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COWORKER UNDERMINING IN A TEAM: HOW DOES THE PROPORTION
OF PERPETRATORS INFLUENCE TARGET COPING RESPONSES?

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2020

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**Coworker undermining in a team: How does the proportion of perpetrators
influence target coping responses?**

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A thesis submitted in partial fulfilment of the requirements for the degree
of Master of Philosophy
September 2019

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ABSTRACT

Coworker undermining can involve multiple perpetrators in a team. While extant literature on social undermining has examined how the frequency of undermining behaviors experienced by the individual target influences distal outcomes, it overlooked the effect of the varied proportions of perpetrating and non-perpetrating coworkers that exist in a team context. Drawing on attributional theories of emotion and motivation, I proposed that the proportion of undermining ties (i.e., coworkers who undermine the same target) in the team influences the target behavioral responses toward the undermining via two negative emotions—anger and shame. I then predicted that individual job performance moderates the effect of the proportion of undermining coworkers on anger and shame respectively. I also hypothesized that emotion regulation moderates the second-stage relationships between anger and two behavioral outcomes (i.e., revenge and direct communication). The theoretical model was tested with a sample of 117 employees in 35 work teams from nine organizations based in Hong Kong. Overall, results showed that the proportion of undermining coworkers was positively associated with revenge via anger, and with social withdrawal via shame. Emotion regulation moderated the mediated relationship between the proportion of undermining coworkers and direct communication via anger; the relationship was significantly positive only when emotion regulation was high, but not when the capability was low. Individual job performance did not moderate any of the mediated relationships between the proportion of undermining coworkers and the three respective behavior outcomes (i.e., revenge, direct communication, and social withdrawal). Implications for research and practices were discussed. I concluded the thesis by identifying the limitations of this study and suggestions for future research.

Keywords: social undermining, team composition, attribution, emotion,
coping behavior

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CHAPTER 1 INTRODUCTION

“A single arrow is easily broken, but not ten in a bundle.”

—Japanese proverb

1.1 Research Background

Social interactions form a core part of one’s work experience. Research has found that positive interpersonal treatments, such as social support at work, bring many benefits to individuals (e.g., life satisfaction, engagement, thriving at work) and organizations (e.g., lower turnover, organizational citizenship behaviors) (see Dutton & Ragins, 2007; Ehrhardt & Ragins, 2019). Thus, working in an environment with positive treatments by colleagues is desirable. In contrast, negative interpersonal treatments cause a wide range of detrimental effects on individuals’ attitudinal (e.g., commitment), behavioral (e.g., work performance), and health-related outcomes (e.g., emotional exhaustion, depression) (see Hershcovis & Barling, 2010). The vast amount of studies on workplace mistreatment over the past two decades indicates that it is not uncommon (Hershcovis, 2011). Given many undesirable outcomes, it is important to understand how individuals respond to and manage these negative interpersonal experiences at work.

Among various forms of workplace mistreatments (e.g., abusive supervision, incivility, social undermining), the present research focuses on social undermining, defined as the behavior intended to inhibit another individual’s ability to establish work-related success, develop and maintain positive relationships, as well as build positive reputations over time (Duffy, Ganster, & Pagon, 2002). There are two reasons for selecting social undermining as the focal phenomenon. First, I set out to examine how the experience of individuals who are mistreated by coworkers in a team, but not the team supervisor. Social undermining, with the source being

specified as supervisor or coworker in the original article (Duffy et al., 2002), is more suitable than other forms of mistreatment which are either specific to supervisors only (e.g., abusive supervision; Tepper, 2000) or too general without a specified source (e.g., incivility; Andersson & Pearson, 1999). Second, by definition, social undermining involves the nature of perceived intention to harm the target's career, relationships, and reputation, which are high-stake concerns for individuals in the workplace. Thus, the target is likely to perceive social undermining as more personal and of higher intensity than other forms of coworker mistreatment. Thus, social undermining is more likely than other forms of coworker mistreatment to trigger responses from the target.

Extant literature has found well-established evidence on the proposed harmful effects of workplace undermining on outcomes, including job satisfaction, belongingness, work performance, deviance, turnover intention, mental health, and even aggression at home (e.g. Barber, Taylor, Burton, & Bailey, 2017; Duffy et al., 2002; Duffy, Ganster, Shaw, Johnson, & Pagon, 2006; Kammeyer-Mueller, Wanberg, Rubenstein, & Song, 2013; Lee, Kim, Bhave, & Duffy, 2016). Some research has also identified circumstances (e.g., the undermined target's personalities, level of undermining in the group; Britton, Sliter, & Jex, 2012; Duffy et al., 2006; Hepburn & Enns, 2013; Nahum-Shani, Henderson, Lim, & Vinokur, 2014), in which these negative effects would be strengthened or attenuated. In general, the current literature has largely agreed that the more an individual (perceives to) have encountered undermining, the more pronounced the negative consequences would be.

1.2 Research Needs and Thesis Overview

Despite advancing our understanding on the distal impact of social undermining, prior research has not systematically examined how the focal target (i.e. the victim) actually experiences undermining in a team context with multiple coworkers. Based on the initial conceptualization and measurement development of social undermining by Duffy et al. (2002), previous research has predominantly focused on the *frequency* of undermining behaviors experienced by the individual focal employee; that is, these studies capture the accumulated effects of the undermining episodes as a whole. I maintain that this way of understanding coworker undermining within a team is incomplete, because it neglects the fact that the focal employee could experience different interactions with each of the coworkers within the team. From the perspective of the focal employee, the number of perpetrators (and non-perpetrators) can vary across individuals. These different compositions of undermining and non-undermining relationships represent the relational context for the focal target, in which the undermining occurs, and would critically influence how the target experiences and responds to the mistreatment (Hershcovis & Reich, 2013). Although the opening quote of this manuscript is usually used to describe the benefits of teamwork among coworkers, ironically it seems to be also well suited to describe the other side of the coin—when undermining comes from multiple, rather than just one or two, coworkers in the team, it might also be harder to manage.

Our understanding of coworker undermining will be enhanced by examining the number of perpetrators and non-perpetrators in a team for two main reasons. First, episodes of coworker undermining do not occur in a social vacuum. Past research measuring the frequency of undermining experienced by the individual only

focuses on the individual target encountering of the general perception of undermining by his or her group of members, without specification of who those undermining coworkers are. Prior research overlooks the possibility that not all team members are perpetrators and how the varied number of perpetrators and non-perpetrators influence the target's experience in a team context. To the best of my knowledge, only two studies have explicitly examined group-level undermining (Duffy et al., 2006; Duffy, Shaw, Scott, & Tepper, 2006). However, authors of these research considered the undermining in a team as a contextual background for the target's own experience. The group-level undermining referred to the undermining experienced by the group of coworkers, without reference to any specific perpetrators. Specifically, Duffy et al. (2006) found that the negative effects (e.g., meeting absence, depression) of coworker undermining for the focal individual were the strongest, when the group-level undermining was low. In another study, Duffy et al. (2006) found that a team environment with a higher group-level undermining led to a greater likelihood of individual members to become perpetrators, when individuals possessed higher self-esteem and were more neurotic. Both of these studies only considered the group-level undermining when coworkers were being undermined as targets, which formed the contextual background of the focal target's own experience as a victim. Yet, no study has considered how team undermining, with varied number of *perpetrators* and *non-perpetrators* among coworkers, influences the focal target's experience as an integral factor. As such, it remains unclear how the varied number of team members engaging in undermining toward the focal employee affects his or her experience as well as reactions of undermining.

Second, past conceptualization of frequency only captures the level of acts of undermining, regardless of who in the team actually are doing the actions. This

neglects the interpersonal relationships built on the acts of undermining that essentially involves a particular perpetrator and a particular target in each relationship. In fact, in early social psychology work on social interactions, Rook (1984) has found that the number of problematic ties, rather than the frequency of contact with problematic ties, predicted well-being. Similarly, in workplace relationship literature, Gerbasi, Porath, Parker, Spreitzer, and Cross (2015) have found evidence for a significant negative relationship between the number of de-energizing relationships and job performance, using a social network perspective. This stream of research points to the potential predictive value of the number of undermining ties, instead of mean level of individual undermining experienced by the target, nor the mean level of group undermining experienced by the whole team.

