EMPLOYEES' REACTIONS TO COWORKER'S PRO-ENVIRONMENTAL BEHAVIOR: INSIGHTS FROM SOCIAL COGNITIVE THEORY AND SOCIAL COMPARISON THEORY

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Abstract

Environmental issues are severe worldwide concerns that threaten ecosystems and humanity. The increased demand for pro-environmental behavior (PEB) has drawn attention to the environmental impact of organizations (Ones & Dilchert, 2012a). Employee PEB is essential for improving organizational environmental performance and sustainability (Boiral, 2009). Despite frequent peer interactions at work, little research has examined whether coworkers' PEB positively influences focal employees' PEB. Integrating social cognitive theory (Bandura, 1986) with social comparison theory (Festinger, 1954), this dissertation examines the focal employee's differential responses toward various types of coworkers' PEB. Using Boiral and Paillé's (2012) widely recognized categorization, I propose that a coworker's eco-civic engagement, eco-initiatives, and eco-helping can have both positive and negative impacts on the focal employee. Specifically, I document three psychological mechanisms—integrity-based trust toward the coworker, the focal employee's green self-efficacy, and the focal employee's moral inferiority—that mediate the effects of a coworker's PEB on the focal employee's subsequent behaviors, including PEB at work and in life, collaboration with the coworker, and ostracism toward the coworker. Task interdependence and performance inferiority are proposed to moderate these mediated relationships. Four scenario-based experiments (Studies 1a–d) and a survey with dyadic data (Study 2) were used to test hypotheses. Studies 1a–d found that coworkers' eco-civic engagement and eco-initiatives increased focal employees' integrity-based trust toward coworkers, especially under higher task interdependence. Coworkers' eco-initiatives and eco-helping positively impacted focal employees' green self-efficacy, with the relationship between eco-helping and green self-efficacy being more pronounced under higher (vs. lower) task interdependence. Additionally, coworkers' eco-helping increased focal employees' moral inferiority, which was strengthened by performance inferiority. Study 2 replicated most findings

from Studies 1a–d except for the relationship between coworkers' eco-initiatives and focal employees' green self-efficacy. Study 2 further found that coworkers' eco-civic engagement and eco-initiatives increased collaboration via focal employees' integrity-based trust and was amplified by task interdependence. Coworkers' eco-helping increased focal employees' personal PEB via focal employees' green self-efficacy, which was strengthened by task interdependence. Eco-helping increased focal employees' ostracism toward coworkers through focal employees' moral inferiority, with performance inferiority exacerbating this relationship. Implications and future directions were also discussed.

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Table of Contents

List of Tables

List of Figures

Chapter One: Introduction

Taking action on environmental issues such as climate change, the sustainability of natural resources, and pollution reduction has increasingly become an international priority due to population growth and living area expansion. According to the Intergovernmental Panel on Climate Change's (IPCC)'s (2022) estimation, the overall temperature will increase by 1.5°C between 2021–2040, resulting in inevitable increases in various climatic hazards and posing threats to ecosystems and humans. A transition in human activity toward a more sustainable way of living is needed to prevent harmful environmental consequences.

Organizations are frequently considered the primary causes of environmental challenges such as climate change (Trudeau and Canada West Foundation, 2007)(Trudeau and Canada West Foundation, 2007). Due to this, more and more organizations strive to reduce their environmental impacts and contribute to improving the natural environment. However, without sufficient employee participation, support, and commitment, the efforts of organizations to improve environmental performance are often symbolic and ineffective (Boiral, 2009). Employee pro-environmental behavior (PEB) refers to actions taken by employees in the workplace to benefit the natural environment or prevent negative environmental consequences (Lamm et al., 2013; Ones & Dilchert, 2012a). As stated by Boiral et al. (2015, p. 532), organizational activities that "impact environmental sustainability are indeed very diverse, complex and therefore difficult to integrate within formal management systems," and employees' individual, informal, and discretionary actions play a significant role in the effectiveness of an organization's environmental practices. For example, in 2020, Google's employees established the company's first beehive and then used the harvested honey in the company's cafes.

On an individual level, employee PEB may not look as salient as organizational environmental initiatives but tends to have a major cumulative impact on an organization's overall environmental performance (Robertson & Barling, 2015). For example, actions like recycling, turning off lights, helping peers to be more environmentally friendly, and making suggestions to reduce the organization's environmental footprint are all examples of employee PEB that are not usually included in a formalized management system or policy. Previous studies have suggested that employee PEB has contributed to the effectiveness of many pro-environmental initiatives performed at the organizational level (Robertson & Carleton, 2018; Unsworth et al., 2013).

Over the last decade, scholars have made strides toward understanding why employees engage in PEB and the influences of PEB on the environment (for recent reviews of this literature, see Inoue & Alfaro-Barrantes, 2015; Yuriev et al., 2020). Several studies have explored the antecedents of employee PEB, including organizational factors (e.g., employee perceived corporate social responsibility, Afsar et al., 2019; perceived organizational support, Lamm et al., 2013; green human resource management, Rubel et al., 2021), interpersonal factors (e.g., environmental-specific transformational leadership, Graves et al., 2013; coworker advocacy, Kim et al., 2014), and individual factors (e.g., activated positive affect, Bissing-Olson et al., 2013; sense of calling, Karatepe et al., 2021; self-efficacy, Klein, 2015; moral norms, Stern, 2000).

Even though studies on PEB's influences are not as extensive as those of its antecedents, prior research has identified that employee PEB not only contributes to the natural environment (Anderson & Bateman, 2000) and organizational environmental performance (Anwar et al.,

2020; Paillé, Boiral, et al., 2013) but also benefits employees (e.g., overall job performance rating, Bohlmann et al., 2018; physical and mental well-being, Grabow et al., 2012).

Despite this progress in our knowledge of employee PEB, no studies have explored how peer PEB serves as an essential antecedent of focal employee PEB. PEB occurs in the workplace, and it is plausible that such behaviors would have implications for employees who observe their colleagues engaging in PEB. Previous studies have recognized the influence of coworkers' environmental advocacy (Afsar & Umrani, 2019; Kim et al., 2014) and coworkers' perceptions of a green work climate on the focal employee (Robertson & Carleton, 2018), but how peer PEB at work influences the focal employee is still limited. This omission is important because PEB does not exist in a vacuum but rather is observed, evaluated, and learned by others in the workplace (Francoeur et al., 2021). Furthermore, the peer is an essential party that influences employees' work life. As such, peers could be a powerful influence on an employee's psychological and behavioral responses regarding environmental protection (Kim et al., 2014).

There are several proposed types of peer PEB. Boiral and Paillé (2012) proposed three main types of employees PEB, including eco-initiatives, eco-civic engagement, and eco-helping. Eco-initiatives refer to employees' personal workplace discretionary behaviors that contribute to the natural environment. Eco-civic engagement is employees' voluntary participation in the organization's environmental programs and activities. Eco-helping refers to employee behaviors aiming to help colleagues incorporate environmental concerns into the workplace more effectively. Previous studies either focused on only one type of PEB (e.g., eco-civic engagement, Khalid et al., 2021) or ignored the various types of PEB by treating PEB as a unidimensional construct (Terrier et al., 2016). Disregarding the differences among the types of PEB overlooks their nuanced impacts in the workplace. Such oversight has resulted in mixed results, limiting the

advancement of theory on PEB (Robertson, 2017). For example, adopting personal environmental protection initiatives at the workplace requires less effort than helping peers develop green habits (Ciocirlan, 2017). However, the latter behavior might impact peers more strongly, as it involves direct influence (Francoeur et al., 2021). No research to date has addressed how different types of coworkers' PEB might affect the reactions of focal employees through different mechanisms.

Prior research shows that the influences of PEB are primarily positive. It is theoretically plausible that the influences could be mixed for the focal employee when observing coworkers engage in the different types of PEB, which have rarely been explored in previous studies. An employee might react positively when observing a coworker's PEB because the employee might associate PEB with the moral values underlying such behavior (Kim et al., 2014). On the other hand, the focal employee might have an unfavorable experience with a coworker's PEB if they associate such behavior with the moral superiority of the coworker (Monin, 2007). Thus, despite the generally positive effects of a coworker's PEB on an employee (Norton et al., 2014), it seems plausible that the impact of different types of PEB on the focal employee may not be so straightforward.

To address the above research gaps, this dissertation aims to ascertain why, how, and when peer PEB influences a focal employee's behavioral responses. Drawing from social cognitive theory and social comparison theory, I first propose the effects of the three types of coworkers PEB on the various behavioral reactions of the focal employee via three separate mechanisms. Specifically, I suggest that the focal employee's integrity-based trust toward the coworker and green self-efficacy is the social cognitive-based mediator, and the focal employee's moral inferiority is the social comparison-based mediator. I then propose the

sequential behavioral reactions of the focal employee. I include task interdependence as the social cognitive-based moderator and performance inferiority as the social comparison-based moderator that moderates the effects of the coworker's different types of PEB.

This dissertation seeks to advance research on employee PEB in three ways. Firstly, my dissertation adopts a relational perspective to examine how the focal employee interprets and reacts to others' PEB. Prior research has conceptualized the green work climate perceptions of coworkers as a social norm to employees that motivates employees to engage in PEB (Norton et al., 2014), which provides a general overview of the workplace green climate rather than specifically the effects of coworker PEB. This dissertation expands beyond this field by involving a dyadic perspective between the focal employee and the coworker. This research can explore the potential mixed reactions of the focal employee to the coworker's different types of PEB, shedding light on the extant PEB literature.

I integrate social cognitive theory and social comparison theory to present a more complete picture of the interpersonal dynamics influenced by peers' PEB. Previous literature has shown that social cognitive theory (Andersen & Chen, 2002; Locke & Sadler, 2007) and social comparison theory (Lam et al., 2011; Reh et al., 2018) are particularly insightful in explaining these dynamics from an interpersonal perspective. The integration of social cognitive theory and social comparison theory in this dissertation is necessary not only because both theories address how cognitive processes influence individuals' reactions to peers' PEB in interpersonal dynamics but also—more importantly—because each theory sheds light on aspects that the other does not fully capture. Social cognitive theory offers insights on how individuals learn by observing others within their environment, which makes it highly relevant for explaining how employees adopt and engage in PEB through social learning processes (Bandura, 1991, 2001).

However, to fully explore the interpersonal dynamics of PEB, social comparison theory is essential for explaining how employees compare their actions with those of similar others (e.g., peers), influencing their positive or negative behavior based on these comparisons (Festinger, 1954). As suggested by Mayer and Sparrowe (2013), combining theories from different perspectives can provide a deeper and more comprehensive understanding of complex phenomena. The integration of these two theories offers a more robust theoretical framework that explains not only how employees learn and engage in PEB but also how their behaviors are shaped by both observation and interpersonal comparison.

Secondly, previous PEB reviews found that the differential impacts caused by different types of PEB might be canceled out when considering PEB as a single-dimensional construct and call for research exploring the influences of different types of PEB (Francoeur et al., 2021; Norton et al., 2015). A close look at the characteristics and distinct impacts of each type of employee PEB could enable us to understand and explain why some previous PEB findings are inconsistent and contradictory (Norton et al., 2015; Robertson & Barling, 2017). As a result, this research enriches the current understanding of the mixed consequences of employee PEB by considering different types of PEB.

Thirdly, despite the generally positive benefits of workplace PEB, the influence of peer PEB on employees may be more complicated than previously described. This dissertation offers new insight into both the positive and negative impacts PEB could have. Combining social cognitive theory and social comparison theory can provide a more complete picture of the influence of peer PEB on encouraging or discouraging employee PEB.

This dissertation documents parallel psychological mechanisms through which the focal employee reacts to the coworker's PEB. Investigating psychological mechanisms could enrich

the theoretical precision of PEB literature. According to Colquitt and Zapata-Phelan (2007), theory development can be accomplished by introducing mediators of an essential connection or process. By documenting the social cognitive- and social comparison-based mediators, this dissertation could provide theoretical nuance on how employees react to peer PEB.

Chapter Two: Literature Review

This literature review of employee PEB was conducted by searching for articles in PsycArticles, PsycINFO, Web of Science, ProQuest, and Google Scholar with combinations of the following two sets of keywords: (1) pro-environmental behavior(s), green behavior(s), organizational citizenship behaviors toward the environment, voluntary workplace green behavior(s), environmental behavior(s), sustainable behaviors, environmentally friendly behavior(s), environmental protection behavior(s), eco-initiatives, eco-helping, eco-civic engagement; (2) employees, workplace, organizations, workers, work. This search process resulted in 273 articles. The reference sections of other review papers were also checked (e.g., Ciocirlan, 2017; Francoeur et al., 2021; Norton et al., 2015). After removing duplicated articles, 241 articles were identified for the literature review, including 18 review papers, five theoretical papers, 18 dissertations, and 200 empirical papers. Based on this literature search, this chapter is structured into the following sections: conceptualization, types, theories and predictors, moderators, consequences, measurement, and the comparison between PEB and prosocial behavior. At the end of the literature review, I summarize the literature, discuss the limitations, and discuss the plan for addressing these limitations.

Conceptualization of PEB

Scholars have studied pro-environmental behavior (PEB) for many decades (Hines et al., 1987; Stern, 2002). PEB refers to “individual behaviors contributing to environmental sustainability” (Mesmer-Magnus et al., 2012, p.160). As the environmental problems caused by firms became more serious, scholars started investigating how employees, as members of organizations, could mitigate the organizations’ negative influence on the natural environment and improve sustainability. The traditional approach to studying employee PEB is the

environmental management perspective, which considers employee PEB as part of the organizational change process or institutional environmental policies and practices (Boiral, 2005; Hanna et al., 2000; Rothenberg, 2003). In this stream of research, the actions of employees might be overlooked. Until the turn of the century, employee PEB at the workplace had been analyzed through an organizational psychology/behavior perspective (Boiral, 2009; Ones & Dilchert, 2012a). This stream of research defined PEB as behaviors taken by employees in the workplace that could contribute to the natural environment (Boiral et al., 2015; Lamm et al., 2013; Ones & Dilchert, 2012a, 2012b).

Employee PEB refers to all types of voluntary or required actions undertaken by employees at work to protect the natural environment, such as following organizational environmental rules to treat sewage, printing double-sided pages, switching from paper to electronic documents, and turning off appliances that are not in use (Boiral et al., 2015). Although most PEB is voluntary, some PEB might be integrated into one's in-role duties, such as completing job duties in environmentally friendly ways (Paillé & Francoeur, 2022). As the motives to engage in PEB and its impacts might differ between voluntary and required PEB, it is important to differentiate them when discussing PEB (Norton et al., 2015). For example, required PEB might be motivated by external forces such as organizational policies or practices (Saifulina et al., 2021), and penalties might be involved if employees do not comply with the organizational environmental protection requirements. Voluntary PEB might be driven by individuals' moral values (Lu et al., 2020) and other intrinsic reasons (e.g., altruistic values, Ciocirlan et al., 2020).

Researchers have referred to employee PEB using other labels, such as organizational citizenship behavior toward the environment (OCB-E) (Lamm et al., 2014), organizational

citizenship behavior for the environment (OCBE) (Paillé & Boiral, 2013; Tuan, 2019; Zhang et al., 2016), employees' environmental behaviors (Robertson & Barling, 2013), green behaviors (Ones & Dilchert, 2012a), and voluntary workplace green behaviors (Kim et al., 2017). Boiral (2009) defined organizational citizenship behavior for the environment (OCBE) as "individual and discretionary social behaviors not explicitly recognized by the formal reward system and contributing to improve the effectiveness of environmental management of organizations" (p. 223). Robertson and Barling (2017) defined OCBE as "individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate, immediately benefits the natural environment, and indirectly through this means, contributes to the organization and benefit specific individuals" (p. 58). Though the labels of these constructs are different, and their definitions might also have nuanced differences, these constructs all capture the essence of PEB—employees' voluntary behavior contributing to environmental sustainability at the workplace (Mesmer-Magnus et al., 2012).

PEB could be regarded as a type of ethical behavior. Ethical behavior refers to "individual behavior that is subject to or judged according to generally accepted moral norms of behavior" (Treviño et al., 2006, p. 952). Ethical behavior is motivated by individuals' commitments to take moral action, uphold moral norms, and take responsibility for moral outcomes (Thoma et al., 1991). Ethical behavior is usually socially responsible (Turnipseed, 2002), altruistic (Fritzsche & Oz, 2007), and going beyond self-interest (Treviño et al., 2006). PEB also carries similar characteristics. When individuals engage in PEB, they seek to engage in behavior that might benefit the natural environment or minimize the negative impacts of their behaviors that might harm the natural environment (Kollmuss & Agyeman, 2010). Such environmentally friendly behaviors are consistent with the moral norms of ethical behavior,

which means being responsible for the natural environment (Patra, 2014). When individuals engage in PEB at the workplace, they do not expect direct benefits for themselves. For example, switching off lights or printing double-sided pages does not provide any real financial benefit for employees. Furthermore, if an employee does not engage in PEB, they might not be personally penalized (Turnipseed & Wilson, 2009). However, groups, organizations, and society might suffer negative effects. Research supports that individuals who engage in PEB are driven by moral motives (de Groot & Steg, 2009). The value-belief-norm theory suggests that the predictors of PEB are moral norms and a sense of obligation to protect the natural environment (Stern, 2000; Weyand, 2022). Therefore, employee PEB is a type of ethical behavior motivated by the actor's ethical value of caring for the natural environment.

Types of Employee Pro-Environmental Behavior

Scholars have developed multiple taxonomies, or types, of employee PEB. Ones and Dilchert (2012b) proposed a taxonomy of PEB by categorizing it into five types. These types include (a) conserving (e.g., reusing papers), (b) working sustainably (e.g., choosing responsible alternatives), (c) taking initiatives (e.g., initiating programs and policies), (d) avoiding harm (e.g., preventing pollution), and (e) influencing others (e.g., educating and training for sustainability). This categorization was among the first to recognize that the constitutions of employee PEB could be required or voluntary behaviors. Certain PEB might be required for companies in certain industries (e.g., an industry that may pose a threat to the environment, such as mining, gas, or chemical manufacturing), while the same behaviors might be voluntary for employees in another industry. For example, monitoring environmental impact might be a part of required responsibilities for an energy auditor in a renewable energy generation company (e.g., Dierdorff et al., 2009) but not required for other companies. Some scholars have labeled

voluntary PEB as in-role green behaviors and required PEB as extra-role green behaviors (Francoeur et al., 2021).

Building on Ones and Dilchert's (2012) work, Boiral and Paillé (2012) attempted to define a clearer boundary between required and voluntary employee PEB. Focusing on voluntary employee PEB in their PEB taxonomy, they proposed a three-dimension construct—organizational citizenship behaviors for the environment (OCBE), based on Organ's (1988) taxonomy of OCB (i.e., sportsmanship, organizational loyalty, individual initiative, self-development, helping). The first dimension was eco-initiatives, which refers to individuals promoting voluntary practices to help support organizations to function sustainably. The second dimension was eco-civic engagement, which involves contributions to organizational green initiatives. The last dimension was eco-helping, which refers to behaviors that help colleagues to engage in environmentally friendly behaviors.

Building on the conceptualization proposed by Boiral and Paillé (2012), Robertson and Barling (2017) took a multi-foci perspective to develop a three-factor construct of PEB. Their three dimensions are (a) personal pro-environmental initiatives, such as recycling (i.e., self-enacted pro-environmental behaviors and eco-initiatives), (b) influential behaviors that seek to motivate colleagues to be more environmentally friendly (i.e., coworker OCBE and eco-helping), and (c) action aimed at helping the organization promote environmental sustainability, such as suggesting the organization minimize their environmental impact (i.e., organizational OCB-E and eco-civic engagement).

Another categorization worth noting is the typology developed by Bissing-Olson et al. (2013). They suggested that employee PEB could be categorized into task-related or proactive behaviors, which might vary on a daily basis. Task-related PEB can include behaviors such as

printing on both sides of the paper or recycling, actions that are easily carried out and may be integrated into one's daily work. Proactive PEB refers to environmentally friendly behaviors that employees make a greater effort to engage in and which might not be directly related to their work. Examples of proactive PEB include making environment-related suggestions to the organization or encouraging other colleagues to recycle. The major difference between these two types of PEB is that proactive PEB might require employees to change or create new patterns of behavior that go beyond required work responsibilities, while task-related PEB is usually embedded in one's daily work, which is a type of in-role behavior.

Although past PEB literature has discussed both required PEB and voluntary PEB, this dissertation only focuses on employees' voluntary PEB due to the following theoretical reasons. Firstly, voluntary PEB might have greater contributions to an organization's environmental performance and the natural environment (Boiral et al., 2015; Weyand, 2022). Secondly, employees' voluntary PEB is more likely to represent employees' attitudes toward environmental issues than PEB that is required by their employer, and employees tend to vary in their voluntary PEB. Thus, the focal employee could observe the variances of their coworkers' different types of voluntary PEB. Thirdly, most PEB reflects employees' voluntary behavior (Ones & Dilchert, 2012a). For example, Ones and Dilchert (2012b) found that U.S. participants reported that 29% of employee PEB is required by the organization, while European participants stated only 13%. This suggested that most types of PEB are voluntary behaviors. Thus, in this dissertation, PEB has been conceptualized as voluntary PEB unless specifically noted.

Theoretical Perspectives of Employee Pro-Environmental Behavior

Prior research has employed four major theoretical perspectives to elaborate on why employees engage in PEB: self-determination perspective, affect perspective, planned behavior perspective, and social learning perspective.

Self-Determination Theory

The self-determination perspective suggests that the interaction of external and internal factors impacts the motives of individuals' engagement in PEB. Self-determination theory (Deci & Ryan, 1985, 2000) states that an individual's development and growth depend on the interaction between themselves and their external environment. Individuals' motives include intrinsic motivation, extrinsic motivation, autonomous motivation, controlled motivation, and demotivation. Contemporary employee PEB research tends to focus on intrinsic motivation and extrinsic motivation. Generally, employees are motivated to engage in PEB because they either genuinely care about environmental sustainability (i.e., intrinsic motivation) or they would be rewarded by engaging in such behaviors (i.e., extrinsic motivation). In a study involving NGO organization employees, Karatepe et al. (2021) found that the sense of calling, an internally driven approach to work, could increase employee PEB via reduced emotional exhaustion. Individuals may also engage in PEB due to extrinsic motivation from one's organization or leader. For example, environmental-specific transformational leadership could result in subordinates' PEB via intrinsic and extrinsic motivation (Graves et al., 2013). Klein (2015) built a nomological network for the motives of environmentally sustainable employee behavior. Employees might be motivated by intrinsic motives (e.g., taking social responsibility, practicing their own ethical beliefs) or extrinsic motives (e.g., concern about the organization's public image, safety reasons). Klein (2015) also suggested that amotivation, such as lack of environmental knowledge or self-efficacy, might hinder employee PEB. For example, when

employees perceive that their capacities are not enough to make contributions to environmental protection, they might not engage in PEB at the workplace.

Affect Perspective

The affect perspective indicates that positive or negative events that occur in the workplace could trigger positive or negative affect, impacting individuals' attitudes and behaviors (Weiss & Cropanzano, 1996). Based on the broaden-and-build theory, Bissing-Olson and colleagues (2013) found that daily activated positive affect could lead to daily task-related PEB and proactive PEB. Positive affect could help employees perform change-oriented behaviors so that they are more likely to change their behavior patterns to engage in proactive PEB. In addition, some leadership styles could promote employee PEB by influencing employees' affective states. For example, employees are more likely to engage in PEB if they are led by spiritual leaders (Afsar et al., 2016). Spiritual leaders could enhance employees' enjoyment and positive affect, and such experience could boost their passion for protecting the environment, increasing the likelihood of them engaging in PEB. On the other hand, negative emotions, especially low arousal emotions (e.g., sadness) evoked by unpleasant events might reduce employee PEB due to a lack of motivation and their tendency to interact with the external environment (Russell & Ashkanasy, 2021).

Researchers also rely on the affective events theory to explain affective variables serving as mediating mechanisms that account for the impacts of antecedents on employee PEB. For instance, Zhang et al. (2016) found that ethical leaders served as role models for employees who valued ethical and fairness norms, which in turn triggered positive affect among subordinates and then increased employee PEB. Likewise, in Garden's (2020) field experiment, the author found

that subtle stimuli (i.e., a smiling picture) could boost eco-initiative OCB-E by increasing employees' positive affect.

Theory of Planned Behavior

The theory of planned behavior suggests that the main antecedent of an individual's behavior is the intention behind the behavior and their attitudes, subjective norm, and perceived behavioral control (Ajzen, 1985, 1991). Attitudes refer to an individual's overall evaluation of the behavior (e.g., positive or negative), which is informed by relevant behavioral beliefs. The subjective norm is an individual's perception of external pressure or influence on performing the behavior (e.g., peer pressure), which is grounded in normative beliefs that concern others' (dis)approval of one's behavior. Perceived behavioral control is the individual's perception of the level of difficulty in performing the behavior, which is based on control beliefs about whether people believe that they are capable of performing a given behavior. Generally, employees' engagement in PEB is moderated by their attitude toward environmental protection, perceived pressure from the organization or team members, or the level of difficulty in performing the PEB. Thus, employee PEB depends on many factors. In terms of attitudes, individuals' environmental attitudes (e.g., attitude towards PEB, Blok et al., 2015; attitude toward reducing CO2 emissions, Greaves et al., 2013) could predict the intention or actual participation in environmental protection in the workplace. Researchers have found that social pressure, such as a sense of community (Dixon et al., 2015) or subjective norms (Cordano & Frieze, 2000; Wan et al., 2017) could impact employees' workplace energy saving or recycling behaviors. In addition, the required time (Tudor et al., 2007), the complexity of paperwork required for changing transportation modes (Yuriev et al., 2020), and the difficulty of taking

public transport or cycling to the workplace (Ru et al., 2018), which are factors related to the perceived behavioral control, could influence employees' PEB.

Some studies have considered the three factors that could influence employee PEB simultaneously. For example, Greaves and colleagues (2013) found that attitude (e.g., reducing energy cost or recycling is worthwhile), subjective norm (i.e., expectations from the organization or pressure from colleagues), and perceived behavioral control (i.e., equipment was difficult to use) impacted employees' decisions on whether to use video conferencing, which is a more environmentally friendly practice than meeting in person.

Scholars also have relied on the theory of planned behavior to explore the mediating roles of the three factors. For example, Aziz and colleagues (2021) found that organizational environmental ethical principles and policies (i.e., environmental ethics) predicted employee attitude, perceived behavioral control, and subjective norms, which in turn increased employee PEB intention and resulted in employee PEB. Some studies also found that green human resources management might impact employee PEB via subjective norms (i.e., green work climate perception about one's organization, green work climate perception about one's coworkers, Rubel et al., 2021; Saeed et al., 2019).

Social Learning Theory

The social learning perspective explains that an individual's behavior is primarily formed through learning from direct experience and observation (Bandura, 1977b). The social learning perspective theorizes that subordinates observe their leaders' PEB or organizational environmental practices and then make inferences about their leaders' values and change their behaviors accordingly (e.g., environmentally specific transformational leadership, Li et al., 2020; employees participate in corporate social responsibility activities, Molnar et al., 2021).

Robertson and Barling's (2013) study found that when leaders observed that people around them (e.g., family members, leader's coworkers) engaged in PEB, they were more likely to perform environmental behaviors, which subsequently increased subordinates' environmental behaviors. This study demonstrated that individuals could learn and be impacted by others' PEB and then engage in similar behaviors. As role models, leaders can influence subordinates by choosing to do what is good for the natural environment. Meanwhile, subordinates can observe and learn from their ethical leaders and then engage in PEB (Islam et al., 2021; Khan et al., 2019). Other than leaders' behaviors, firm actions such as corporate social responsibility (CSR) could also make the organization a role model to employees and increase their PEB. In the study of Yu et al. (2021), CSR is positively related to employee PEB, in turn increasing organizational environmental performance.

Scholars have also employed social learning theory to identify several mechanisms explaining the relationships between antecedents and employee PEB. For example, ethical leadership could increase employee PEB via a green psychological climate (Khan et al., 2019) and organizational pride (Raza et al., 2021). Perceived CSR might improve employee PEB through increasing environmental commitment (Afsar & Umrani, 2019).

Other Theoretical Lenses

In addition to the above perspectives, scholars have employed other lenses (e.g., social exchange theory and social cognitive theory) to examine the antecedents of employee PEB. According to social exchange theory, the principle of social interaction is the reciprocity between an individual and their exchange partners, such as coworkers, leaders, or the organization (Blau, 1964; Cropanzano & Mitchell, 2005). Positive exchanges can shape individuals' attitudes and behaviors and lead to favorable responses. In this stream of research, support from organizations,

coworkers, and supervisors could increase employee eco-initiatives via strengthening affective commitment (Paillé & Mejía-Morelos, 2014; Raineri et al., 2016). For instance, Lamm et al. (2013) found that perceived organizational support indirectly affected PEB via affective commitment to the organization. In terms of the influence of organizational policies and practices, Cheema et al. (2019) applied social exchange theory, social identity theory, and self-determination theory to the investigation of predictors of OCBE and found that CSR perceptions were positively associated with OCBE through its positive impact on organizational identification and environmental orientation fit.

Social cognitive theory states that interpersonal, behavioral, and environmental factors jointly influence individuals' behaviors. PEB scholars have employed social cognitive theory to explain that employees are the agent to connect environmental factors and their PEB. For example, environmental-specific transformational leadership could increase employees' green performance via green mindfulness and green self-efficacy (Y.-S. Chen et al., 2014). Green transformational leaders visualize green goals and communicate green norms and beliefs to followers, which facilitates them to improve their green self-efficacy and self-mindfulness. In turn, self-efficacy is associated with cognitive flexibility in goal setting and inspiration, which helps employees to maintain their effort in green behaviors. Socially responsible human resource management acts as the environmental stimuli of employees' creativity in performing PEB through green self-efficacy, which is moderated by green transformational leadership (R. Farooq et al., 2021). Zhao and Zhou (2021) considered socially responsible human resource management as the ethical structure that could influence employees' moral cognitive process. Such a moral cognitive process could encourage employees to reflect on the morality of their experience and then improve employee OCBE.

Moderators of Employee Pro-Environmental Behavior

Moderators of employee PEB could be categorized into contextual factors and individual factors. In terms of contextual influences, organizational attitude or climate toward environmental protection shapes the relationships between the predictors and employee PEB. For example, Wu and colleagues (2021) found that employees' green work climate perceptions could strengthen the indirect effect of a leader's voluntary workplace green behaviors on employees' proactive PEB through employees' green self-identity. The green organizational climate could amplify the indirect effect of employee-organization fit on employees' voluntary green behavior via perceived insider status (Xiao et al., 2020). Similarly, employees' perceived organizational environmental support could strengthen the relationship between employee affective commitment and employee PEB (Saifulina et al., 2021). As contextual factors, leadership style (e.g., ethical leadership) or leaders' PEB could also buffer or strengthen the relationships between predictors and subordinates' PEB. For instance, Molnar and colleagues (2021) found that employees' perceived ethical leadership strengthened the indirect effect of employees' perceived corporate social responsibility on employee PEB through the quality of work life. Furthermore, perceived responsible leadership moderated the positive relationship between socially responsible human resources management and employee PEB, mediated by moral reflectiveness (Zhao & Zhou, 2021). Though previous research has highlighted the importance of coworker environmental advocacy as the predictor of employee PEB (Kim et al., 2014), no studies have explored the moderating factors involving coworkers.

Most of the studies focused on moderators have only considered individual factors. These individual factors include personality, individual differences, or demographic differences. For example, Garden (2020) found openness to experience moderated the relationship between

positive affect and eco-initiatives. Regarding individual differences, personal values, beliefs, or knowledge such as green values (B. Zhang et al., 2021) or environmental knowledge (Saeed et al., 2019) could moderate the relationships between predictors and one's likelihood of engaging in PEB. Islam et al. (2019) found that ethical leadership predicted employees' environment-specific citizenship behavior through green human resource management, while employees' green values moderated the relationship between green human resource management and their environment-specific citizenship behavior.

Scholars also found that demographic characteristics act as boundary conditions around the effects between antecedents and employee PEB. Gender strengthened the relationship between perceived corporate social responsibility and employee PEB, with this relationship found to be stronger among women than men (Ahmad et al., 2021). Khan et al. (2019) found that gender has similar moderating effects on the indirect relationship between ethical leadership and employee PEB through the psychological green climate.

Consequences of Employee Pro-Environmental Behavior

Given that most studies acknowledge that employee PEB is a positive outcome, the consequences of employee PEB have not been studied as extensively as the antecedents. Several studies have explored the organizational outcomes of employee PEB. Organizational environmental performance was found to be a result of employee PEB (Anwar et al., 2020; Paillé, Chen, et al., 2013). Khan and colleagues (2021) demonstrated that employee PEB was positively related to organizational environmental sustainability.

As for individual outcomes, research has shown that employee PEB could benefit employees' physical or mental well-being. For example, cycling to work (Grabow et al., 2012) or having plants in the workplace (Fjeld, 2000) could help employees maintain or improve their

physical or mental health. Bohlmann et al. (2018) found that employee green behavior also contributed to their overall job performance as rated by managers. The influence of employee PEB could go beyond the organization and influence external members (e.g., customers). Tuan (2018) found that employee OCBE bridged the relationship between perceived CSR and customers' citizenship behavior for the environment. Employees who show OCBE could become the prototype of an organization that cares about social responsibility. Customers are more likely to identify and align with the prototypical members and engage in citizenship behavior for the environment.

Measurements of Employee Pro-Environmental Behavior

Some scholars conceptualize PEB as a unidimensional construct, so they tend to extract classic and representative PEB and then code it into scale items. For example, Robertson and Barling (2013) developed a seven-item scale that described detailed employee PEB, such as printing on both sides. Graves and colleagues (2013) developed a 13-item scale that used a more general way to describe employee PEB, such as sharing pro-environmental knowledge with others. In addition, Kim et al. (2014) developed a scale to measure voluntary workplace green behaviors emphasizing the voluntary nature of these behaviors.

In contrast to scholars who consider employee PEB as a unidimensional construct, some suggest that employee PEB is a multidimensional construct. As mentioned in the conceptualization of the PEB section, Boiral and Paillé (2012) developed their scale by adapting the scale of organizational citizenship behavior. Bissing-Olson et al. (2013) used task performance (Williams & Anderson, 1991) and proactive behavior (Frese & Fay, 2001; Frese et al., 1996) to propose a two-dimension scale including task-related PEB and proactive PEB. Dumont et al. (2017) developed a new employee PEB scale from the perspective of in-role or

extra-role behaviors. In their scale, PEB includes in-role employee green behaviors and extra-role employee green behaviors.

In the review of Francoeur et al. (2021), authors summarized multiple PEB scales used in 53 papers with three parameters–indirect vs. direct influence, in-role vs. extra-role, and low intensity vs. high intensity. Indirect influence behavior references PEB that intends to encourage or support colleagues (e.g., encouraging a coworker to save energy), while direct influence behavior is concrete environmental behaviors (e.g., recycling). In-role and extra-role behavior refer to whether the environmental behavior is included in work tasks or not. Finally, intensity refers to the extent of effort spent on the behavior. For example, printing double sided is low intensity, while not printing at all is high intensity (Ciocirlan, 2017).

