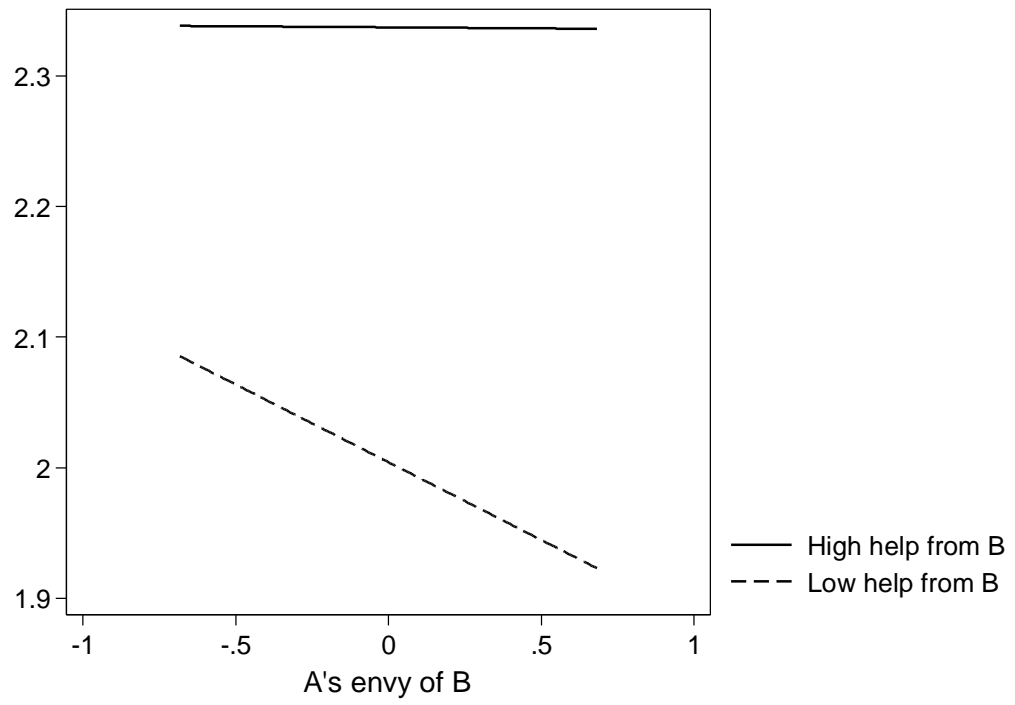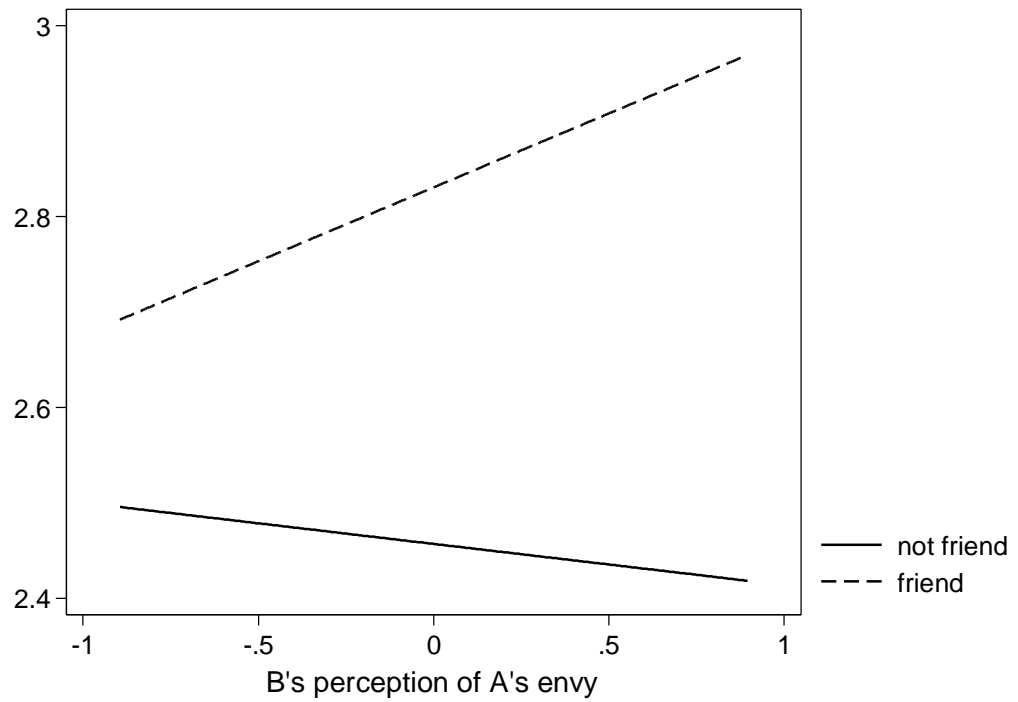
Figure 4. Moderating Role of Mutual Friendship between A and B on the Relationship between B's Perception of A's Envy and Help Provided from B to A