Taken together, the proportion of undermining coworkers toward the focal target is worthy to be examined, in order to further our understanding of coworker undermining in a team context. The proportion of undermining coworkers is defined as the share of perpetrators in relation to the total number of coworkers within the team. Here perpetrators refer to the coworkers whom the target perceives to have engaged in any level of acts that intentionally hinder the target's career success, positive reputation, and positive relationships. Studying the influence of the proportion of undermining coworkers on the target experience of undermining answers the call by scholars to develop theory more specifically for coworker mistreatment (Chiaburu & Harrison, 2008; Hershcovis & Barling, 2010). To address the aforementioned research needs, the present research aims to examine how, when, and why the proportion of coworkers in the team undermining the focal target influences the target's emotional as well as behavioral responses. I draw on the attribution-based theories of emotion and motivation (Weiner, 1985, 1986, 1995) to

develop the model of the present research. Attribution-based theories posit that individuals attempt to assign causality after there is unexpected, important, or negative goal-related outcome. The causal analysis further triggers subsequent emotional and motivational response (Weiner, 1985). The primary thesis of the theoretical framework is that the proportion of undermining coworkers influences the coping behaviors (i.e., revenge, direct communication, social withdrawal) of the targets through the attributional process. I propose that the proportion of undermining coworkers influences the target's specific emotional reactions, as they may make different attributions regarding the underlying causes of the undermining. Importantly, I delineate two pathways that captures both the interpersonal and intrapersonal attributional process (Weiner, 2000). The interpersonal attributional process is directed toward the team of coworkers, whereas the intrapersonal process is directed toward the target oneself. Specifically, I argue that when the proportion of perpetrators in the team increases, the target experiences more anger and is more likely to engage in retaliation, a kind of destructive coping response that is directed toward the perpetrators. This is because the attribution of blame toward the team becomes more evident, and the target is more motivated to restore justice. thus. In contrast, it is less likely for the target to engage in direct communication to confront the perpetrators, as the target is motivated to stay away from the perpetrators. At the same time, when the proportion increases (that means more coworkers engage in undermining behaviour toward the particular target), the target is more likely to experience greater doubt about his or her own character that might have partly caused the relational problems. Such self-directed appraisal leads to greater shame, and the target is more likely to exhibit social withdrawal as a way of coping. Overall, I theorize that when the target is undermined by a larger proportion of

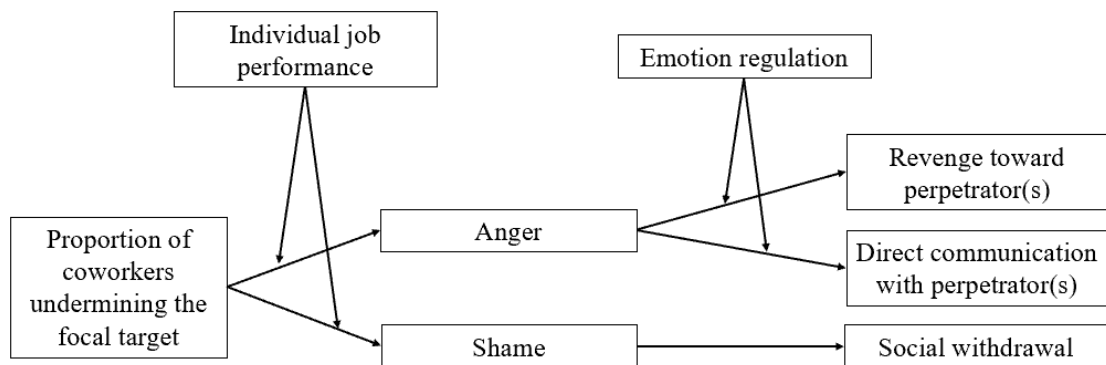
coworkers in the team, he or she is less likely to react with constructive resistance, but more likely to respond in a destructive way toward others and to withdraw oneself from the social group.

In addition, I examine who among the targets are more or less likely to act with each of the three types of coping responses: revenge toward perpetrators, direct communication with perpetrators, and social withdrawal. In accordance with the cognitive approach of emotions, I posit that individual job performance of the target, an indication of the one's social status in the team (for a review, see Anderson & Kilduff, 2009a), could influence his or her self-confidence beliefs that in turn affects the target's causality attribution and the respective strength of each pathway mentioned earlier (Bandura, 1986; Druckman & Bjork, 1994). Further, not everyone reacts in the same way toward a specific emotion. Negative emotions such as anger can lead to more or less constructive responses, depending on how individuals manage the action readiness of the specific emotions (Ilies, Pater, Lim, & Binnewies, 2012; Lebel, 2017; Oh & Farh, 2017). Thus, I propose that the emotion regulation, an individual difference, plays a role in influencing the extent to which the target will behave in a default or more regulated way in response to the action readiness of a specific emotion (Frijda, Kuipers, & Terschure, 1989).

The overall conceptual model is presented in Figure 1. To empirically test the predictions in this model, I conducted a field study with a sample size of 117 individuals in 35 teams of nine organizations from diverse industries including jewellery and watches, manufacturing, retail, and employment agency. To compute the proportion of undermining coworkers for each participant, social relations design was adopted to measure social undermining for each dyadic relationship between the focal participant and the coworkers. The predictions on emotional and behavioral

responses were mostly supported. Overall, when the proportion of undermining coworkers increased, the target was more likely to take revenge and withdraw socially via anger and shame respectively. Unexpectedly, the proportion of undermining coworkers had an insignificant relationship with direct communication via anger. Yet, as expected, such mediated relationship was significantly positive when the target possesses high emotion regulation.

Figure 1. The conceptual model



1.3 Research Objectives and Contributions

The present research aims to contribute to the social undermining literature in three ways. First, I propose that the number of perpetrators and non-perpetrators in team undermining has predictive value in the study of target responses. This novel measure expands our understanding of undermining in a team by taking the social dynamics between the focal target and each of the other coworkers into account. The extant literature focusing on the frequency of undermining experienced by the focal individual only captures the occurrence of undermining behaviors, but neglects the relational context (Hershcovis & Reich, 2013). While the acts of undermining provide information about *what* the target faces, the nature of dyadic relationships provides information about *who* in the team have acted in the negative manner.

Since a team constitutes multiple members that can form different compositions of relationship ties, the proportion of undermining coworkers provides a new perspective that was previously overlooked on the target experience of undermining in a team context. Although this perspective might also have implications on the target's work experience in the organizational context, which is an extended social network in the workplace, the present research limits the scope to the team context, representing a local social network with higher level of regular interpersonal interactions.

Second, I develop an integrated framework that encompasses two negative emotions, anger and shame, as the mechanisms that involve emotions toward others and the self, both of which would influence target behavioral responses toward social undermining in a team. Prior research has mostly examined other-directed thoughts (e.g., justice perceptions) and emotions (e.g., anger, sympathy) in response to the experience of social undermining (Crossley, 2009; Duffy et al., 2006; Ferris, Yan, Lim, Chen, & Fatimah, 2016; Lee et al., 2016). However, Duffy et al. (2002) suggested that social undermining also involves information that the target would use to evaluate himself or herself, which has not received the same amount of research attention. As such, the present research contributes to the literature by simultaneously examining the effects of team undermining on the target's psychological experiences that are oriented toward others (i.e., coworkers) and the self.

Last, the present research identifies two conditions—individual job performance as a situational factor and emotion regulation as an individual factor—under which the proportion of undermining coworkers will influence some emotional and behavioral responses to a greater or smaller extent. These two

conditions have an impact on the appraisal-emotion-behavior process that is stipulated by various theories of emotions including the appraisal theory (Roseman & Smith, 2001) and sociofunctional approach of emotions (Frijda et al., 1989; Lazarus & Folkman, 1984) . The job performance of the target, relative to other team members, provides situational information to the target, which serves as a background for the cognitive appraisal of the undermining event per se. Then, the emotion regulation is an individual factor that influences the target's ability to manage emotions and respond with a more constructive, rather than destructive, behavior.

1.4 Structure of the Thesis

With this overview of the present research, the thesis will now proceed with the following structure. In Chapter 2, I will first review the social undermining literature in detail, to identify what researchers have and have not known. I will also briefly introduce the key theoretical perspective used in this research—attribution-based theories of emotion and motivation. Next, in Chapter 3, these theoretical backgrounds guide the development of specific hypotheses. I will then explain the empirical procedure, measurements, and analytic method to test the hypotheses of my research model in Chapter 4. This is followed by Chapter 5 that presents the findings from the field study. Finally, in Chapter 6, I will discuss the theoretical and practical implications of this research, as well as limitations and suggestions for future research.

CHAPTER 2 LITERATURE REVIEW

In this chapter, I will first introduce the construct of social undermining, its development in the literature, and the gap in the literature that motivates this study. Next, I will briefly introduce the overarching theory, attributional theories (Weiner, 1985, 1986), and its application in organizational research.