Pro-Environmental Behavior and Prosocial Behavior

Some studies have investigated PEB through prosocial lens, with literature suggesting that certain prosocial traits (e.g., altruism, Clark et al., 2003) can predict general PEB. While PEB might be predicted by certain prosocial traits or characteristics, I argue that PEB is distinct from prosocial behavior. In addition, to differentiate PEB from established prosocial constructs (such as organizational citizenship behavior or helping behavior), it is critical to show how PEB differs in definition and implications from these established prosocial behavior constructs.

Prosocial behavior is organizational members' acts that promote or protect the welfare of individuals, groups, or organizations (Brief & Motowidlo, 1986). Though there are many types of behavior that could be considered as prosocial behavior, the shared characteristic is that the behavior is undertaken with the aim of enhancing the well-being of the person, group, or organization it is intended for (Bolino & Grant, 2016). In organizational behavior literature, organizational citizenship behavior (OCB) as a prototypical prosocial action that has been

extensively studied. OCB has been defined as a workplace discretionary act that promotes organizational effectiveness. OCB, like PEB, is an umbrella term that includes a wide range of specific behaviors. Usually, OCBs can be grouped into two categories: OCB-individuals and OCB-organization (Williams & Anderson, 1991). OCB-individuals refers to behaviors that are targeting individuals, such as assisting coworkers or volunteering for tasks outside of one's job description. OCB-organization refers to behaviors that benefit the organization as a whole, such as promoting the organization's image or participating in organizational activities. In the following paragraphs, I will use OCB as an example of prosocial behavior to discuss the differences between prosocial behavior and PEB and the unique contribution of my research to the literature. I will first briefly review the OCB literature.

Early research on OCB focused on identifying the antecedents and drivers of such behaviors, with the aim of determining how organizations can encourage and elicit OCB from employees. There are four theories that have been widely used to explain why individuals engage in OCB, which are social exchange theory, social identity theory, social learning theory, and affective events theory.

First, researchers have used social exchange theory to consider OCB as a form of exchange between the employee and the organization in which employees engage in OCB because they receive favorable treatment from their organizations. For example, previous literature has found that job satisfaction (Organ & Ryan, 1995), organizational commitment (Diefendorff et al., 2002), and organizational support (Thompson et al., 2020) are positively related to OCB. Such exchange or reciprocity also apply to the relationship between employees and coworkers or leaders. Previous studies suggest that team–member exchange (Farmer et al., 2015) and a higher level of leader–member exchange (Walumbwa et al., 2011) also foster OCB.

In addition, OCB could be driven by a perception of fair and just treatment from organizations and supervisors. When employees are treated with procedural fairness, they perceive that they are valued and respected by the organization, and this fosters a social exchange relationship where they come to understand their relationship to the organization and its authorities (Kamdar et al., 2006; McNeely & Meglino, 1994; Rupp et al., 2014).

Second, social identity theory suggests that OCB is driven by a sense of identification with and attachment to the organization, leading employees to engage in behaviors that benefit the organization as a way of enhancing their own identity and reputation. For example, a previous study found that employees with a longer organizational tenure are more likely to engage in OCB due to the increase of organizational identification (Mohammad et al., 2010). In addition, Wu et al. (2016) found that workplace ostracism decreased OCB by undermining employees' identification with the organization.

Third, social learning theory proposes that OCB is learned through observing and imitating the behavior of others in the organization, as well as through reinforcement and punishment. For instance, Zagenczyk et al. (2008) found that compared to friendship ties, strong advice ties, the belief that coworkers had the ability and competence to provide help (Ho, 2005), were more likely to predict OCB. In this case, employees could learn from coworkers on job skills and organizational norms, which then facilitates them to engage in OCB. Employees might also set others (i.e., leaders or coworker) who engage in OCB as the role model and then learn from them on how to exhibit OCB (Yaffe & Kark, 2011).

Fourth, affective events theory suggests that OCB is influenced by the emotions and attitudes employees experience in response to events and experiences in the workplace, with positive emotions and attitudes leading to increased OCB. For example, employees with positive

emotions are more likely to engage in OCB, while the state negative affect is negatively related to OCB (Geiger et al., 2018; Reynolds Kueny et al., 2020). The theory has also been used in research to explain the short-term changes in OCB. A study by Spence and colleagues (2011), which was conducted over a 14-day period, demonstrated that mood and emotions can play a role in both the cause and effect of OCB. Glomb and colleagues' study (2011) also supported this idea by showing that affect could serve as both antecedents and consequences of OCB.

Moderators of OCB could be categorized into individual factors and contextual factors. Regarding individual factors, organizational tenure has been found as the moderator in the curvilinear relationship between organizational commitment and OCB (Ng & Feldman, 2011). Previous literature also suggests that age could buffer the relationship between job insecurity and OCB (Stynen et al., 2013). Gender was also found to be a moderator of the relationship between on-the-job embeddedness and OCB; such a relationship would be stronger among female employees (Lev & Koslowsky, 2012). Some contextual factors such as organizational respect for people culture could strengthen the relationship between organizational justice and OCB (Erkutlu, 2011), and organizational support could buffer the negative relationship between organizational stressors and OCB (Jain et al., 2013).

Though the initial focus of OCB was on its antecedents, recent research has found that the implications of OCB are important for employees, groups, and organizations. Such an impact could be either positive or negative. In terms of the implications on individuals, OCB has been found to positively predict individual performance, such as higher levels of job performance (Podsakoff et al., 2009), career advancement and promotions (Allen & Rush, 1998), lower turnover intention (Sharoni et al., 2012), job satisfaction (Podsakoff et al., 2009) and positive mood (Koopman et al., 2016; Lam et al., 2016). However, there are also some negative impacts

of OCB on individuals. For example, OCB is expected to consume time and energy of individuals. From the conservation of resources theory, employees might experience role overload (Bolino & Turnley, 2005) and work–family conflict (Halbesleben et al., 2009) due to the loss of resources. In addition, OCB might result in interpersonal deviance and organizational deviance among employees because employees' compelled feeling of engaging in OCB leads to psychological entitlement, which operates as moral credentials (Yam et al., 2017).

OCB is originally described as behavior that facilitates organizational effectiveness, so previous studies have found that OCB is correlated to subjective and objective overall unit-level performance (see meta analysis, Podsakoff et al., 2009). OCB is expected to enhance group effectiveness by encouraging knowledge sharing, facilitating problem-solving, and improving collaboration (Bolino & Grant, 2016). However, some studies indicated that such a relationship might be buffered when employees' jobs are not interdependent (Nielsen et al., 2010), and the relationship could also be curvilinear (Mackenzie et al., 2011).

OCB research has also investigated its influence on fellow employees at the workplace. The core concept of OCB is about contributing to the effectiveness to the group and organization, so the studies of positive and negative consequences of OCB were mainly focused on how coworkers' OCB might influence fellow employees' job performance, OCB, and fellow employees' perceptions of the competence of coworkers. As mentioned, social learning theory suggests that employees learn acceptable behavior from observing how others behave. Previous studies found that coworkers' OCB could enhance fellow employees' OCB because the modelling of OCB facilitates the fellow employees' engagement in OCB (Bommer et al., 2003; Guo et al., 2022). Similarly, coworkers' OCB could enhance fellow employees' job performance

by providing help to fellow employees and modelling the best practice (Podsakoff & MacKenzie, 2014; Posdakoff & Mackenzie, 1994).

In addition, based on social exchange theory, coworkers' OCB could foster a good relationship with fellow employees who receive the help. For example, OCB-individuals could result in an increase in the likability of coworkers by their fellow employees and the intention to collaborate (Turner & Connelly, 2021). Previous studies also found that coworkers' OCB-individuals could increase affect-based trust toward coworkers because such behavior might be attributed to interpersonal care (McAllister, 1995). In this dissertation, PEB is considered a type of ethical behavior. Thus, I contribute to PEB literature by investigating if coworkers' PEB might lead to integrity-based trust. Integrity-based trust is a type of cognitive-based trust that is typically triggered by ethical behavior.

However, the impacts of coworkers' OCB on fellow employees might not always be positive. Tepper et al. (2004) found that coworker's OCB was positively related to fellow employees' job satisfaction only when abusive supervision was low because fellow employees who were not being abused would perceive coworkers' OCB was motivated by others' concern. Conversely, coworkers' OCB was adversely related to fellow employees' job satisfaction when abusive supervision was high because abused fellow employees perceived coworkers' OCB was driven by impression management. Similarly, drawing on attribution theory, fellow employees might consider coworkers' service-oriented OCB as hypocritical, especially when fellow employees attribute the motive of OCB as self-concerned (Guo et al., 2022). In addition, fellow employees might experience negative reactions when accepting coworkers' help, including diminished image, reciprocity obligation, self-reliance, mistrust toward coworker, and coworker incompetence (Thompson & Bolino, 2018). For example, Tai et al. (2023) found that coworkers'

task-related help might result in status threat to fellow employees, particularly if fellow employees felt more inadequate than coworkers after receiving help. However, this study did not examine the relationship between coworkers' task-related help and fellow employees' feelings of inadequacy, assuming it as a given and contextual factor. In my dissertation, I expand on this research by exploring focal employees' moral inferiority resulting from coworker's eco-helping, which in turn leads to focal employee's subsequent behavior.

Based on the review above, OCB and PEB have some similarities, such as both behaviors being discretionary and beneficial to other parties. There are also important differences that distinguish these two constructs. First, the target of PEB and OCB is different. Though PEB might help organizations enhance the effectiveness potentially via enhancing environmental performance (Paillé & Boiral, 2013), PEB was not originally described and defined as behavior facilitating organizational effectiveness. The target of PEB is protecting the environment and reducing harm to the environment (Norton et al., 2015), which is different from the target of OCB of increasing individual performance and organizational and group effectiveness (Bolino & Grant, 2016). PEB aligns with ethical principles such as respect for the environment, intergenerational equity, and the promotion of sustainability (de Groot & Steg, 2009). In such case, PEB might be considered a more ethics-based behavior than OCB, as it is directly focused on promoting environmental sustainability and protecting the planet for future generations. OCB is a form of extra-role behavior that contributes to the betterment of the organization. Many employees who engage in OCB may have strong prosocial values or a desire to help colleagues and the organization (Grant & Mayer, 2009). However, it is not necessarily driven by ethical considerations. In such case, PEB might be considered as a more ethical behavior as it promotes

sustainable development and has a positive impact on the wider community (Paillé & Boiral, 2013).

Second, these two behaviors are motivated differently. OCB is often motivated by prosocial values, a sense of obligation to the organization, a desire to contribute to its success and maintain positive relationships with organizational members, or impression management (Harvey et al., 2018). Additionally, employees may engage in OCB in order to receive recognition, rewards, and other benefits from the organization, such as promotions or increased job security. PEB might be motivated by a variety of personal factors, including values, attitudes, and beliefs that intrinsically care about the environment and sustainability (Robertson & Barling, 2017). Individuals may also be motivated by a sense of reducing their personal impact on the environment or protecting the environment for future generations or desire to do what is right for the environment and society. Individuals who engage in PEB in the workplace do not expect to receive direct benefits for themselves. For instance, actions such as using digital documents do not typically result in any significant gain for employees. Additionally, not engaging in PEB may not result in any personal penalties for the employee (Turnipseed & Wilson, 2009). However, the negative effects of not engaging in PEB can impact the society as a whole. That is to say, individuals who engage in PEB are internally motivated by moral considerations (de Groot & Steg, 2009) and a sense of responsibility to protect the natural environment (Weyand, 2022). Such differences in motivation could influence how fellow employees might perceive these two behaviors. For example, coworkers who engage in OCB might be considered by peers as a good person who cares about the organization or the recipients (McAllister, 1995) but might not be considered an ethical person who cares about the wider community or even the environment. In addition, though coworkers' PEB might contribute to a sustainable workplace by conserving

energy and reducing waste to enhance organizational effectiveness, peers might not directly link this behavior to the organizational concern motive.

In summary, though PEB has positive social effects (Story & Forsyth, 2008; Turaga et al., 2010), the core concepts and implications of PEB are different from traditional prosocial behavior in target and motivations (i.e., OCB). OCB focuses on actions that benefit the organization and its members, while PEB targets the natural environment and the broader community. Additionally, the motivation for engaging in PEB may be driven more by ethical concerns rather than organizational factors. PEB represents a distinct area that cannot necessarily be explained based on the extensive literature on OCB. Therefore, this dissertation differs from the previous prosocial behavior literature on focusing on the ethical characteristics of coworkers' PEB and explores how the impacts of coworkers' PEB on fellow employees may differ from the effects generally associated with OCB via ethical relevant mechanisms.

Summary

The extant literature on employee PEB has contributed to our knowledge of when and why employees might engage in PEB and has shed light on future research directions (see Figure 1 for a summary of the antecedents, moderators, and consequences of employee PEB from previous studies). However, there are still some gaps that need to be addressed. Firstly, though previous studies have highlighted the role of coworker environmental advocacy, no study has investigated whether a coworker's PEB could act as an antecedent that influences the focal employee's PEB. However, peers are an important part of the daily work experience and could be a powerful influence on employees' perceptions and behavior (Kim et al., 2014). In addition, ethical behavior literature suggests that employees tend to follow the ethical or unethical behaviors of their coworkers via social cognitive process (Treviño et al., 2014), whereas such

ethical behavior might impose pressure on the focal employee due to the social comparison (Bolino & Grant, 2016). In summary, without taking a relational perspective to investigate the influences of the coworker's different types of PEB on the focal employee, it could be hard to understand how and why employees decide to engage in PEB in the workplace.

Secondly, very few studies explored the mixed influences of employee PEB. Despite the growing body of evidence suggesting that workplace PEB might positively impact the organization or other organizational members, research has traditionally limited the focus on modeling behaviors (e.g., organizational environmental performance, Anwar et al., 2020; Khan et al., 2021) and considered only the positive influences of employee PEB (Tuan, 2018). As a type of ethical behavior, employee PEB could have mixed influences on others. Social comparison theory suggests that ethical behaviors might trigger the comparison between two parties where the one who shows less ethical behavior might experience moral inferiority after upward comparison (Monin, 2007). Thus, a coworker's type of PEB might trigger feelings of inadequacy in the focal employee when the coworker tries to lobby or convince the focal employee to engage in PEB. The extant literature overlooked the mixed influences of employee PEB by not examining the complexity of the varied outcomes of employee PEB.

Thirdly, limited research has considered the varied influences of different types of PEB. Previous studies either explored one type of PEB (e.g., eco-civic engagement, Khalid et al., 2021) or ignored the various types of PEB by treating it as a unidimensional construct (Terrier et al., 2016). Disregarding the differences among the various types of PEB might overlook their nuanced impacts in the workplace, and such oversight has resulted in mixed results, limiting the advancement of theory on PEB (Robertson, 2017). In addition, previous review articles mentioned that the shift of focus and target of PEB could create different impacts (Francoeur et

al., 2021; Inoue & Alfaro-Barrantes, 2015). For example, adopting personal environmental protection initiatives at the workplace requires less effort than helping peers develop green habits (Ciocirlan, 2017). The latter behavior might have a stronger impact on peers as it involves direct influence to peers (Francoeur et al., 2021). However, no research to date has addressed how types of a coworker's PEB might affect the reactions of focal employees through different mechanisms.

To address the gaps in prior employee PEB research, this dissertation integrates social cognitive theory and social comparison theory to contribute to PEB literature in the following ways. First, I focus on the conceptualization of Boiral and Paillé (2012) to explore how different types of a coworker's PEB might influence the focal employee. Boiral and Paillé's (2012) typology differentiated the focus and captured the nuance of three types of PEB: eco-initiatives, eco-civic engagement, and eco-helping. Eco-initiatives are self-enacted PEB that aim to improve environmental practices with a more proactive attitude toward the natural environment. Eco-civic engagement is voluntary participation in organizational environmental activities, which reflects that the coworker follows organizational environmental protection expectations. Finally, eco-helping is an influential behavior that seeks to motivate peers to be more environmentally friendly. I select this typology as it differentiates the focus of PEB into the organization, individuals, and coworkers (Robertson, 2017). This distinction between different types of PEB provides a useful framework for understanding the various responses of the focal employee toward the coworker's different types of PEB. For example, the focal employee might gain more environment-related knowledge through the observation of a coworker's eco-initiatives rather than eco-civic engagement, whereas the focal employee might feel inadequate about themselves when receiving help from a coworker in resolving environmental issues. Therefore, I integrate

social cognitive theory and social comparison theory to better understand the complex impacts of the coworker's three types of PEB on the focal employee.

Second, I investigate both the positive and negative consequences of the coworker's PEB on the focal employees both within and beyond the workplace. According to social cognitive theory, individuals attempt to imitate the behaviors of others (Bandura, 1986). Thus, I propose that the focal employee is more likely to engage in PEB in the workplace and at home after observing the coworker's PEB. On the other hand, according to social comparison theory (Festinger, 1954), coworkers' engagement in PEB may result in unfavorable and uncomfortable comparisons in the eyes of the focal employee, subsequently leading to a negative response from the focal employee. Specifically, I examine whether eco-helping might evoke avoidant behaviors in the focal employee (i.e., ostracism from the focal employee toward the coworker).

Third, through a combination of social cognitive theory and social comparison theory (Bandura, 1977a, 1977b, 2001; Festinger, 1954), I investigate the psychological mechanisms that connect the coworker's PEB and the focal employee's sequential behaviors. For example, the focal employee, as the observer, might develop integrity-based trust toward the coworker (Mayer et al., 1995) and enhance their confidence in contributing to the environment (i.e., green self-efficacy, Chen et al., 2015) via the social cognitive process. In contrast, the focal employee may experience feelings of inadequacy when perceiving that the coworker is more ethical (i.e., moral inferiority, Monin, 2007) via the social comparison process.

Fourth, prior PEB literature has predominantly focused on individual characteristics and contextual factors as potential boundary conditions around the effect of PEB. In this dissertation, I propose task interdependence and performance inferiority as dyadic relational moderators with implications for the psychological mechanisms proposed by social cognitive theory and social

comparison theory. With this focus, this dissertation aims to look beyond individual characteristics and highlight a dyadic perspective for future PEB research.

Chapter Three: Theory and Hypotheses

As mentioned in the literature review chapter, PEB could be considered a type of ethical behavior. In this research, I aim to contribute to behavioral ethics literature and PEB literature. This chapter proposes several hypotheses to answer the following research questions:

RQ1: How do the coworkers' different types of PEB impact the focal employee's psychological responses and their subsequent behaviors?

RQ2: What are the boundary conditions around the effects of PEB on the focal employee?

To answer these research questions, this dissertation integrates social cognitive theory and social comparison theory to provide a more complete understanding of the interpersonal dynamics influenced by coworkers' PEB. Prior studies have shown that social cognitive theory (Locke & Sadler, 2007) and social comparison theory (Downes et al., 2021; Tai et al., 2023) are insightful for explaining the impact of interpersonal dynamics on individuals. Combining these two theories is essential not only because both theories share an interest in understanding how individuals' perceptions of others' behaviors influence their own motivation and actions, but also because each theory sheds light on aspects that the other underemphasizes.

Social cognitive theory primarily focuses on how individuals learn by observing others within their environment, which makes it particularly relevant for understanding how employees adopt and engage in PEB through social learning processes (Bandura, 1991, 2001). This theory employs an agentic perspective to explore individuals' adaptation and self-regulation in interactions with others. However, learning does not always occur. When social comparison processes hinder motivation, observing others' positive behavior can lead to negative outcomes. Although Bandura (1997) acknowledged this potential issue, the negative effect on observers'

behavior has not been fully explored in social cognitive theory. Social comparison theory provides a critical perspective for understanding how employees evaluate their actions relative to others, especially similar others (e.g., coworkers), which in turn influences their motivation and behavior through these comparisons (Festinger, 1954). Together, these perspectives provide a more nuanced and comprehensive framework for explaining how employees' PEB is influenced by both cognitive and social comparison processes.

Guided by the integration of social cognitive theory and social comparison theory, I propose that the focal employee might respond to their coworker's different types of PEB in various ways. I draw specifically on social cognitive theory and social comparison theory to explain these different responses. First, drawing on social cognitive theory, I propose that the focal employee might develop integrity-based trust and green self-efficacy, which in turn will influence their subsequent behaviors (i.e., PEB at the workplace and in personal life, and in collaboration with the coworker). Then, drawing on social comparison theory, I expect the focal employee might experience moral inferiority in response to the coworker's eco-helping. Such moral inferiority could increase the focal employee's ostracizing behaviors toward the coworker. Lastly, I propose task interdependence as the social cognitive-based moderator and performance inferiority as the social comparison-based moderator that moderates the mediated relationships detailed above.

The following part of the chapter is organized into three sections. In the first section, I briefly explain social cognitive theory and my hypotheses on how the social cognitive process explains the impacts of the different types of the coworkers' PEB on the focal employee. In the second section, I briefly introduce social comparison theory and then develop theoretical arguments for the relationships implied by social comparison. In the third section, I propose two

moderators (task interdependence and performance inferiority) based on social cognitive theory and social comparison theory. The proposed model, which integrates these theories and introduces novel moderators, is depicted in Figure 2.

The Social Cognitive-Based Mediators

Social Cognitive Theory

The premise of social cognitive theory is that individuals are not only the product of the "reciprocal interaction of personal and environment determinants" (Bandura, 1977b, pp.11-12) but also contributors to their environments by self-organizing, regulating, and reflecting (Bandura, 2001). Social cognitive theory employs an agentic perspective to explore the cognitive process. Therefore, social cognitive mechanisms have been frequently used to explain how an individual's cognition and behavior are shaped by the environment surrounding them (e.g., people, stimuli).

According to the agentic perspective of social cognitive theory, individuals strive to achieve goals, overcome obstacles, and develop confidence in their capabilities to maintain a certain level of performance (Bandura, 1977a, 2001). This is especially true for one of the important components of social cognitive theory—self-efficacy, which refers to an individual's confidence in their capabilities to achieve goals and maintain a certain degree of performance. Individuals with strong self-efficacy feel confident when performing or organizing courses of action. As suggested by Bandura (1977a), individuals can increase their self-efficacy via observational learning. Though direct experiences could also help individuals learn knowledge and skills, they still need to rely on observing others' behaviors (Bandura, 1986). Bandura suggested that "most of the behaviors that people display is learned, either deliberately or

inadvertently, through the influence of example" (1977b, p. 5), further arguing that individuals' behavior might be shaped by social context.

Observational learning includes four stages: attention, retention, motor reproduction, and motivation (Bandura, 1977a). Through these steps, individuals choose a model, watch and rehearse the model's behavior in the cognitive process, and then repeat the behaviors they have learned. Individuals do not enact observed behaviors; they only learn and imitate behaviors that could lead to favorable outcomes or rewards. The motivation component highlights the importance of reinforcement, which provides an effective way to help individuals regulate the behaviors they have learned or plan to learn. Individuals' learning experiences allow them to evaluate courses of action and determine which performance strategies will be effective in a given domain (Gist & Mitchell, 1992), in turn increasing their self-efficacy.

Individuals selectively choose their role models and modeled behaviors during the learning process. That is, individuals might pay different amounts of attention to the stimuli. Concerning the social cognitive process, saliency, vividness, and accessibility impact the extent of an individual's attention (Fiske & Taylor, 2013). Saliency indicates the contextual significance or importance of the stimuli, vividness stands for the individual's innate interest in the stimuli, and accessibility represents the ability to recognize the stimuli (Fiske & Taylor, 2013). In the social cognitive process, individuals encode social information, with most of this information being ambiguous and messy. The accessibility of this information enables individuals to process information more effectively (Bruner, 1957). For example, Liang and colleagues (2020) found that employees could access more information about their coworkers when they are attracted by more visible communication (e.g., a discussion forum for employees), increasing their mutual trust in each other.

In the organizational context, peers could be the source of role modeling, since their behaviors can be observed by each other frequently (Bandura, 1986). For example, Ng and colleagues (2021) found that the focal employee witnessing their coworker's voice could enhance their own voice by increasing the focal employee's self-efficacy in engaging in voice behavior. As such, social cognitive theory provides a psychological framework for studying how peers react to each other's behavior in the work setting.

The social cognitive process facilitates the development of trust toward others (Fiske & Macrae, 2012). Observers could gain or lose trust in a target in the social cognitive process while learning the target's standards and principles during observation (Fehr et al., 2019). External stimuli trigger cognitive processes within individuals. In the process of social cognition development, individuals evaluate whether others are trustworthy, including their capability and reliability, based on their behaviors and characteristics (Fiske & Taylor, 2013; Wang et al., 2010). Similarly, Mayer and colleagues (1995) proposed that interpersonal trust is shaped by ability, benevolence, and integrity. Among the three types of trust, integrity-based trust reflects the cognitive trust of individuals toward others (Mayer et al., 1995; McAllister, 1995).

In summary, social cognitive theory suggests that individuals' behaviors are shaped by their social context, and they set goals and anticipations to guide and motivate their behaviors to interact with the environment (Bandura, 1977a, 2001). Based on social cognitive theory, I propose the focal employee's integrity-based trust toward the coworker and green self-efficacy as two mechanisms that bridge types of the coworker's PEB and the focal employee's sequential behaviors.

Types of PEB and Integrity-Based Trust

Eco-civic Engagement. In the workplace, peers are likely to develop interpersonal trust with each other in their daily work. Research has shown that employees can build integrity-based trust toward coworkers (Colquitt et al., 2011). Integrity-based trust refers to the trustor perceiving that the trustee adheres to a set of principles accepted by the trustor (Mayer et al., 1995). The level of integrity-based trust between peers depends on the values and behaviors of the trustee and trustor or the interpersonal relationship characteristics. The trustor is more likely to build integrity-based trust with the trustee when they are high in trust propensity (Becerra & Gupta, 2003; see the meta-analysis review, Colquitt et al., 2007). In addition, trustees' individual characteristics or behaviors also impact the level of the trustors' integrity-based trust toward the trustee, such as caring about social issues (Zlatev, 2019), OCB engagement (Ferrin et al., 2006), perceived trustworthiness of the trustee (Yakovleva et al., 2010), and the trustee's power (Mayer et al., 2011). Previous literature has adopted social exchange theory to explain that tie strength (Evans et al., 2018), shared cultural-ethnic similarity (Jiang et al., 2011), and shared common goals (Ferrin & Dirks, 2003) could predict a high level of integrity-based trust. Apart from intrapersonal and interpersonal factors, contextual factors such as organizational justice (Colquitt et al., 2011) also shape an employee's integrity-based trust toward their employer.

Eco-civic engagement describes employees' participation in activities (e.g., serving on a new ecological committee or attending nonmandatory meetings on promoting environmental protection in the organization) aiming to improve organizational performance (Boiral, 2009). When employees engage in their organization's environmental initiatives, they have a greater chance of being observed by their peers. For instance, organizations might use internal communication channels to announce and recap activities, which increases the exposure and salience of the participating employees to their peers (Sanyal & Haddock-Millar, 2018). When

the coworker actively engages in organizational environmental activities, the focal employee is more likely to notice the coworker's behavior, as such behaviors are salient and accessible in the eyes of the focal employee. As previously explained, integrity-based trust is the product of the trustor's accumulated observations of the trustee (Dirks & Ferrin, 2002). During observation, the focal employee might perceive that the coworker's eco-civic engagement demonstrates their personal value of caring for the natural environment and their support of the organization's environmental protection programs. The coworker's eco-civic engagement implies that the coworker is ethical and desires to take social responsibility.

Environmental activities are often not required by the organization; a coworker's participation in such activities demonstrates their willingness to sacrifice time and energy for the good of the natural environment, which benefits the community as a whole. Individuals are more likely to trust someone who cares about common goals and is not acting only for their own benefit (Bolino et al., 2002). Previous studies have shown that individuals who care about the interests of others (e.g., the environment and future generations) may be more likely to keep promises and demonstrate concern for other employees (Whitener et al., 1998). Therefore, coworkers' eco-civic engagement may increase the exposure of their pro-environmental behavior to the focal employee, so the focal employee is more likely to build integrity-based trust toward the coworker based on their observation of the coworker's engagement in organizational environmental activities.

Hypothesis 1: The coworker's eco-civic engagement is positively related to the focal employee's integrity-based trust toward the coworker.

Eco-Initiatives. Eco-initiatives are employees' personal initiatives to integrate environmental concerns in the workplace. Similar to eco-civic engagement, eco-initiatives are a

type of ethical behavior that aims to protect the environment in the workplace, which could raise the perceived integrity-based trust of observers. Beyond the similar characteristics to eco-civic engagement, eco-initiatives have other characteristics that encourage a focal employee's integrity-based trust toward the coworker.

In line with social cognitive theory, I argue that the coworker's eco-initiatives are positively associated with the focal employee's integrity-based trust toward the coworker. A coworker's voluntary behavior is seen as a significant source of information regarding their internal character and motivations and, thus, trustworthiness (Ferrin et al., 2006). When the coworker performs personal pro-environmental behavior above and beyond the call of duty, the focal employee is more likely to consider the coworker to be trustworthy.

Engaging in eco-initiatives indicates that the coworker is dedicated to improving environmental performance with a proactive attitude and possesses genuine concerns about environmental problems, which implies that the coworker maintains moral standards. According to social cognitive theory (Bandura, 1986), observers might understand others' moral standards by observing how others interact with their external environment (Bandura, 1991). Eco-initiatives demonstrate that the coworker has a high moral standard and a genuine concern about the natural environment. In this case, the coworker might be perceived as more trustworthy and more consistent with their values (Zlatev, 2019). Therefore, when observing a coworker proactively practicing PEB, the focal employee is likely to develop integrity-based trust toward the coworker as they are now seen to possess high moral standards.

Hypothesis 2: The coworker's eco-initiatives are positively related to the focal employee's integrity-based trust toward the coworker.

Integrity-Based Trust and Subsequent Behaviors

Collaboration with the Coworker. Once the focal employee develops integrity-based trust toward the coworker, I expect that such cognitive trust could influence the focal employee's sequential behaviors. Specifically, I predict that the focal employee's integrity-based trust toward the coworker could increase their collaboration with the coworker at work. Trust is a predictor of collaboration or teamwork in the workplace (Sargent & Waters, 2004; McAllister, 1995). According to social cognitive theory, integrity-based trust can result in collaboration because such cognitive trust is associated with the belief that the behavior of the trustee is predictable and consistent (Mayer et al., 1995). When the trustor trusts the trustee based on integrity, the trustor is confident that the trustee could keep their promise and maintain consistency in their behaviors (Colquitt et al., 2011; Mayer et al., 1995). Trust provides cognitive cues to the trustor that there is a great level of predictability regarding how the trustee will react in the future, so the trustor is more likely to work with the trustee. That is to say, the trustor might consider the trustee to be capable of fulfilling promises and reliable when encountering obstacles.

A higher level of integrity-based trust toward the trustee means that the trustor is more likely to take risks and more willing to be vulnerable to the actions of the trustee (Mayer et al., 1995). This willingness to be vulnerable facilitates the development of working relationships in an organization (Mayer & Davis, 1999). Although there are risks associated with collaboration with the trustee, these risks are relatively predictable due to the consistent pattern of the trustee's behavior. Following this argument, the focal employee might be more likely to collaborate with the coworker if the focal employee has a strong integrity-based trust toward the coworker. I argue that the coworker's eco-civic engagement and eco-initiatives are indirectly related to the focal employee's collaboration with the coworker via their integrity-based trust towards the coworker.

Hypothesis 3a: The focal employee's integrity-based trust is positively related to the collaboration with the coworker.

Hypothesis 3b: The focal employee's integrity-based trust toward the coworker mediates the relationship between (a) the coworker's eco-civic engagement, (b) the coworker's eco-initiatives, and collaboration with the coworker.

Types of PEB and Green Self-Efficacy

Eco-Initiatives. Self-efficacy is a key component of the social cognitive process. Chen and colleagues applied the core notion of self-efficacy to the pro-environmental and green behavior context and proposed the construct of green self-efficacy (Y.-S. Chen et al., 2014; Chen et al., 2015). Green self-efficacy refers to "the belief in individuals' capabilities to organize and execute courses of action required to achieve environmental goals" (Chen et al., 2015, p.1172). In the green self-efficacy literature, researchers adopted social exchange theory (Kardoyo et al., 2020) and social cognitive theory (K. Farooq et al., 2021; Zhao & Zhou, 2021) to explore the antecedents of green self-efficacy. In these studies, researchers found that organizational or team contextual factors might impact the variation of green self-efficacy, such as shared vision (Chen et al., 2015), green human resource management (R. Farooq et al., 2021; Zhang et al., 2020), and green transformational leadership (Y. Chen et al., 2014). Green self-efficacy has been comprehensively discussed in the context of customer behavior but is a relatively new construct in the workplace.

According to social cognitive theory, self-efficacy could be enhanced through vicarious learning by observing the explicit behaviors of others (Bandura, 2001). When the focal employee observes a coworker's eco-initiatives and practices, they could effectively learn behaviors without wasting unnecessary effort in a cycle of trial and error (Hoover et al., 2012). In addition,

by witnessing the coworker's engagement in eco-initiatives, the focal employee could "draw" a mental script for conducting eco-initiatives and activities to repeat the coworker's behavior effectively. After repeating these steps, the focal employee is more likely to gain confidence in completing similar pro-environmental behaviors.

Eco-initiatives are practices done by a coworker without support from the organization. The self-directed nature implies that individuals could use their ability to resolve environmental problems and create green outcomes without support from the organization (Robertson & Barling, 2017). According to social cognitive theory, watching others complete tasks could provide information to observers on the abilities and strategies needed to perform certain tasks independently (Gist & Mitchell, 1992). I propose that a coworker's eco-initiatives positively predict the focal employee's green self-efficacy.

Hypothesis 4: The coworker's eco-initiatives are positively related to the focal employee's green self-efficacy.

Eco-Helping. Eco-helping concerns employees voluntarily helping coworkers to better address environmental problems at work. As social cognitive theory suggests, the amount of attention individuals pay varies depending on the stimuli. I expect a coworker's helping behaviors for environmental protection toward the focal employee could increase the focal employee's green self-efficacy, as the focal employee has been exposed to environmental protection knowledge and skills via direct observational learning, verbal persuasion, and knowledge sharing. Eco-helping behaviors provide the focal employee with direct information about protecting the natural environment at the workplace once the coworker has guided the focal employee in person or provided useable resources (Mi et al., 2020; Tsai et al., 2016). For example, the coworker might explain environmental procedures to the focal employee or

encourage the focal employee to recycle or conserve energy (Boiral & Paillé, 2012). During the process of eco-helping, the focal employee could gain more details and hands-on experience, helping them build confidence in performing environmental behaviors in the future.