Appendix I: Scales and Items Used in Survey

Envy – Schaubroeck & Lam (2004)

Please answer the following items with regard to each of your teammates.

1. It is so frustrating to see this coworker succeed so easily.
2. Feelings of envy about this coworker constantly torment me.
3. I generally feel inferior to his/her success.
4. Frankly, his/her success makes me resent him/her.

Perception of Coworker Envy – Vecchio (2005)

Please answer the following items with regard to each of your teammates.

1. Because of my success at work, I am sometimes resented by this coworker.
2. Because of the closeness of the working relationship I have with my supervisor, I am sometimes resented by this coworker.
3. This coworker is envious of my accomplishments.

Learning from a Coworker – Adapted from Van Kleef et al. (2013)

Please answer the following items with regard to each of your teammates.
1. I carefully observed the behavior of this coworker.
2. I reflected on the behavior of this coworker.
3. I thought about how to modify my behavior in accordance with this coworker's behavior.

Work Engagement – Rothbard & Patil (2011)

Attention
1. I focus a great deal of attention on my work.
2. I concentrate a lot on my work.
3. I pay a lot of attention to my work.
4. I spend a lot of time thinking about my work.

Absorption
1. When I am working, I often lose track of time.
2. Nothing can distract me when I am working.
3. When I am working, I am totally absorbed by it.
4. When I am working, I am completely engrossed by my work.
5. I often get carried away by what I am working on.

Energy
1. I work with intensity on my job.
2. I exert my full effort to my job.

3. I devote a lot of energy to my job.
4. I try my hardest to perform well on my job.
5. I strive as hard as I can to complete my job.
6. I exert a lot of energy on my job.

Core Self-evaluation – Judge et al. (2003)

1. I am confident I get the success I deserve in life.
2. Sometimes I feel depressed [R].
3. When I try, I generally succeed.
4. Sometimes when I fail I feel worthless [R].
5. I complete tasks successfully.
6. Sometimes, I do not feel in control of my work [R].
7. Overall, I am satisfied with myself.
8. I am filled with doubts about my competence [R].
9. I determine what will happen in my life.
10. I do not feel in control of my success in my career [R].
11. I am capable of coping with most of my problems.
12. There are times when things look pretty bleak and hopeless to me [R].

Help Provided from B to A – Ferrin et al. (2006)

How frequently does each of your teammate give you assistance beyond what their job role requires? For example, how frequently does he or she (1) help you when you have a heavy work load or are absent; (2) help you with your work even though it's not required; or (3) give you innovative suggestions?

Friendship Network Centrality – Zagenczyk et al. (2010)

Whom would you consider to be your friends? Friends are people with whom you might choose to see socially outside of work or when you are not working together.

Task Performance – Welbourne et al. (1998)

(This employee's…)
1. Quantity of work output is…
2. Quality of work output is…
3. Accuracy of work is…
4. Customer service provided (internal and external)...

OCBI – Coleman & Borman (2000) and Tsai et al. (2007)

(This employee…)
1. Helps other team members.
2. Cooperates with other team members.
3. Assists other team members with personal matters.

Taking Charge – Grant et al. (2009)

(This employee…)
1. Often tries to bring about improved procedures for the work unit or branch.
2. Often tries to institute new work methods that are more effective for the branch.
3. Often tries to implement solutions to pressing organizational problems.

Negative Affectivity – Watson et al., (1988)

1. Distressed
2. Upset
3. Guilty
4. Scared
5. Jittery
6. Afraid
7. Ashamed
8. Nervous
9. Irritable
10. Hostile