2.1 Social Undermining in the Workplace

2.1.1 *Definition and Conceptualization of Social Undermining*

Social undermining in the workplace is defined as intentional behavior that hinders, over time, another person's ability to establish work-related successes, maintain or create positive interpersonal relationships, and build favourable reputations (Duffy et al., 2002). Examples of undermining behavior include criticizing the target in front of others, belittling the target's ideas, and intentionally ignoring the target. It is noteworthy that social undermining and social support do not represent the two ends of the same continuum. These two concepts are independent and exert unique influence on the target. It means that the lack of social undermining from coworkers does not imply the presence of support from coworkers. In this thesis, I focus on social undermining from coworkers, because undermining generally showed stronger impact on detrimental consequences, such as counterproductive work behaviors and physical well-being, than social support (Duffy et al., 2002).

The source of undermining can be supervisor, coworkers, or both. Despite specific sources were identified in the initial conceptualization, including the development of measurement for each source, most studies on undermining put little emphasis on the unique aspect of each source. Some studies examine the outcomes of both supervisor and coworker undermining (Duffy et al., 2002; Kammeyer-

Mueller et al., 2013). The predictions are usually aligned for the two sources, such as the outcomes of lower job satisfaction, greater intention to quit, and more counterproductive work behavior (Duffy et al., 2006). However, these research have indeed found some differential effects of undermining from supervisor and that from coworkers. Kammeyer-Mueller et al. (2013), for example, found that initial supervisor undermining toward newcomers led to more social integration, whereas initial coworker undermining led to less social integration. Further, Duffy et al. (2002) found that while high levels of support and undermining from supervisor caused more negative results across different outcomes, the results of coworker support interacting with coworker undermining were less consistent. These results suggest that supervisor and coworker undermining might not always represent the same experience. As such, studies that focus on unique aspects of undermining by each source could enrich scholarly understanding of social undermining. Also, to answer the call of scholars to develop more theories that examine coworker influence, due to its independent impact on employee outcomes beyond leader influence (Chiaburu & Harrison, 2008), the present research focuses on the presence of multiple members within a team context. , as an integral component of coworker undermining.

Importantly, in the seminal article that introduced the concept of social undermining in organizational studies, Duffy et al. (2002) emphasized two distinctive features of social undermining: the perception of intentionality and the insidious nature of harmful outcomes. First, the target has to perceive the behavior as intentional. Intentionality here refers to the target's perception that the behavior comes with a prior purpose, and it is not seen as involuntary nor spontaneous (Reason, 1990). For instance, if the target thinks that the coworker provided a wrong

piece of work-related information, due to the coworker's illness and absence from a meeting for the updated correct information, such behavior would not be considered as undermining. Extant literature has largely taken this assumption of vicious intent on the part of the perpetrator, which makes the undermining behavior violations of normative standards, and not simply incidental negative interpersonal behavior (e.g., Duffy et al., 2006; Lee et al., 2016). However, the study by (Crossley, 2009) showed that the wrongness of the violations was a matter of degree and was critically influenced by the motives (i.e., greed and malice) attributed by the target, beyond the intentional act of undermining per se. The level of severity subsequently influenced the target responses toward the perpetrator. Taken together, prior research indicates that there is a broader scope of criteria, including but not only limited to intentionality, that the target uses to evaluate how wrong the act of undermining is. In particular, the target can attribute different reasons or motives behind the intentional undermining.

Second, Duffy et al. (2002) posited that social undermining hurts the target's work successes, reputations, and relationships gradually or by degrees. It implies that social undermining usually happens over time, instead of happening only once or twice to the target. Thus, undermining studies measure the frequency of undermining behavior, either experienced as the target or performed as the perpetrator (e.g., Duffy et al., 2006). The underlying assumption is that the higher the frequency of undermining experienced over a period of time, the stronger is its negative effect on the target.

2.1.2 Social Undermining and Related Constructs

With an understanding of what social undermining is, I will now turn to what undermining is not. Over the last two decades, research interest on workplace

aggression has exploded, with a variety of constructs established, including social undermining (Duffy et al., 2002), abusive supervision (Tepper, 2000), interpersonal conflict (Spector & Jex, 1998), incivility (Andersson & Pearson, 1999), ostracism (Williams, 1997), and bullying (Zapf & Einarsen, 2001). While the definitions and conceptualizations of these constructs, at the time of their introduction, do consist of distinguishing characteristics, the rapid yet rather independent development of each specific literature has led some scholars to question the additional value of the proliferation of constructs (Hershcovis, 2011). Although the goal of the present research is not to compare and differentiate various workplace aggression constructs, it is important to have a brief understanding on how social undermining is different from these other similar constructs. This provides a background on why social undermining is of particular interest.

Social undermining and abusive supervision are the two constructs that specifically state the source of the mistreatment. Social undermining, as mentioned in the previous section, can come from supervisor or coworkers, whereas abusive supervision, as the construct name tells, can only come from the supervisor. Since the present research aims to examine a mistreatment phenomenon among coworkers in a team context, abusive supervision would not be suitable. Interpersonal conflict, on the other hand, is not clear regarding the source of mistreatment. It is defined as an organizational stressor involving disagreements between employees (Spector & Jex, 1998). Due to the nature of mutual stress for the two employees involved, it would be difficult to identify who the perpetrator and the target respectively are.

Social undermining differs from ostracism and incivility in terms of the forms and the intensity of behaviors. Undermining involves both active and passive forms of behaviors (Duffy et al., 2002), whereas ostracism is primarily passive in

nature. Ostracism is defined as the target being ignored, overlooked, or excluded (Williams, 1997). Instead of performing any overt action to harm the target, as in the case of active undermining, the perpetrators in ostracism actually avoid any action that leads to interacting with the target. Incivility is specifically defined as low intensity deviant acts with ambiguous intent to harm (Andersson & Pearson, 1999), which stands in contrast with the intentional nature included as part of the undermining definition. As the present research aims to identify the specific perpetrators within the team, the low intensity of incivility and the “invisible nature” of ostracism (Robinson, O’Reilly, & Wang, 2013), although possible, make it harder for the target to differentiate between perpetrators and non-perpetrators. A recent study on social exclusion, akin to ostracism, found that in a three-person team, when one team member excluded the target, the target would inaccurately perceive that the other inclusive member had also engaged in exclusion (Chernyak & Zayas, 2010). Therefore, undermining would be more appropriate in this study, as the perceived intent to harm sets a higher standard for a team member to be perceived as a perpetrator.

Finally, bullying refers to situations where an individual is repeatedly, and over a period of time, exposed to negative acts (Zapf & Einarsen, 2001). Of importance is the power imbalance between the perpetrator and the target, which is usually implicated in the studies of bullying (e.g., Matthiesen & Einarsen, 2001; Mikkelsen & Einarsen, 2001). Power imbalance would introduce a non-essential layer of complexity to the dynamics among team members. Since undermining does not inherently assume power difference, it keeps power dynamics as a factor distinct from the mistreatment construct. The core focus of the present research is on the

number of perpetrators within a team, thus social undermining would be more focused in this regard.

In sum, social undermining by coworker is a form of workplace aggression, with a perceived intent, on the part of the coworker perpetrator, to inhibit the target's task and interpersonal successes at work over time. The clear intent makes undermining a suitable construct for the present study, because it facilitates the differentiation between perpetrators and non-perpetrators within the same team. At the same time, the perceived intent still allows the possibility for different motives behind the same undermining behavior, which would be an important aspect for the examination of target responses toward coworker undermining.

2.1.3 Antecedents of Social Undermining

Considerable amount of research has been dedicated to investigate the nomological network of social undermining. I will organize this section of antecedents, according to the key theorized or hypothesized mechanisms in the studies, as well as the level of constructs from individual-, dyadic-, to group-level. Before sharing in detail, it is important to note that most studies used *a perpetrator perspective*. This means that most research examined the factors that influence an individual to become a perpetrator of coworker undermining. The only exception is the study by Campbell, Liao, Chuang, Zhou, and Dong (2017), which investigated the cause for an individual to be undermined as the target (i.e., *a target perspective*).

Threat to Resources or Statuses

The first group of antecedents drives the undermining behavior through inducing the sense of threat to one's own resource or status. When individuals perceive such threat, they are motivated to protect or maintain control of their resources or statuses by putting others down. As undermining is intended to block

the other person's success at work, it serves the instrumental purpose to eliminate the competition for resources and statuses from the target.