The focal employee could experience vocal persuasion when receiving eco-helping behavior from the coworker (Boiral & Paillé, 2012; Boiral et al., 2016; Paillé & Boiral, 2013). Verbal persuasion refers to individuals receiving verbal encouragement and feedback from others on achieving certain tasks (Bandura, 1986; Gist & Mitchell, 1992). Previous studies have suggested that others' verbal persuasion is positively related to individuals' self-efficacy in the work context (Eden & Kinnar, 1991; Mellor et al., 2010). For instance, when individuals obtain advice and guidance from others on specific work, they tend to be more assured of their capabilities (Neff et al., 2013). Accordingly, when the focal employee receives encouragement and feedback from the coworker on how to better perform environmentally friendly behavior, the focal employee would theoretically be more confident in themselves when dealing with environmental issues. These arguments suggest that eco-helping, which includes verbal persuasion, could raise the level of green self-efficacy of the focal employee.

The coworker's eco-helping could also influence the focal employee's green self-efficacy by sharing related knowledge of protecting the natural environment at the workplace. Related knowledge facilitates the focal employee to gain more confidence in performing similar practices (Kim & Yun, 2015; Mansoor & Wijaksana, 2022). For instance, after realizing the environmental problems and possible solutions to those problems, the focal employee is more likely to ensure that they contribute to the natural environment at the workplace, like the coworker. In sum, a coworker's eco-helping could help the focal employee gain more confidence in performing environmental protection practices at the workplace.

Hypothesis 5: The coworker's eco-helping is positively related to the focal employee's green self-efficacy.

Green Self-Efficacy and the Subsequent Behaviors

Coworker's Eco-Initiatives. Previous literature has found that self-efficacy is positively related to a variety of behavioral outcomes, such as creativity (Liao et al., 2010), high performance (Brown et al., 2005), and organizational citizenship behavior (Beauregard, 2012). Similarly, green self-efficacy predicts green performance (Y.-S. Chen et al., 2014; Chen et al., 2015), PEB (Faraz et al., 2021), and green creativity (R. Farooq et al., 2021). Social cognitive theory suggests that individuals with higher levels of self-efficacy are more likely to hold a stronger commitment to their goals and beliefs in their performance (Bandura, 1977a, 1993). Individuals who regard themselves as highly efficacious tend to transform knowledge and skills into successful courses of action (Bandura, 1977a). Similarly to self-efficacy, a high level of green self-efficacy is associated with higher levels of positive thinking and self-regulation in achieving the environmental protection goal (Y.-S. Chen et al., 2014). Thus, I expect that the focal employee's green efficacy could lead them to have a stronger belief in their ability to imitate their coworker and engage in initiatives that help protect the natural environment in the workplace.

Self-efficacy additionally influences people's cognitive processes in deciding to change their behaviors to shape the surroundings people choose to be in (Bandura, 1977a, 2001). Green self-efficacy describes one's belief that they can protect the environment through their abilities and knowledge, which implies that people tend to shape their surroundings with environmentally conscious behavior. Green self-efficacy plays an influential role in employees' adoption of eco-initiatives due to their confidence in environmental protection. Thus, the focal employee is more

likely to engage in eco-initiatives when they have a higher (vs. lower) level of green self-efficacy.

The discussion above highlights the mediating relationships that are consistent with social cognitive theory. This self-efficacy mediating mechanism is grounded in social cognitive theory (Bandura, 1977a), which suggests that witnessing a behavior displayed by others (i.e., a coworker's eco-initiatives) enhances one's confidence (i.e., green self-efficacy) in conducting similar behaviors, which in turn motivates them to engage in similar behavior (i.e., the focal employee's eco-initiatives). I expect the focal employee's green self-efficacy could mediate the link between the coworker's eco-initiatives and the focal employee's eco-initiatives.

Hypothesis 6a: The focal employee's green self-efficacy is positively related to the focal employee's eco-initiatives.

Hypothesis 6b: The focal employee's green self-efficacy mediates the relationship between the coworker's eco-initiatives and the focal employee's eco-initiatives.

Personal Pro-Environmental Behaviors. Drawing on social cognitive theory, I suspect that the focal employee's green self-efficacy could transfer to the life domain of the focal employee and influence their actions beyond the workplace. Green self-efficacy is a belief that individuals have certain capabilities to perform certain behaviors to protect the environment. This is constant and does not necessarily disappear once employees commute from the workplace to home. Thus, in the life domain, employees might still carry their thoughts and beliefs about protecting the environment, thereby engaging in pro-environmental behaviors.

As previously mentioned, green self-efficacy enables individuals to shape the course of people's lives with their belief in their ability to protect the environment. When employees go back home, they still carry such beliefs about protecting their environment. For example,

Chighizola (2020) suggested that employees would actively manage the transfer of their PEB between home and work domains and adapt to different conditions in order to behave in an environmentally friendly manner. Therefore, their confidence in performing environmental practices and achieving related goals could encourage them to seek opportunities to engage in environmental protection behaviors in their personal lives (Swann & Read, 1981). Paired with the prediction that the coworker's eco-initiatives and eco-helping will lead to the focal employee's green self-efficacy, the coworker's engagement in and support of environmental activities to the focal employee could facilitate the focal employee's green self-efficacy, which in turn promotes the focal employee's personal pro-environmental behaviors.

Hypothesis 7a: The focal employee's green self-efficacy is positively related to the focal employee's personal pro-environmental behaviors.

Hypothesis 7b: The focal employee's green self-efficacy mediates the relationship between (a) the coworker's eco-initiatives, (b) the coworker's eco-helping, and the focal employee's personal pro-environmental behaviors.

The Social Comparison Mechanism

This section provides a general discussion of social comparison theory and develops hypotheses on the mechanisms of how the social comparison process explains the focal employee's responses to the coworker's eco-helping.

Social Comparison Theory

According to social comparison theory (Festinger, 1954), individuals tend to compare themselves to others. Two major tenets of social comparison theory exist: similarity hypothesis and unidirectional drive upward (Festinger, 1954; O'Fallon & Butterfield, 2011). The similarity hypothesis refers to the notion that individuals tend to compare themselves with others who are

similar rather than dissimilar. Comparing with similar people is more meaningful, and individuals gain more adequate information. The unidirectional drive upward implies that individuals prefer to do upward comparison rather than downward comparison (Festinger, 1954; Wood, 1989) because they strive to do better than others.

Individuals might experience mixed emotions comparing themselves with others, especially with upward comparisons (Kumar, 2004). Though some studies of social comparison theory suggest that comparison might evoke positive emotions or reactions (e.g., Lockwood et al., 2004), negative experiences can still be had via unfavorable comparisons. An unfavorable upward comparison could hurt one's self-esteem and evoke negative feelings, such as anger, envy, or perceived injustice (Shaver, 1987; Stack, 1984). To alleviate these negative emotions, the observer might need to avoid contact or interaction with the target (Quade et al., 2018).

In the literature on ethical behaviors, some studies have used the social comparison lens to investigate the impacts of moral comparison. Monin (2007) proposed that individuals might experience moral inferiority in the upward moral comparison. As a type of ethical behavior, the coworker's PEB could trigger moral comparison in the focal employee, with the comparison potentially creating a negative experience. It is expected that eco-helping will trigger moral inferiority experienced by the observer.

Eco-Helping and Moral Inferiority

Organizations do not require PEB, so the focal employee might initiate the comparison process if a coworker engages in such behaviors. Although employee PEB literature has not applied social comparison theory to explain how the focal employee reacts to the coworker's PEB, previous studies about PEB in nonwork contexts have discussed how individuals react to others' PEB. For example, when college students received the comparison information that their

single-use plastic consumption was either above or below the average consumption of their peers, this information could result in an intention to reduce their single-use plastic consumption (Bruchmann et al., 2021). Similarly, faculty staff increased recycling when they received comparative feedback that colleagues performed better in recycling (Dupré & Meineri, 2016).

Social comparison can also evoke some negative consequences. One type of social comparison is moral comparison, which refers to individuals comparing their level of morality with others (Monin, 2007). Moral comparison can be upward (the focal person performs worse than the target) and downward (the focal person performs better than the target). As explained earlier, PEB is a type of ethical behavior. As such, individuals might initiate moral comparison when they face moral exemplars, such as someone who behaves in an environmentally friendly manner (Minson & Monin, 2012; Monin, 2007). Accordingly, individuals are likely to experience *moral inferiority*, which is the feeling that others behave more morally (Monin, 2007) when they observe others' PEB (Hoogendoorn et al., 2019). Individuals might experience unfavorable comparisons when comparing themselves to others who act more morally. For example, nonvegetarians might derogate vegetarians to reduce the moral threat caused by vegetarians, especially when vegetarians emphasize that they are morally superior to nonvegetarians (Minson & Monin, 2012).

An unfavorable comparison can hurt self-esteem and evoke negative experiences (Shaver, 1987; Stack, 1984). Therefore, I expect the coworker's eco-helping to predict the focal employee's moral inferiority. The coworkers' three types of PEB could result in unfavorable moral comparison, as each of these behaviors demonstrates that the coworker is superior to the focal employee in morality (i.e., protecting the environment). I argue that the coworker's eco-helping behavior is a salient predictor of moral comparison. In contrast to a coworker's eco-

initiatives and eco-civic engagement, which might not create direct connections with the focal employee, eco-helping includes lobbying environmentalism and helping the focal employee engage in environmental protection practices. Zhu et al. (2020) found that trying to convince others to be more ethical people might evoke negative emotions in observers. A coworker taking steps to guide or lobby the focal employee to engage in environmental protection behaviors could threaten the focal employee's image and increase the stress of behaving morally (DeTienne et al., 2012). In addition, individuals are subject to a "unidirectional drive upward" (Festinger, 1954, p.24), especially under ambiguous standards. Without a clear standard, individuals might experience feelings of inferiority when the comparison target emphasizes their moral values through ethical behaviors (Boileau et al., 2021). Eco-helping is a type of discretionary helping behavior, so the focal employee generally cannot rely on explicit standards or requirements to evaluate such environmental protection behaviors. Helping behavior from a coworker shows the focal employee that the coworker has performed well in protecting the environment. Thus, I propose that the focal employee might perceive the coworker as morally superior.

Previous helping behavior literature has suggested that recipients of helping behaviors might feel inadequate about themselves and experience the obligation of reciprocity (Thompson & Bolino, 2018). In such cases, morality is like an ability. Coworkers' eco-helping may imply that the focal employee is unable to achieve environmental goals by themselves or does not have environmental awareness, which may elicit a feeling that the focal employee is inferior to the coworker in their environmental values (Hoogendoorn et al., 2019). Eco-helping strengthens upward comparison, as it implies that the focal employee needs assistance and help from the coworker to improve their environmental performance.

While social comparison theory explains how observing a coworker's eco-helping might evoke moral inferiority through upward moral comparison, psychological reactance might occur when individuals perceive the coworker's behavior as pressure to conform to certain moral standards. Psychological reactance, as defined by Brehm (1966), arises when people feel their freedom is threatened by the perceived imposition of behaviors they are not required or inclined to engage in. In this case, eco-helping could be perceived as proselytizing, where the coworker, by engaging in or encouraging environmentally friendly behaviors, implicitly imposing moral demands on the focal employee. This perceived imposition can lead to a threat to personal autonomy, invoking reactance and further reinforcing feelings of moral inferiority. As Zhu et al. (2020) suggest, attempts to influence others' ethical behavior can evoke negative responses, particularly when the influence is unsolicited or perceived as a threat to individual agency. Although psychological reactance is not a core focus of this dissertation, it complements the explanation of how upward moral comparison triggers negative responses (Liu et al., 2022).

Hypothesis 8: The coworker's eco-helping is positively related to the focal employee's moral inferiority.

Moral Inferiority and Ostracism

Moral inferiority is an uncomfortable experience and may trigger subsequent negative responses in the focal employee. Through its impact on moral inferiority, the coworker's eco-helping also increases the focal employee's likelihood of excluding the coworker from their group (i.e., ostracism). Ostracism refers to a type of social rejection where one is ignored and excluded by an individual or group (Williams, 2007, p.427). The antecedents of ostracism are theorized to be personality (e.g., neuroticism, Zhang & Dai, 2015) or contextual characteristics

(e.g., abusive leadership, see a meta analysis, Howard et al., 2020; competitive goals with supervisor, Wu et al., 2015).

I argue that the focal employee is more likely to socially exclude coworkers if they judge them as being more moral when experiencing moral inferiority due to the self-evaluation threat (Hogg et al., 1995; Suls & Wheeler, 2000). The positive evaluation of individuals is important and desirable (Sedikides & Strube, 1997). For example, when a coworker is considered superior to the focal employee, ostracism toward the coworker could protect the focal employee's reputation and social status in their group or organization. This is consistent with the core tenet of social comparison theory: individuals strive to distance themselves from comparison targets to manage their negative experiences (Tesser, 1988). Not surprisingly, individuals might try to avoid interaction with others who might be more moral or ethical than they are in the workplace (Quade et al., 2018).

Moral inferiority is an unfavorable situation, and individuals might use avoidance strategies to maintain their status and survive in the organization (Elliot, 2006). Individuals value their moral image in a group. Ybarra et al. (2012) stated that individuals tend to enhance their image through moral and intellectual dimensions, with the moral dimension playing a particularly important role. Allison and colleagues (1989) suggested that morality was central to maintaining and enhancing one's image in a group. Therefore, when individuals perceive that their morality is weaker than others during moral comparison, they tend to adopt avoidance strategies such as ostracism. Ostracism allows the focal employee to protect themselves and prevent potential reputation damage. In addition, ostracism is likely a safer and easier approach to fleeing an uncomfortable situation (Robinson et al., 2012). As a result, the focal employee might ostracize the coworker after experiencing moral inferiority.

I expect that moral inferiority will mediate the effect of coworker eco-helping on the focal employee's ostracism toward the coworker. This is consistent with the social comparison theory, which suggests that individuals are more likely to engage in a passive approach to protect themselves once making an upward comparison. Therefore, when the coworker tries to help or guide the focal employee on how to behave in a more environmentally friendly manner, the focal employee might experience inadequacy in morality when comparing themselves with the coworker. Such an experience could lead the focal employee to exclude the coworker to mitigate the negative experiences associated with moral inferiority.

Hypothesis 9a: The focal employee's moral inferiority is positively related to the focal employee's ostracism toward the coworker.

Hypothesis 9b: The focal employee's moral inferiority mediates the relationship between the coworker's eco-helping and the focal employee's ostracism toward the coworker.

Moderators

Based on social cognitive theory and social comparison, I expect that interpersonal factors might influence the effects that mediate green self-efficacy and moral inferiority. Specifically, I propose task interdependence as the social cognitive-based moderator and performance comparison as the social comparison-based moderator for the mediated relations.

Social Cognitive-Based Moderator-Task Interdependence

Eco-Civic Engagement and Integrity-Based Trust. According to social cognitive theory (Fiske & Taylor, 2013), individuals' reactions toward others' behaviors vary depending on the extent to which the stimuli are salient, accessible, or vivid. In this study, I investigate task interdependence as the interpersonal factor that could strengthen the effects of the different types of coworkers PEB on the focal employee's responses. This is because task interdependence

could provide more opportunities for observational learning, communication, and knowledge sharing.

Task interdependence refers to the extent to which one's job tasks are connected with others' job tasks (Grant & Parker, 2009). Previous studies have shown that task interdependence influences the social cognitive process, as employees gain more opportunities for observational learning due to the highly interactive nature of their job tasks (Goo et al., 2019). This amplification effect could also apply to the relationship between a coworker's eco-civic engagement and the focal employee's integrity-based trust toward the coworker. When task interdependence is higher between the coworker and the focal employee (e.g., performing surgery on patients, playing professional sports games), they must work closely together to effectively perform their jobs (Staples & Webster, 2008). Therefore, the higher task interdependence condition allows the focal employee to observe the coworker's behavior (e.g., work behavior or nonwork behavior) at the workplace, making information on the coworker more accessible. When tasks are highly interdependent, the focal employee likely has more opportunities to observe how the coworker contributes to the natural environment. Therefore, the focal employee would be more likely to build integrity-based trust toward the coworker's eco-civic engagement in a higher task interdependence condition.

According to social cognitive theory, higher task interdependence could increase the saliency of the target (Fiske & Taylor, 2013). Individuals are expected to pay more attention to information about someone familiar to them. Accordingly, information about peers who work closely with the focal employee is more salient compared to peers who work independently. Therefore, in the higher task interdependence condition, the coworker's eco-civic engagement is more salient and easier for the focal employee to notice. In a higher task interdependence

condition, the focal employee is more likely to develop integrity-based trust toward the coworker after observing the coworker's eco-civic engagement behavior because the coworker's behavior is more salient to them.

In contrast, if the level of task interdependence between the coworker and the focal employee is lower, their interaction would be less frequent, thereby inhibiting the social cognitive process. With a lower level of task interdependence, the coworker and the focal employee are less likely to share information. This prevents the focal employee from noticing the coworker's behavior or even their participation in contributing to organizational environmental performance. Without enough attention to support the development of cognition, the focal employee might not be able to evaluate the coworker's integrity or trustworthiness.

I expect task interdependence to strengthen the relationship between a coworker's eco-civic engagement and the focal employee's integrity-based trust toward the coworker. Since the focal employee's integrity-based trust toward their coworker mediates the indirect effect of the coworker's eco-civic engagement and the focal employee's collaboration with the coworker, I further propose that this positive indirect effect is stronger when task interdependence is higher (vs. lower).

Hypothesis 10a: Task interdependence moderates the relationship between the coworker's eco-civic engagement and the focal employee's integrity-based trust toward the coworker, such that the relationship is stronger when task interdependence is higher than lower.

Hypothesis 10b: Task interdependence moderates the indirect effect of the coworker's eco-civic engagement and the focal employee's collaboration with the coworker via the focal employee's integrity-based trust, such that the indirect effect is stronger when task interdependence is higher than lower.

Eco-Initiative and Integrity-Based Trust. In addition to eco-civic engagement, eco-initiatives demonstrate that a coworker proactively resolves environmental issues with their own efforts. Therefore, I expect the effect of coworkers' eco-initiative on the focal employees' integrity-based trust toward the coworkers will be stronger in the higher (vs. lower) task interdependence conditions. Task interdependence has been linked to enhanced cooperative behaviors such as communication and information sharing (Crawford & Haaland, 1972). Moreover, task interdependence requires that the focal employee and the coworker continually check each other's behavior and evaluate their work environment to complete tasks (Kozlowski et al., 1999). Therefore, in the higher task interdependence condition, the focal employee is more likely to recognize that the coworker has genuine concerns about the natural environment by observing their eco-initiatives and then developing integrity-based trust toward the coworker.

With lower task interdependence, reliance on each other is low. This infrequent interaction at work makes it difficult for the focal employee to observe and evaluate their coworker's eco-initiatives. Thus, the focal employee might not be able to develop trust toward the coworker because they are less likely to pay attention to or recognize coworkers' behaviors (Goo et al., 2019).

I propose that task interdependence strengthens the effect of the coworker's eco-initiatives and the focal employee's integrity-based trust toward the coworker. As proposed above, the focal employee's integrity-based trust toward the coworker mediates the indirect effect of the coworker's eco-initiatives on the focal employee's collaboration with the coworker. I further propose that this positive indirect effect is stronger when task interdependence is higher (vs. lower).

Hypothesis 11a: Task interdependence moderates the relationship between the coworker's eco-initiatives and the focal employee's integrity-based trust toward the coworker, such that the relationship is stronger when task interdependence is higher than lower.

Hypothesis 11b: Task interdependence moderates the indirect effect of the coworker's eco-initiatives and the focal employee's collaboration with the coworker, via the focal employee's integrity-based trust, such that the indirect effect is stronger when task interdependence is higher than lower.

Eco-Initiative and Green Self-Efficacy. In highly task interdependent conditions, employees are more likely to share information and knowledge, facilitating the observer's vicarious learning process. For example, peers can easily imitate each other's behavior and avoid potential mistakes when they have more opportunities to observe and learn from each other (Rico et al., 2009). This amplification effect could also apply to the relationship between a coworker's eco-initiative and the focal employee's green self-efficacy.

A higher task interdependence context facilitates information sharing, and employees are more likely to learn from each other. Therefore, when the focal employee notices that their coworker performs environmental practices, the focal employee is more likely to gain information about the required skills of environmental practices. Such knowledge could increase the focal employee's confidence in preparing and dealing with environmental concerns. As such, high task interdependence with the coworker may facilitate the focal employee's development of green self-efficacy after observing the coworker's eco-initiatives.

With a lower level of task interdependence, the coworker and the focal employee are less likely to share information, which prevents the focal employee from easily learning skills from the coworker. Observational learning expects that the observer pays attention to the role model

and cognitively rehearses what they have observed (Bandura, 1977a, 1977b). Without enough attention to support the observational learning process, the focal employee may not gain enough confidence to replicate the environmental initiatives performed by the coworker.

I propose that task interdependence strengthens the relationship between a coworker's eco-initiatives and the focal employee's green self-efficacy. The focal employee's green self-efficacy is expected to mediate the indirect effect of the coworker's eco-initiatives and the focal employee's eco-initiatives. I further propose that this positive indirect effect is stronger when task interdependence is higher (vs. lower). In addition, paring the hypothesis that the focal employee's green self-efficacy mediates the indirect effect of the coworker's eco-initiatives and the focal employee's personal pro-environmental behaviors, I further propose that this positive indirect effect is stronger when task interdependence is higher (vs. lower).

Hypothesis 12a: Task interdependence moderates the relationship between the coworker's eco-initiatives and the focal employee's green self-efficacy, such that the relationship is more positive when the task interdependence is higher than lower.

Hypothesis 12b: Task interdependence moderates the indirect effect of the coworker's eco-initiatives on (a) the focal employee's eco-initiatives and (b) the focal employee's personal pro-environmental behaviors via the focal employee's green self-efficacy, such that the relationship is more positive when the task interdependence is higher than lower.

Eco-Helping and Green Self-Efficacy. The greater the interdependence of the task, the greater the requirements for collaboration and cooperative behaviors among peers (Wageman & Gordon, 2005). During collaboration, the coworker and the focal employee may need to support each other to achieve their mutual goals. The level of task interdependence influences peers' expectations of help (Thomas, 1957), which influences how helping behaviors are demonstrated

(Krebs, 1970) and expected (Lam et al., 1999). In the higher task interdependence condition, peers support each other to complete a job. Thus, helping behaviors from a coworker are more likely to be valued (Bachrach et al., 2006; Miller & Hamblin, 1963) and considered as modeling (Gist & Mitchell, 1992) in the eyes of the focal employee. Extending this logic to the arguments of eco-helping and green self-efficacy, task interdependence might amplify the relationship as the focal employee already values the coworker's help and will tend to learn from the coworker when they experience high task interdependence. Thus, I argue that the coworker's eco-helping behaviors are more likely to increase the focal employee's green self-efficacy under the higher (vs. lower) task interdependence situation.

A lower task interdependence situation implies that employees are less likely to interact with each other. Employees might also have lower expectations of receiving help from coworkers. In addition, in the lower interdependence condition, employees might not be expected to reach a consensus on independent tasks (Manz & Angle, 2016). Receiving help might be an unfavorable experience, as the recipient might interpret such behaviors as taking over control of the independent task. For example, helping behaviors might imply that the recipient's capability is not enough to complete the independent project. Therefore, in the lower task interdependence condition, the focal employee might feel uncomfortable receiving help or guidance from their coworker on how to protect the natural environment. The experience of losing control might hinder the development of green self-efficacy. Thus, when task interdependence is lower, a coworker's eco-helping behaviors may be less likely to increase the focal employee's green self-efficacy.

I expect that task interdependence strengthens the relationship between the coworker's eco-helping and the focal employee's green self-efficacy. As proposed that the focal employee's

green self-efficacy mediates the indirect effect of the coworker's eco-helping and the focal employee's personal pro-environmental behaviors, I further propose that this positive indirect effect is stronger when task interdependence is higher (vs. lower).

Hypothesis 13a: Task interdependence moderates the relationship between the coworker's eco-helping and the focal employee's green self-efficacy, such that the relationship is more positive when task interdependence is higher than lower.

Hypothesis 13b: Task interdependence moderates the indirect effect of the coworker's eco-helping and the focal employee's (a) personal pro-environmental behaviors and (b) eco-initiatives, via the focal employee's green self-efficacy, such that the relationship is more positive when the task interdependence is higher than lower.

Social Comparison-Based Moderator-Performance Inferiority

Individuals care about how other group members evaluate their morality and ability (Ybarra et al., 2012). The easiest way of assessing work ability is employee job performance. One's level of performance immediately influences their status in an organization (Brenner & Molander, 1977). Furthermore, some scholars have argued that performance is more important than morality in the workplace setting (Kreps & Monin, 2011). Therefore, employees might compare themselves with others in some aspects, such as morality and relationship quality with supervisors or peers, but performance comparison is the most powerful comparison to evoke huge influence in the workplace. I propose that performance inferiority might moderate the moral comparison process and its implications. Remaining consistent with the concept of moral inferiority, performance inferiority refers to the focal employee having lower performance than their coworker, while performance superiority refers to the focal employee having higher performance than their coworker.

In the performance inferiority situation (i.e., the coworker performs better than the focal employee), the focal employee is more likely to experience moral inferiority after observing or receiving the coworker's eco-helping. Without considering the performance of the coworker, the focal employee might only experience the moral threat posed by the coworker caring more about environmental protection than them. However, when the coworker has spent time and energy on protecting the natural environment with a better performance than the focal employee, the focal employee might feel inadequate and question their capabilities in both completing job tasks and environmental protection. Hence, performance inferiority might amplify the effect of the coworker's eco-helping on the focal employee's moral inferiority.

In the performance superiority situation (i.e., the coworker performs worse than the focal employee), the focal employee might be less threatened by the coworkers' dedication in PEB, and their confidence in themselves may be enhanced. When the coworker has a lower performance level, the focal employee might perceive that the coworker is less competent or mediocre (Aronson et al., 2014). Maintaining good performance is necessary for employees to survive in an organization, but committing to environmental protection is discretionary. With a higher performance, the focal employee might believe that they are more competent than the coworker. The focal employee might not consider guidance from the coworker on environmental protection as a threat to their morality but as a sign that the coworker is distracted from work when engaging in PEB (Wojciszke, 2005). In this case, the threat caused by eco-helping is less salient to the focal employee.

In sum, I expect that performance inferiority exacerbates the relationship between a coworker's eco-helping and the focal employee's moral inferiority. The focal employee's moral inferiority likely mediates the indirect effect of the coworker's eco-helping and the focal

employee's ostracism toward the coworker. I further propose that this positive indirect effect is stronger when the performance inferiority is higher (vs. lower).

Hypothesis 14a: Performance inferiority moderates the relationship between the coworker's eco-helping and focal employee's moral inferiority, such that the relationship is stronger when the focal employee has an inferior (vs. superior) performance.

Hypothesis 14b: Performance inferiority moderates the indirect effect of the coworker's eco-helping and the focal employee's ostracism toward the coworker, via the focal employee's moral inferiority, such that the relationship is stronger when the focal employee has an inferior (vs. superior) performance.

Chapter Four: Pilot Studies and Study 1a–d

I conducted pilot studies (i.e., Pilot Study 1, Pilot Study 2a & b, Pilot Study 3a & b) to validate newly developed scenarios for this research, followed by five main studies to test my hypotheses. The pilot studies were used to assess the validity and effectiveness of the manipulations of PEB (Pilot Study 1), task interdependence (Pilot Study 2a & b), and performance inferiority (Pilot Study 3a & b). Study 1a was a scenario-based experiment designed to test the direct relationship between *eco-civic engagement* and *integrity-based trust toward coworkers*, along with the moderation effect of *task interdependence* on this relationship (i.e., H1 and H10a). Study 1b examined the employees' responses toward coworkers' *eco-initiatives* (i.e., *green self-efficacy* and *integrity-based trust*) and the moderation effect of *task interdependence* on the relationships between *eco-initiatives* and employees' responses (H2, H4, H11a, and H12a) through a scenario-based experiment. In Study 1c, I used a scenario-based experiment to investigate the relationship between coworkers' *eco-helping*, the employees' *green self-efficacy*, and the moderation effects of task interdependence on the above relationship (H5 and H13a). In Study 1d, I used a scenario-based experiment to investigate the direct relationship between the coworkers' *eco-helping* and the focal employee's *moral inferiority*, and the moderation effects of *performance inferiority* on this relationship (H8 and H14a). These four studies manipulated different types of the *coworkers' PEB, task interdependence*, or *performance inferiority* to investigate the psychological reactions of the focal employee when observing the coworkers' types of PEB. All the studies (Pilot Studies, Study 1a–d, and Study 2) were approved by the York University's Office of Research Ethics (Project Title: Employees' reactions to the coworker's pro-environmental behavior: Insights from social cognitive theory and social

comparison theory, Certificate #: e2023-130). In the following section, I will introduce the pilot studies and Study 1a–d in this chapter. Study 2 will be presented in Chapter 5.

Pilot Study 1: Construct Validity Test of PEB Scenarios

Overview

Follow the guidance of Aguinis and Bradley (2014) on designing experimental vignette methodology, I developed scenarios that depicted high/low levels of eco-civic engagement, eco-initiative, and eco-helping based on the typology of PEB proposed by Boiral (2009). To test the validity and effectiveness of the manipulation of the independent variables (i.e., three types of PEB), I conducted a pilot study prior to using the PEB scenarios in the main studies (i.e., Study 1a–d).

Participants

I recruited 245 working adults from the United States through Prolific, an online research platform. Prior studies have demonstrated that the Prolific platform can provide research samples comparable to those obtained from other traditional recruiting methods, especially organizational research methods (Buhrmester et al., 2016; O'Reilly et al., 2016). After excluding participants who failed the requirement of the study (i.e., being full-time employees) and attention check questions, the final sample consisted of 236 full-time employees from various industries, including education, retail, healthcare, and other sectors. On average, participants were 39.5 years old (SD =9.99) with a mean organizational tenure of 8.44 years (SD = 5.75). Of these participants, 61% were female and 82.2% had received at least a two-year college education. On average, participants reported that they worked at the office for 4.93 days per week (SD = 0.62), facilitating regular interaction with coworkers at the workplace. None of the participants from this pilot study had participated in other pilot or main studies.

Procedure

After obtaining informed consent, participants were asked to read a scenario. In the pilot study, participants were randomly assigned to one of six conditions: high eco-initiatives, low eco-initiatives, high eco-civic engagement, low eco-civic engagement, high eco-helping, or low eco-helping (See Appendix A for the scenario). At the beginning of the scenario, participants were instructed to imagine themselves as employees in the research and development (R&D) department of a hypothetical large company in the retail industry. They were told that they had a coworker, Alex, who also worked in the R&D department. The name Alex was chosen for the scenario due to it being relatively gender neutral to mitigate the potential impact of the coworker's gender on participants. After reading the scenario, the participants answered the relevant manipulation check questions and an attention check question. The manipulation check measures were utilized to check the validity of scenarios. For example, participants who read the high eco-civic engagement scenario evaluated the level of eco-civic engagement of Alex.

Manipulation

To manipulate the types of PEB, different descriptions of Alex were provided in each condition. In the *high eco-initiatives condition*, participants read a description about Alex always considering the environmental impacts of personal behavior and performing personal environmentally friendly initiatives at the workplace with personal effort. Conversely, the *low eco-initiatives condition* depicted Alex as someone who rarely considered the environmental implications of personal behaviors and rarely engaged in personal environmental protection behaviors. In the *high eco-civic engagement condition,* Alex actively supported the company's noncompulsory environmental activities and proactively contributed ideas for resolving the company's environmental issues. In contrast, the *low eco-civic engagement condition*

characterized Alex as being disengaged from the organization's environmental initiatives, typically remaining silent during meetings that discussed environmental issues. In the *high eco-helping condition*, Alex eagerly helped coworkers in developing good habits for environmental protection at work. Conversely, in the *low eco-helping condition*, Alex rarely helped coworkers resolve environmental issues. In addition, Alex did not notify coworkers of their environmentally unfriendly behavior nor support coworkers in developing pro-environmental habits.

Measures

PEB. I used an adapted version of the organizational citizenship behavior for the environment scale developed by Boiral and Paillé (2012) to check whether the scenario reflected the PEB constructs. Participants were asked to recall the scenario and complete a Likert scale questionnaire (1 = completely disagree, 5 = completely agree). For higher or lower eco-initiatives conditions, participants evaluated their level of agreement on "Alex weighs the consequences of own actions before doing something that could affect the environment" and "Alex voluntarily carries out environmental actions and initiatives in Alex's daily work activities." For higher or lower eco-civic engagement conditions, participants rated their degree of agreement on statements "Alex actively participates in environmental events organized in and/or by the company," "Alex undertakes environmental actions that contribute positively to the image of the company," "Alex volunteers for projects, endeavors, or events that address environmental issues in the company," and "Alex stays informed of the company's environmental initiatives." For higher or lower eco-helping condition, participants assess their agreement on statements "Alex spontaneously gives time to help colleagues take the environment into account in everything they do at work," "Alex encourages colleagues to adopt

more environmentally conscious behavior," and "Alex encourages colleagues to express their ideas and opinions on environmental issues."

Results

I conducted a set of t-tests for independent samples to assess whether participants in the higher PEB condition perceived a higher level of PEB engagement of Alex than in the lower PEB conditions. The results showed that participants in the higher eco-initiatives condition (M = 4.75, SD = .42) indeed reported a higher level of perceived eco-initiatives compared to the participants in the lower condition (M = 1.29, SD = .82; $t(80) = 24.19$, $p < .001$). Similarly, for eco-civic engagement, participants in the higher eco-civic engagement condition (M = 4.79, SD = .40) reported a higher level of eco-civic engagement compared to the participants in the lower condition (M = 1.04, SD = .13; $t(42.20) = 53.18$, $p < .001$). In the case of eco-helping, participants in the higher eco-helping condition (M = 4.64, SD = .43) also rated significantly higher on eco-helping than those in the lower condition (M = 1.15, SD = .55; $t(77) = 31.71$, $p < .001$).

A one-way analysis of variance (ANOVA) further confirmed that the participants in the higher PEB condition perceived a higher level of PEB of Alex than the participants in the lower PEB conditions (eco-initiatives, $F(1, 80) = 585.37$, $p < .001$, $\eta^2 = .88$; eco-civic engagement, $F(1, 42.20) = 2828.04$, $p < .001$, $\omega^2 = .98$; eco-helping, $F(1, 77) = 1005.55$, $p < .001$, $\eta^2 = .93$). Taken together, these results suggested that the manipulations of PEB scenarios were effective.

Pilot Study 2a: Construct Validity Test of Task Interdependence Scenario

Overview

The primary objective of Pilot Study 2a was to assess the construct validity of the newly designed task interdependence scenarios. I developed scenarios that depicted high/low task

interdependence conditions by applying the descriptions from Grant and Parker (2009) and Van der Vegt and Van de Vliert (2016).

Participants

I recruited 120 working adults from the United States through Prolific. After excluding participants who failed the requirement of the study (i.e., being full-time employees) and attention check question, the final sample consisted of 114 full-time employees from various industries, including education, manufacturing, healthcare, banking, service firms, and other sectors. On average, participants were 40.96 years old (*SD* =11.26) with a mean organizational tenure of 8.78 years (*SD* = 6.24). Of these participants, 57% were female and 86% had received at least a two-year college education. On average, participants reported that they worked at the office for 3.87 days per week (*SD* = 1.35) and had regular interaction with coworkers at the workplace. None of the participants from this pilot study had participated in other pilot or main studies.