The individual-level factors in this group include Machiavellianism and bottom-line mentality of the focal employee. Machiavellianism is a multidimensional personality construct defined by four dimensions: amoral manipulation of others, desire for control over others, distrust in others' intentions, and a strong desire to status and extrinsic career success (Dahling, Whitaker, & Levy, 2009). Drawing on trait activation theory (Tett & Burnett, 2003; Tett & Guterman, 2000), research found that when there were high organizational constraints or the presence of an abusive supervisor, the trait Machiavellianism was activated, and employees high in this trait were more likely to undermine others to ensure their own successes, without considering the moral aspect of their behavior (Castille, Kuyumcu, & Bennett, 2017; Greenbaum, Hill, Mawritz, & Quade, 2017). Similarly, bottom-line mentality is a "one-dimensional thinking that revolves around securing bottom-line outcomes to the neglect of competing priorities" (Greenbaum, Mawritz, & Eissa, 2012). In essence, this research posited that the more bottom-line outcome becomes the only priority, the more likely one would use any way, even in an interpersonally harmful manner, to protect one's work results. Nevertheless, personalities including core self-evaluation and conscientiousness moderate the relationship between bottom-line mentality and undermining. This research again showed that both personality and situational factors play a role to influence the likelihood for one to engage in undermining.

Dyadic factors, particularly unfavourable social comparison (Festinger, 1954), could lead to perceived threat from the specific peer, with whom the focal employee compares. In this case, the target of undermining would be the specific

source of the perceived threat. Campbell et al. (2017) found that high individual job performance caused the dyadic counterpart to perceive greater threat from this high performer, and in turn led to greater likelihood that the high performer was undermined. Social comparison is not limited to the current performance, but also the projected trajectory of future standing (Albert, 1977). A recent study by Reh, Troster, and Van Quaquebeke (2018) showed that the target's relatively better development in terms of overall standing over a past period, compared to the focal employee, caused the focal employee to perceive greater future status threat, and tend to undermine the target to a greater extent.

The team-related antecedent relevant to status threat is group prototype content. Specifically, ideal prototype (versus central tendency prototype) implies that only a small portion of team members, that is the ideal instead of the average level, is considered the group representative, who gains more influence and resources. Kim and Wiesenfeld (2017) found that the perception of ideal prototype led to greater perceived status dispersion in the group, and group members are thus generally more likely to undermine others to maintain their own status or avoid inferior positions.

Self-esteem Threat

The second group of antecedents concerns the positive self-regard that individuals are motivated to protect. A recent article on the undermining of CEO has intriguingly revealed how the manager's ingratiating behavior toward the CEO posed self-esteem threat to themselves, and in turn caused resentment toward the CEO. The emotion of resentment subsequently influenced the manager to negatively comment on the CEO when communicating with journalists (Keeves, Westphal, & McDonald, 2017). Interestingly, this study indicates that an individual's own action

can paradoxically create the esteem-threatening situation. At the same time, group members' actions also influence one's tendency to engage in undermining. (Duffy et al., 2006) found that the group-level undermining, the aggregate level of undermining experienced by all team members, predicted individual undermining toward other members, when the focal individual's self-esteem and neuroticism were high. The argument is that this combination of traits causes these individuals to be more sensitive to the potential inferiority, and have more to lose in an environment with a group undermining norm.

Moral Disengagement

Moral disengagement is a set of cognitive mechanisms that allows the individuals to perform acts while avoiding self-sanction that would normally defer such behaviors (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996). The third group of antecedents includes situational envy (Duffy, Scott, Shaw, Tepper, & Aquino, 2012), undermining victimization (Lee et al., 2016), and team task and relationship conflict (Yu & Zellmer-Bruhn, 2018). Instead of emphasizing the instrumentality of undermining to bolster oneself, as shown in the previous two groups, these studies are concerned with the psychological processes that help perpetrators feel justified of their interpersonal harming. For example, undermining victimization consumes the individuals' cognitive resources and makes them less empathic, the individuals are more likely to *devalue the target* and believe that the target deserve the harmful treatment. As an alternative example, the same experience of being an undermining victim causes the perception of interpersonal injustice. The individuals could *reconstrue the conduct through rationalizing* undermining the target as "making things right" (Lee et al., 2016).

Despite undermining, by definition, is perceived by the target as intentional, the empirical findings of the antecedents clearly suggest that the perpetrators do not always consciously consider their behavior as intentionally harmful. Our understanding would be more comprehensive to consider that there are a variety of possible drivers or justifications, such as the supervisor bottom-line mentality or other group members' undermining behavior, even behind the same intent to self-enhance at the expense of others.

2.1.4 Consequences of Social Undermining

While most research on antecedents of social undermining study the factors that drive individuals to become perpetrators, the flip side is true for studies on consequences: a wealth of knowledge has been established on the negative impact for the targets. This line of research predominantly focused on identifying distal outcomes, with only one study exploring the proximal coping responses of the targets (Crossley, 2009). Gradually, researchers pay more attention to conditions that exacerbate or buffer the negative effects. During the recent few years, research efforts have been put to develop more integrated framework and to empirically test the specific mechanisms underlying the effect of undermining on the distal behavioral outcomes. I will now provide a review of the findings from these studies.

Distal Outcomes

There is accumulated evidence that undermining, from both supervisors and coworkers, leads to a wide range of adverse outcomes for the targets. Undermining negatively influences the target's attitudes and beliefs at work, such as lower organizational commitment, lower job satisfaction, higher job insecurity, lower self-efficacy, and the perception of less social integration (Britton et al., 2012; Duffy et al., 2002; Kammeyer-Mueller et al., 2013). Targets of undermining often encounter

problems in their health and personal well-being, for example, somatic complaints, stress, and depression (Britton et al., 2012; Duffy et al., 2002; Duffy et al., 2006). Additionally, being undermined affects the target's subsequent deviant behaviors. Supporting the initial findings by Duffy et al. (2002), further studies have shown that the targets are more likely to engage in both active counterproductive work behaviors, such as undermining toward other coworkers (Ferris et al., 2016; Lee et al., 2016), as well as passive counterproductive work, such as absenteeism and withdrawal from tasks (Kammeyer-Mueller et al., 2013). Aligned with burgeoning interest on the spillover effects between the work and family interfaces (Casper, Vaziri, Wayne, DeHauw, & Greenhaus, 2018), Barber et al. (2017) also found that the targets of undermining at work are more likely to undermine their spouses at home.

Mechanisms

Research has identified three key mechanisms on the effect of undermining on the targets. First, researchers posited that undermining, as a deviant behavior, is perceived to violate the norms of social interactions (Miller, 2001). Thus, targets are motivated to restore justice through behaving in a similarly harmful way toward the source of the injustice (e.g., undermining; Lee et al., 2016). Second, undermining consumes the target's resources to cope with the negative thoughts and emotions. As such, due to the finite pool of resource individuals possess (Muraven, Baumeister, & Tice, 1999), targets are left with less available cognitive resources to regulate their subsequent acts in a socially desirable way and tend to behave in more self-interested manner. Research has indeed shown evidence that targets of undermining are more likely to undermine their coworkers or spouses through resource depletion and self-regulatory impairment (Barber et al., 2017; Lee et al., 2016). The third

mechanism, moral disengagement, has been shown to be a function of the aforementioned two mechanisms. When the targets perceive injustice, they feel more entitled to harm others through *devaluing the target*, *obscuring the harmful consequences*, or *reconstructing the immoral conduct* (Bandura et al., 1996). In parallel, researchers argued that the depleted targets are also more likely to engage in these three cognitive mechanisms, because they are less able to empathize with the target and to perform complex reasoning on their behaviors and the associated outcomes.

Individual and Contextual Factors Influencing the Strengths of the Effects of Social Undermining on Distal Outcomes

Research has found support for the above mechanisms by identifying theory-driven moderators for the relationship between undermining and the negative outcomes. Specifically, high level of group-level undermining norm, a social contextual factor, buffers the negative individual outcomes, because the perceived level of norm violation is lower, when group members generally behave in the same manner (Duffy et al., 2006). In the study by Barber et al. (2017), exercise facilitated the recovery of resources, and thus buffered the adverse impact of depletion. Moral identity was shown to play a key role in mitigating the negative effects via moral disengagement. In contrast, earlier studies have also found that other individual differences, such as optimism (Britton et al., 2012) and communal orientation (Hepburn & Enns, 2013), could accentuate the negative outcomes, due to the higher level of expectations that individuals high in these two traits have toward positive social interactions.