Procedure

In this pilot study, participants were randomly assigned to higher or lower task interdependence conditions (See Appendix B for the scenario). At the beginning of the scenario, like PEB scenarios, participants were instructed to imagine themselves as employees in the research and development (R&D) department of a hypothetical large company in the retail industry and had a coworker named Alex, who also worked in the R&D department. Then, they read a description about their task interdependence with Alex. After reading the scenario, the participants answered the relevant manipulation check measures and an attention check question.

Manipulation

To manipulate the higher and lower task interdependence, different descriptions of Alex were provided in each condition. In the *higher task interdependence condition*, participants read description such as "As colleagues in the research and development department, your work tasks and responsibilities have a high overlap with Alex's, and they are closely interconnected." Conversely, in the *lower task interdependence condition,* the example description was "As colleagues in the research and development department, your work tasks and responsibilities have a low overlap with Alex's and are not interconnected." After reading the scenario, participants were asked to assess their degree of job interdependence with Alex (1 = completely independent, 7 = completely dependent). The example item was "At work, to what extent do you depend on Alex for information and advice?" The four-item scale was adapted from Taggar and Haines (2006).

Results

I conducted a t-test for independent samples to assess whether participants in the higher task interdependence condition perceived a higher level of task interdependence than in the lower task interdependence condition. The results showed that participants in the higher task interdependence condition (M = 5.89, SD = .63) reported a higher level of task interdependence compared to the participants in the lower condition (M = 1.99, SD = 1.39; $t(72.12) = 18.99$, $p < .001$). Taken together, the results suggest that the scenarios were able to successfully manipulate task interdependence.

Pilot Study 2b: Discriminant Validity Test of Task Interdependence Scenario

Overview

In addition to testing whether the task interdependence scenarios manipulation influenced the construct it was intended to manipulate, I also examined whether it influenced other

constructs that it was not intended to manipulate. Following the guidance of Podsakoff et al. (2013) and Colquitt et al. (2019), I performed a test to examine the discriminant validity of the newly designed interdependence scenarios. Based on the four criteria proposed by Colquitt et al. (2019), I selected competence-based trust (Mayer & Davis, 1999) and coworker support (Haynes et al., 2010) as the two orbiting constructs, which were related, but distinct, constructs with task interdependence.

Participants

I recruited 110 participants, who were working adults in the United States via Prolific. I obtained 105 valid responses (95%) following the same data scrutinization procedure as Pilot Study 2a. Among the participants, 58.1% were female, with an average age of 40.35 years (*SD* = 11.73), and 9.02 (*SD* = 7.45) years of organizational tenure. Participants reported an average of 4.00 office workdays per week (*SD* = 1.35). Of the participants, 86.7% held a two-year college degree or higher. Participants were working in various industries, such as healthcare, manufacturing, education, and professional service (e.g., consulting, law firms). Participants held different occupational positions such as teacher, data analyst, and accountant.

Procedure

Following the recommendations of Podsakoff et al. (2013) and Colquitt et al. (2019), I provided participants with instructions, an illustration of the construct label and its definition, and a practice test. Participants were then directed to read through scenarios describing either high or low task interdependence and to familiarize themselves with the definitions of task interdependence, competence-based trust, and coworker support. Following this, participants rated how accurately the scenario captured task interdependence on a scale from 1 (the scenario does a very bad job of capturing task interdependence) to 5 (the scenario does a very good job of

capturing task interdependence). They also assessed how the scenario captured competence-based trust and coworker support with the same response scale.

Results

I conducted a one-way repeated measure ANOVA in SPSS 26 to examine if the rating of the scenarios on task interdependence differed from its ratings on competence-based trust and coworker support. In scenarios depicting either high or low task interdependence, participants consistently rated these scenarios as more accurately capturing task interdependence than competence-based trust and coworker support. In the higher task interdependence scenario, the assumption of sphericity was not violated ($\chi^2(2) = 5.57$, $p = .06$). The results were F (2, 102) = 15.42, $p < .001$, $\eta^2 = .23$, Wilki's $\Lambda = .69$. The pairwise comparison results demonstrated that participants provided a significantly higher rating for task interdependence ($M = 4.42$, $SD = .14$) compared to competence-based trust (mean difference = 1.06, $p < .001$) and coworker support (mean difference = 1.10, $p < .001$), which indicated that participants perceived the higher task interdependence scenario as a better reflection of the construct of task interdependence rather than competence-based trust or coworker support. The difference in ratings between competence-based trust and coworker support was not significant (mean difference = .04, p = 1.00). In the lower task interdependence scenario, the assumption of sphericity was violated ($\chi^2(2) = 22.03$, $p < .001$), and the results yielded F (1.48, 77.00) = 14.46, $p < .001$, $\eta^2 = .22$, Wilki's $\Lambda = .71$. Similar to the higher task interdependence scenario, the pairwise comparison result found that participants' ratings for task interdependence were significantly higher (M = 2.98, $SD = .25$) compared to competence-based trust (mean difference = 1.11, $p = .002$) and coworker support (mean difference = 1.28, $p < .001$), demonstrating a more accurate capture of construct. Conversely, the difference between competence-based trust and coworker support was

not significant (mean difference = .17, p = .97).[1] The results indicated that task interdependence had a sufficient level of discriminant validity.

Pilot Study 3a: Construct Validity Test of Performance Inferiority Scenario

Overview

The primary objective of Pilot Study 3a was to check the construct validity of the newly designed performance inferiority/superiority scenarios. I developed scenarios that depicted high/low performance inferiority conditions by applying the construct descriptions from Quade et al. (2018) and adapting from a published scenario from Campbell et al. (2017).

Participants

I recruited 120 working adults from the United States through Prolific. After excluding participants who failed the requirement of the study (i.e., being full-time employees) and the attention check, the final sample included 103 full-time employees from a variety of industries, such as manufacturing, healthcare, banking, and professional service (e.g., consulting, law firms). The average age of the participants was 36.93 years old (*SD* =10.51) with an average organizational tenure of 7.32 years (*SD* = 5.97). Among these participants, 54.4% were female and 77.5% had received at least a two-year college education. On average, participants reported that they worked at the office for 4.15 days per week (*SD* = 1.32). Importantly, none of the participants in this pilot study had been involved in other pilot or main studies.

Procedure

[1] As suggested by Podsakoff et al. (2013), we should also consider the comparison between the rating of the focal construct and the combined ratings of the other constructs. The results found the task interdependence scenario had a sufficient level of discriminant validity in higher condition (F(1, 51) = 23.27, p < .001, η^2 = .31, Wilki's Λ = .69) and lower condition (F(1, 52) = 18.13, p < .001, η^2 = .26, Wilki's Λ = .74) when compared between task interdependence and the combined ratings of competence-based trust and coworker support.

In this pilot study, participants were randomly allocated to either the performance inferiority or superiority condition (See Appendix C for the scenario). At the beginning of the scenario, similar to the PEB scenarios, participants were asked to imagine themselves as employees in the research and development (R&D) department of a hypothetical large company in the retail industry, with a coworker named Alex who also worked in the R&D department. Then, they were presented with a narrative describing their performance inferior or superior to Alex. Following the reading of the scenario, the participants answered the manipulation check measures and an attention check question.

Manipulation

To manipulate the performance inferiority and superiority condition, different descriptions of Alex were provided in each condition. In the *performance inferiority condition*, participants read description such as "Alex is typically perceived as outperforming you. In general, Alex's annual review ratings are higher than yours." Conversely, *performance superiority condition* provided descriptions like "Most people perceive Alex as underperforming relative to you. Alex's annual review ratings are consistently lower than yours." After reading the scenario, participants rated their degree of agreement with the statements about their performance compared with Alex (1 = strongly disagree, 5 = strongly agree). The example item was "Does Alex perform better than you?" The four-item scale was adapted from Campbell et al. (2017).

Results

I conducted an independent samples t-test for independent samples to assess whether participants in the performance inferiority condition perceived that Alex performed better than participants in the performance superiority condition. The higher rating indicated that

participants perceived that they had a lower performance than that of Alex. The results revealed that participants in the performance inferiority condition (M = 4.61, SD = 0.53) perceived that their performance as lower than Alex's, while participants in the performance superiority condition perceived their performance as higher than Alex's (M = 1.20, SD = 0.46). The difference of performance inferiority among these two conditions was significant (t (101) = 34.98, p < .001).

Pilot Study 3b: Discriminant Validity Test of Performance Inferiority Scenario

Overview

Following the recommendations of Podsakoff et al. (2013) and Colquitt et al. (2019), my study aimed to examine whether the scenarios captured the conceptual definition of performance inferiority and superiority and were distinct from related constructs. Workplace status (Djurdjevic et al., 2017) and contextual performance (Borman & Motowidlo, 1997) were chosen as the two constructs for assessing the discriminant validity of the newly developed performance inferiority and superiority scenarios.

Participants

I recruited 110 participants, who were working adults in the United States via Prolific. I obtained 99 valid responses (90%) following the same data scrutinization procedure as Pilot Study 2b. The participants were 50% female, had an average age of 40.57 years (SD = 11.95), and 9.31 (SD = 7.40) years of organizational tenure. Participants reported an average of 3.99 office workdays per week (SD = 1.27). Of the participants, 84% held a two-year college degree or higher. Participants were working in various industries, such as retail, manufacturing, and education. Participants held different occupational positions such as teacher, engineer, and IT technician.

Procedure

As in Pilot Study 2b, I provided participants with detailed instructions, an example illustrating the construct label and its definition, and a practice test. Participants were then asked to read the scenario depicting either performance inferiority or superiority, along with its definitions and the definitions of two other constructs: contextual performance and work status. Following this, they were asked to rate the extent to which the scenario effectively captured the concept of performance inferiority/superiority using a scale ranging from 1 (the scenario does a very bad job of capturing performance inferiority/superiority) to 5 (the scenario does a very good job of capturing performance inferiority/superiority). This rating process was also applied to their assessment of contextual performance inferiority/superiority and work status.

Results

I conducted a one-way repeated measure ANOVA in SPSS 26 to examine if the rating of the scenarios on performance inferiority/superiority differs from its ratings on contextual performance inferiority/superiority and workplace status. In performance inferiority and superiority scenarios, participants consistently rated these scenarios as more accurately capturing task inferiority/superiority than contextual performance inferiority/ superiority and workplace status. In the performance inferiority scenario, the assumption of sphericity was not violated ($\chi^2(2) = 1.77$, $p = .41$). The results showed $F(2, 98) = 18.60$, $p < .001$, $\eta^2 = .28$, Wilki's $\Lambda = .52$. The pairwise comparison results revealed that participants rated performance inferiority ($M = 4.40$, $SD = .13$) higher in comparison to contextual performance inferiority (mean difference = 1.22, $p < .001$) and workplace status (mean difference = 1.08, $p < .001$), which indicated that participants perceived the performance inferiority scenario was a better reflection of the construct of performance inferiority rather than contextual performance inferiority and

workplace status. Conversely, the difference between contextual performance inferiority/superiority and workplace status was not significant (mean difference = –.14, p = 1.00). For the performance superiority scenario, as the assumption of sphericity was not violated ($\chi^2(2) = .74$, $p = .69$). The results showed $F(2, 96) = 26.61$, $p < .001$, $\eta^2 = .36$, Wilki's $\Lambda = .50$. Similar to the results of the performance inferiority scenario, the pairwise comparison results found that participants rated performance superiority significantly higher ($M = 4.22$, $SD = .17$) compared to contextual performance inferiority/superiority (mean difference = 1.20, $p < .001$) and workplace status (mean difference = 1.59, $p < .001$), while contextual performance inferiority/superiority and workplace status did not significant differ from each other (mean difference= .39, $p = .24$).[2] The results indicated that the performance inferiority/superiority scenarios had a sufficient level of discriminant validity.

Study 1a

Overview

Study 1a was primarily designed to investigate whether a coworker's eco-civic engagement influences the focal employee's integrity-based trust and examine the moderating effect of task interdependence on this relationship. In Study 1a, I employed a between-subject design with 2 (high vs. low eco-civic engagement) × 2 conditions (high vs. low task interdependence). Participants were randomly assigned to one of the four conditions.

Participants

[2] As suggested by Podsakoff et al. (2013), we should also consider the comparison between the rating of the focal construct and the combined ratings of the other constructs. The results found the performance inferiority/superiority scenario had a sufficient level of discriminant validity in performance inferiority condition ($F(1, 50) = 43.85$, $p < .001$, $\eta^2 = .47$, Wilki's $\Lambda = .53$) and performance superiority condition ($F(1, 48) = 45.74$, $p < .001$, $\eta^2 = .49$, Wilki's $\Lambda = .51$) when compared between performance inferiority/superiority and the combined ratings of contextual performance inferiority/superiority and workplace status.

Prior to the experiment, I conducted a power analysis to determine the required sample size for each group using G*Power (Cohen, 1988; Faul et al., 2007). Based on the average effect size of 0.45 found in a meta-analysis of PEB literature (Osbaldiston & Schott, 2011), 62 participants for each condition were enough to detect the effect size (sample size estimated based on $f^2 = .20$, $\Delta R^2 = .01$, $\alpha = .05$, Power = .80) (Faul et al., 2009). To account for potential attrition and ensure adequate statistical power for testing the hypothesized effects, I invited 324 individuals to participate in the study to obtain enough statistical power to test proposed effects. Participants were recruited from the United States via Prolific. After excluding participants who did not meet the requirements (i.e., being full-time employees) and failed the attention check question, the final sample consisted of 307 participants. Of the 307 respondents, 57.7% were female, the average age was 40.47 years (*SD* = 11.06), and the average organizational tenure was 8.62 years (*SD* = 6.23). Participants reported an average of 3.81 office workdays per week (*SD* = 1.41). Regarding education, 87% had received at least a two-year college degree or higher. They were from different industries, such as healthcare, education, and service firms (including consulting, law firms, etc.). They held different positions, including data analyst, engineer, teacher, and project manager. None of the participants participated in other pilot studies or main studies.

Procedure and Manipulation

In Study 1a, participants were randomly assigned to read one of the 2 × 2 (high vs. low eco-civic engagement × high vs. low task interdependence) scenarios describing a coworker's (Alex) eco-civic engagement and task interdependence validated in the pilot studies. For each condition, participants were firstly instructed to imagine themselves as employees in the research and development (R&D) department of a hypothetical large company in the retail industry, with

a coworker named Alex who also worked in the R&D department. In **the *higher eco-civic engagement and higher task interdependence condition***, the scenario described they had frequent interactions and reliance on Alex for job-related information and materials, along with Alex's active participation in environmentally friendly activities organized by the company. In the ***higher eco-civic engagement and lower task interdependence condition***, participants read about working independently from Alex, rarely needing Alex's information or materials, and Alex actively engaging in eco-friendly activities organized by the company. In the ***lower eco-civic engagement and higher task interdependence condition***, participants read a description that they frequently interacted with Alex on job assignments and depended on information or materials from Alex to complete job tasks and that Alex rarely participated in environmentally friendly activities held by the organization. In the ***lower eco-civic engagement and lower task interdependence condition***, participants read a description about working independently from Alex, rarely needing Alex's information or materials, and Alex rarely participating in environmentally friendly activities held by the organization. Participants were asked to read their assigned scenario carefully, imagining their feelings and thoughts in such a situation. After reading the scenario, all the participants completed manipulation check questions of eco-civic engagement and task interdependence, assessed their level of integrity-based trust toward Alex, and did an attention check question. Participants were asked to provide demographic information at the end of the experiment.

Measures

Manipulation Check Measure. Participants were asked to recall the scenario they just read to answer manipulation check questions adapted from Boiral and Paillé (2012) with a five-point Likert scale (1= completely disagree, 5 = completely agree). The manipulation check items

of eco-civic engagement were the same as those in Pilot Study 1 (e.g., "Alex undertakes environmental actions that contribute positively to the image of the company"). The Cronbach's α was .99. For the manipulation check of task interdependence, participants were asked to recall the working relationship between Alex and themselves with a four-item measure (Taggar & Haines, 2006). A sample item of this manipulation check measure was "To what extent do you depend on Alex for information and advice?" (1 = completely independent, 7 = completely dependent; α = .98).

Focal Employee's Integrity-Based Trust toward the Coworker. Participants were asked to report their integrity-based trust toward Alex with a three-item scale adapted from Levine and Schweitzer (2015). The sample items were "Alex has a great deal of integrity" and "I can trust Alex's word" (1 = strongly disagree, 5 = strongly agree). The Cronbach's α was .94.

Results

For the manipulation checks, participants in the higher eco-civic engagement condition (M = 4.79, SD = .43) reported that Alex had a higher level of eco-civic engagement than those in the lower eco-civic engagement condition (M = 1.18, SD = .50), $t(305) = 67.49$, $p < .001$. Participants in the higher task interdependence condition (M = 5.58, SD = 1.00) reported that Alex and themselves had a higher level of task interdependence than those in the lower task interdependence condition (M = 1.78, SD = .90), $t(305) = 35.07$, $p < .001$.

I ran a two-way ANOVA with eco-civic engagement condition, task interdependence condition, and their interaction as factors to test Hypothesis 1, which concerns the relationship between eco-civic engagement and integrity-based trust, and Hypothesis 10a, which involves the moderation effect of task interdependence. As shown in Figure 3, the results revealed a significant main effect of eco-civic engagement, $F(1, 303)=166.28$, $p < .001$, $\eta^2 = .35$.

Hypothesis 1 was supported. The main effect of task interdependence was also significant, $F(1, 303) = 5.47$, $p = .02$, $\eta^2 = .02$. Importantly, there was a significant interaction between eco-civic engagement and task interdependence, $F(1, 303) = 4.42$, $p = .04$, $\eta^2 = .01$.

To further test the moderation effect of task interdependence on the relationship between eco-civic engagement and integrity-based trust, I did a simple effect test. The findings found that employees were more likely to perceive coworker integrity-based trust when they viewed their coworker as someone more conducted eco-civic engagement than those who did not. This effect was stronger when the focal employee had a higher level of task interdependence with the coworker (Ms = 6.04 vs. 4.24, SDs = 0.78 vs. 1.31, respectively), $F(1, 127.47) = 108.99$, $p < .001$, $\omega^2 = .41$, than when there was a lower level of task interdependence (Ms = 5.51 vs. 4.21, SDs = 0.92 vs. 1.16, respectively), $F(1, 150) = 61.55$, $p < .001$, $\eta^2 = .29$. Hypothesis 10a was supported.

Study 1b

Overview

In Study 1b, the aim was to examine the relationship between eco-initiatives and green self-efficacy (Hypothesis 2), and integrity-based trust (Hypothesis 4), as well as to investigate the moderation effect of task interdependence on these relationships (Hypothesis 11a and Hypothesis 12a). The hypotheses proposed that focal employees who had a higher task interdependence with the coworker were more likely to (1) develop integrity-based trust toward the coworker and (2) have a higher level of green efficacy after observing the coworker's eco-initiatives. To test these hypotheses, I employed a between-subject design with 2 (high vs. low eco-initiatives) × 2 (high vs. low task interdependence) conditions. Participants were randomly assigned to one of the four conditions.

Participants

Using the same power analysis and considering the attrition rate as in Study 1a, I invited 306 individuals to participate in Study 1b. Participants were recruited from the United States through the Prolific platform. After screening out participants who did not meet the requirement (i.e., being full-time employees) and failed the attention check question, the final sample comprised 272 respondents. Among them, 52.9% were female, with an average age of 41.45 years (*SD* = 12.24) and an average organizational tenure of 8.84 years (*SD* = 7.94). Participants reported an average of 4.08 office workdays per week (*SD* = 1.46). Most participants (83.7%) had received at least a two-year college degree or higher. They came from different industries, including healthcare, education, retail, and manufacturing and held roles such as customer service representative, teacher, and project manager.

Procedure and Manipulation

In Study 1b, participants were randomly assigned to read one of the 2 × 2 (high vs. low eco-initiatives × high vs. low task interdependence) scenarios describing a coworker's (Alex) eco-initiatives behavior and task interdependence validated in the pilot studies. The same as Study 1a, participants were initially instructed to imagine themselves as employees in the research and development (R&D) department of a hypothetical large company in the retail industry, with a coworker named Alex who also worked in the R&D department. In the ***higher eco-initiatives and higher task interdependence condition***, the scenario described they had frequent interactions and reliance on Alex for job-related information and materials while observing Alex's active personal efforts to protect the environment at the workplace. In the ***higher eco-initiatives and lower task interdependence condition***, the scenario described participants working independently from Alex, with minimal need for Alex's information or

materials, and they observed Alex actively engaged in personal efforts to protect the environment at the workplace. In the ***lower eco-initiatives and higher task interdependence condition***, participants read a description that they frequently interacted with Alex on job assignments and depended on information or materials from Alex to complete job tasks and observed Alex rarely engaged in personal efforts to protect the environment at the workplace. In the ***lower eco-initiatives and lower task interdependence condition***, participants read a description about working independently from Alex, with minimal need for Alex's information or materials, and observing Alex rarely engaged in personal efforts to protect the environment at the workplace. Participants were instructed to carefully read the scenario, imagining how they would feel and think in that situation. After reading the scenario, they completed manipulation check questions for eco-initiative and task interdependence, assessed their level of integrity-based trust toward Alex, and evaluated their green self-efficacy. An attention check question was also included. Upon completing the main part of the experiment, participants were asked to provide demographic information.

Measures

Manipulation Check Measure. The manipulation check measure for eco-initiatives and task interdependence were the same as in Pilot Study 1 and Study 1a. The Cronbach's α of eco-initiatives and task interdependence were .96 and .98, respectively.

Focal Employee's Green Self-Efficacy. I measured participants' green self-efficacy using the scale developed by Homburg and Stolberg (2006). Participants reported their level of green self-efficacy on a five-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Sample items were "I know how to deal with new types of environmental problems" and

"I am able to find ways to deal with this kind of environmental problems in everyday life." The Cronbach's α was .91.

Focal Employee's Integrity-Based Trust toward the Coworker. The measure of integrity-based trust was the same as in Study 1a. The Cronbach's α was .89.

Results

For the manipulation checks, participants in the higher eco-initiatives condition (M = 4.69, SD = .67) reported that Alex had a significantly higher level of eco-initiatives than participants in the lower eco-initiatives condition (M = 1.43, SD = .87), $t(251.29) = 34.64$, $p < .001$. Likewise, in the higher task interdependence condition (M = 5.54, SD = 1.21), participants perceived a greater degree of task interdependence with Alex than those in the lower task interdependence condition (M = 2.19, SD = 1.41, $t(270) = 21.12$, $p < .001$.

A two-way ANOVA was conducted to test Hypothesis 2, the relationship between eco-initiatives and integrity-based trust, and Hypothesis 11a regarding the moderating role of task interdependence on this relationship. As shown in Figure 4, there was a significant main effect of the coworker's eco-initiatives on the focal employee's integrity-based trust toward the coworker, $F(1, 268) = 241.63$, $p < .001$, $\eta^2 = .47$, supporting Hypothesis 2. The main effect of task interdependence was also significant, $F(1, 268) = 6.01$, $p = .02$, $\eta^2 = .02$. Importantly, a significant interaction between eco-initiatives and task interdependence on integrity-based trust was found, $F(1, 268) = 3.94$, $p = .048$, $\eta^2 = .01$. The simple effect test results showed that employees perceived higher coworker integrity-based trust when they found their coworker as someone more engaged in eco-initiatives than those who did not. This effect was more salient when the focal employee had a higher level of task interdependence with the coworker (Ms = 5.91 vs. 3.69, SDs = 0.92 vs. 1.16, respectively), $F(1, 124.02) = 150.55$, $p < .001$, $\omega^2 = .53$, than

when there was a lower level of task interdependence (Ms = 5.35 vs. 3.63, SDs = 0.84 vs. 1.20, respectively), $F(1, 121.60) = 93.53$, $p < 0.001$, $\omega^2 = .40$. Hypothesis 11a was supported.

I ran another two-way ANOVA that was used to test Hypothesis 4, which investigated the relationship between eco-initiatives and green self-efficacy, and Hypothesis 12a, which explored the moderation effect of task interdependence on this relationship. A significant main effect of the coworker's eco-initiatives on the focal employee's green self-efficacy was found, $F(1, 268) = 4.04$, $p = .045$, $\eta^2 = .02$. Hypothesis 4 was supported. However, the main effect of task interdependence ($F(1, 268) = .40$, $p = .53$, $\eta^2 = .001$) and interaction between eco-initiatives and task interdependence on green self-efficacy ($F(1, 268) = 0.99$, $p = 0.32$, $\eta^2 = .004$) were not significant, respectively (see Figure 5). Hypothesis 12a was not supported.

Study 1c

Overview

Study 1c focused on examining the relationship between eco-helping and green self-efficacy (Hypothesis 5), as well as the moderation effect of task interdependence on this relationship (Hypothesis 13a). This study utilized a 2 (high vs. low eco-helping) × 2 (high vs. low task interdependence) between-subject design. Participants were randomly assigned to one of the four conditions.

Participants

Using the same power analysis and considering the attrition rate as in Study 1a, I invited 307 individuals to participate in Study 1c. Participants were recruited from the United States through the Prolific platform. After screening out participants who did not meet the requirement (i.e., being full-time employees) and failed the attention check question, the final sample comprised 281 respondents. Among them, 46.2% were female, with an average age of 39.04

years (*SD* = 11.61) and an average organizational tenure of 7.37 years (*SD* = 6.43). Participants, on average, reported working in the office 3.95 days each week (*SD* = 1.48). Most participants (89.2%) had received at least a two-year college degree or higher. They came from different industries, including education, manufacturing, healthcare, and service firms (e.g., consulting, law firms, etc.), and held roles such as attorney, consultant, engineer, and teacher.

Procedure and Manipulation

In Study 1c, participants were randomly assigned to one of the 2 × 2 (high vs. low eco-helping × high vs. low task interdependence) scenarios, which described a coworker's (named Alex) eco-helping behaviors and task interdependence. These scenarios were validated in the pilot studies. As with Study 1a, participants were first asked to imagine themselves as employees in the research and development (R&D) department of a hypothetical large company in the retail industry, with Alex as a coworker in the same department. In the ***higher eco-helping and higher task interdependence condition***, the scenario described that they had frequent interactions and reliance on Alex for job-related information and materials while also observing Alex's active efforts to help colleagues integrate environmental considerations into their work. The ***higher eco-helping and lower task interdependence condition*** depicted participants working independently from Alex, with minimal need for Alex's information or materials, and noting Alex's active efforts to help colleagues integrate environmental considerations into their work. In the ***lower eco-helping and higher task interdependence condition***, participants read a description that they frequently interacted with Alex on job assignments and depended on information or materials from Alex to complete job tasks and observed Alex rarely help colleagues integrate environmental considerations into their work. The ***lower eco-helping and lower task interdependence condition*** described a situation where participants worked

independently from Alex, with minimal need for Alex's information or materials, and observed Alex rarely help colleagues integrate environmental considerations into their work. Participants were instructed to thoroughly read the scenario, imagining their reactions in such circumstances. Following this, they answered manipulation check questions for eco-helping and task interdependence and assessed their level of green self-efficacy. An attention check question was part of the process. After completing the main section of the study, participants were asked to provide demographic information.

Measures

Manipulation Check Measure. The manipulation check questions of eco-helping and task interdependence were the same as for Pilot Study 1 and Study 1a. The Cronbach's α of eco-helping and task interdependence were .96 and .97, respectively.

Focal Employee's Green Self-Efficacy. The measure of green self-efficacy was the same as the measure used for Study 1b. The Cronbach's α was .91.

Results

For the manipulation checks, participants in the higher eco-helping condition (M = 4.51, SD = .59) reported that Alex had a significantly higher level of eco-helping than those in the lower eco-helping condition (M = 1.28, SD = .65), $t(279) = 43.59$, $p < .001$. Likewise, in the higher task interdependence condition (M = 5.41, SD = 1.10), participants perceived a greater degree of task interdependence with Alex than those in the lower task interdependence condition (M = 1.84, SD = .93), $t(279) = 29.36$, $p < .001$.

A two-way ANOVA was conducted to test Hypothesis 5, which explored the relationship between eco-helping and green self-efficacy, and Hypothesis 13a, which concerned the moderating role of task interdependence in this relationship. The results showed a significant

main effect of eco-helping: $F(1, 277) = 8.35$, $p = .004$, $\eta^2 = .03$, supporting Hypothesis 5, while the main effect of task interdependence was not significant: $F(1, 277) = 2.34$, $p = .13$, $\eta^2 = .01$. Importantly, a significant interaction between eco-helping and task interdependence on green self-efficacy was found: $F(1, 277) = 4.72$, $p = .03$, $\eta^2 = .02$. The simple effect analysis results showed that employees were more likely to have a higher level of green self-efficacy when they observed their coworker engaged in eco-helping than those who did not. This effect was stronger when the focal employee and the coworker had a higher level of task interdependence (Ms = 5.22 vs. 4.62, SDs = 0.89. vs. 1.01, respectively), $F(1, 137) = 13.62$, $p < .001$, $\eta^2 = .09$, than a lower level of task interdependence (Ms = 4.78 vs. 4.69, SDs = 0.88 vs. 1.14, respectively), $F(1, 140) = 0.24$, $p = 0.62$, $\eta^2 = .00$, supporting Hypothesis 13a (see Figure 6).

Study 1d

Overview

Study 1d focused on examining the relationship between eco-helping and moral inferiority (Hypothesis 8), as well as the moderation effect of performance inferiority on this relationship (Hypothesis 14a). This study utilized a 2 (high vs. low eco-helping) × 2 (performance inferiority vs. superiority) between-subject design. Participants were randomly assigned to one of the four conditions.

Participants

Using the same power analysis and considering the attrition rate as in Study 1a, I invited 305 individuals to participate in Study 1b. Participants were recruited from the United States through the Prolific platform. After screening out participants who did not meet the requirement (i.e., being full-time employees) and failed the attention check question, the final sample comprised 277 respondents. Among them, 48.2% were female, with an average age of 39.18

years (*SD* = 11.45) and an average organizational tenure of 8.09 years (*SD* = 6.88). On average, participants reported that they worked at the office for 4.07 days per week (*SD* = 1.39). Most participants (86%) had received at least a two-year college degree or higher. They came from different industries, including healthcare, education, government, and manufacturing, and held roles such as administrative assistant, recruiter, engineer, and teacher.

Procedure and Manipulation

In Study 1d, participants were randomly assigned to one of the 2 × 2 (high vs. low eco-helping × performance inferiority vs. superiority) scenarios, which described a coworker's (named Alex) eco-helping behaviors and the participants' performance inferior or superior compared to Alex. These scenarios were validated in pilot studies. As with Study 1a, participants were first asked to imagine themselves as employees in the research and development (R&D) department of a hypothetical large company in the retail industry, with Alex as a coworker in the same department. In the ***higher eco-helping and performance inferiority condition***, the scenario described that they had a lower job performance than Alex, while also observing Alex's active efforts to help colleagues integrate environmental considerations into their work. The ***higher eco-helping and performance superiority condition*** depicted participants with a higher job performance than Alex and noted Alex active efforts to help colleagues integrate environmental considerations into their work. In the ***lower eco-helping and performance inferiority condition***, participants read a description that they a lower job performance than Alex, alongside observing Alex rarely help colleagues integrate environmental considerations into their work. The ***lower eco-helping and performance superiority condition*** described a situation where participants had a higher job performance than Alex and observed Alex rarely help colleagues integrate environmental considerations into their work. Participants were instructed to carefully read the

scenario, imagining their reactions in such circumstances. Then, they answered manipulation check questions for eco-helping and performance inferiority and assessed their level of moral inferiority. An attention check question was also included. At the end of the main section of the study, participants were asked to provide demographic information.

Measures

Manipulation Check Measure. The manipulation check questions of eco-helping were the same as Pilot Study 1. The manipulation check for performance inferiority asked participants to recall the performance comparison between Alex and themselves by asking if Alex performed better than the participants (1 = disagree strongly; 5 = agree strongly) (Campbell et al., 2017). The Cronbach's α of eco-helping and performance inferiority were .96 and .98, respectively.

Moral Inferiority. To measure moral inferiority, I used an adapted version of the moral identity measure from Aquino & Reed (2002), which was originally adapted by Jordan et al. (2015) to measure the comparison of moral self. Participants read the instruction "Compared to Alex, I am…". Participants compared the level of morality between themselves and Alex by using nine moral words (i.e., caring, compassionate, fair, friendly, generous, hardworking, helpful, honest, kind) with a 9-point scale (1 = much less than Alex, 9 = much more than Alex). The final score of each item was reversed to indicate that a higher score reflects higher moral inferiority. The Cronbach's α was .94.

Results

For the manipulation checks, participants in the higher eco-helping condition (M = 4.43, SD = .62) reported that Alex had a significantly higher level of eco-helping than those in the lower condition (M = 1.22, SD = .53), $t(269.99) = 46.33$, $p < .001$. Likewise, in the performance inferiority condition (M = 4.58, SD = .62), participants perceived a greater degree of

performance inferiority than those in the performance superiority condition (M = 1.43, SD = .69), $t(275) = 40.27$, $p < .001$.

A two-way ANOVA was conducted to test Hypothesis 8, which explored the relationship between eco-helping and moral inferiority, and Hypothesis 13a, which investigated the moderating role of performance inferiority in this relationship. As shown in Figure 7, the results showed a significant main effect of eco-helping: $F(1, 273) = 230.22$, $p < .001$, $\eta^2 = .46$. Hypothesis 8 was supported. The main effect of performance inferiority was also significant: $F(1, 273) = 50.87$, $p < .001$, $\eta^2 = .16$. Importantly, a significant interaction between eco-helping and performance inferiority on moral inferiority was found: $F(1, 273) = 4.39$, $p = 0.04$, $\eta^2 = .02$.

The results of simple effect analysis found that employees were more likely to experience a higher level of moral inferiority when they observed their coworker engaged as someone more in eco-helping than those who did not. This effect was stronger when the focal employee had a lower level of job performance than the coworker (Ms = 5.50 vs. 3.33, SDs = 0.70 vs. 1.09, respectively), $F(1, 117.77) = 197.88$, $p < .001$, $\omega^2 = .58$, than when the focal employee had a higher level of job performance than the coworker (Ms = 4.34 vs. 2.70, SDs = 1.14 vs. 1.19, respectively), $F(1, 135) = 68.03$, $p < .001$, $\eta^2 = .34$, supporting Hypothesis 14a.

Study 1a–d Discussion

Study 1a–d conducted four scenario-based experiments to examine the proposed relationships among three types of coworkers' pro-environmental behavior (PEB) and their association with two psychological responses grounded in social cognition theory—integrity-based trust toward the coworker and the focal employee's green self-efficacy—and one psychological response rooted in social comparison theory—moral inferiority. Additionally, the study explored the moderating roles of task interdependence, a social cognition-based moderator,

and performance inferiority, a social comparison-based moderator. The findings revealed that coworkers' eco-civic engagement and eco-initiatives positively associated with the focal employee's integrity-based trust, particularly in the situation of higher task interdependence. Additionally, the coworker's eco-initiatives and eco-helping were found to positively relate to the focal employee's green self-efficacy. Specifically, the positive relationship between the coworker's eco-helping and focal employee's green self-efficacy was more salient under the higher task interdependence scenario. Moreover, the coworker's eco-helping was positively related to focal employee's perceived moral inferiority, a relationship that was strengthened by performance inferiority.

However, the findings in Study 1b did not support the hypothesized moderation effect of task interdependence on the relationship of the coworker's eco-initiatives and the focal employee's green self-efficacy. This unexpected outcome may be attributed to the characteristics of eco-initiatives. Eco-initiatives are personal environmental actions taken by coworkers that might be less visible to focal employees (Robertson & Barling, 2017). These initiatives, such as turning off lights, commuting with public transportation, or bringing your own water bottle, do not necessarily require collaboration or direct interaction with other employees. Additionally, eco-initiatives are personal behaviors that do not typically involve others, leading to a lack of feedback or acknowledgment from peers. The development of self-efficacy usually requires interaction and feedback from colleagues (Dimotakis et al., 2017). Without interaction and feedback, there are fewer opportunities for employees to develop self-efficacy through social learning.

Task interdependence generally increases the visibility of behaviors that require feedback and cooperation (De Stobbeleir et al., 2019; Okhuysen & Bechky, 2009). This visibility makes it

easier for employees to observe and receive feedback from one another. Previous research also suggests that feedback can significantly reinforce and enhance self-efficacy especially in task-dependent activities (Gully et al., 2002). However, because eco-initiatives are usually performed individually and lack direct cooperation or feedback from peers, the potential amplifying effect from interdependent task settings is mitigated. This means the relationship between the coworker's eco-initiatives and the focal employee's green self-efficacy may not change as a function of the level of task interdependence. Even in contexts of higher task interdependence, eco-initiatives remain individualistic and do not require collaboration or collective effort. Consequently, the relationship between eco-initiatives and green self-efficacy remains stable across different levels of task interdependence.

Studies 1a–d have several limitations. First, the scenario-based experimental design may not fully capture the complexities of real-world workplace interactions, potentially limiting external validity. Despite using a between-subjects design to minimize the concern of participants guessing the hypotheses, employees in real workplace settings might react differently than those in experimental conditions. Second, assessing all variables from a single source increases the potential for common method bias and social desirability bias, which could influence the findings. Third, all the participants of Studies 1a–d were from the United States. While this was not the primary focus of this dissertation, assessing the model across varied cultural contexts would enhance its generalizability and ensure robustness. Fourth, Studies 1a–d only tested the first half of the proposed model. Therefore, despite the strengths of scenario-based experimental design, such as strong causal inferences and internal validity (Aguinis & Bradley, 2014; Podsakoff & Podsakoff, 2019), it is important to replicate the findings using a survey with dyadic data.

To address these limitations, Study 2 was conducted to enhance the external validity of the results from Studies 1a–d by collecting dyadic data from full-time employees in China. This approach allows for testing the full model in actual workplace settings, providing a more accurate representation of real-world interactions. The use of dyadic data, which includes responses from both focal employees and their coworkers, significantly reduces common method bias. Additionally, the collection of time-lagged survey data helps to mitigate potential biases and provides a more comprehensive understanding of the relationships studied.

Chapter Five: Study 2

Overview

In Study 2, I aimed to complement and build upon Study 1a–d's results in several ways. First, I sought to replicate and extend the findings by testing the full theoretical model, examining the impact of coworkers' different types of pro-environmental behavior (PEB) on the focal employees' behaviors. Study 2 further examined the full mediation relationships: (1) integrity-based trust mediated the relationship between (a) the coworker's eco-civic engagement and (b) coworker's eco-initiatives and the focal employee's collaboration with the coworker (H3a & b); (2) the focal employee's green self-efficacy mediated the relationship between (a) the coworker's eco-initiatives and (b) coworker's helping and the focal employees' eco-initiatives (H6a & b) and personal pro-environmental behavior (H7a & b); (3) the focal employee's moral inferiority mediated the relationship the coworker's helping and the focal employee's ostracism toward the coworker (H9a & b). Additionally, Study 2 investigated the moderated mediation effects of task interdependence (H10AB, H11a & b, H12a & b, H13a & b) and performance inferiority on the above mediation relationships (H15a & b).

Second, the results of Study 1a–d supported most of the hypotheses about the psychological responses of the focal employees to the coworkers' PEB; I aimed to replicate these findings with dyadic data by conducting a multisource and time-lagged research design wherein the relationships were assessed with the focal employee–coworker dyads. For instance, instead of coworkers, focal employees were asked to evaluate their observations of the coworker's PEB. Additionally, rather than having employees self-report, coworkers were tasked with rating the focal employee's ostracism towards themselves, which could mitigate the social desirability bias associated with self-reported data.

Third, the dyadic survey in Study 2 could capture real-life interactions among coworkers and may offer insights with higher ecological validity. Unlike scenario-based experiments, which focus on individual perceptions and behaviors, dyadic data from coworkers and employees can reveal interaction effects and reciprocal relationships. This approach can significantly deepen the understanding of the dynamics within work relationships and how these dynamics affect the model's variables.

Fourth, the data of Study 2 was collected from China, allowing me to test the model in a different cultural context compared to Studies 1a–d, which were conducted in the United States. While this was not the primary focus of this dissertation, assessing the model across varied cultural contexts would enhance its generalizability. This helps explore whether the findings from the U.S. context hold true in different cultural settings, contributing to the robustness and universality of the model.

Participants and Procedure

The participants of Study 2 consisted of focal employees and their coworkers. I collected dyads data (the focal employee–the coworker) through Wenjuanxing, a market research service company in China (for recent dyadic data collection studies utilizing this data collection method, Hu et al., 2021; Wei et al., 2022). This platform allows researchers to collect dyadic data online similarly to other online survey service platforms like Qualtrics (Barnes et al., 2011; Yam et al., 2017). With the assistance from Wenjuanxing, I recruited full-time employees who were willing to invite a coworker to participate in the survey at three time points. Participants were required to be on-site workers to ensure interaction between the participants and coworkers. Each pairing of a focal employee and a coworker was unique to prevent one employee from evaluating multiple coworkers. To ensure the pairing of the three-phase questionnaires in the distribution process,

when collecting basic information about the focal employee–coworker pairs, we required both focal employees and coworkers to provide the name of their company and each other's names. As stated in the consent form, throughout the entire process, none of participants' privacy and ratings were disclosed to anyone except the researchers. To minimize potential self-selection bias, participants were provided with a general description of the study's purpose during pre-screening, with an emphasis on the academic use of their responses.

The data collection spanned one and a half months, occurring at three intervals: a one-month gap between the first (Time 1) and second points (Time 2), and a two-week gap between the second (Time 2) and third points (Time 3). Very few PEB studies have justified the temporal interval of data collection (with few exceptions, Osbaldiston & Sheldon, 2003; Paillé & Meija-Morelos, 2019). To find appropriate time intervals for the proposed relations, I searched previous studies that have explored the influence of peer behavior, the development of trust, self-efficacy, and peer comparison in the workplace. Previous studies have suggested that one month is a reasonable time interval for exploring the effects of a peer's behavior and the development of trust between peers (Ouyang et al., 2018; Xiong et al., 2016). A two-week period was identified as appropriate for examining the influence of trust and social comparison on sequential behaviors (Fulmer & Ostroff, 2017; Quade et al., 2018).

At Time 1 (T1), 330 pairs of focal employees and their coworkers responded to the questionnaires. The focal employees and their coworkers completed their demographic information. The focal employees assessed the degree of task interdependence and performance inferiority and reported their baseline integrity-based trust toward the coworker, green self-efficacy, moral inferiority, personal PEB, and collaboration with the coworker. The coworkers assessed their PEB and the focal employees' baseline eco-initiatives and the baseline

experienced ostracism from the focal employee. At Time 2 (T2), I received valid questionnaires from 305 focal employees. The focal employees assessed their integrity-based trust toward the coworker, green self-efficacy, and moral inferiority. At Time 3 (T3), 290 pairs of focal employees and their coworkers finished the questionnaires, with an 88% response rate. The focal employee assessed their personal PEB and collaboration with the focal employee. The coworkers reported the eco-initiatives of the focal participants and the level of ostracism from the focal employee.

I omitted those participants who failed one or more of the attention-check items (Huang et al., 2011) or gave no responses on several variables. After matching the data for focal employees and their coworkers, I received 285 valid focal employee–coworker dyads questionnaires. In the sample of focal employees, 38.6% were female with an average age of 35.62 (*SD* = 6.17), and 81.4% of focal employees completed a three-year college education. On average, they spent 5.71 years (*SD* = 3.14) in the current organization and had 3.59 years (*SD* = 2.06) working with the coworker who was invited to the survey. Most of them were sales, accountant, engineer, and human resources managers/assistants. Among the final 285 coworkers, 43.9% of them were female, and their average age was 35.45 (*SD* = 5.49). Most coworkers completed a three-year college education (84.9%). On average, they spent 5.39 years (*SD* = 2.01) in the current organization. Similar to the focal employees, most of the coworkers worked as accountants, sales, engineers, human resources managers/assistants, and operation specialists. The focal employees and coworkers were mainly from manufacturing (18.2%), supply chain (16.8%), hospitality (8.8%), agriculture (6.7%), education (6.0%), and finance (6%).

Measures

Since the measurements were originally developed in English, I translated these scales into Chinese following the translation–back-translation procedure suggested by Brislin (1986). To ensure the clarity and accuracy of the translations, an experienced bilingual translator conducted an additional back translation. Following this, the translator and I undertook an iterative process to identify, address, and resolve any discrepancies. All the measures were presented in Appendix D.

Types of the Coworker's PEB. At T1, the focal employees evaluated their coworkers' types of PEB using the scale from Boiral and Paillé (2012). This assessment included two items for the eco-initiatives dimension, four items for eco-civic engagement, and three items for eco-helping. The focal employees rated their agreement with each item on a five-point Likert scale, ranging from 1 (completely disagree) to 5 (completely agree). The focal employees were instructed "the coworker" in the item referred to the coworker they had invited to participate in the study. The items for eco-initiatives were "In the work, the coworker weigh the consequences of my actions before doing something that could affect the environment" and "The coworker voluntarily carries out environmental actions and initiatives in his/her daily work activities." For eco-civic engagement, sample items were "The coworker actively participates in environmental events organized in and/or by our company" and "The coworker volunteers for projects, endeavors, or events that address environmental issues in our organization." The eco-helping dimension included items such as, "The coworker spontaneously gives his/her time to help colleagues take the environment into account in everything they do at work" and "The coworker encourages colleagues to adopt more environmentally conscious behavior." The reliability coefficients (Cronbach α) for the eco-initiatives, eco-helping, and eco-civic engagement dimensions were .90, .71 and .82, respectively.

Task Interdependence. Task interdependence was measured with a five-item scale adapted from Pearce and Gregersen (1991) on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). The focal employees completed the scale at T1. The original scale assessed task interdependence among the employee and other team members. To adapt to the research design of my study, I revised "others" to instead read "the coworker." Sample items included, "I work closely with the coworker in doing my work" and "I frequently must coordinate my efforts with the coworker." The Cronbach α was .77.

Performance Inferiority. At T1, focal employees rated their perceptions of their own job performance relative to that of their coworker to measure performance inferiority. This scale was adapted from Yousef (2000), which employed a seven-point Likert scale from 1 (very low) to 7 (very high). Sample items were "How do you evaluate the quality of your performance on the job compared with the coworker?" and "How do you evaluate your productivity on the job compared with the coworker?" Ratings were reverse coded so that a higher score indicated greater perceived performance inferiority by the focal employee compared to the coworker. The Cronbach α was .81.

Focal Employee's Integrity-based Trust toward the coworker. At T1 and T2, focal employees reported their integrity-based trust toward their coworker using a three-item scale adapted from Levine and Schweitzer (2015). The sample items were "The coworker has a great deal of integrity" and "I can trust the coworker's word" (1 = strongly disagree, 5 = strongly agree). The Cronbach α was .81 at T1 and .82 at T2, respectively.

Focal Employee's Green Self-Efficacy. The focal employee assessed their green self-efficacy at T1 and T2 with the scale developed by Moeller and Stahlmann (2019). Sample items included, "I can choose forms of transportation that cause fewer carbon emissions" and "I can

make environmentally eating choices (0 = cannot do at all, 10 = highly certain can do).” The Cronbach α was .83 (T1) and .78 (T2).

Moral Inferiority. At T1 and T2, focal employees assessed their moral inferiority with the scale developed by Shin et al. (2021). The instruction sentence for this measure was “Compared to the coworker who also participates in this study, are you more or less likely to ….” Participants then rated their level of moral inferiority relative to the coworker. Sample items were “make fair and balanced decisions” and “represent high ethical standards.” (1 = much less likely compared with the coworker; 7 = much more likely compared with the coworker). Ratings were reverse coded so that a higher score indicates a greater level of perceived moral inferiority. The Cronbach α was .85 (T1) and .81 (T2).

Focal Employee’s Collaboration with the Coworker. At T1 and T3, the focal employee reported their collaboration with the coworker using a scale developed by Turner and Connelly (2021). Sample items included, “In the past month, I liked to build an alliance with the coworker” and “In the past month, I was pleased to collaborate with this colleague in developing an action plan.” (1 = strongly disagree, 5 = strongly agree). The Cronbach α was .85 (T1) and .83 (T3).

Focal Employee’s Eco-Initiatives. At T1 and T3, the coworker assessed the focal employee’s eco-initiatives in the past month with the scale from Boiral and Paillé (2012). The Cronbach α was .70 (T1) and .71 (T3).

Focal Employee’s Personal PEB. At T1 and T3, focal employees reported the frequency of their personal PEB in the life domain in the past month on a 3-point scale (1 = never, 2 = occasionally, 3 = often) using a 10-item scale that was developed by Xiao and Hong (2010). Sample items were “How often do you bring your own shopping bag to grocery stores?” and

"How often do you actively participate in environmental protection activities sponsored by nongovernmental environmental organizations?" The Cronbach α was .72 (T1) and .71 (T3).

Focal Employee's Ostracism toward the Coworker. At T1 and T3, coworkers indicated the extent to which they felt ostracized by focal employees using a seven-point Likert scale (1 = Never, 7 = Always) adapted from Ferris et al. (2008). Coworkers were instructed "the coworker" in the item referred to the focal employee who invited them to participate in the study. Sample items included, "In the past month, the coworker ignored me at work" and "in the past month, the coworker left the area when I entered." The Cronbach α was .84 (T1) and .87 (T2).

Control Variables. Following the recommendations of Bernerth and Aguinis (2016), I controlled for the following four sets of variables that could potentially affect focal employees' psychological reactions and subsequent behaviors toward coworkers' PEB: baseline mediators and outcomes, relationship with the coworker, demographic background similarity, and negative affectivity. As noted previously, at T1, participants assessed baseline mediators (e.g., the focal employee's integrity-based trust toward the coworker) and outcomes (e.g., the focal employee's ostracism toward the coworker). Baseline levels of mediators and dependent variables were controlled to mitigate autoregressive effects (Wang et al., 2017), thereby strengthening the evidence regarding the directionality of the relationships.

In terms of the relationship with the coworker, I controlled for the focal employee's liking toward the coworker and the focal employee's tenure with the coworker. The level of coworker liking can influence the level of trust felt (Yang, 2011). Focal employees assessed the extent to which they liked their coworker using the scale from Yang (2011) on a seven-point Likert-type response scale ranging from 1 (strongly disagree) to 7 (strongly agree). This measurement was originally adopted from Wayne and Liden (1995). A sample item was "I like

the coworker very much as a person." The Cronbach α was .92. For the focal employee's tenure with the coworker, length of tenure might influence the collaboration and ostracism behavior (Chang & Raver, 2019).

Additionally, I considered the similarity between the focal employee and the coworker in gender and age. Based on social comparison theory, such similarities can influence employee's reactions, which suggests that individuals are more likely to compare themselves with those who are similar rather than dissimilar. Both focal employees and coworkers provided demographic information to create a demographic similarity index, following the approach by Wayne and Liden (1995). Age difference was quantified by the absolute difference in years, and gender differences were dummy coded as 0 (the same) or 1 (different).

Lastly, I included personal characteristics that might influence individuals' perceptions of others' ethical behavior, including negative affectivity, moral identity, and self-esteem. Negative affectivity has been shown to be positively correlated with a tendency to engage in social comparison (Gibbons & Buunk, 1999) and linked to negative behaviors stemming from social comparison (i.e., ostracism, Ng et al., 2022). This variable was measured using a scale developed by Watson et al. (1988), asking employees to rate to what extent they generally feel afraid, nervous, and other emotions (α = .90). These control variables were integral in ensuring a comprehensive analysis of the factors that might affect the focal employees' and coworkers' behaviors and perceptions within the workplace. Moral identity includes two dimensions, which are internalization and symbolization. Internalization reflects the importance of moral identity to one's self-concept, whereas symbolization refers the degree to which individuals express their moral identity through actions (Aquino & Reed, 2002). Moral identity has been shown to predict individuals' morally relevant consequences including citizenship behavior, pro-environmental

behavior, and antisocial behavior (Abbas & Bashir, 2020; Shao et al., 2008; Skarlicki et al., 2008). This variable was measured using the scale developed by Aquino and Reed (2002). The two dimensions were treated as separate control variables, as previous literature suggests that the two dimensions might have different impacts on moral outcomes (Boegershausen et al., 2015; Reynolds & Ceranic, 2007) . The Cronbach α was .73 and .76 for internalization and symbolization, respectively. In addition, I controlled for self-esteem because previous literature suggests that individuals with low self-esteem are more likely to use ostracism as a means in the interactions with others (Sommer et al., 2010). The focal employees rated their degree of agreement using a global self-esteem scale developed by Rosenberg (1979) (α = .75). The sample item was "On the whole, I am satisfied with myself" and "I feel I do not have much to be proud of" (reverse coded).

Analytical Strategy

Prior testing the hypothesized model, I conducted a test of variance inflation factors to examine the multicollinearity issue and a confirmatory factor analysis to check whether the variables were conceptually distinct. After passing these preliminary analyses, I followed procedures as recommended by Edwards and Lambert (2007) with two sets of path analyses with a maximum likelihood estimator in Mplus 8.10 to test the model. In the first set, I tested the full mediation model, and in the second set, I included all the moderators and then tested the full mediated moderation model. This approach allowed me to examine each hypothesized relationship in the theoretical model and to simultaneously conduct tests of mediation (via three parallel mediators) and moderation using a bootstrapping methodology. For indirect effect, I bootstrapped 10,000 samples to produce 95% bias-corrected confidence intervals (MacKinnon et al., 2002).

Preliminary Analysis

Multicollinearity. Multicollinearity is a concern in statistical analysis, as it can impact the interpretation of results when the correlations between predictors are excessively high. It might be an issue in the use of multiple mediation models where mediators may exhibit complementary and competitive effects. To assess the presence of multicollinearity in my study, I examined the variance inflation factors (VIFs). Multicollinearity is considered problematic when VIF values exceed 10, with more conservative thresholds set at 5 and 2.5 (O'brien, 2007). In my analysis, I conducted three regression tests with one type of PEB as dependent variables while treating the other two behaviors as independent variables. The VIF values were within the acceptable range to suggest that multicollinearity was not an issue in the data ($VIF_{\text{eco-civic engagement}} = 1.34$, $VIF_{\text{eco-initiatives}} = 1.50$, $VIF_{\text{eco-helping}} = 1.37$). I also performed a multicollinearity test for three mediators. The results showed all VIF values—$VIF_{\text{integrity-based trust}} = 1.07$, $VIF_{\text{green self-efficacy}} = 1.02$, $VIF_{\text{moral inferiority}} = 1.06$—also fell within the acceptable range, supporting that multicollinearity is not an issue in the hypothesized model testing for this study.

Confirmatory Factor Analysis. Confirmatory factor analysis was conducted with Mplus 8.3 (Muthén & Muthén, 2017) to ensure that study variables are conceptually distinct. Landis et al. (2000) were followed to parcel the items. I did not parcel the coworker's eco-initiatives and eco-helping, integrity-based trust, and the focal employee's eco-initiatives, as they had less than four items. All parcels loaded significantly on the corresponding constructs (standardized factor loadings ranging from .59 to .94). This 12-factor CFA model fit the data well: $\chi^2(398) = 509.52$, $p < .001$, CFI = .98, SRMR = .04, RMSEA = .03. All scale items loaded on their intended factors significantly ($p < .001$). Factor loadings for each item are provided in Table 1. I then compared the 12-factor model with 13 alternative 11-factor models, where any two of the 12 factors were

combined. Results showed that the 12-factor model fit the data significantly better than any 11-factor models ($\Delta\chi^2$s [$\Delta df = 12$] ranged from 146.47 to 411.44, $p < .001$). These results suggest that the measures used in Study 2 captured distinct constructs.

Hypotheses Tests

Table 2 presented the correlations and descriptives of the variables. Key variables had high reliability (i.e., Cronbach's α from .71 to .90). The correlations provided preliminary support for the hypothesized relationships. For example, both coworker eco-civic engagement and eco-initiatives were significantly related to focal employee's integrity-based trust toward coworker ($r_{\text{eco-civic engagement}} = .62$, $p < .001$; $r_{\text{eco-initiatives}} = .46$, $p < .001$). The coworker's eco-helping was significantly related to focal employee's green self-efficacy ($r = .31$, $p < .001$). The focal employee's moral inferiority was positively related to the focal employee's ostracism toward coworker ($r = .16$, $p =. 006$). Then I tested the mediation model and full model via path analysis using Mplus 8.3 (Muthén & Muthén, 2017).

Mediation of the Focal Employee's Integrity-Based Trust toward the Coworker

As shown in Table 3 and Figure 8, the coworker's eco-civic engagement and eco-initiatives were positively related to the focal employee's integrity-based trust toward the coworker ($B_{\textit{eco-civic engagement}} = .85$, $p < .001$; $B_{\textit{eco-initiatives}} = .31$, $p = .02$), respectively. The focal employee's integrity-based trust toward the coworker was positively related to employee's collaboration with the coworker ($B = .15$, $p = .004$). To account for the asymmetric distribution of indirect effects, I used bias-corrected bootstrap simulations (10,000 replications) to get the 95% confidence intervals for the indirect effects (Hayes, 2013)see Table 4). Coworker's eco-civic engagement and eco-initiatives had significant indirect effects on the focal employee's collaboration with the coworker through the focal employee's integrity-based trust toward the

coworker: $Estimate_{eco\text{-}civic\ engagement}$ = .13, 95% CI [.065, .226], $Estimate_{eco\text{-}initiatives}$ = .05, 95% CI [.017, .107], which supported Hypothesis H1, H2, and H3a & b.

Mediation of the Focal Employee's Green Self-Efficacy

Coworker's eco-helping was found to positively influence the focal employee's green self-efficacy ($B_{eco\text{-}helping}$ = 29, p = .01), while eco-initiatives was not ($B_{eco\text{-}initiatives}$ = .10, p = .15;). Thus, Hypothesis 5 was supported, but Hypothesis 4 was not. Green self-efficacy was related to the focal employees' own eco-initiatives (B = .12, p = .008) and their personal pro-environmental behaviors (B = .06, p = .02), supporting Hypotheses 6a and 7a. The results of 10,000 replications bias-corrected bootstrap simulations showed that coworkers' eco-initiatives influenced the focal employees' eco-initiatives via the focal employees' green self-efficacy was significant (*Estimate* = .01, 95% CI [.001, .036]), supporting Hypothesis 6b[3]. However, green self-efficacy did not mediate the relationship between coworkers' eco-initiatives and the focal employees' personal pro-environmental behaviors (*Estimate* = .01, 95% CI [.000, .017]). The results found that green self-efficacy mediated the relationship between coworkers' eco-helping and the focal employees' personal environmental behaviors (*Estimate* = .02, 95% CI [.004, .038]). Hypothesis 7b was partial supported.

Mediation of the Focal Employee's Moral Inferiority toward the Coworker

Hypothesis 8 proposed that the coworker's eco-helping was positively related the focal employee's moral inferiority, and Hypothesis 9a & b proposed that moral inferiority could mediate the relationship between coworkers' eco-helping and the focal employees' ostracism

[3] In testing the mediation of green self-efficacy between a coworker's eco-initiatives and the focal employee's eco-initiatives, although the direct path of eco-initiatives and green self-efficacy was not significant, the indirect effect was still significant. This finding is reasonable because the indirect effect is the estimate of the product of two paths rather than individual ones. The statistical significance of individual path is not a requirement for significant mediation (Hayes, 2013).

toward the coworker. The results found that the coworker's eco-helping was positively related to the employee's moral inferiority toward the coworker ($B = .76$, $p < .001$). The focal employee's moral inferiority toward the coworker was positively related to the focal employee's ostracism toward the coworker ($B = .19$, $p = .003$). Furthermore, a bias-corrected bootstrap simulation (10,000 replications) found a significant indirect effect of the coworker's eco-helping on employee's ostracism toward the coworker via the focal employee's moral inferiority toward the coworker: *Estimate* = .159, 95% CI [.070, .259]. Hypothesis H8 and H9a & b were supported.

Moderation of Task Interdependence

After testing mediation effects, I added task interdependence and performance and their interactions with types of the coworkers' PEB into the model to test the moderation and moderated mediation hypotheses (i.e., Hypothesis H10a & b, Hypothesis H11a & b, Hypothesis H12a & b, and Hypothesis H13a & b). Table 4 showed the moderated mediation bias-corrected bootstrapping results. Table 5 and Figure 9 showed the results of the full model with moderation effect.

The interaction effect between the coworker's eco-civic engagement and task interdependence on the focal employee's integrity-based trust toward the coworker was significant ($B = .21$, $p = .04$). Figure 10 demonstrated that the relationship between the coworker's eco-civic engagement and the focal employee's integrity-based trust toward the coworker was stronger under conditions of higher task interdependence ($B = 1.18$, $p < .001$) compared to lower ($B = .91$, $p < .001$). Moreover, the indirect effects of coworkers' eco-civic engagement on employees' collaboration with the coworker, mediated by employees' integrity-based trust toward the coworker, was stronger when task interdependence was higher versus

lower, showing a significant difference = .04, 95% CI [.012, .100], supporting Hypothesis H10a & b.

Similarly, the interaction effect between the coworker's eco-initiatives and task interdependence on the focal employee's integrity-based trust toward the coworker was significant (B = .21, p = .04). Figure 11 illustrated that the relationship was stronger when the focal employee and the coworker had a higher degree of task interdependence (B = .49, p = .01) versus lower (B = .21, p = .11). The indirect effects of coworker's eco-initiatives on employee's collaboration with the coworker via employee's integrity-based trust toward the coworker was significantly stronger when task interdependence was higher versus lower, difference = .04, 95% CI [.011, .108], supporting Hypothesis H11a & b.

However, task interdependence did not moderate the relationship between the coworker's eco-initiatives and the focal employee's green self-efficacy (B = –.12, p = .25) nor the indirect effect of the coworker's eco-initiatives on the focal employee's eco-initiatives via the focal employee's green self-efficacy, difference = –.02, 95% CI [–.062, .000], or the focal employee's personal environmental behavior via the focal employee's green self-efficacy, difference = –.01, 95% CI [–.029, .000]. Hypothesis H12a & b were not supported.

The interaction between the coworker's eco-helping and task interdependence had a significant effect on the focal employee's green self-efficacy (B = .28, p = .03). Figure 12 showed that this relationship was stronger with a higher degree of task interdependence (B = .69, p = .001) versus lower (B = .33, p = .02). In addition, the indirect effects of the coworker's eco-helping on the focal employee's personal environmental behavior via the focal employee's green self-efficacy was stronger when task interdependence was higher versus lower, difference = .04, 95% CI [.010, .103], supporting Hypothesis H13a & b.

Moderation of Performance Inferiority

Study 2 additionally investigated the moderation effect of performance inferiority on the relationship between the coworker's eco-helping and the focal employee's perceived moral inferiority and the subsequent ostracism toward the coworker. The results found that performance inferiority significantly strengthened the relationship between coworker's eco-helping and the focal employee's moral inferiority (B = .17, p = .01). As showed in Figure 13, the relationship between the coworker's eco-helping and the focal employee's moral inferiority was stronger when the focal employee had a lower level of performance compared to the coworker (B = .72, p < .001) versus higher level of performance (B = .42, p = .05). Furthermore, the indirect effect of the coworker's eco-helping on the focal employee's ostracism toward the coworker via the focal employee's moral inferiority was stronger when the focal employee perceived that they had an inferior performance compared to the coworker, difference = .06, 95% CI [.023, .118]. Hypothesis H14a & b were supported.

Supplemental analysis

In the hypothesized model, I proposed that different types of the coworker's PEB might lead to different psychological reactions in the focal employee and their subsequent behavior. For example, compared to the coworker's eco-helping behavior, the coworker's eco-initiatives and eco-civic engagement are more likely to lead to the focal employee's integrity-based trust toward the coworker. Integrity-based trust is influenced by the cognitive and motivational processes triggered by observing others, which focus on whether the target presents a sense of fairness and adheres to a set of ethical principles (Lind, 2001). Integrity-based trust is a form of cognitive trust that does not necessarily involve direct interactions between the trustor and the trustee (Park, 2021). It is based on personal judgment (Pesch, 2020) and tends to function

effectively in relationships that might need relatively infrequent interactions (Yang, 2005). That is to say, one important characteristic of eco-helping—interpersonal interactions—might not be effective in developing integrity-based trust. Additionally, eco-helping is an influential behavior aimed at motivating peers to adopt more environmentally friendly practices (Robertson & Barling, 2017). Efforts to influence others can be perceived as pressure or coercion if not done tactfully. When employees feel coerced rather than inspired, it can lead to the focal employee's distrust and doubts about the coworker's authenticity in engaging in environmental protection. Authenticity is crucial for integrity-based trust, and any doubt about motives can severely impact trust. Therefore, eco-helping doesn't contribute as strongly as the other two types of PEB to the perception of integrity. To further justify the rationale of the model, I conducted a supplemental analysis of the mediation model by incorporating three types of PEB. For instance, I included the path between the coworker's eco-helping and the focal employee's integrity-based trust toward the coworker.

In Table 6, the results indicated that only the proposed relationships remained significant after adding other types of the coworker's PEB, except for the path of the coworker's eco-initiatives and the focal employee's green self-efficacy was still not significant ($B_{eco\text{-}initiatives}$ = .14, p = .08). The relationships between the coworker's eco-civic engagement and the focal employee's integrity-based trust ($B_{eco\text{-}civic\ engagement}$ = .92, p < .001) and between the coworker's eco-initiatives and the focal employee's integrity-based trust ($B_{eco\text{-}initiatives}$ = .35, p = .02) were still significant after including the path between eco-helping and the focal employee's integrity-based trust, while the latter was not significant ($B_{eco\text{-}helping}$ = -.31, p = .15). Additionally, the relationship between the coworker's eco-helping and the focal employee's green self-efficacy was significant and positive ($B_{eco\text{-}helping}$ = .36, p = .001), while the added path between the

coworker's eco-civic engagement and the focal employee's green self-efficacy was significant but negative ($B_{eco\text{-}civic\ engagement} = -.14$, $p = .04$). Regarding the relationship with the focal employee's moral inferiority, the proposed path between the coworker's eco-helping and the focal employee's moral inferiority was significant ($B_{eco\text{-}helping} = .70$, $p < .001$), while the newly added two paths were both not significant ($B_{eco\text{-}civic\ engagement} = .12$, $p = .27$; $B_{eco\text{-}initiatives} = -.02$, $p = .84$).

In addition to the mediation model, I included two moderators and the interactions between three types of PEB and two moderators—task interdependence and moral inferiority—on each path. For example, I included performance inferiority and the interaction terms of the coworker's eco-civic engagement with performance inferiority on the path between the coworker's eco-civic engagement and the focal employee's green self-efficacy. Unfortunately, none of the interactions were significant, including the proposed ones. One possible reason might be the potential multicollinearity caused by the interaction terms, as it increases the variability in parameter estimates and leads to an overall underestimation of parameters (Lavery et al., 2017).

Study 2 Discussion

Study 2 explored the mediating effects of the focal employee's perceptions of trust, green self-efficacy, and moral inferiority, as well as the moderating effects of task interdependence and performance levels, on the relationships between the coworker's PEB and the focal employee's PEB in work and life domains, collaboration, and ostracism toward the coworker.

In terms of mediation, the results found that the coworker's eco-civic engagement and eco-initiatives positively influenced the focal employee's integrity-based trust, which in turn increased their collaboration with the coworker. Additionally, the coworker's eco-helping behaviors positively affected the focal employee's green self-efficacy, which subsequently

enhanced the focal employee's personal pro-environmental behaviors. Another significant mediation effect showed that the coworker's eco-helping increased the focal employee's moral inferiority toward the coworker, leading to a higher level of the focal employee ostracizing the coworker.

The moderation analyses results revealed that task interdependence significantly influenced the relationship dynamics. The interaction effects between the coworker's eco-initiatives/eco-civic engagement and task interdependence were found to significantly boost the focal employee's integrity-based trust, which also strengthened the indirect effects on the focal employee's collaboration. Task interdependence also significantly moderated the effect of the coworker's eco-helping on the focal employee's green self-efficacy. This moderation indicated that the positive impact of eco-helping on green self-efficacy was more pronounced under conditions of a higher task interdependence between the focal employee and the coworker. However, task interdependence did not influence the relationships between the coworker's eco-initiatives and the focal employee's green self-efficacy or the subsequent mediation effects on the focal employee's PEB. Furthermore, the focal employee's perceived performance inferiority strengthened the relationship between the coworker's eco-helping and the focal employee's moral inferiority, increasing ostracism. This suggests that the focal employee's perceptions of inferior performance can exacerbate negative reactions to the coworker's PEB.

Overall, these findings illustrate that types of coworkers' PEB can profoundly affect both positive and negative behaviors through complex psychological mechanisms involving trust, self-efficacy, and perceived moral inferiority, with important implications for organizational behavior and dynamics among colleagues.

However, the coworker's eco-initiatives and the focal employee's green self-efficacy relationship was not significant (Hypothesis 4) and the mediated effect of green self-efficacy for the relationship between the coworker's eco-initiatives and the focal employee's personal pro-environment behavior was not significant (Hypothesis 7b & a). One possible explanation for the unexpected nonsignificant main effect and mediation findings is that eco-initiatives, which generally involve personal habits such as using public transportation or reducing personal energy use, might not be visible to peers in the workplace. According to Bandura (1977a), gaining self-efficacy is achieved through modeling and learning. If a coworker's eco-initiatives are less visible, it may be difficult for peers to observe and learn such environmental protection practices and then gain the confidence needed to engage in pro-environmental behavior and achieve environmental protection goals.

Additionally, eco-initiatives usually do not involve interactions with coworkers. Previous research suggests that interactions with peers could increase self-efficacy (Xu et al., 2017). Therefore, even if employees observe that their coworkers engage in eco-initiatives, they might not develop green self-efficacy due to the lack of personal interaction. Compared to eco-initiatives, eco-helping behaviors are likely more visible and involve direct interactions between the coworker and the focal employee, such as organizing team recycling efforts or collaboratively reducing office waste, which naturally increases the observer or recipient's green self-efficacy. As shown in the results of Study 2, the effect of eco-helping on green self-efficacy was much stronger than the effect between eco-initiatives and green self-efficacy.