In addition, the simultaneous support from the source of undermining has garnered some attention from researchers as well. Nahum-Shani et al. (2014) has

reconciled some previous inconsistent findings of the interacting effects between supervisor support and supervisor undermining by showing that high self-esteem and high quality of work life allow the individuals to be more capable to manage the inherent uncertainty that the supervisor demonstrates. Therefore, these individuals can reap the benefits of the supervisor support, while being undermined at the same time. However, the inconsistencies of the interacting effects involving coworker undermining remain a question. In the study by Duffy et al. (2002), the interacting effects of coworker support and coworker undermining across different outcome variables were much less consistent than those for supervisor support and undermining.

2.1.5 Research Gaps

Despite the advancement that research has made to understand the negative consequences of undermining, there are a few notable limitations in the extant literature.

First, group- or team-based coworker undermining is an underexplored area (Fang, 2010; Hershcovis & Barling, 2010). Most studies on coworker undermining have either examined undermining by one coworker, or a general level of undermining by all coworkers inclusively, without considering the possibility of a combination of perpetrators and non-perpetrators in the same group. The study by Duffy et al. (2006) that takes into account the group-level undermining only considers how other team members being targets serves as a contextual background for the target. Yet, it still did not capture the potential difference between individual undermining (i.e., undermining by a single coworker) versus group undermining (i.e., undermining by more than one coworkers as perpetrators) toward the same target.

Second, although research has identified many distal outcomes for the targets after experiencing undermining, the current understanding on the target proximal responses has been inadequate. Crossley (2009) only found evidence that when the target attributed greater motives of greed or malice, they perceived the act of undermining as more severe. Such evaluation led to greater anger, and the targets were more likely to take revenge and avoid the offender, as well as less likely to reconcile with the offender. This study, albeit examining three coping responses, did not find support to demonstrate any potential way for targets to respond more constructively or in a more socially acceptable manner.

Third, all research involving the evaluation of the undermining event focus on the appraisal of the perpetrators, which influences the other-directed outcomes, such as anger, blame attribution, and perceptions of interpersonal injustice. Yet, the seminal article by Duffy et al. (2002) also suggested that undermining could also bring negative self-evaluation information. This proposition of self-directed evaluation has not received equivalent research attention. Even more importantly, researchers thus know little about the consequences engendered by the self-directed appraisal.

Now, with an overall understanding on the state of the literature on social undermining, I will turn to a brief introduction of attribution-based theories of emotion and motivation, which serve as the overarching framework of the present research, and its application in organization research.

2.2 Attribution-based Theories of Emotion and Motivation

In attribution-based theories, there are two separate but related processes (Weiner, 2010). Attribution theories (Kelley, 1967; Weiner, 1985, 1986) refer to the process when individuals try to understand the events and make inferences about the

causes, based on various dimensions that I will elaborate later. Then, based on different patterns of the attribution dimensions, attributional theories of emotion and motivation further stipulate that thoughts made about the causes of events influence individuals' responses emotionally and behaviorally (Weiner, 1986). Together, these two processes constitute the basis of the present research. Specifically, I will examine how coworker undermining, as an event from the target perspective, influences the target's attribution of causality and subsequent responses.

Weiner's attributional theories (2000) can be applied to interpersonal or intrapersonal attribution. From an interpersonal perspective, individuals attempt to understand the event to make an evaluation about another individual's responsibility in causing the event. For example, when an employee performs poorly, the leader tries to attribute whether the poor performance is caused by the employee's internal issues, such as lack of ability or motivation, to determine the warranted level of punishment (Martinko & Gardner, 1987; Mitchell & Wood, 1980). In this case, the one making an attribution is a different person from the one being evaluated. From an intrapersonal perspective, individuals try to understand whether and how any part related to himself causes the event. Using the same example of poor performance, the employee can also attribute the performance to his lack of ability or situational factor like sickness. Then, the evaluator and the one being evaluated, in this case, would be the same individual.

Despite the existence of these two perspectives in the theory, most research focus on either one of the perspectives. While scholars suggest that attribution and attributional theories, as a whole, are underutilized in management research (Martinko, Harvey, & Dasborough, 2011), there is also an imbalance in the application of these two perspectives. Prior studies mostly explore an event, such as

poor performance (Ferguson, Ormiston, & Moon, 2010; Jackson & LePine, 2003; LePine & Van Dyne, 2001), or others' actions, such as coming to a meeting late (Mroz & Allen, 2017), the use of work-life policies (Bourdeau, Ollier-Malaterre, & Houfort, 2019), or help-seeking (Nadler & Chernyak-Hai, 2014), from an interpersonal perspective. This asymmetric distribution is puzzling, because interpersonal behaviors, which are very common in a social context like the workplace, inherently involves two parties: an actor and a recipient. Further, these two parties likely have prior relationships and interactions that might contribute to the events under evaluation (LePine & Van Dyne, 2001). It would be more comprehensive to take into account how the recipient evaluates the actor's role, and also his own. Indeed, recently researchers have started to develop another new perspective of relational attribution (Eberly, Holley, Johnson, & Mitchell, 2011, 2017) that explicitly considers the dyadic relationships. For example, Puranik, Koopman, Vough, and Gamache (2019) propose that the target of coworker undermining can attribute the undermining acts to the feeling of envy toward himself by the specific coworker. In addition, Peng, Schaubroeck, Chong, and Li (in press) have also simultaneously examined how abusive supervision influences both other-directed emotions (i.e., anger and fear) and self-directed emotion (i.e., shame); the other-directed emotions are driven by an attribution about the abusive supervisor, whereas the self-directed emotion is driven by an attribution about the self. The latest development in the literature nevertheless points to the direction to consider both inter- and intrapersonal perspective of attributional theories.

To establish predictions regarding the relationships among attributional thoughts, emotions, and actions, we need to first know the three dimensions of attributions (Weiner, 1980a, 1980b, 2010), since different patterns of the attribution

dimensions lead to unique emotional responses that further activates corresponding behavioral intentions (Weiner, 1986). First, locus of causality refers to whether an internal or external cause is attributed to the actor (from the interpersonal perspective) or to the self (from the intrapersonal perspective). Second, controllability refers to whether the actor or the self can volitionally control the event. Third, stability refers to the extent to which the perceived cause is going to remain stable over time.

From the interpersonal perspective, an external cause attributed to the actor indicates that he or she is not held accountable, whereas an internal cause of the actor might indicate responsibility, subject to the evaluation of the other two dimensions. Weiner (1995) suggests that, besides locus of causality, causal controllability is a necessary condition to assign a judgment of responsibility about the actor. If the actor is seen to have volitional control over the cause, he or she is held accountable, and thus worthy of blame. With the internal locus and high controllability attributions, the recipient of the negative interpersonal behavior tends to feel angry (Weiner, 1986). Otherwise, with an attribution of internal locus and low controllability, the recipient might instead feel pity or sympathy toward to the actor; yet, empirical research on social undermining has not found evidence for the emotional response of sympathy (Weiner, 1986). It might be that the severity of transgressions in an affiliation context makes it difficult for the recipient, who is harmed, to feel the other-regarding emotion. As such, the present research will focus on the emotion—anger—that has received more empirical support in studies on transgressions, as a potential mechanism.

From the intrapersonal perspective, an external locus indicates that the event was caused by factors that are unrelated to the self, and does not lead to self-

evaluation that raises or lowers self-esteem or self-worth (Weiner, 1986). Contrarily, an internal locus attributed to the self would indicate a positive or negative evaluation of one's self. In the case of a negative event that is attributed internally, the dimensions of controllability and stability together determine whether one experiences the feelings of shame or guilt. For internal, uncontrollable, and stable attributions, the focal evaluator views the cause as an inherent part of him- or herself that cannot be changed, and thus feels shameful of his or her whole self. When the evaluator views the cause as internal yet controllable and unstable, he or she attributes the cause to his or her own actions, on which the evaluator has agency. With the perceived agency and control, the evaluator would feel guilty, and is motivated to compensate (Tangney & Dearing, 2002).

In sum, drawing on both the interpersonal and intrapersonal perspectives of attributional theories, I will theorize how the increased proportion of perpetrators influences the target attributions of the undermining event, which subsequently leads to different emotional and behavioral responses.

CHAPTER 3 THEORY AND HYPOTHESES DEVELOPMENT

3.1 Multiple Perpetrators of Coworker Undermining in a Team Context

As revealed in the literature review, coworker undermining based in a team context has received limited research attention (Hershcovis & Barling, 2010). One of the unique characteristics of a team lies in the existence of multiple members within the team boundary. As such, the interpersonal experience does not occur in a social vacuum. Each episode of social interactions is experienced in relation to the presence of all team members, including the ones directly involved in the interactions and those who are indirectly involved (Salancik & Pfeffer, 1978). Social undermining toward a specific target is of no exception. Duffy et al. (2006) has succinctly spotted how other members' experience of being undermined would influence the focal target's perceptions of their own experience and the associated negative outcomes. However, their study only explored how the social context of multiple *targets* in a team moderates the effect of individual undermining, it did not examine the effect of varied number of *perpetrators* and *non-perpetrators* as a unique feature of team-based undermining. To expand our understanding of undermining in the workplace, I propose that the proportion of perpetrators undermining the focal target within a team is a factor that would influence the target responses.