Consistent with the results of Study 1b, I did not find a significant moderation effect of task interdependence on the relationship between the coworker's eco-initiatives and the focal employee's green self-efficacy. As discussed in Study 1a–d, this unexpected outcome might be

due to the inherently individual nature of eco-initiatives, which are less visible and do not involve interactions with others. Eco-initiatives do not provide feedback to peers. However, task interdependence typically facilitates feedback (De Stobbeleir et al., 2019) and behavior characterized by interaction and cooperation (Wageman & Baker, 1997). This means that even with a higher level of task interdependence among the focal employee and the coworker, the effect of the coworker's eco-initiatives on the focal employee's green self-efficacy cannot be amplified because task interdependence typically does not enhance behaviors that lack interpersonal interaction and feedback. Therefore, the relationship between eco-initiatives and green self-efficacy was less influenced by the strengthening effect of task interdependence and remained stable across different levels of task interdependence.

Chapter Six: General Discussion

This dissertation explores the dynamics of peer influence on employee pro-environmental behavior in the workplace. As environmental concerns continue to escalate globally, there is a growing expectation for individuals and organizations to engage in behaviors that support environmental sustainability. Previous research has predominantly focused on how organizational policies and individual factors influence employees' PEB. This dissertation seeks to extend this literature by examining how coworkers' different types of PEB in the workplace can shape the focal employees' actions toward the environment and coworkers.

In Studies 1a–d, I used scenario-based experiments to investigate the relationships between coworkers' pro-environmental behaviors and three psychological responses: integrity-based trust, green self-efficacy, and moral inferiority. Findings revealed that coworkers' eco-civic engagement and eco-initiatives positively influenced the focal employee's integrity-based trust toward the coworker, especially under higher task interdependence. Coworkers' eco-initiatives and eco-helping positively impacted the focal employee's green self-efficacy, with the relationship between eco-helping and green self-efficacy being more pronounced under high task interdependence. Additionally, coworker eco-helping was associated with increased moral inferiority experienced by the focal employee, a relationship strengthened by performance inferiority. However, Study 1b did not find support for the moderation effect of task interdependence on the relationship between the coworker's eco-initiatives and the focal employee's green self-efficacy (Hypothesis 12a).

Building on Study 1a–d, Study 2 collected dyadic data from full-time employees to enhance external validity and test the model between the focal employee and the coworker who interacted directly at work. The results in Study 2 showed that the coworker's eco-civic

engagement and eco-initiatives positively influenced the focal employee's integrity-based trust, which in turn increased their collaboration. Coworkers' eco-helping behaviors positively affected the focal employee's green self-efficacy, which subsequently enhanced their personal PEB. Additionally, eco-helping increased the focal employee's moral inferiority, leading to higher levels of ostracism toward the coworker. In the moderation analyses of Study 2, the findings showed that task interdependence amplified the relationship between coworker eco-initiatives/eco-civic engagement and the focal employee's integrity-based trust and strengthened the indirect effects of coworker eco-initiatives/eco-civic engagement on collaboration through the focal employee's integrity-based trust. Task interdependence also moderated the effect of eco-helping on green self-efficacy, making the positive impact more pronounced under higher task interdependence. Performance inferiority strengthened the relationship between eco-helping and moral inferiority and the indirect effect between eco-helping and ostracism via moral inferiority. This suggests that perceived inferior performance can amplify negative reactions to coworker PEB.

Unexpectedly, Study 2 did not find support for the relationship between coworkers' eco-initiatives and green self-efficacy (Hypothesis 4), nor was the mediated effect of green self-efficacy on the relationship between the coworker's eco-initiatives and the focal employee's personal pro-environment behavior supported (Hypothesis 7b(a)). Study 2 also did not find support for the hypothesized moderation effect of task interdependence on the relationship between coworkers' eco-initiatives and focal employees' green self-efficacy (Hypothesis H12a & b). This nonsignificant relationship between coworkers' initiatives and green self-efficacy might be due to the personal nature of eco-initiatives. Examples of eco-initiatives include turning off lights or using public transportation, which are generally personal habits and might not be

visible to peers in the workplace, making it difficult for employees to observe and learn from these behaviors to gain self-efficacy (Bandura, 1977a). Additionally, eco-initiatives usually do not involve direct interactions with coworkers, which is crucial for increasing self-efficacy (Xu et al., 2017). Therefore, the link between coworkers' initiatives and focal employees' green self-efficacy is weak.

Regarding the unsupported moderation effect of task interdependence on the relationship between eco-initiatives and green self-efficacy, this unexpected outcome might be due to the mismatched characteristics of eco-initiatives and task interdependence. Eco-initiatives are less visible and do not involve interactions with others. Eco-initiatives do not provide feedback to peers. However, task interdependence typically facilitates feedback and cooperation (De Stobbeleir et al., 2019; Wageman & Baker, 1997), but it does not enhance behaviors that lack interpersonal interaction and feedback. Therefore, the relationship between eco-initiatives and green self-efficacy remained stable across different levels of task interdependence. This means that even with a higher level of task interdependence among the focal employee and the coworker, the effect of the coworker's eco-initiatives on the focal employee's green self-efficacy cannot be amplified because task interdependence typically does not enhance behaviors that lack interpersonal interaction and feedback.

Overall, integrating both social cognitive theory and social comparison theory, the dissertation articulates how employees react to various types of coworkers' PEB. Coworkers' different types of PEB greatly impact employees' behaviors, attitude, and their subsequent PEB and interactions with coworkers, contributing to PEB literature by extending the antecedents of PEB from organizational and personal factors to dyadic factors. By investigating these dynamics through a combination of empirical research methods, including scenario-based experiments and

a dyadic data survey, this research aims to provide a comprehensive understanding of the mechanisms that promote or hinder employees' PEB. Below, I outline the theoretical contributions and managerial implications, discuss limitations, and identify avenues for future research.

Theoretical Implications

The findings of this dissertation have important theoretical implications. First, this dissertation is amongst the first empirical studies to use a relational perspective to examine the impact of coworkers' PEB on employees, extending the current PEB research that has primarily focused on organizational predictors (e.g., perceived corporate social responsibility, Afsar & Umrani, 2019; perceived organizational support, Lamm et al., 2013) and individual-based predictors (e.g., activated positive affect, Bissing-Olson et al., 2013; individuals' environmental attitudes, Blok et al., 2015). Very few studies have incorporated a dyadic perspective among coworkers in PEB literature. For example, Paillé et al. (2015) found that perceived colleague support could increase employee eco-helping through job satisfaction and commitment to colleagues, and Paillé et al. (2018) found that job satisfaction could moderate the indirect effect of perceived coworker support on employee eco-helping through commitment to coworkers and helping behaviors. Although these two studies have acknowledged that coworkers' support could be an important factor influencing employees' eco-helping, the understanding regarding how focal employees' PEB may be shaped by coworkers' PEB is still limited. This dissertation thus extends this line of research by involving a dyadic relational perspective to identify coworkers' different types of PEB as crucial antecedents to employee PEB. This extension is important because it integrates social cognitive theory and social comparison theory to provide a more

complete and realistic view of the dynamics underlying the influence of a coworker's PEB on the focal employee.

Previous literature has shown that social cognitive theory (Andersen & Chen, 2002; Locke & Sadler, 2007) and social comparison theory (Lam et al., 2011; Reh et al., 2018) provide valuable insights into interpersonal dynamics. Integrating these theories is crucial because they each explain how cognitive processes shape individuals' responses to peers' PEB, while also highlighting unique aspects of interpersonal dynamics that the other does not fully address, offering a more complete understanding. Social cognitive theory suggests that individuals rely on cues from others to learn and regulate their behavior, especially in ambiguous situations (Salancik & Pfeffer, 1978). However, learning can be hindered by automatic engagement in social comparison in interpersonal relationships (Matthews & Kelemen, 2024), which was not discussed in social cognitive theory (Bandura, 1997). I draw on social comparison theory to complement social cognitive theory by showing that observing peers' behaviors can lead to mixed outcomes depending on how individuals evaluate themselves relative to others.(Festinger, 1954). Thus, both theories together capture the complexity of interpersonal dynamics influencing PEB.

A review article on PEB suggests that "employee green behavior is nested in an organizational ecosystem involving individuals, dyadic, teams, the organization and other macro-level factors" (Tang et al., 2023, p.307). If we overlook the dyadic perspective among peers in PEB research, it limits our understanding of how employees react toward coworkers' PEB and how interpersonal dynamics might affect employees' PEB. As such, by incorporating social cognitive theory and social comparison theory, this research contributes to PEB literature by

being the first to document the coworker's types of PEB as an important factor that might promote or prohibit the focal employee's PEB.

Second, previous studies have either focused on only one type of PEB (e.g., eco-civic engagement; Khalid et al., 2021) or ignored the various types of PEB by treating PEB as a unidimensional construct (Terrier et al., 2016). Disregarding the differences among the types of PEB overlooks their nuanced impacts in the workplace. Such oversight has resulted in mixed results, limiting the advancement of the theory of PEB (Robertson, 2017).This research adds theoretical nuance to understanding employee PEB by examining differences in types of PEB, which responds to calls for exploring the impacts of various types of PEB (Boiral & Paillé, 2012; Francoeur et al., 2021). This dissertation found that eco-civic engagement and eco-initiatives were related to integrity-based trust, and eco-helping was related to green self-efficacy and moral inferiority. The results of supplemental analyses further showed that only the proposed relationships remained significant after including other types of coworkers' PEB in the mediation model. Therefore, these findings provide essential insights for PEB literature, highlighting the importance of exploring the different impacts of types of coworkers' PEB on focal employees. These three mechanisms add nuanced explanations for why and when a coworker's different types of PEB might influence the focal employee's reactions.

Additionally, by examining the nuanced impacts of three types of PEB, the dissertation explores how coworkers' eco-helping can be a double-edged sword in the workplace, leading to both positive and negative impacts in the workplace. Employee PEB literature has generally agreed that such activities are typically beneficial for employees (Bohlmann et al., 2018; Grabow et al., 2012). However, since PEB is fundamentally a non-work-related activity and a type of citizenship behavior (Paillé & Boiral, 2013), there is a potential for disadvantages and negative

workplace effects (Garden, 2020). This research adds to the PEB literature by specifying that eco-helping can result in uncomfortable psychological reactions (i.e., moral inferiority) and negative behavioral responses (i.e., focal employee's ostracism toward the coworker) due to upward comparison. These insights resonate with broader observations in organizational behavior that well-intended actions, like unsolicited helping, can lead to unintended negative effects, such as depression and lower likelihood from the recipient (Song & Chen, 2014). This dissertation sheds light on the research of the dark side of PEB by considering the interpersonal dynamics between the eco-helping behavior giver and receiver, which would prompt negative interpersonal reactions from the recipient toward the help giver. Furthermore, this dissertation introduced the focal employee's moral inferiority and green self-efficacy as a dual mechanism linking eco-helping to ostracism toward the coworker and personal PEB. This research highlights the potential for mixed reactions from employees when encountering coworkers' ethical actions. It answers the call from Chen and Trevino (2023) for comprehensive investigations that consider the varied emotional and behavioral responses of observers, which are essential for a deeper understanding of employees' multifaceted reactions to ethical behavior.

Third, the study not only explores the impact of coworkers' PEB on employees' positive and negative reactions in the workplace but also extends its scope to include the effects on the focal employee's personal environmental behaviors outside the workplace. Previous PEB research has shown that employees are more likely to engage in PEB in their personal lives if they engage in PEB in the workplace (Frezza et al., 2019; Wang et al., 2023), are exposed to environmental management practices in the company (Jaich et al., 2022), or perceive pro-environmental climates (Hicklenton et al., 2019), which were personal or organizational factors. To better understand employee PEB in a holistic way, previous research suggests that both work

and life domains of PEB should be studied (Nilsson et al., 2017), and coworkers should be an important factor that influences employees' different types of PEB (Tang et al., 2023). My research finds that observing peer PEB can increase employees' confidence in their environmental protection abilities, encouraging them to undertake environmentally friendly activities in both their professional and personal lives. By examining these dynamics, my dissertation enhances the understanding of how peers' environmental behaviors can lead to employees' pro-environmental behavior in both work and life domains through green self-efficacy within the framework of social cognitive theory.

Additionally, this dissertation extends the research on dyadic relationships among peers by demonstrating that focal employees' behavior in their personal lives can be influenced not only by coworkers' work-related behavior but also by behaviors that occurred at work and are not directly associated with the job (i.e., PEB). Previous research on coworkers' influence on employees' behaviors in their personal lives usually focused on job-related constructs, such as coworkers' support (McMullan et al., 2018), job satisfaction (Simon et al., 2010), or conflict with coworkers (Lipscomb et al., 2015). Although prior studies have found that nonwork socialization among peers is an important predictor of employees' personal lives (Kleshinski, 2021), our understanding regarding how coworkers' nonwork behaviors occurred at work impact employees' behavior in their personal lives. In previous reviews about the impacts of coworkers on employees, authors call for more comprehensive and complex theories to understand the full scope of coworker influences as part of the social environment of employees (Chiaburu & Harrison, 2008; Robinson et al., 2014). My dissertation extends this line of research by considering how coworkers' PEB leads to focal employees' PEB at life domain, which emphasizes that coworkers' influence on employees might go beyond job-related behavior. For

future research on dynamics among peers, we should explore not only coworkers' work-related behaviors but also behaviors that might not be directly related to work.

Finally, previous PEB literature has focused on individual characteristics or contextual factors as the potential boundary conditions around the effects of employee PEB. Previous PEB literature usually investigated organizational-level factors, such as policies (Norton et al., 2014) and perceived organizational environmental support (Saifulina et al., 2021), or individual characteristics, such as personal green values (W. Zhang et al., 2021) and gender (Ahmad et al., 2021). This dissertation extends PEB research by incorporating task interdependence and performance inferiority as relational moderators with implications for the psychological mechanisms suggested by social cognitive theory and social comparison theory. Task interdependence, as a type of work design, may enhance the positive impacts of the coworker's PEB by increasing interactions and facilitating learning. In contrast, performance inferiority considers the performance-based social comparison at work, which could exacerbate the potential negative effects of the coworker's PEB on the focal employee. This dissertation's findings suggest that, beyond individual differences and contextual factors, relational factors also play crucial roles in shaping the effect caused by coworkers' PEB. By including these two relational moderators, this dissertation answers calls from PEB review to examine potential moderators involving the interactions between employees and coworkers that might have a boundary effect on PEB (Inoue & Alfaro-Barrantes, 2015; Norton et al., 2015). Given the important role of coworker–employee relationships in organizational life, this dissertation contributes to the PEB research that has yet to account for dyadic relational influences on the focal employees' reactions toward coworkers' PEB (Tang et al., 2023).

In conclusion, my dissertation enhances the understanding of employee PEB by integrating social cognitive theory and social comparison theory. This research adds a relational perspective to PEB research, emphasizing the role of peers. It demonstrates that peers play a pivotal role in fostering or hindering the focal employee's PEB in and beyond the workplace, as well as their interactions with the coworker. The findings highlight three mechanisms—integrity-based trust, green self-efficacy, and moral inferiority—through which employees react to observed coworkers' PEB, providing a more nuanced understanding of how different types of PEB influence employee actions. Moreover, the dissertation explores the dual nature of PEB's impact, acknowledging that while generally beneficial, it can also lead to negative outcomes like discomfort or workplace ostracism due to upward social comparisons.

Practical Implications

The insights of this research not only contribute to theoretical advancements in PEB research but also offer practical guidance for organizations aiming to foster a sustainable culture. This dissertation provides a foundation for leveraging peer influence and offers important information for managers interested in promoting employee PEB.

Firstly, the findings of this dissertation show that coworkers' PEB can facilitate the focal employees' PEB in the work domain (i.e., eco-initiatives) and the life domain (i.e., personal PEB). It is, therefore, essential for organizations to nurture different approaches and programs to help coworkers increase the positive influences of PEB on employees. For instance, managers could acknowledge employees' PEB and provide support to help them appropriately share their environmental protection knowledge with their colleagues. Organizations can develop workshops or training sessions to invite employees to share their thoughts and knowledge of daily environmental protection behavior or set up green committees so that employees can

actively contribute to resolving organizational environmental issues (Swaim et al., 2014). In that case, employees have more opportunities to know and observe their coworkers' different types of PEB, which facilitates the influence of coworkers' PEB on employees' PEB.

Secondly, the findings of this dissertation are the first to document three parallel mechanisms to explore the potential positive and negative impact of a coworker's PEB on focal employees. The findings indicate that coworkers' PEB can increase focal employees' integrity-based trust toward coworkers and green self-efficacy, leading to a higher level of collaboration and PEB within and beyond organizations. Based on these positive impacts, managers should foster an environment that encourages employees to integrate environmental behavior into their work and personal activities. To facilitate employees' learning processes and confidence in performing PEB, organizations should first recognize the importance of environmental protection and encourage employees to participate in organizational environmental practices. Organizations then need to promote communication and knowledge sharing among employees about green behavior in the workplace (Mansoor & Wijaksana, 2022).

However, this dissertation also found that coworkers' eco-helping might cause focal employees discomfort experience (e.g., moral inferiority) and then lead to antisocial behavior (e.g., ostracism toward the coworker). Insights from these findings can inform managers on how to minimize the potential negative reactions of employees, especially when coworkers help in ways that might be perceived as superior or condescending (e.g., educating the focal employee on recycling or lobbying the environmental values). To address the potential negative effects of social comparisons and promote PEB or green values among employees effectively, managers could emphasize collaboration over competition, presenting environmental sustainability as a collective goal rather than a field of peer competition (Paillé, 2020). Organizations should

emphasize empathy, recognize the value of diverse contributions to environmental goals, and understand that everyone is at a different stage in their journey of learning how to protect the environment. Moreover, the potential deleterious effects of eco-helping must be carefully managed to enhance the overall effectiveness of organizational environmental practices. Programs designed to promote pro-environmental values should be engaging and educational, encouraging employees to voluntarily focus on environmental issues, rather than being mandatory, which could lead to resistance and disengagement (Gattiker & Carter, 2009).

Thirdly, the results suggest that task interdependence could strengthen the effects of the coworker's eco-civic engagement and eco-initiatives on the focal employee's integrity-based trust, as well as the effect of the coworker's eco-helping on the focal employee's green self-efficacy. Task interdependence allows employees to engage more in cooperative behaviors such as communication (Johnson, 1973) and information sharing (Crawford & Haaland, 1972). Managers could design tasks that require employees to coordinate and collaborate closely and explore ways to improve interpersonal connections among team members (Thomas et al., 2019). Moreover, performance inferiority was found to potentially exacerbate the relationship between a coworker's eco-helping and the focal employee's moral inferiority. As such, managers should minimize unnecessary competition and encourage cooperation among employees. Managers could help members create shared goals (Hu & Liden, 2011) and promote clear and open dialogue to enable each employee to find their place in the team.

Limitations and Future Research

This dissertation is subject to several limitations. Firstly, Study 1a–d are scenario studies that employ hypothetical scenarios that test the participants' responses, which could limit the generalizability of the results. To mitigate this, I used five pilot studies to first test the construct

validity of the newly developed PEB scenarios, task interdependence scenarios, and performance inferiority scenarios. In addition, the scenarios were designed to mirror experiences participants may have encountered in their daily work lives. Future research could adopt a lab simulation design to better manipulate high/low conditions of types of the coworker's PEB.

Secondly, as with social science research, there may be concerns with common method bias. Given that multiple variables in Study 2 (i.e., integrity-based trust toward the coworker, focal employee's green self-efficacy, focal employee's moral inferiority, and several subsequent behaviors) are reported by focal employees, exaggerated correlations and doubts about causation direction are potential problems (Podsakoff et al., 2003). To counter this, I measured major variables at multiple time points and controlled for baseline mediators and dependent variables. Additionally, instead of coworkers, focal employees were asked to evaluate their observations of the coworker's PEB. Rather than having focal employees self-report their behaviors, coworkers answered the focal employee's eco-initiatives and focal employees' ostracism toward the coworker. These approaches can mitigate the concern about common method bias. In addition, I proposed interaction effects in the model, which are less likely to be explained by common method bias (Siemsen et al., 2009). Nonetheless, future research can use other reports (e.g., supervisor-rated PEB) or objective measures (e.g., company records of participation in organizational environmental activities) to reduce common method bias.

Thirdly, while I used method triangulation (i.e., experiment and survey) to improve the validity and reliability of findings (Patton, 1990), both studies are not field studies, which might influence the validity of the results. In Studies 1a–d, I pre-screened the participants to ensure they were full-time employees who worked on-site and interacted with their coworkers to allow them to easily immerse themselves in the scenario-based experiments (the pilot studies and

Study 1a–d). In Study 2, the platform used several steps to ensure the participants are real coworkers. The platform asked the focal participant to forward the survey link and answer verification questions such as company name and department. Both participants needed to correctly provide each other's information (e.g., email and phone number) to achieve a successful pairing. Future research could address the concern of validity by conducting a field survey to investigate how coworkers' PEB impacts focal employees considering workplace dyadic dynamics.

Fourthly, this study focuses exclusively on voluntary employee PEB. This is because it is the most frequently examined type of PEB in the literature and is also prevalent in the workplace (Ones & Dilchert, 2012a). Consequently, other types of PEB, such as required employee PEB and task-related PEB (Bissing-Olson et al., 2013), are not considered. However, focal employees might respond differently to coworkers who are requested to perform PEB or who engage in task-related PEB. For example, employees are less likely to develop integrity-based trust toward a coworker when observing them participating in environmentally friendly activities required by organizations. Future research can investigate how the focal employee responds to such behavior and whether the impacts are positive or negative.

Fifthly, another limitation is that this research employs social comparison theory to investigate the uncomfortable experience caused by upward comparison. Previous research suggests that upward comparison can also trigger positive responses such as performance improvement (Khan & Noor, 2020) and positive affect (Buunk et al., 2010). This dissertation proposes that the focal employee could gain green self-efficacy when observing a coworker's eco-helping behavior from the social cognitive perspective, but it does not discuss the potential positive responses of upward comparison. Therefore, future research could explore whether

specific types of PEB might trigger upward comparison with a more comfortable experience for individuals who feel they are inferior in the situation.

Sixthly, I did not find support for the hypothesis of the relationship between the coworker's eco-initiatives and the focal employee's green self-efficacy in Study 2, nor for the moderating effect of task interdependence on this relationship in Study 1b and Study 2. The nonsignificant results might due be the self-directed nature of eco-initiatives, which might not be visible to peers, making it difficult to activate the learning process of focal employees to gain self-efficacy in environmental protection. However, the influences of coworkers' eco-initiatives might be more salient in the long term on focal employees, while it is hard for focal employees to notice the trivial impact in a short period (i.e., one month in Study 2), as they may not have the opportunity to observe or recognize coworkers' eco-initiatives (Spector, 2016). In future research, researchers might adopt a longitudinal study with longer time intervals to detect the incremental impact of coworkers' PEB.

Seventhly, while this dissertation focuses on social comparison theory to explain the relationship between eco-helping and moral inferiority, the role of psychological reactance presents an interesting avenue for future research. Psychological reactance, which arises when individuals perceive their autonomy to be threatened by implicit moral demands, may further explain the negative reactions observed in response to eco-helping (Brehm, 1966). Although this dissertation does not center on psychological reactance, it is possible that some employees may experience reactance in addition to moral inferiority when they perceive eco-helping as proselytizing or imposing moral standards. Future research could explore how reactance interacts with social comparison processes in shaping employees' responses to pro-environmental behavior, particularly in contexts where employees feel coerced or pressured into conforming to

ethical norms (Liu et al., 2022). Investigating this interaction may provide a more nuanced understanding of the complex emotional and behavioral outcomes resulting from eco-helping.

Eighthly, in this dissertation, I employed the dyadic relational perspective to examine the focal employees' mixed reactions toward a coworker's PEB. However, it is important to acknowledge the potential role of organizational norms in influencing the focal employee's interpretation of the coworker's behavior. Observing a coworker's PEB could be perceived not only as an individual action but as indicative of a broader norm within the organization. Research suggests that a coworker's behavior could serve as a social cue that impacts focal employees (Chen et al., 2013). The focal employee may infer that other coworkers also engage in similar behaviors, which could amplify the perceived pressure to conform to the norm. Studies have shown that organizational norm can promote employees' PEB (Norton et al., 2014; Wan et al., 2017). Although the current model does not address social norms, future research could explore how the presence of perceived social norms interacts with the dyadic relationship to influence employees' responses to PEB. This could provide a more comprehensive understanding of how both interpersonal and organizational dynamics shape the focal employee's reactions to their coworker's behavior, potentially extending the PEB literature.

Ninthly, this dissertation discussed ostracism as a reaction to moral inferiority, where the focal employee may exclude the coworker who engages in eco-helping behaviors. However, other responses, ranging from more aggressive actions (e.g., negative gossip about the coworker, Thoroughgood et al., 2024) to more passive ones (e.g., avoidance, Fleischmann et al., 2021), could also occur after experiencing upward moral comparison. More aggressive reactions might manifest as verbal hostility, negative gossip, or even sabotage of the coworker's efforts. These behaviors are indicative of a deeper sense of resentment toward the coworker. Passive responses,

on the other hand, such as avoidance or emotional withdrawal, could arise as the focal employee seeks to reduce exposure to the coworker's eco-helping behaviors, thereby minimizing feelings of inferiority. These alternative reactions may depend on the intensity of perceived moral threat and individual coping strategies (Gausel et al., 2012; Parks & Stone, 2010). Future research could examine these varied responses, offering a broader perspective on how moral inferiority influences behavior in workplace interactions.

Lastly, although the integration of social cognitive theory and social comparison theory has allowed this dissertation to offer many contributions to the literature, other theories may also be relevant to explaining the focal employee's reactions toward a coworker's types of PEB. For example, social exchange theory (Blau, 1964) may offer insight into interpreting how the relationships and reciprocations of eco-helping behavior between the focal employee and the coworker might shape the focal employee's perception of the coworker's PEB. The focal employee might develop a strong exchange relationship with the coworker when the coworker helps them incorporate environmental concerns into daily work.

Conclusion

This dissertation advances the discussion on pro-environmental behavior (PEB) within organizational settings by integrating social cognitive and social comparison theories. This research adds a relational perspective to PEB research. It contributes to PEB literature by demonstrating that peers play a pivotal role in fostering or hindering the focal employee's PEB in and beyond the workplace, as well as their interactions with the coworker. By exploring both the positive and negative effects of PEB in the workplace, the study reveals that coworker's PEB might not only promote focal employees' confidence in handling environmental issues and integrity-based trust toward coworkers but also trigger feelings of discomfort and inferiority,

which provides a more nuanced and complete understanding of how different types of PEB influence employee actions. As expectations for organizations' environmental protection practices continue to grow, it is important to consider how organizations can promote rather than hinder employees' PEB. This dissertation offers practical insights for organizations looking to increase their employees' PEB and develop a collaborative rather than competitive environment to promote environmental protection values.

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Table 1. Items and Factor Loadings from Confirmatory Factor Analysis

Items	Standardized Factor Loadings ($p < .001$)
Coworker's eco-helping	
1. The coworker spontaneously gives time to help colleagues take the environment into account in everything they do at work.	0.69
2. The coworker encourages colleagues to adopt more environmentally conscious behavior.	0.71
3. The coworker encourages colleagues to express their ideas and opinions on environmental issues.	0.72
Coworker's eco-civic engagement	
1. The coworker actively participates in environmental events organized in and/or by the company.	0.78
2. The coworker undertakes environmental actions that contribute positively to the image of the organization.	0.70
3. The coworker volunteers for projects, endeavors or events that address environmental issues in the organization.	0.76
4. The coworker stays informed of the company's environmental initiatives.	0.82
Coworker's eco-initiative	
1. In work, the coworker weighs the consequences of his/her actions before doing something that could affect the environment.	0.99
2. The coworker voluntarily carries out environmental actions and initiatives in the daily work activities.	0.88
Task interdependence	
1. I work closely with the coworker in doing my work.	0.88
2. I frequently must coordinate my efforts with the coworker.	0.73
3. My own performance is dependent on receiving accurate information from the coworker.	0.79
4. The way I perform my job has a significant impact on the coworker.	0.80

Table 1. (continued)

5. My work requires me to consult with the coworker fairly frequently.	0.82
6. I work fairly independently of the coworker in my work. (Reverse coded)	0.55
Performance inferiority	
1. How do you evaluate your productivity on the job compared with the coworker? (Reverse coded)	0.77
2. How do you evaluate your quality of your performance on the job compared with the coworker? (Reverse coded)	0.78
3. How do you evaluate the performance of yourself at your job compared with the coworker doing the same kind of work? (Reverse coded)	0.81
Integrity-based trust	
1. The coworker has a great deal of integrity.	0.86
2. I can trust the coworker's word.	0.75
3. The coworker cares about honesty and truth.	0.80
Green self-efficacy	
1. I can control my impact on the environment.	0.59
2. I can be as environmentally friendly as most people in my community.	0.68
3. I can avoid being among the least environmentally friendly members of my community.	0.44
4. I can choose forms of transportation that cause fewer carbon emissions.	0.53
5. I can help preserve the quality of the water.	0.35
6. I can choose to be an environmentally friendly consumer.	0.63
7. I can continue being environmentally friendly even when faced with financial burdens.	0.47
8. I can continue being environmentally friendly even when I'm having a bad day.	0.55
9. I can make environmentally eating choices.	0.49

Table 1. (continued)

10. I can learn more about new environmental issues as they become relevant.	0.44
Moral inferiority	
Compared to the coworker who also participates in this study, are you more or less likely to …	
1. make fair and balanced decisions. (Reverse coded)	0.71
2. set an example of how to do things the right way in terms of ethics. (Reverse coded)	0.68
3. represent high ethical standards. (Reverse coded)	0.71
4. guide decision making in an ethical direction. (Reverse coded)	0.70
5. regularly show that you care about ethics. (Reverse coded)	0.65
Focal Employee's Collaboration with the Coworker	
1. In the last month, I would be willing to work with the coworker on a team project.	0.69
2. In the last month, I looked forward to working with the coworker.	0.63
3. In the last month, I volunteered to work on a project team if I knew the coworker was on the team.	0.53
4. In the last month, I thought the coworker and I could work together in the future.	0.50
5. In the last month, if I could pick my next project team, the coworker would be at the top of my list.	0.53
6. In the last month, I could see myself maintaining a working relationship with the coworker long-term.	0.52
7. In the last month, I liked to build an alliance with the coworker.	0.46
8. In the last month, If the coworker asked me to work with him/her on a new project, I would.	0.57
9. In the last month, I thought working together with the coworker would be mutually beneficial.	0.52
10. In the last month, I was willing to cooperate with the coworker to develop a plan of action.	0.54
11. In the last month, I was happy to have my name associated with the coworker's name on a team report.	0.53
12. In the last month, I sought out the coworker if I needed a second opinion on my work.	0.58

Table 1. (continued)

Focal Employee's Personal PEB	
In the last month, how frequently have you engaged in the following behavior?	
1. Recycle.	0.22
2. Discuss environmental protection issues with friends and relatives.	0.39
3. Bring your own shopping bag to grocery stores.	0.33
4. Save and reuse plastic shopping bags.	0.22
5. Make a monetary donation to an environmental protection cause.	0.79
6. Actively pay attention to environmental protection and information in the media.	0.35
7. Actively participate in environmental campaigns sponsored by the government.	0.38
8. Actively participate in environmental protection activities sponsored by non-governmental environmental organizations.	0.29
9. Maintain public woods and grasslands with your own money.	0.85
10. Participate in protests and express grievances about environmental problems.	0.18
Focal employee's eco-initiative	
1. In the last month, in work, the focal employee weighed the consequences of his/her actions before doing something that could affect the environment.	0.63
2. In the last month, the focal employee voluntarily carried out environmental actions and initiatives in the daily work activities.	0.87
Focal Employee's Ostracism toward the Coworker	
1. In the past month, the focal employee ignored you at work.	0.75
2. In the past month, the focal employee left the area when you entered.	0.55
3. In the past month, the focal employee did not answer your greetings.	0.73
4. In the past month, the focal employee did not sit with you in a lunchroom at work.	0.62

Table 1. (continued)	
5. In the past month, the focal employee avoided you at work.	0.65
6. In the past month, the focal employee did not look at you at work.	0.53
7. In the past month, the focal employee shut you out of the conversation.	0.66
8. In the past month, the focal employee refused to talk to you at work	0.72
9. In the past month, the focal employee treated you as if you weren't there.	0.51
10.In the past month, the focal employee did not invite you or ask you if he/she wanted anything when he/she went out for a coffee break.	0.65

Table 2. Descriptive Statistics, Reliabilities, and Correlations

	M	*SD*	1	2	3	4	5	6	7	8	9	10	11
1. Coworker eco-helping	4.37	.50	**.71**										
2. Coworker eco-civic engagement	4.28	.67	.58***	**.82**									
3. Coworker eco-initiatives	4.23	.76	.50***	.52***	**.90**								
4. Task interdependence	4.24	.64	.45***	.53***	.44***	**.77**							
5. Performance inferiority	2.37	.91	-.56***	-.45***	-.50***	-.53***	**.81**						
6. Integrity-based trust toward coworker	5.31	1.1	.31***	.62***	.46***	.48***	-.24***	**.82**					
7. Green self-efficacy	7.04	.85	.31***	.21***	.27***	.27***	-.24***	.23***	**.78**				
8. Moral inferiority	2.90	1.0	.14*	.06	-.03	-.16**	.18**	-.12*	-.26***	**.81**			
9. Collaboration with coworker	3.94	.62	.14*	.23***	.20***	.22***	-.06	.32***	.04	.07	**.83**		
10. Employee eco-initiatives	4.18	.53	.10	.05	.04	.12*	-.05	.00	.16**	.01	.06	**.71**	
11. Personal PEB[a]	2.34	.36	.32***	.28***	.31***	.23***	-.29***	.22***	.25***	-.03	.00	.09	**.71**
12. Ostracism	2.17	.86	.00	-.05	-.06	.00	-.01	-.10	.14*	.16**	-.12*	-.14*	.03
13. Gender difference[b]	0.40	.49	-.04	-.05	-.08	-.14*	.12*	.01	-.05	.06	.02	-.05	.06
14. Age difference[c]	5.82	4.6	-.07	-.13*	-.15*	-.02	.13*	-.17**	-.13*	-.01	-.13*	-.02	.01
15. Employee tenure with coworker[d]	43.0	24.	.09	.10	.07	.15*	-.08	.13*	.25***	-.15*	.04	-.03	.07
16. Employee Negative affectivity	1.74	.66	-.23***	-.18**	-.23***	-.29***	.39***	-.10	-.04	.16**	-.25***	-.08	.03
17. Coworker liking	5.89	1.2	.42***	.37***	.44***	.35***	-.40***	.23***	.15**	-.14*	.14*	.11	.23***
18. Moral identity (internalization)	5.38	.77	.01	.08	.07	.21***	.00	.16**	.01	-.10	.06	.12*	.10
19. Moral identity (symbolization)	5.26	.78	.01	.10	.08	.16**	-.01	.15*	-.03	-.03	.04	.10	.19**
20. Self-esteem	5.11	.60	-.02	.03	.06	.16**	.01	.14*	-.02	-.06	.04	.08	.09
21. Integrity-based trust toward coworker (T1)[e]	5.78	.91	.55***	.58***	.43***	.62***	-.63***	.40***	.26***	-.13*	.20***	.07	.21***
22. Green self-efficacy (T1)	7.65	.94	.28***	.33***	.28***	.35***	-.28***	.32***	.55***	-.22***	.16**	.29***	.35***
23. Moral inferiority (T1)	2.16	.83	-.57***	-.47***	-.51***	-.53***	.71***	-.25***	-.30***	.15**	-.12*	-.16**	-.32***
24. Collaboration with coworker (T1)	4.35	.41	.64***	.58***	.48***	.46***	-.54***	.39***	.38***	-.01	.22***	.20***	.33***
25. Employee eco-initiatives (T1)	4.33	.50	.47***	.45***	.31***	.36***	-.34***	.33***	.32***	.01	.23***	.17**	.20***
26. Personal PEB (T1)	2.09	.34	.21***	.13*	.20***	.13*	-.16**	.04	.18**	-.01	.02	.14*	.22***
27. Ostracism (T1)	1.71	.50	-.43***	-.40***	-.31***	-.27***	.34***	-.18**	.05	-.09	-.22***	-.06	.01

Table 2. (continued)

	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
12. Ostracism	**.87**															
13. Gender difference[b]	-.02	-														
14. Age difference[c]	.04	-.04	-													
15. Employee tenure with coworker[d]	-.07	-.05	-.13*	-												
16. Employee Negative affectivity	.01	-.05	-.04	-.11	**.90**											
17. Coworker liking	-.03	-.01	-.10	.11	-.34***	**.92**										
18. Moral identity (internalization)	-.07	-.01	.00	-.06	-.08	.08	**.73**									
19. Moral identity (symbolization)	-.05	.01	.05	-.03	-.08	.10	.71***	**.76**								
20. Self-esteem	-.01	.01	.01	-.10	-.08	.03	.80***	.76***	**.75**							
21. Integrity-based trust toward coworker (T1)[e]	.03	-.09	-.08	.12	-.30***	.43***	.03	.05	.03	**.81**						
22. Green self-efficacy (T1)	.04	-.01	-.02	.21***	-.14*	.30***	.12*	.09	.08	.29***	**.83**					
23. Moral inferiority (T1)	-.06	.05	.07	-.07	.46***	-.50***	.00	-.03	.00	-.61***	-.37***	**.85**				
24. Collaboration with coworker (T1)	-.03	-.08	-.10	.17**	-.20***	.39***	.02	.05	-.01	.56***	.50***	-.66***	**.85**			
25. Employee eco-initiatives (T1)	-.01	-.04	-.01	.14*	-.15*	.32***	.08	.07	.03	.38***	.41***	-.45***	.69***	**.70**		
26. Personal PEB (T1)	-.01	-.06	-.07	.12*	-.06	.26***	-.03	-.06	-.07	.17**	.24***	-.22***	.35***	.19**	**.72**	
27. Ostracism (T1)	.14*	-.02	.03	-.05	.44***	-.37***	.01	-.04	-.02	-.35***	-.15*	.41***	-.39***	-.31***	-.02	**.84**

Note. *N*=285 (285 focal employees and 285 coworkers). Cronbach's alpha coefficients were reported along the diagonal in bold.
a. Personal PEB = Personal pro-environmental behavior. b. Gender difference: 0 = the same gender, 1= different gender. c. Age difference: The age difference was calculated by the absolute difference of the age of the focal employee and the coworker. d. The unit of employee tenure with coworker was month(s). e. Variables with T1 in the brackets indicate that they are baseline variables.

Table 3. Results for Mediation Analyses of Study 2

	Mediators			Outcomes			
	Focal employee's integrity-based trust (T2)	Focal employee's green self-efficacy (T2)	Focal employee's moral inferiority (T2)	Collaboration with the coworker (T3)	Focal employee's eco-initiatives (T3)	Focal employee's PEB (T3)	Focal employee's ostracism toward the coworker(T3)
Predictors							
Coworker's eco-civic engagement (T1)	.85*** (.13)	-	-	-.03 (.11)	-	-	-
Coworker's eco-initiatives (T1)	.31* (.14)	.10 (.07)	-	-.02 (.08)	-.08 (.05)	.08* (.04)	-
Coworker's eco-helping (T1)	-	.29* (.12)	.76*** (.15)	-	-	.13* (.05)	.04 (.13)
Mediators							
Focal employee's integrity-based trust (T2)	-	-	-	.15** (.05)	-	-	-
Focal employee's green self-efficacy (T2)	-	-		-	.12** (.05)	.06* (.02)	-
Focal employee's moral inferiority (T2)	-	-		-	-	-	.19** (.06)
Control variables							
Age difference (T1)	-.02 (.01)	-.02 (.01)	-.01 (.01)	-.01 (.01)	-.00 (.01)	.01 (.01)	.01 (.01)
Gender difference (T1)	.15 (.10)	-.04 (.08)	.10 (.12)	.01 (.07)	-.05 (.07)	.08* (.04)	-.07 (.10)
Coworker liking (T1)	-.06 (.06)	-.07 (.04)	-.11 (.06)	-.01 (.05)	.03 (.04)	.02 (.02)	.04 (.06)
Employee tenure with coworker (T1)	.00 (.00)	.01 (.00)	-.01** (.00)	.00 (.00)	-.00 (.00)	.00 (.00)	-.00 (.00)
Employee Negative affectivity (T1)	.09 (.12)	.08 (.09)	.08 (.14)	-.22* (.11)	-.05 (.05)	.09** (.03)	-.15 (.13)

Table 3. Continued

	Mediators			Outcomes			
	Focal employee's integrity-based trust (T2)	Focal employee's green self-efficacy (T2)	Focal employee's moral inferiority (T2)	Collaboration with the coworker (T3)	Focal employee's eco-initiatives (T3)	Focal employee's PEB (T3)	Focal employee's ostracism toward the coworker(T3)
Control variables							
Moral identity (internalization)	.09 (.11)	.01 (.09)	-.21 (.13)	.05 (.07)	.08 (.07)	-.02 (.04)	-.16 (.13)
Moral identity (symbolization)	-.02 (.10)	-.09 (.08)	.14 (.11)	-.01 (.06)	.04 (.07)	.12** (.04)	-.08 (.12)
Self-esteem	.17 (.16)	.02 (.12)	-.02 (.16)	-.05 (.10)	-.07 (.09)	-.04 (.06)	.24 (.16)
Integrity-based trust toward coworker (T1)	.06 (.13)	-	-	-	-	-	-
Green self-efficacy (T1)	-	.44*** (.05)	-	-	-	-	-
Moral inferiority (T1)	-	-	.33** (.10)	-	-	-	-
Collaboration with coworker (T1)	-	-	-	.16 (.16)	-	-	-
Employee eco-initiatives (T1)	-	-	-	-	.13 (.07)	-	-
Personal PEB (T1)	-	-	-	-	-	.14* (.06)	-
Ostracism (T1)	-	-	-	-	-	-	.39* (.20)
R^2	.45***	.37***	.17**	.17*	.08*	.24***	.10*

Note. N=285. Values in parentheses are *standard errors*.

Table 4. Indirect Effects Based on 10,000 Replications Bias-Corrected Bootstrapping Simulations

	Collaboration with the coworker		Focal employee's eco-initiatives		Focal employee's PEB		Focal employee's ostracism toward the coworker	
	Estimate	95% CI	Estimate	95% CI	Estimate	95% CI	Estimate	95% CI
Coworker's eco-civic engagement								
Indirect effect (via integrity-based trust)	.13*	[.065, .226]	-	-	-	-	-	-
Moderated mediation effect								
High task interdependence (+1 SD)	.18*	[.089, .327]			-	-	-	-
Low task interdependence (-1 SD)	.14*	[.070, .246]	-	-	-	-	-	-
Difference	.04*	[.012, .100]	-	-	-	-	-	-
Coworker's eco-initiatives								
Indirect effect (via integrity-based trust)	.05*	[.017, .107]	-	-	-	-	-	-
Indirect effect (via green self-efficacy)	-	-	.01*	[.001, .036]	.01	[.000, .006]		
Moderated mediation effect								
High task interdependence (+1 SD)	.08*	[.027, .178]	.00	[-.014, .033]	.00	[-.006, .015]	-	-
Low task interdependence (-1 SD)	.03*	[.006, .089]	.02*	[.005, .054]	.01*	[.002, .025]	-	-
Difference	.04*	[.011, .108]	-.02	[-.062, .000]	-.01	[-.029, .000]	-	-
Coworker's eco-helping								
Indirect effect (via green self-efficacy)	-	-	-	-	.04*	[.011, .075]	-	-
Moderated mediation effect								
High task interdependence (+1 SD)	-	-	-	-	.08*	[.031, .174]	-	-
Low task interdependence (-1 SD)	-	-	-	-	04*	[.012, .091]	-	-
Difference	-	-	-	-	.04*	[.010, .103]	-	-
Indirect effect (via moral inferiority)	-	-	-	-	-	-	.15*	[.070, .259]
Moderated mediation effect								
High performance inferiority (+1 SD)	-	-	-	-	-	-	.14*	[.060, .245]
Low performance inferiority (-1 SD)	-	-	-	-	-	-	.08*	[.016, .196]
Difference	-	-	-	-	-	-	.06*	[.023, .118]

Note. N = 285. CI = confidence interval. *Indirect effect was significant if the confidence interval did not contain zero.

Table 5. Unstandardized Results for Full Model Analyses of Study 2

	Mediators			Outcomes			
	Focal employee's integrity-based trust (T2)	Focal employee's green self-efficacy (T2)	Focal employee's moral inferiority (T2)	Collaboration with the coworker (T3)	Focal employee's eco-initiatives (T3)	Focal employee's PEB (T3)	Focal employee's ostracism toward the coworker(T3)
Predictors							
Coworker's eco-civic engagement (T1)	1.05*** (.16)	-	-	-.03 (.11)	-	-	-
Coworker's eco-initiatives (T1)	.35* (.15)	.11 (.08)	-	-.02(.01)	-.08 (.05)	.08* (.04)	-
Coworker's eco-helping (T1)	-	.51** (.16)	.57** (.17)	-	-	.13* (.05)	.04 (.13)
Mediators							
Focal employee's integrity-based trust (T2)	-	-	-	.15** (.05)	-	-	-
Focal employee's green self-efficacy (T2)	-	-	-	-	.12** (.05)	.06* (.02)	-
Focal employee's moral inferiority (T2)	-	-	-	-	-	-	.19** (.06)
Moderators							
Task interdependence (T1)	.52** (.16)	.04 (.07)	-	-	-	-	-
Performance inferiority (T1)	-	-	.33** (.12)	-	-	-	-
Interaction terms							
Coworker's eco-civic engagement × Task	.21* (.10)	-	-	-	-	-	-
Coworker's eco-initiatives × Task interdependence	.21* (.11)	-.12 (.10)	-	-	-	-	-
Coworker's eco-helping × Task interdependence	-	-	-	-	-	-	-
Coworker's eco-helping × Performance inferiority	-	.28* (.13)	.17** (.06)	-	-	-	-

Table 5. continued

	Mediators			Outcomes			
	Focal employee's integrity-based trust (T2)	Focal employee's green self-efficacy (T2)	Focal employee's moral inferiority (T2)	Collaboration with the coworker (T3)	Focal employee's eco-initiatives (T3)	Focal employee's PEB (T3)	Focal employee's ostracism toward the coworker(T3)
Control variables							
Age difference (T1)	-.01 (.01)	-.01 (.01)	-.02 (.01)	-.01 (.01)	-.00 (.01)	.01 (.01)	.01 (.01)
Gender difference (T1)	.16 (.10)	-.04 (.08)	.07 (.11)	.01 (.07)	-.05 (.07)	.08* (.04)	-.07 (.10)
Coworker liking (T1)	-.08 (.06)	-.08 (.04)	-.09* (.06)	-.01 (.05)	.03 (.04)	.02 (.02)	.04 (.06)
Employee tenure with coworker (T1)	.00 (.00)	.00(.00)	-.01** (.00)	-.00 (.00)	-.00 (.00)	.00 (.00)	-.00 (.00)
Employee Negative affectivity (T1)	.08 (.12)	.10 (.09)	.02 (.12)	-.22 (.11)	-.05 (.05)	.09** (.03)	-.15 (.13)
Moral identity (internalization)	-.02 (.10)	-.03 (.09)	-.19 (.13)	.04 (.07)	.08 (.07)	-.02 (.04)	-.16 (.13)
Moral identity (symbolization)	.00 (.09)	-.07 (.08)	.10 (.11)	-.01 (.06)	-.04 (.07)	.12** (.04)	-.08 (.12)
Self-esteem	.16 (.15)	.02 (.12)	-.03 (.16)	-.05 (.10)	-.07 (.09)	-.04 (.06)	.24 (.16)
Integrity-based trust toward coworker (T1)	.05 (.10)	-	-	-	-	-	-
Green self-efficacy (T1)	-	.43*** (.05)	-	-	-	-	-
Moral inferiority (T1)	-	-	.24* (.11)	-	-	-	-
Collaboration with coworker (T1)	-	-	-	.16 (.16)	-	-	-
Employee eco-initiatives (T1)	-	-	-	-	.13 (.07)	-	-
Personal PEB (T1)	-	-	-	-	-	.14* (06)	-
Ostracism (T1)	-	-	-	-	-	-	.39* (.20)
R^2	.52***	.39***	.21***	.17*	.08*	.24***	.09*

Note. N=285. Values in parentheses are *standard errors*.

Table 6. Results for Supplemental Mediation Analyses of Study 2

	Mediators			Outcomes			
	Focal employee's integrity-based trust (T2)	Focal employee's green self-efficacy (T2)	Focal employee's moral inferiority (T2)	Collaboration with the coworker (T3)	Focal employee's eco-initiatives (T3)	Focal employee's PEB (T3)	Focal employee's ostracism toward the coworker(T3)
Predictors							
Coworker's eco-civic engagement (T1)	.92*** (.13)	-.14* (.07)	.12 (.11)	-.02 (.11)	-	.40 (.04)	-.01 (.11)
Coworker's eco-initiatives (T1)	.35* (.14)	.13 (.08)	-.02 (.10)	-.00 (.01)	-.07 (.05)	.07* (.04)	-.05 (.11)
Coworker's eco-helping (T1)	-.31 (.21)	.36** (.11)	.70*** (.16)	-.08 (.12)	-	.11 (.06)	.08 (.17)
Mediators							
Focal employee's integrity-based trust (T2)	-	-	-	.15** (.06)	-	-	-
Focal employee's green self-efficacy (T2)	-	-	-	-	.12** (.05)	.06* (.02)	-
Focal employee's moral inferiority (T2)	-	-	-	-	-	-	.19** (.06)
Control variables							
Age difference (T1)	-.02 (.01)	-.02 (.01)	-.01 (.01)	-.01 (.01)	-.00 (.01)	.01 (.01)	.01 (.01)
Gender difference (T1)	.15 (.10)	-.04 (.08)	.10 (.12)	.01 (.07)	-.05 (.07)	.08* (.04)	-.07 (.10)
Coworker liking (T1)	-.06 (.06)	-.07 (.04)	-.11 (.06)	-.01 (.05)	.03 (.04)	.02 (.02)	.05 (.07)
Employee tenure with coworker (T1)	.00 (.00)	.01 (.00)	-.01** (.00)	-.00 (.00)	-.00 (.00)	.00 (.00)	-.00 (.00)
Employee Negative affectivity (T1)	.08 (.12)	.08 (.09)	.08 (.13)	-.22* (.11)	-.05 (.05)	.09** (.03)	-.15 (.14)

Table 6. Continued

	Mediators			Outcomes			
	Focal employee's integrity-based trust (T2)	Focal employee's green self-efficacy (T2)	Focal employee's moral inferiority (T2)	Collaboration with the coworker (T3)	Focal employee's eco-initiatives (T3)	Focal employee's PEB (T3)	Focal employee's ostracism toward the coworker(T3)
Control variables							
Moral identity (internalization)	.08 (.11)	.01 (.09)	-.22 (.13)	.04 (.07)	.08 (.07)	-.02 (.04)	-.16 (.13)
Moral identity (symbolization)	-.03 (.10)	-.07 (.08)	.13 (.11)	-.02 (.06)	.04 (.07)	.12** (.04)	-.08 (.12)
Self-esteem	.17 (.16)	.01 (.12)	-.01 (.16)	-.05 (.11)	-.07 (.09)	-.04 (.06)	.24 (.16)
Integrity-based trust toward coworker (T1)	.06 (.13)	-	-	-	-	-	-
Green self-efficacy (T1)	-	.45*** (.05)	-	-	-	-	-
Moral inferiority (T1)	-	-	.35** (.10)	-	-	-	-
Collaboration with coworker (T1)	-	-	-	.20 (.16)	-	-	-
Employee eco-initiatives (T1)	-	-	-	-	.13 (.07)	-	-
Personal PEB (T1)	-	-	-	-	-	.14* (.06)	-
Ostracism (T1)	-	-	-	-	-	-	.39* (.19)
R^2	.46***	.38***	.17**	.17*	.08*	.25***	.10*

Figure 1. Literature Review of Employee PEB

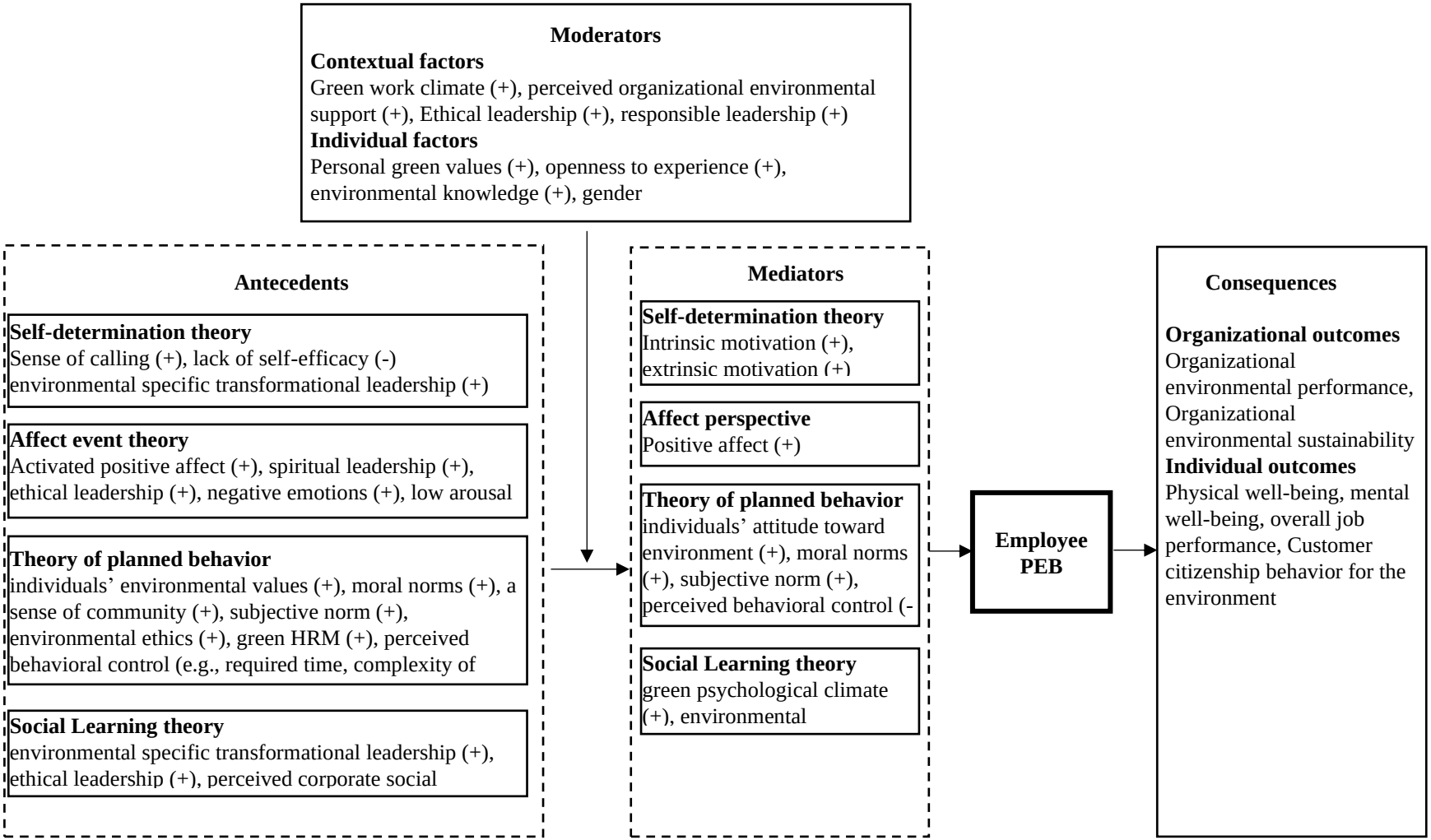


Figure 2. Model of Hypothesized Relationships

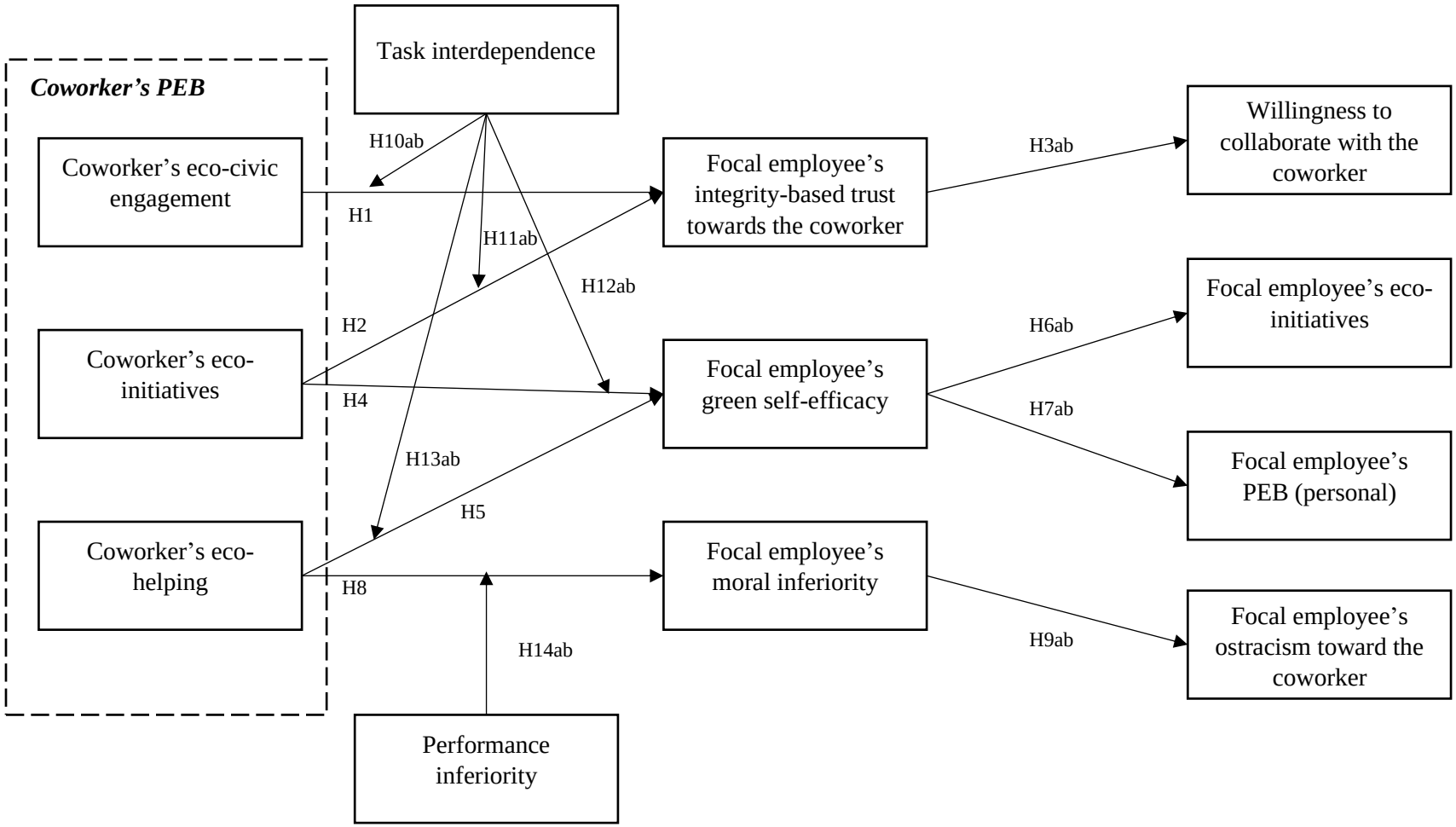


Figure 3. The Effect of the Eco-Civic Engagement on Integrity-Based Trust as contingent upon Task Interdependence for Study 1a

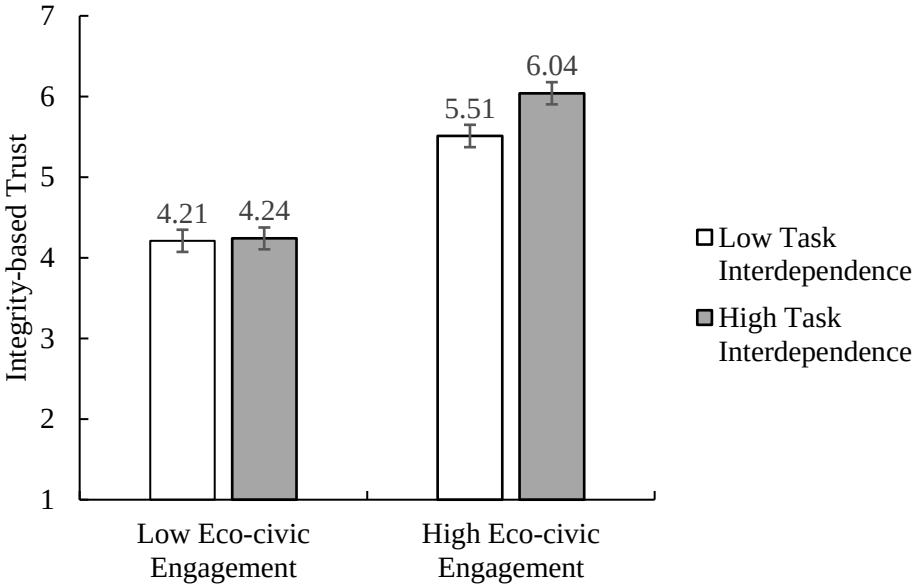


Figure 4. The Effect of the Eco-Initiatives on Integrity-Based Trust as contingent upon task interdependence for Study 1b

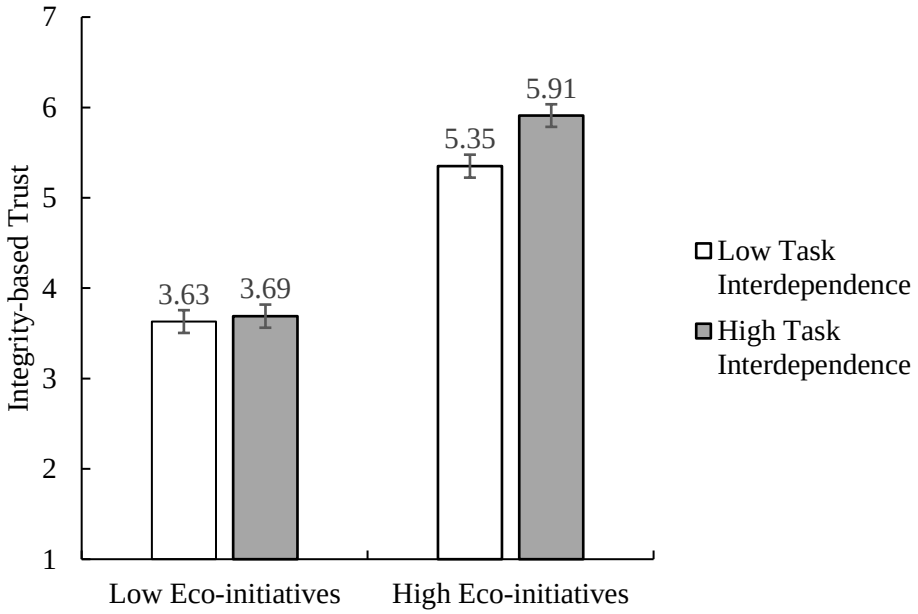


Figure 5. The Effect of the Eco-Initiatives on Green Self-Efficacy as contingent upon task interdependence for Study 1b

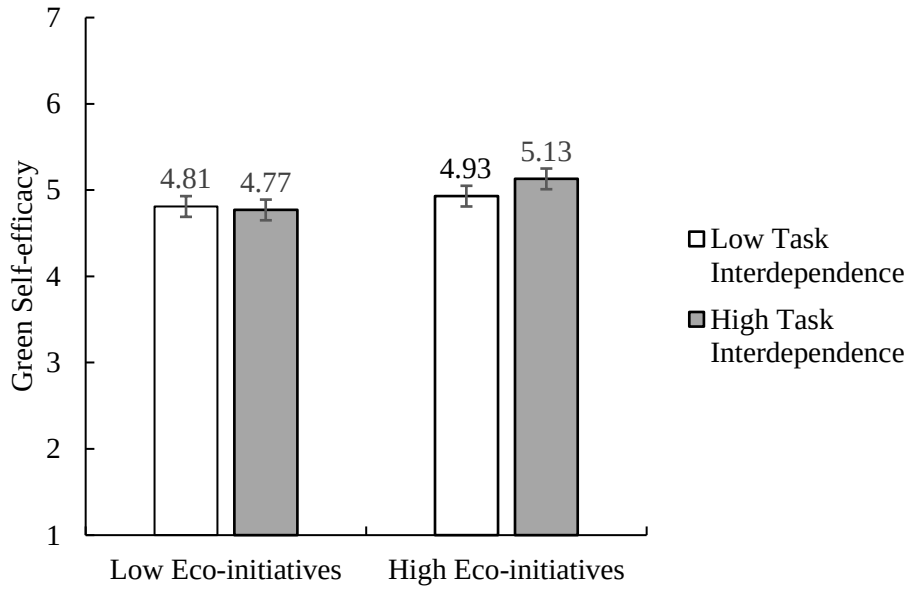


Figure 6. The Effect Of The Eco-Helping On Green Self-Efficacy as contingent upon Task Interdependence for Study 1c

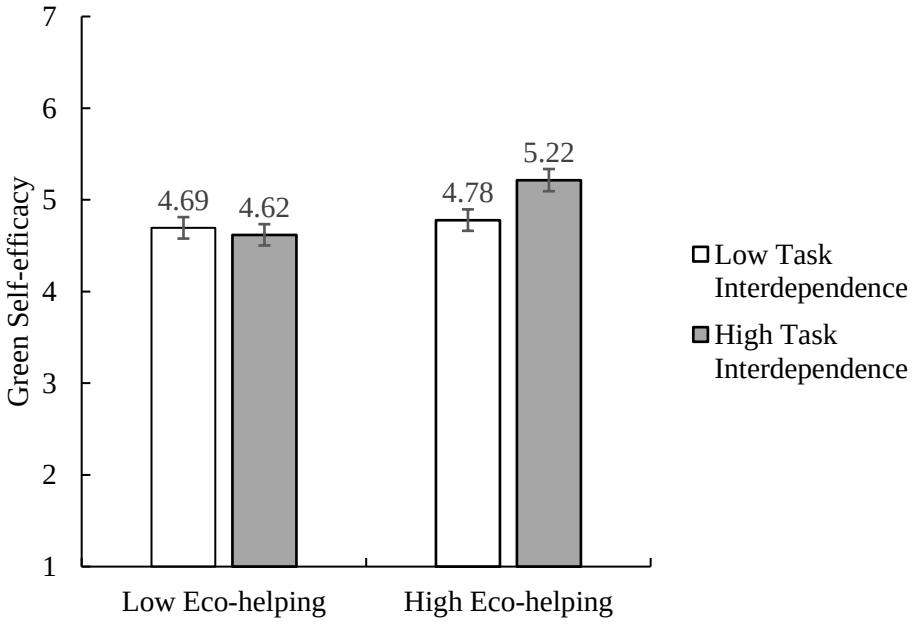


Figure 7. The Effect of The Eco-Helping on Moral Inferiority as contingent upon Performance Inferiority for Study 1d