By studying the number of perpetrators and non-perpetrators within a particular team size (i.e. the proportion of perpetrators within a team), this research not only explores the act of undermining per se, but takes a broader perspective that involves who the perpetrators and non-perpetrators are. I argue that this team-based perspective better captures the social dynamics in the team as a whole, as well as the nature of each dyadic relationship. This expands the usual implicit assumption, when

undermining is measured by frequency, that social undermining only concerns the target's experience of the acts, neglecting the perpetrators. In fact, in the early social psychology work on negative social interactions, in which the concept of workplace social undermining is rooted, Vinokur, Price, and Caplan (1996) utilized a social network perspective to investigate the interactions within the focal person's ego network. Specifically, the study measured the number of problematic and supportive ties in one's network, as well as the frequency of contact with these different ties (Rook, 1984). Intriguingly, the number of problematic ties, but not the frequency of contact with problematic others, significantly predicted the focal subject's well-being. Despite this finding, later conceptual development and the corresponding measurement refinement has shifted toward emphasizing the quality of individual relationships and specific components of the negative interactions (e.g., Abbey, Abramis, & Caplan, 1985; Pagel, Erdly, & Becker, 1987; Ruehlman & Karoly, 1991), gradually neglecting the role of the network-based characteristics of these interactions. Notwithstanding the advances made by measuring the frequency of social undermining, I maintain that it is critical to revisit the conceptualization of undermining from a team perspective to capture the undermining dynamics between the focal individual and each of the other team members; that is to measure the proportion of coworkers in the team undermining the focal target. This perspective of the undermining dynamics in the team cannot be captured by the previous measure of the undermining frequency.

The social dynamics of undermining from a team-based perspective, captured by the number of perpetrators and non-perpetrators, influence the target's experience and interpretation of the event. Manstead and Fischer (2001) posit that when individuals appraise an event, they not only pay attention to the object and the

one who directly performs the action, but also other individuals in the social context and the reactions of these surrounding individuals. In the case of coworker undermining in a team, the focal target would notice information related to these questions: are the rest of the members also treating me in the same negative way? Is there possibly some support from the remaining team besides the perpetrating ones? How am I being seen or evaluated by other team members or in the team as a whole? Different answers to these questions provide different inputs for social appraisal of the event, and influence the subsequent reactions.

To sum up, the key tenet of the current research is that the team composition of perpetrators and non-perpetrators provides the target with social dynamics information related to the undermining event, and in turn influences how the target appraises and interprets the events with implications on his or her experiences and responses. Before I move further to the theoretical arguments in detail, it is essential to clearly define the new measure introduced in this research—the proportion of coworkers in the team who undermine the focal target (“the proportion of undermining coworkers” hereafter). Based on the aforementioned conceptualization, I define the proportion of undermining coworkers as the number of perpetrators in the team divided by the total number of coworkers (excluding the focal employee). I also specify the perpetrator as any individual whom the focal employee perceives to have engaged in at least some level of undermining behavior over a certain period of time. As such, the non-perpetrators are individuals who are perceived as not engaging in any undermining behavior during that same period.

3.2 Coworker Undermining and Emotional Responses

Being undermined by coworkers is a negative event that triggers negative emotions and subsequently influence behavioral responses (AET; Weiss &

Cropanzano, 1996). Undermining threatens the target's basic needs of competence (e.g., self-efficacy; Duffy et al., 2002) and relatedness (e.g., social integration; Kammeyer-Mueller et al., 2013). Because coworker undermining inhibits the achievement of these personally significant and fundamental motives, it is motive-inconsistent and would elicit negative emotions in general (Frijda, 1986; Scherer, 1984; Weiss & Cropanzano, 1996). The research by Kammeyer-Mueller et al. (2013) has found that undermining was negatively related to hedonic tone. Yet, beyond the broad negative emotional outcome, hedonic tone unexpectedly did not mediate the effect of undermining on distal outcomes, for example, withdrawal behavior and social integration. One possible reason behind this empirical finding is the difference between general hedonic tone and specific negative emotions. While the valence of emotions (i.e., positive or negative) indicates whether the situation is broadly goal-consistent or goal-inconsistent for the individual, unlike each specific emotion, it does not speak to the more specific dimensions of the affective event (e.g., the source of the cause, level of certainty, individual's coping potential, etc.) and the nuances among different behavioral responses (Roseman, 2013). In fact, recent research in the broader workplace mistreatment literature has started to pay more attention to the role of specific emotions, which facilitates our understanding on why one individual might respond in an entirely different way from another, even both are facing the same situation of mistreatment (Ilies, Pater, Lim, & Binnewies, 2012; Lebel, 2017; Oh & Farh, 2017). Therefore, to address the research question on how and why the proportion of undermining coworkers within a team influences specific types of behavioral response, the present research is aligned with the recent development to investigate the crucial role of specific emotions as the underlying psychological process.

Among the variety of emotions that can be elicited by an emotionally charged interpersonal event, I mainly draw on attribution-based theories to delineate the two emotions, anger and shame, that are of particular interest in this research (Weiner, 1985, 1986, 2010). The key tenet of my theoretical model is that when the proportion of undermining coworkers varies, the target's appraisal of the causes behind the undermining event would also change. There are interpersonal and intrapersonal processes under attributional theories (Weiner, 2000). Adopting the way Weiner (2000) metaphorically describes these two processes, when making interpersonal attribution, the target evaluates the event of undermining like a judge and assess whether the team of coworkers is worthy of blame (Weiner, 1995). When making intrapersonal attribution, the target appraises the event like a scientist and attempts to find out whether and how self-relevant factors cause the event to happen; this self-directed appraisal has further implication on the target's self-worth. Based on these two sub-processes, I argue that the target will engage in both other- and self-directed attributions, which in turn trigger emotions specifically toward coworkers in the team and the self. With the emphasis on the other- and self-focused processes and outcomes, the aim of this research is thus not to exhaustively investigate the effect on all possible emotions. Instead, I focus on the two emotions, anger and shame, that are representative in the mistreatment literature, and are most relevant to the aforementioned other- and self-directed attributional processes respectively.

3.2.1 The Proportion of Undermining Coworkers and Anger

Anger or hostility is an unpleasant emotion, characterized by the antagonism toward a specific other and associated with the dynamics of (in)justice (Lambert, Eadeh, & Hanson, 2019; Lewis, 2014; Roseman, 2013; Roseman, Wiest, & Swartz,

1994). There is well-established evidence on a positive relationship between experiencing workplace aggression and the feeling of anger (e.g., Ferris et al., 2016; Lim, Ilies, Koopman, Christoforou, & Arvey, 2018; Peng et al., in press). The primary argument in this relationship is that when the perpetrators act in ways that are violating the normative standard of respect in interpersonal interactions, the target experiences the feeling of injustice and considers the perpetrators as blameworthy (Miller, 2001). Importantly, the elicited anger in these prior studies was examined as either toward the specific perpetrator(s) or a general state at that moment. Since the present research emphasizes the role of the whole team in the target appraisal, I examine the elicited anger toward the team of coworkers, instead of toward specific perpetrators. Research found that a collective entity that is seen as possessing agentic mental states, such as companies, can elicit anger when judged as villain of transgression (Rai & Diermeier, 2015). In this section, I will draw on the interpersonal attributional theory to argue that the proportion of undermining coworkers is positively associated with the target's experienced anger toward the team of coworkers.

When the proportion of coworkers undermining the target increases, the target would increasingly perceive the undermining event as a team problem and attribute blame toward the whole team. According to attributional theory from an interpersonal perspective, the cause can be internal and controllable by the actor, or external and uncontrollable by the actor (Weiner, 1995). For example, an employee can attribute the reason of missing a project deadline to the team's poor teamwork, which is an internal cause for the actor, or to the overwhelming workload faced by the team during the peak season, which is more external or situational cause for the actor. The team is considered to hold greater responsibility in the former case than

the latter. In the case of social undermining in a team context, the actor or the subject of appraisal is the team of coworkers and the evaluator is the target. When there is a small proportion of coworkers undermining the target, for instance, only a single perpetrator, the target tends to externalize the blame for the threats he or she experiences, because of self-serving bias (Miller & Ross, 1975). Importantly, the target not only externalizes the blame to other parties beside him- or herself, but the responsibility of wrongness is specifically attributed as an internal cause of the specific perpetrator but not the team as a whole. As social norms usually promote respectful positive interactions, and individuals are socialized to follow social norms, attribution theory posits that individuals are more likely to be seen as performing negative behavior at their own will, which leads to an idiosyncratic internal locus of attribution (Kelley, 1973). This idiosyncratic attribution is further reinforced by the majority of non-perpetrators who stand in stark contrast with the perpetrators who also violate the group norm. However, when the proportion of perpetrators increases, it is more ambiguous on exactly whom the negative experience of being undermined should be blamed. Laypersons attempt to search for the cause that co-occurs with the effect, which is one of the principles used in attribution (Kelley, 1967). When a large proportion of coworkers undermine the target, the team factor becomes more consistent across various undermining encounters, whereas the presence of each perpetrator across all incidents of undermining is comparatively less consistent. In fact, team factors, such as leader's abusive supervision or bottom-line mentality were found to drive coworker undermining behavior (Greenbaum et al., 2017; Greenbaum et al., 2012). As such, the target is likely to attribute that the team, rather than individual perpetrators, is responsible.

Moreover, the presence of more perpetrators in a team changes the social appraisal of the event of undermining and, in particular, what the acceptable norm is within that team locally. Fairness theory (Folger & Cropanzano, 2001) and much supporting evidence shows that negative interactions, such as undermining, violate societal normative expectations in general (Aryee, Chen, Sun, & Debrah, 2007; Bies, 2001; Duffy et al., 2006; Lee et al., 2016). Coworkers are thus usually expected not to engage in undermining behavior; when they do, the behavior is perceived as wrongdoing or unjust. Yet, the prevalence of undermining toward the focal target indicates an alternative local group norm. Even if the non-perpetrators do not actively engage in undermining behavior, they are likely to be perceived as a bystander who tolerates the emergence of the undermining norm from the target perspective. The study by Chernyak and Zayas (2010) found that in a virtual ball-tossing game with three people, the target who was excluded by one while included by another mistakenly perceived the inclusive others as part of the exclusion. I argue that this inaccurate perception of the non-perpetrators is much more salient, when the target perceives an overall unjust team norm and develops a lower level of trust propensity toward any member (Baer, Matta, Kim, Welsh, & Garud, 2018). As a result, the target perceives a higher level of injustice among the whole team of coworkers.

In sum, I thus argue that when undermining is performed by an increasing proportion of coworkers within the team, the level of wrongness and responsibility that is attributed to the team of coworkers becomes higher. The target would perceive that the team in general is more blameworthy and less just. Since anger is generated by the inference of responsibility and blame (Averill, 1982, 1983; Folger

& Cropanzano, 2001; Weiner, 1995), the target is likely to experience a higher level of anger toward coworkers.

Hypothesis 1: The proportion of coworkers undermining the target is positively related to anger toward coworkers.

3.2.2 The Proportion of Undermining Coworkers and Shame

Shame is a self-conscious emotion that is associated with having deficits, flaws, and failures of the self being exposed (Lewis, 1992; Tangney & Dearing, 2002). It is elicited by a negative global self-evaluation and accompanied by a sense of unattractiveness and unworthiness about the self (Lewis, 1971; Roseman, 2013). Of importance, the self-evaluation is fundamentally in relation to social others; theories of shame posit that the focus of shame concerns how others think of the self (Arndt & Goldenberg, 2004), as much as how the focal individual creates self-judgment that can be partly created through past interactions with others (Baldwin, 1997). Gilbert (2007) succinctly argued that shame is an evolutionary marker of relationship safety, that indicates how much one fits in, belongs, and feels accepted by others. Therefore, shame is a particularly relevant emotional response, when the target of social undermining faces the risk of damaged interpersonal relationships. Despite the apparent relevance, the extant literature of mistreatment, including social undermining, has geared toward the emotional reaction toward the perpetrators, and has not paid much attention to self-directed emotional responses. Only until very recently, organizational researchers have started to suggest and examine the relationship between experiencing abusive supervision and the feeling of shame (Oh & Farh, 2017; Peng et al., in press). To my best knowledge, this will be the first study to examine the relationship between social undermining and shame. Drawing on intrapersonal attributional theory, I argue that when the proportion of

undermining coworkers in the team increases, the target's feeling of shame intensifies.

When the proportion of undermining coworkers increases, the target is more likely to take into account his or her own role as part of the causes of the negative interactions. According to the intrapersonal attributional theory, the target attempts to infer whether the locus of causality is external or internal to the self (Weiner, 2000). As an illustration, when an individual is being rejected by a date, he or she can attribute to a reason that is external, for example, the date is busy; on the other hand, the individual can attribute to an internal cause, such as his or her unattractive appearance or poor communication when making the invitation. Likewise, such different loci of causality can be attributed to the undermining event as well.

In their seminal article on social undermining, Duffy et al. (2002) suggests that the act of undermining sends negative self-evaluative information to the target, and empirically found that undermining led to a lower level of self-efficacy. Building on their finding, I propose that the salience and credibility of the negative information varies as the number of perpetrators within the team changes. In the case of a single or a minority of perpetrators in the team, the target can easily disregard the negative information and defend oneself by blaming on the part of the perpetrators. This tendency is especially facilitated by the presence of the majority of non-perpetrators; the target can engage in counterfactual thinking to reason that the perpetrators *could have* treated him or her in the same neutral or positive way like the rest of the team (Folger & Cropanzano, 1998). In contrast, the negative information becomes more salient, when it comes through the undermining by majority or even all coworkers. With the higher level of information consistency across different coworkers, the target can no longer easily dismiss nor completely

disregard the information. Then, the target is more likely to internalize the negative evaluation to him- or herself. In addition, because it is harder for the target to attribute the interpersonal problem to be a dyadic issue and aim to discern the specific drives behind the undermining, the target likely associates the negative self-evaluative information to an underlying problem of the global self, which is harder to alter and less controllable (Dweck & Leggett, 1988). When the target attributes the undermining to an internal uncontrollable cause of the self, he or she would see the self as inherently flawed, which adversely affects self-worth and engenders the shameful feeling.

Coworker undermining also indicates one's vulnerable social position in the eyes of others, because undermining involves the display of dislike by the perpetrator (Vinokur et al., 1996). While a single or small portion of perpetrators might reflect an idiosyncratic relationship problem between the target and the specific perpetrator, a larger proportion of undermining coworkers reflects an overall dynamic of rejection and exclusion against the target. In fact, in the ostracism literature, research found evidence that unanimous exclusion led to worse outcomes than partial exclusion for both adults and children samples (Dewall, Twenge, Bushman, Im, & Williams, 2010; Sandstrom et al., 2017). Therefore, on top of the internalization of blame, the increasing proportion of perpetrators also poses a greater threat to the social self and individual's need for belongingness. The tainted social image in turn triggers shame as an emotional response (Gilbert, 1998; Kam & Bond, 2008, 2009).

Taken together, when there are more perpetrators within the team, the target feels a higher level of social rejection, and is more likely to attribute the cause of such negative event to the inherent undesirability of the self. Both contribute to the

intensified feeling of shame that is linked with the appraisal of unworthiness. I thus develop the hypothesis as follows.

Hypothesis 2: The proportion of coworkers undermining the target is positively related to shame toward the self.

3.2.3 The Moderating Role of Individual Job Performance

As mentioned previously, the appraisal of the undermining event also involves the relational dynamics between the target and the perpetrators. Besides the relationship quality among team members, each member's status, oftentimes indicated by the individual skills and job performance (for a review, see Anderson & Kilduff, 2009a), is a crucial factor that influences the interpersonal dynamics. High-status individuals with perceived competence are more well-respected, deferred to, and have greater influence in the social group (Anderson & Kilduff, 2009b; Cheng, Tracy, Foulsham, Kingstone, & Henrich, 2013). A study on abusive supervision suggested that supervisors would be less likely to abuse higher performing employees, because the supervisors perceive high performers to be more competent and more deserving of fair treatment (Tepper, Moss, & Duffy, 2011). I argue that high performing employees possess similar perceptions regarding their own deservingness of being mistreated. High performers perceive themselves to be more competent and have higher expectation toward fair treatment by coworkers. Also, the better they perform, they would expect even more coworkers, who perform relatively worse, to defer to themselves. Therefore, the experience of being undermined by the majority of coworkers fails the justice expectation of high performers to greater extent than that of low performers.