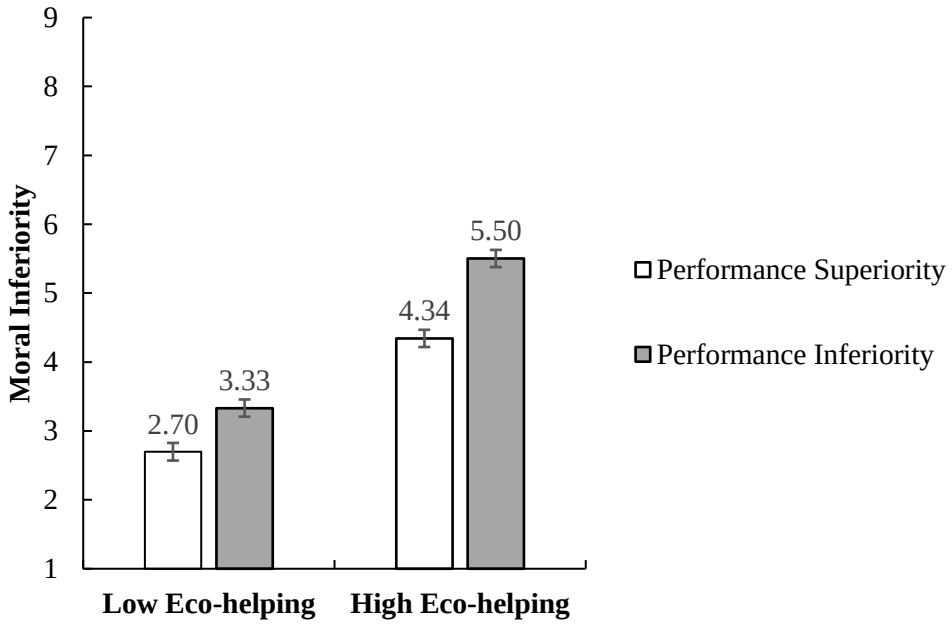
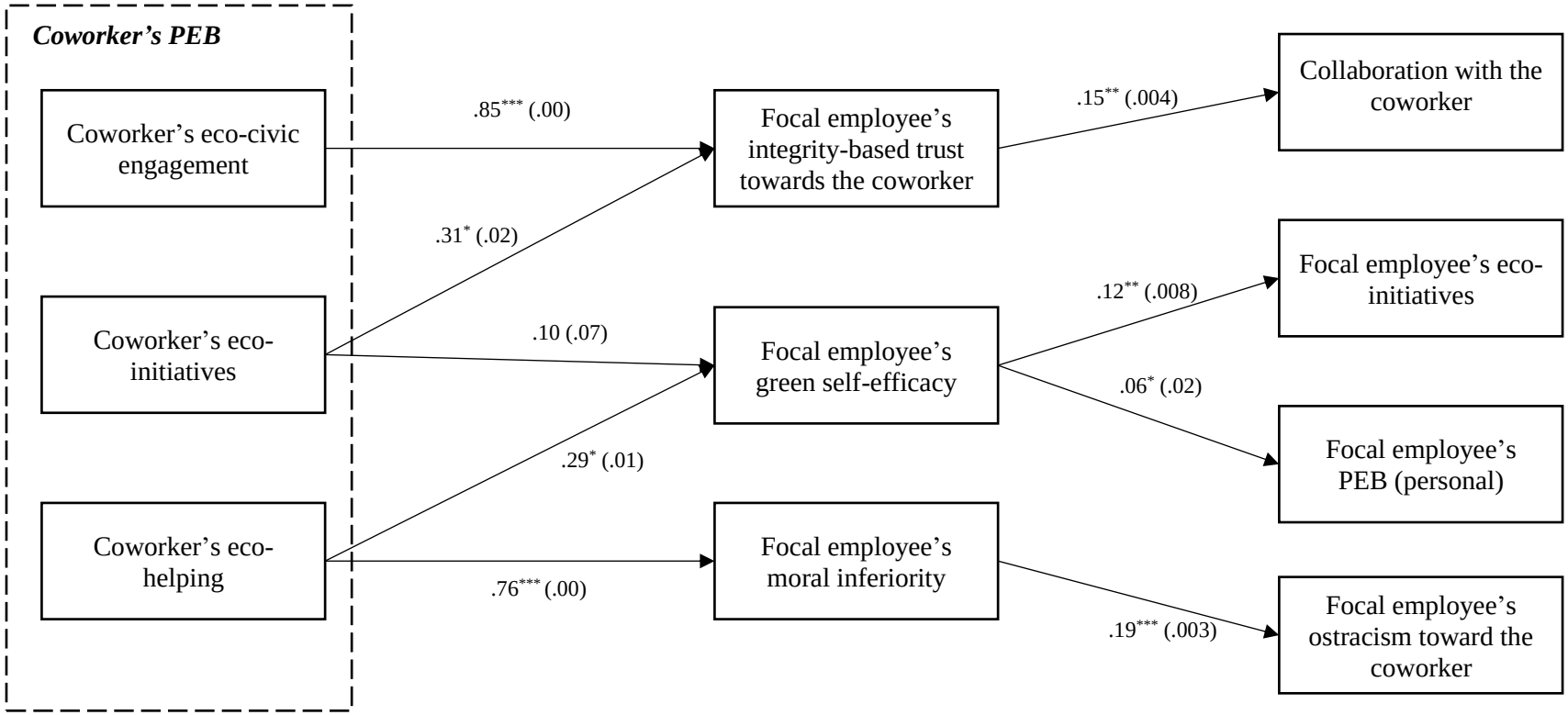
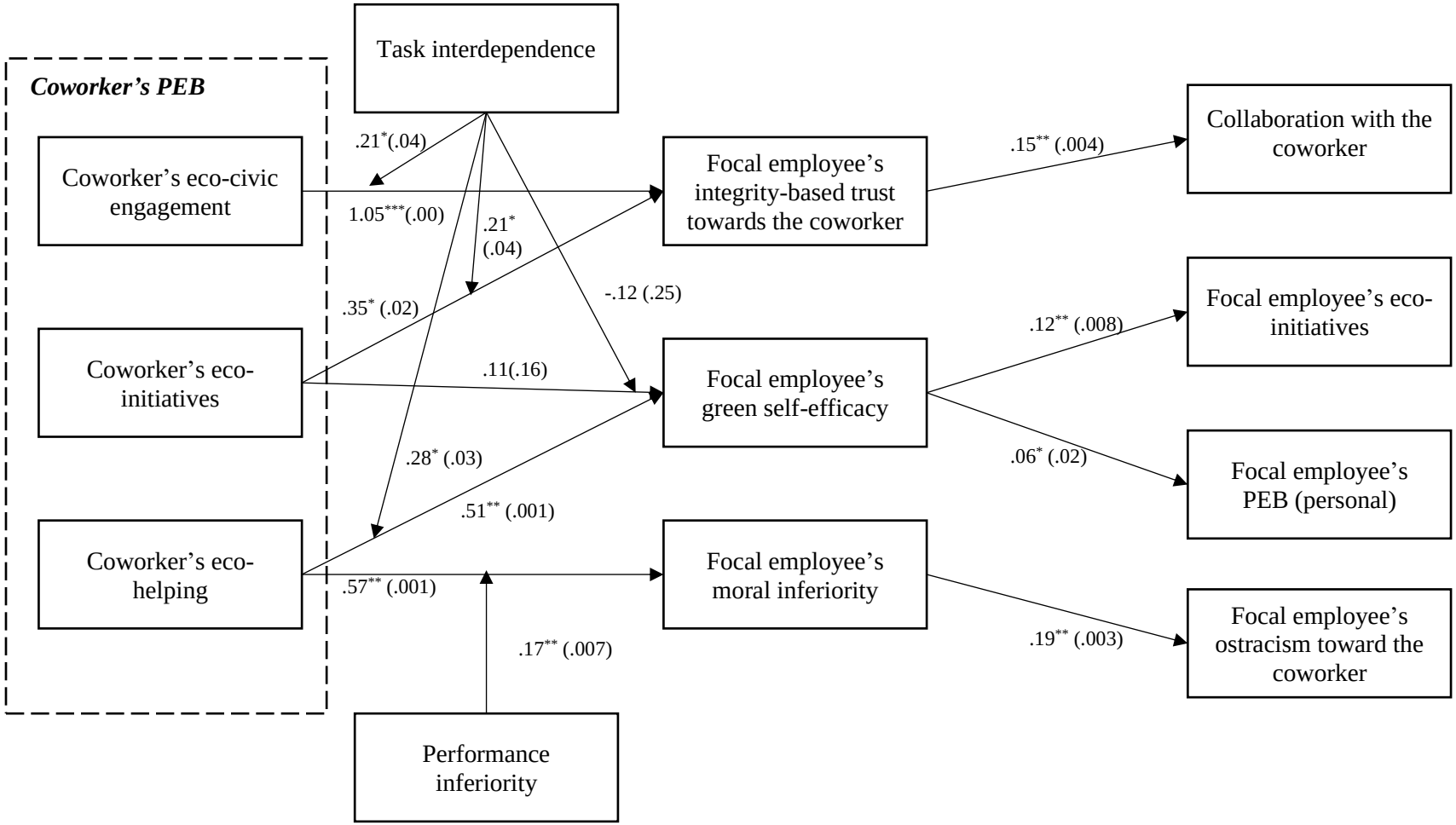


Figure 8. Study 2 Mediation Model



Note. $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$. Values in parentheses are p-values.

Figure 9. Study 2 Full Model



Note. $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$. Values in parentheses are p-values.

Figure 10. Moderating effect of Task Interdependence on the Relationship between Coworker's Eco-Civic Engagement and Focal Employee's Integrity-Based Trust towards the Coworker

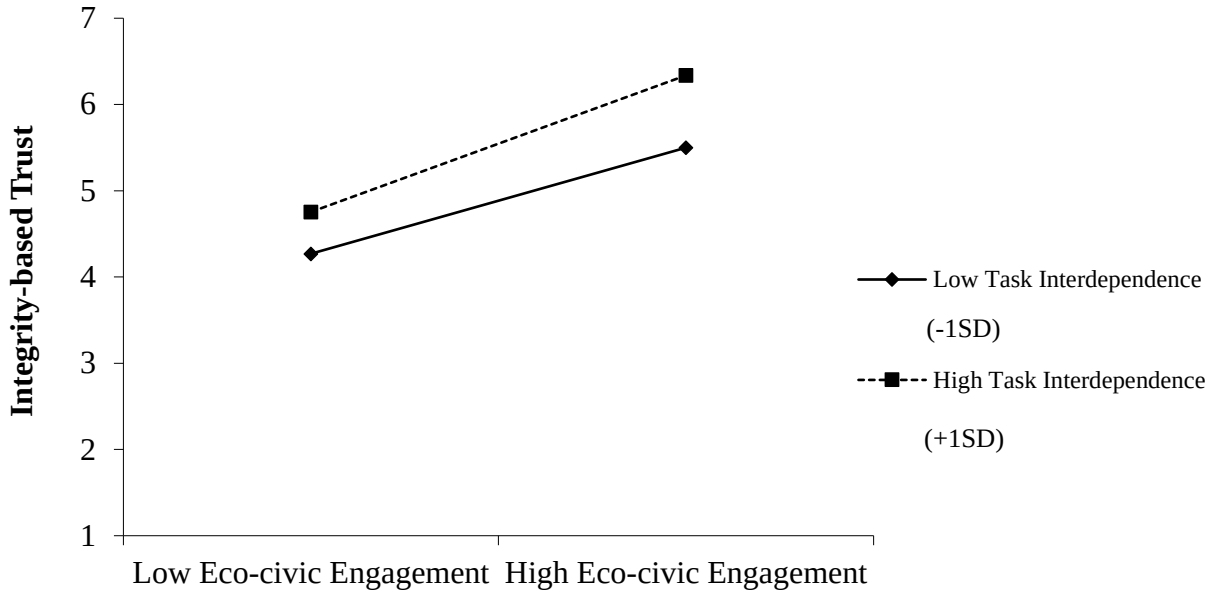


Figure 11. Moderating Effect of Task Interdependence on the Relationship between Coworker's Eco-Initiatives and Focal Employee's Integrity-Based Trust towards the Coworker

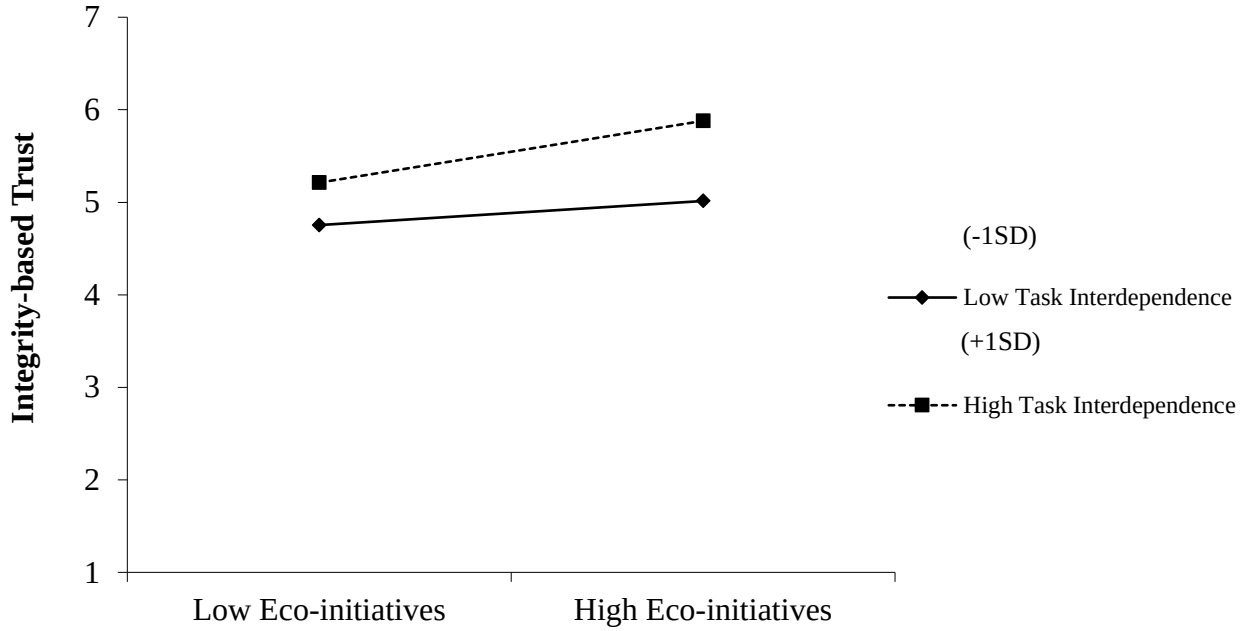


Figure 12. Moderating Effect of Task Interdependence on the Relationship between Coworker's Eco-Helping and Focal employee's Green Self-Efficacy

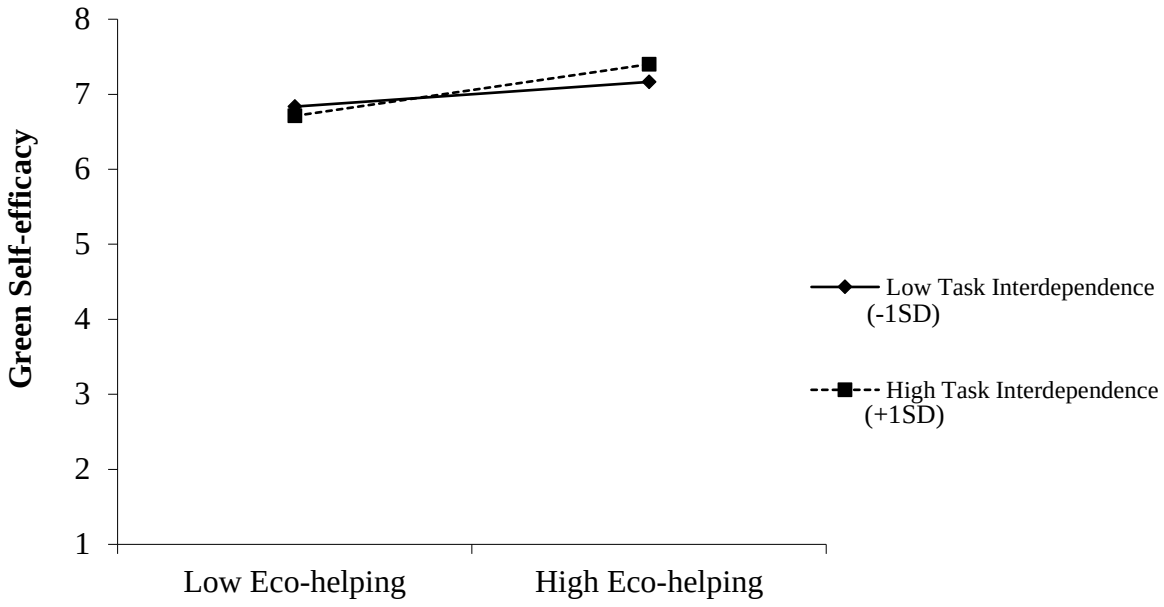
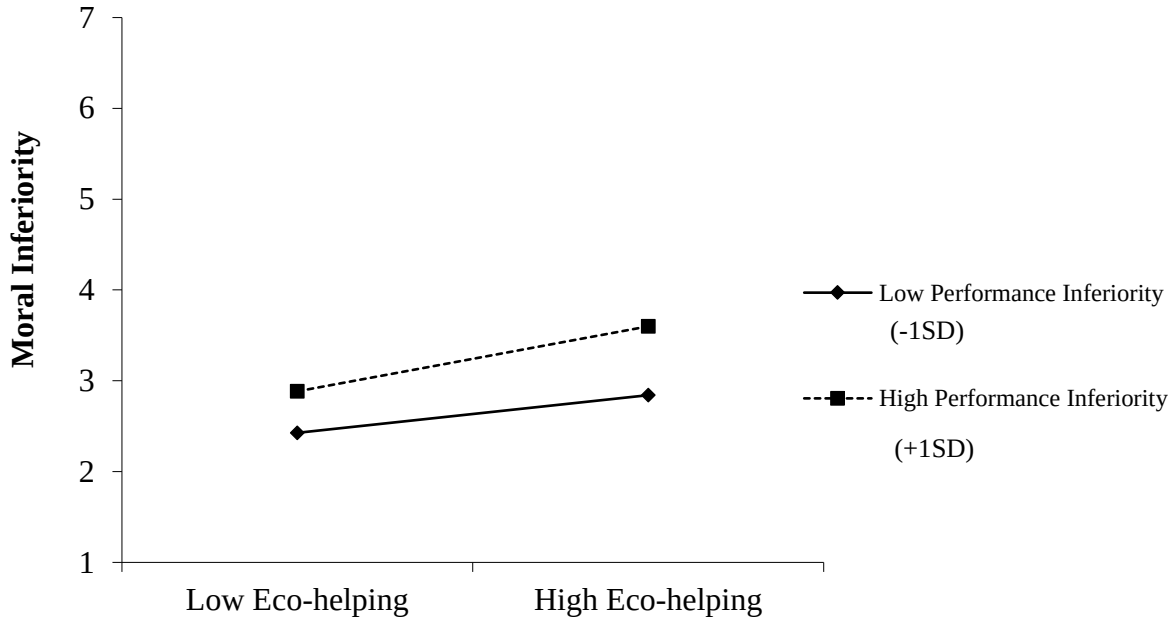


Figure 13. Moderating Effect of Performance Inferiority on the Relationship between Coworker's Eco-Helping and Focal employee's Green Self-Efficacy



Appendix A Pro-Environmental Behavior Scenarios

Imagine you are an employee of a large company in the retail industry. You work in the research and development department. **You have a coworker named Alex, who works in the same department with you.** Please read the following information about Alex and answer the following questions about Alex.

Higher Eco-civic Engagement

At work, Alex ***actively and voluntarily participates in and supports*** the ***company's environmentally friendly programs, events, and workshops***, such as tree planting events or environmental training workshops. Alex ***v*olunteers to serve on the environment and sustainability committee**. Moreover, Alex always **stays informed about the company's environmental news** by regularly checking the company newsletter and bulletin boards. In addition, Alex often ***shares the company's environmental activities or news on social media***. Alex also ***proactively participates in conferences*** that could contribute to the company's image to the ***public regarding the company's environmental protection efforts.***

Lower Eco-civic Engagement

At work, Alex ***never participates in or supports any environmental protection programs or events organized by the company***. For example, Alex did not participate in the tree planting events or environmental training workshops organized by the company. Alex has ***declined the opportunity to take part in the company environment and sustainability committees***. Alex ***rarely pays attention to the company's environmental news*** posted in the company's newsletter or on the bulletin boards. In addition, Alex has ***never shared any information about the company's environmental initiatives or news on social media***. Alex also ***rarely participates in conferences*** that could contribute to the company's image to the ***public regarding the company's environmental protection efforts*.**

Higher Eco-initiatives

At work, Alex **proactively spends personal effort to protect the natural environment,** though employees are **not required by the company to do so**. Alex **actively strives to minimize the impact on the planet** by cycling to work, printing double-sided, and turning off the computer and light at work when leaving the desk. Alex has **a reusable metal water bottle** to fill water from the machine instead of purchasing plastic bottled water. Alex **has brought plants into the office to improve the air quality** and makes sure they are watered regularly.

Lower Eco-initiatives

At work, Alex **never engages in any personal behavior aimed at protecting the environment**. Alex **seldom recycles, always prints single-sided, and does not bother turning off the lights or the computer when leaving the workstation**. Moreover, Alex drives a fuel-inefficient 4x4

truck to work, ***contributing to high carbon emissions***. Despite having convenient access to the water refill station near the office, Alex always **purchases plastic bottled wate**r. Unlike other coworkers who ***bring small plants to work***, Alex ***never does*** that.

Higher Eco-helping

At the workplace, Alex often **puts extra time or effort into helping you and other coworkers be more environmentally friendly**. Alex **persuades others to print double-sided and turn off lights** when they are not being used. Alex promotes environmental awareness to others. Alex **frequently shares news and information on how to protect the environment**, both on a notice board and via group emails emphasizing the importance of being environmentally friendly. When **coworkers** seek advice from Alex on addressing environmental issues, **Alex is always willing to answer their questions with details**.

Lower Eco-helping

At the workplace, **Alex never takes time or effort to help you or other coworkers to be more environmentally friendly**. **Alex never pays attention to others' behavior that might have environmental implications**, such as turning lights off and printing one-sided. **Alex also never shares any knowledge or information on environmental protection.** When coworkers seek advice from Alex on addressing environmental issues, **Alex only briefly touches on the topic and then moves to the next one.**

Appendix B Task Interdependence Scenarios

Imagine you are an employee of a large company in the retail industry. You work in the research and development department. **You have a coworker named Alex, who works in the same department with you.** Please read the following information about Alex and answer the following questions about Alex.

Higher Task Interdependence

As colleagues in the research and development department, your **work tasks and responsibilities have a high level of overlap with Alex's**, and they are closely interconnected. Alex's and your work tasks **intersect significantly**, requiring **frequent coordination to complete the job**. You both **rely on each other's input to complete your assignments,** and the way you two perform your jobs **has a significant impact on each other's performance.** For example, when coming up with new designs, the shared responsibilities require you to discuss with Alex about colors, sizes, and other features of a product.

Lower Task Interdependence

As colleagues in the research and development department, **your work tasks and responsibilities have a low overlap** with Alex's and **are not interconnected**. Alex's and your work tasks **have limited intersection,** with **a low need for coordination** to complete the job. You **both rarely rely on each other's input** to complete your individual assignments, and the way you two perform your jobs have **minimal impact on each other's performance.** You and Alex **work on different projects.** For instance, you primarily focus on developing product design, while Alex conducts market analysis.

Appendix C Performance Inferiority/Superiority Scenarios

Imagine you are an employee of a large company in the retail industry. You work in the research and development department. **You have a coworker named Alex, who works in the same department with you.** Please read the following information about Alex and answer the following questions about Alex.

Performance Inferiority

Alex is typically perceived as **outperforming you**. In general, Alex's **annual review ratings are higher than yours**, and **the products developed by Alex have generated approximately 20% more revenue**. Alex has crafted several outstanding business proposals that have effectively pinpointed key customers and emerging demands. In contrast, some of **your business proposals received feedback indicating a lack of feasibility and an inability to address current trends or customer needs.** Below is a comparison of you and Alex based on the number of successful proposals, overall performance, and project revenue.

	Alex	You
Number of successful proposals	9	6
Overall performance	5.3	3.9

Performance superiority

Most people perceive Alex as **underperforming relative to you**. **Alex's annual review ratings are consistently lower than yours,** and the products **Alex developed have generated less than 20% of the revenue that yours have**. You've crafted numerous outstanding proposals that effectively identified key customers and emerging demands. In contrast, **some of Alex's business proposals were critiqued for lacking feasibility and not addressing current trends or customer needs.** Below is a comparison of you and Alex based on the number of successful proposals, overall performance, and project revenue.

	Alex	You
Number of successful proposals	6	9
Overall performance	3.9	5.3

Appendix D Measures of Study Variables

Study 1a–d

Manipulation Check Measure of Eco-Initiatives

1= completely disagree, 5 = completely agree

Please recall the description that you just read about Alex and answer the following questions.

1. Alex weighs the consequences of actions before doing something that could affect the environment.
2. Alex voluntarily carries out environmental actions and initiatives in Alex's daily work activities.

Manipulation Check Measure of Eco-Civic Engagement

1= completely disagree, 5 = completely agree

Please recall the description that you just read about Alex and answer the following questions.

1. Alex actively participates in environmental events organized in and/or by the company.
2. Alex undertakes environmental actions that contribute positively to the image of the company.
3. Alex volunteers for projects, endeavors or events that address environmental issues in the company.
4. Alex stays informed of the company's environmental initiatives.

Manipulation Check Measure of Eco-Helping

1= completely disagree, 5 = completely agree

Please recall the description that you just read about Alex and answer the following questions.

1. Alex spontaneously gives time to help colleagues take the environment into account in everything they do at work.
2. Alex encourages colleagues to adopt more environmentally conscious behavior.
3. Alex encourages colleagues to express their ideas and opinions on environmental issues.

Manipulation Check Measure of Task Interdependence

1 = completely independent, 7 = completely dependent

1. At work, to what extent do you depend on Alex for information and advice?
2. AT work, to what extent do you depend on Alex for materials, resources, and other things they need?
3. At work, to what extent do you depend on Alex's presence, help and support?
4. At work, to what extent do you depend on Alex for doing your work well?

Manipulation Check Measure of Performance Inferiority

1= strongly disagree, 7= strongly agree

Please recall the description that you just read and answer the following question.

Does Alex perform better than you?

Focal Employee's Integrity-Based Trust Toward Coworker

1= strongly disagree, 7= strongly agree

1. Alex has a great deal of integrity.
2. I can trust Alex's word.
3. Alex cares about honesty and truth.

Focal Employee's Green Self-Efficacy

1= strongly disagree, 5= strongly agree

1. I know how to take precautions against environmental problems in everyday life.
2. When faced with pollution of this kind, I find ways to deal with it.
3. When I hear about environmental problems of this kind, I usually have various ideas of how to deal with it.
4. I know how to deal with new types of environmental problems.
5. I am able to find ways to deal with this kind of environmental problems in everyday life.
6. I can handle environmental problems of this kind, if I make an effort.
7. I believe I can even manage unexpected environmental problems.
8. Whatever happens in terms of the environment, I will be able to handle it.
9. I don't worry much about difficulties, which may arise as a result of global environmental problems because I trust in my ability to cope with them.

Moral Inferiority

1. Compared to Alex, I am:

1	2	3	4	5	6	7	8	9
Much less caring than Alex				*Exactly as caring as* Alex				*Much more caring than Alex*

2. Compared to the Alex, I am:

1	2	3	4	5	6	7	8	9
Much less compassionate *than Alex*				*Exactly as* compassionate *as Alex*				*Much more* compassionate *than Alex*

3. Compared to the Alex, I am:

1	2	3	4	5	6	7	8	9
Much less fair *than Alex*				*Exactly as* fair *as Alex*				*Much fairer than Alex*

4. Compared to Alex, I am:

1	2	3	4	5	6	7	8	9
Much less friendly than Alex				*Exactly as friendly as Alex*				*Much more friendly than Alex*

5. Compared to Alex, I am:

1	2	3	4	5	6	7	8	9
Much less generous than Alex				*Exactly as generous as Alex*				*Much more generous than Alex*

6. Compared to Alex, I am:

1	2	3	4	5	6	7	8	9
Much less hard-working than Alex				*Exactly as hard-working as Alex*				*Much more hard-working than Alex*

7. Compared to Alex, I am:

1	2	3	4	5	6	7	8	9
Much less helpful than Alex				*Exactly as* helpful *as Alex*				*Much more helpful than Alex*

8. Compared to Alex, I am:

1	2	3	4	5	6	7	8	9
Much less honest than Alex				*Exactly as* honest *as Alex*				*Much more honest than Alex*

9. Compared to Alex, I am:

1	2	3	4	5	6	7	8	9
Much less kind than Alex				*Exactly as* kind *as Alex*				*Much more kind than Alex*

Study 2

Types of the Coworker's PEB (focal employees rated at Time 1 and Time 3))

1= completely disagree, 5 = completely agree

Eco-Helping

1. The coworker spontaneously gives time to help colleagues take the environment into account in everything they do at work.
2. The coworker encourages colleagues to adopt more environmentally conscious behavior.
3. The coworker encourages colleagues to express their ideas and opinions on environmental issues.

Eco-Civic Engagement

1. The coworker actively participates in environmental events organized in and/or by the company.
2. The coworker undertakes environmental actions that contribute positively to the image of the organization.
3. The coworker volunteers for projects, endeavors or events that address environmental issues in the organization.
4. The coworker stays informed of the company's environmental initiatives.

Eco-Initiative

1. In work, the coworker weighs the consequences of his/her actions before doing something that could affect the environment.
2. The coworker voluntarily carries out environmental actions and initiatives in the daily work activities.

Task Interdependence (focal employees rated at Time 1)

1= strongly disagree, 5= strongly agree

1. I work closely with the coworker in doing my work.
2. I frequently must coordinate my efforts with the coworker.
3. My own performance is dependent on receiving accurate information from the coworker.
4. The way I perform my job has a significant impact on the coworker.
5. My work requires me to consult with the coworker fairly frequently.
6. I work fairly independently of the coworker in my work. (Reverse coded)

Performance Inferiority (focal employees rated at Time 1)

1= very low, 7= very high

1. How do you evaluate your productivity on the job compared with the coworker?
2. How do you evaluate your quality of your performance on the job compared with the coworker?
3. How do you evaluate the performance of yourself at your job compared with the coworker doing the same kind of work?

Focal Employee's Integrity-Based Trust (focal employees rated at Time 1 and Time 2)

1= strongly disagree, 7= strongly agree

1. The coworker has a great deal of integrity.
2. I can trust the coworker's word.
3. The coworker cares about honesty and truth.

Focal Employee's Green Self-Efficacy (focal employees rated at Time 1 and Time 2)

zero = cannot do at all to ten =highly certain can do

1. I can control my impact on the environment.
2. I can be as environmentally friendly as most people in my community.
3. I can avoid being among the least environmentally friendly members of my community.
4. I can choose forms of transportation that cause fewer carbon emissions.
5. I can help preserve the quality of the water.
6. I can choose to be an environmentally friendly consumer.
7. I can continue being environmentally friendly even when faced with financial burdens.
8. I can continue being environmentally friendly even when I'm having a bad day.
9. I can make environmentally eating choices.
10. I can learn more about new environmental issues as they become relevant.

Moral Inferiority (focal employees rated at Time 1 and Time 2)

1= much less likely compared with the coworker, 7= much more likely compared with the coworker

Compared to the coworker who also participates in this study, are you more or less likely to …

1. make fair and balanced decisions.
2. set an example of how to do things the right way in terms of ethics.
3. represent high ethical standards.
4. guide decision making in an ethical direction.
5. regularly show that you care about ethics.

Focal Employee's Collaboration with the Coworker (focal employees rated at Time 1 and Time 3)

1= strongly disagree, 5= strongly agree

1. In the last month, I would be willing to work with the coworker on a team project.
2. In the last month, I looked forward to working with the coworker.
3. In the last month, I volunteered to work on a project team if I knew the coworker was on the team.
4. In the last month, I thought the coworker and I could work together in the future.
5. In the last month, if I could pick my next project team, the coworker would be at the top of my list.
6. In the last month, I could see myself maintaining a working relationship with the coworker long-term.
7. In the last month, I liked to build an alliance with the coworker.
8. In the last month, If the coworker asked me to work with him/her on a new project, I would.

9. In the last month, I thought working together with the coworker would be mutually beneficial.

10. In the last month, I was willing to cooperate with the coworker to develop a plan of action.

11. In the last month, I was happy to have my name associated with the coworker's name on a team report.

12. In the last month, I sought out the coworker if I needed a second opinion on my work.

Types of the Focal Employee's PEB (coworkers rated at Time 1 and Time 3)

1= completely disagree, 5 = completely agree

Eco-initiative

1. In the last month, in work, the focal employee weighed the consequences of his/her actions before doing something that could affect the environment.
2. In the last month, the focal employee voluntarily carried out environmental actions and initiatives in the daily work activities.

Focal Employee's Personal PEB (focal employees rated at Time 1 and Time 3)

1 = Never, 2 = Occasionally, 3 = Often

In the last month, how often do you engage in the following behaviors?

1. Recycle
2. Discuss environmental protection issues with friends and relatives
3. Bring your own shopping bag to grocery stores.
4. Save and reuse plastic shopping bags.
5. Make a monetary donation to an environmental protection cause.
6. Actively pay attention to environmental protection and information in the media.
7. Actively participate in environmental campaigns sponsored by government.
8. Actively participate in environmental protection activities sponsored by non-governmental environmental organizations.
9. Maintain public woods and grasslands with your own money.
10. Participate in protests and express grievances about environmental problems.

Focal Employee's Ostracism toward the Coworker (coworkers rated at Time 1 and Time 3)

1 = Never, 7 = Always

In the last month, how often does the focal employee engage in the following behaviors?

1. In the past month, the focal employee ignored you at work.

2. In the past month, the focal employee left the area when you entered.

3. In the past month, the focal employee did not answer your greetings.

4. In the past month, the focal employee did not sit with you in a lunchroom at work.

5. In the past month, the focal employee avoided you at work.

6. In the past month, the focal employee did not look at you at work.

7. In the past month, the focal employee shut you out of the conversation.

8. In the past month, the focal employee refused to talk to you at work

9. In the past month, the focal employee treated you as if you weren't there.

10.In the past month, the focal employee did not invite you or ask you if he/she wanted anything when he/she went out for a coffee break.

Negative Affectivity (focal employees rated at Time 1)

1= not at all, 7= extremely

This scale consists of a number of words and phrases that describe different feelings. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you generally feel this way, that is, how you feel on average.

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

Coworker Liking (focal employees rated at Time 1)

1= strongly disagree, 7= strongly agree

1. I like the coworker very much as a person.
2. I think the coworker would make a good friend.
3. I like being around the coworker.

Moral Identity (focal employees rated at Time 1)

Listed alphabetically below are some characteristics that might describe a person:

Caring, Compassionate, Fair, Friendly, Generous, Helpful, Hardworking, Honest, Kind

The person with these characteristics could be you or it could be someone else. For a moment, visualize in your mind the kind of

person who has these characteristics. Imagine how that person would think, feel, and act. When you have a clear image of what this

person would be like, answer the following questions using the scale below.

1. It would make me feel good to be a person who has these characteristics.

2. Being someone who has these characteristics is an important part of who I am.

3. I often wear clothes that identify me as having these characteristics.

4. I would be ashamed to be a person who had these characteristics.

5. The types of things I do in my spare time (e.g., hobbies) clearly identify me as having these characteristics.

6. The kinds of books and magazines that I read identify me as having these characteristics.

7. Having these characteristics is not really important to me.

8. The fact that I have these characteristics is communicated to others by my membership in certain organizations.

9. I am actively involved in activities that communicate to others that I have these characteristics.

10. I strongly desire to have these characteristics.

Self-Esteem (focal employees rated at Time 1)

1. On the whole, I am satisfied with myself.

2. At times I think I am no good at all.

3. I feel that I have a number of good qualities.

4. I am able to do things as well as most other people.

5. I feel I do not have much to be proud of.

6. I certainly feel useless at times.

7. I feel that I'm a person of worth, or at least on an equal plane with others

8. I wish I could have more respect for myself.

9. All in all, I am inclined to feel that I am a failure.

10. I take a positive attitude toward myself.

Demographic Variables (focal employees and employees rated at Time 1)

1. Gender: □ Male □ Female □ Other
2. Year of Birth: _____
3. Marital Status: □single □married □widowed □divorced □ common-law partner
4. When did you join your current employer? Year ___ Month ____
5. How long have you worked with the coworker?
Year ___ Month _____
6. Current position: _____
7. Are you currently employed? Yes_ No_

8. If yes, are you a full-time or part-time worker?
9. Years of work experience (from your first full-time or part-time job): _____
10. Level of Education:
1=Lower than middle school
2=Middle school
3=High school
4=two-year college
5=four-year university
6=Master degree or more
11. Industry:

1) Education
2) Government
3) Retail
4) Manufacturing
5) Health Care
6) Banking
7) Food service (e.g., restaurant)
8) Social service
9) Service firms (e.g., consulting, law firm, etc.)
10) Other: Please specify _____

12. Monthly income (before tax):
1) □ 0 – 3,000
2) □ 30,001 – 6,000
3) □ 6,001 – 10,000
4) □ 10,001 – 12,000
5) □ 12,001 – 15,000
6) □ above 15,000