Hypothesis 3: Individual job performance moderates the positive relationship between the proportion of coworkers undermining the target

and anger toward coworkers, such that the relationship is stronger, when the individual job performance of the target is higher rather lower.

At the same time, individual job performance influences the target's self-directed appraisal. I propose that high-performing targets are less affected by the undermining event, when they evaluate their social positions in the team and their self-worth. First, as I pointed out earlier, good performance usually affords the employee a higher social rank. From a resource perspective, other coworkers need to rely on high performers for some resource benefits. Campbell et al. (2017) showed an interesting finding that although high performers are likely to be undermined more frequently, they are also more likely to receive support from coworkers. Therefore, when both are undermined, compared to low performers, high performers are still more likely to retain some instrumental relationships and not fully rejected. Second, under influence of the reciprocal relationship between performance and self-efficacy (Lindsley, Brass, & Thomas, 1995), when the target has sufficiently high level of self-efficacy, he or she might be more likely to interpret that the coworkers envy the positive qualities, and feel pride instead of shame (Puranik et al., 2019). Overall, I thus expect that high-performing target will be less influenced by the negative self-evaluative information sent by the perpetrators.

Hypothesis 4: Individual job performance moderates the positive relationship between the proportion of coworkers undermining the target and shame toward the self, such that the relationship is weaker, when the individual job performance of the target is higher rather than lower.

3.3 Coworker Undermining and Behavioral Responses

In addition to emotional responses, the present research aims to examine how the target behaviorally reacts to the varying proportion of undermining coworkers

within the team as well. Here I will primarily focus on the interpersonal and intrapersonal aspects of attributional theories of motivation (Weiner, 2000). That is to examine how the causal attribution of the undermining event influences the motivation to act toward the coworkers and the self respectively. I also draw on coping and the broader mistreatment literatures to first identify specific relevant behaviors as potential responses.

3.3.1 The Proportion of Undermining Coworkers and Other-directed Behavioral Responses

While there can be a wide variety of ways that the target acts to respond to undermining, one of the most commonly studied behavioral strategies after experiencing mistreatment is to resist against the perpetrators via various forms of actions (e.g., Andersson & Pearson, 1999; Tepper, Duffy, & Shaw, 2001). Different forms of responses engender different outcomes. Some might be more dysfunctional than the others, and that they cause subsequent negative outcomes to other individuals in the organization or the organization itself (Griffin, O'Leary-Kelly, & Collins, 1998; Tepper et al., 2001). Yet, some forms might also be more functional than the others in terms of the coping effectiveness for the target (Hershcovis, Cameron, Gervais, & Bozeman, 2018; Tepper, Moss, Lockhart, & Carr, 2007).

One dysfunctional form is retaliation, or revenge (Bies & Tripp, 1996; Bies & Tripp, 1998), which has been a key outcome in aggression research. According to (Averill, 1982), retaliation involves the desire to punish the perpetrators for malicious acts. Skarlicki and Folger (1997) have also defined retaliation as behavior that seeks to “make the wrongdoer pay” for a meaningfully harmful action toward the target. For example, conceptualizing abusive supervision as aggression, subordinates who are abused by their supervisors are more likely to perform

supervisor-directed deviance or aggress toward the supervisors, as a way to retaliate (Lian et al., 2014; M. S. Mitchell & Ambrose, 2007; Restubog, Scott, & Zagenczyk, 2011); in undermining literature, Crossley (2009) also found that attributing malicious or greedy motives to the act of undermining increased the chance of revenge toward the offenders. Revenge is dysfunctional, because the target then gets into the negativity spiral that becomes a vicious cycle of aggression (Andersson & Pearson, 1999). It not only likely brings further repercussions, but also damages the reputation of the target for his or her own norm-violating behavior.

An alternative more functional form of response is direct communication with the perpetrators. Direct communication refers to efforts that are directed to maintain relationships by communicating relational expectations, questioning relational injustice, and openly discussing problems with others (Waldron, 1991). Despite that direct communication tactics, as one way of relationship maintenance communication, have only been studied in abusive supervision and non-target specific incivility literature (Hershcovis et al., 2018; Tepper et al., 2007), they are equally relevant to the coworker context, as maintaining coworker relationships are also crucial to perform one's work effectively (Cross & Cummings, 2004; Sparrowe, Liden, Wayne, & Kraimer, 2001). I thus expand the study of direct communication to coworker undermining. Hershcovis et al. (2018) found that confrontation, which is conceptually similar to direct communication, reduces the target's deviant behavior and the adverse impact of incivility on well-being, so it is considered to be more adaptive for the individuals.

From the perspective of interpersonal attribution, the evaluator (i.e., the target) is to find out whether the team is accountable and deserves to be blamed. Should the team of coworkers be attributed with internal responsibility, the target is

then motivated to restore justice by punishing coworkers (Rudolph, Roesch, Greitemeyer, & Weiner, 2004). As the proportion of undermining coworkers increases within the team, the target will be more likely to take an active approach to make the wrongdoers pay for their actions for two reasons. First, similar to what I argued earlier for the effect of the proportion of undermining coworkers on anger, the target perceives an unjust norm within the team. He or she feels more entitled to engage in deviant behavior through moral disengagement, which enables the target to justify his or her own retaliation as an appropriate way of restoring justice (Bandura et al., 1996). Such act would be more constrained when the proportion of undermining coworkers decreases, because there are more third-party witnesses who are upholding the interpersonal justice and would evaluate the act of retaliation as unethical, according to deontic justice theory (Hershcovis & Bhatnagar, 2017; Mitchell, Vogel, & Folger, 2015). Second, the target is less concerned about potential adverse consequences that the revenge brings to the team. Since the target attributes greater responsibility to the whole team, the target is also motivated to punish the team by affecting the other coworkers' productivity or relationships, which could indirectly worsen the team performance. Therefore, I predict that with greater blame attributed to the team as a whole as well as less concern about the remaining non-perpetrators, the target is more likely to take the destructive approach to take revenge against the perpetrators.

Hypothesis 5a: The proportion of coworkers undermining the target is positively related to revenge toward perpetrators.

Contrarily, with the greater attribution of blame to the whole team, the target is less likely to engage in constructive communication with the perpetrators. Despite direct communication could possibly negotiate the relational expectations and

restore a balance of justice between the target and coworkers, it requires efforts and investment of time from the target to initiate and maintain such two-way interactions. I argue that the target would be motivated to stay away from perpetrators because communicating with one or two perpetrators might not be effective to influence the team undermining dynamics anymore. Folkman, Lazarus, Gruen, and DeLongis (1986) posit that the target performs secondary appraisal of the coping potential. Indeed, as study on coordinated deviance showed, deviants develop affective trust with one another (Schabram, Robinson, & Cruz, 2018); although implicit, it is likely the perpetrators feel a sense of affective connection with the others who undermine the same target. The closer the group of perpetrators is, the less power the target holds. I thus develop the following prediction.

Hypothesis 5b: The proportion of coworkers undermining the target is negatively related to direct communication with perpetrators.

3.3.2 The Mediating Role of Anger

According to various appraisal theories of emotions (Frijda et al., 1989; Lazarus, 1991; Lazarus & Folkman, 1984; Roseman et al., 1994), each specific emotion elicited by specific pattern of appraisal generates its unique strategy to restore personal well-being. In this section, I will elaborate how the appraisal of the varying proportion of undermining coworkers influences the other-directed behavioral responses through the emotional experience of anger.

Anger leads to a dominant action tendency to fight against the source of harm, who are the perpetrators in the case of coworker undermining (Smith & Ellsworth, 1985, 1987). In the Emotion System model (Roseman, 2013) and other related appraisal theories, there are a few components that altogether give rise to this action readiness. The phenomenological component of anger concerns the

perceptions of injustice in a particular situation. The emotivational component of anger provides a goal to hurt or get back at the source of harm, in order to motivate instrumental actions to move against that source. Past research has provided evidence on the relationship between the experience of anger or hostility and subsequent aggressive behaviors, such as abusive supervision, deviance, and marital aggression (Liang et al., 2016; Lim et al., 2018; Peng et al., in press). Taken together, when the target makes a greater attribution of accountability to the team of coworkers, he or she experiences a higher level of anger, then the target is more motivated to get back at the perpetrators through revenge.

Hypothesis 6a: Anger mediates the positive relationship between the proportion of coworkers undermining the target and revenge toward perpetrators.

Further, the increasing proportion of undermining coworkers also influences the likelihood for the target to engage in direct communication with the coworkers through anger. Moving the source of harm away is the default action tendency with the experience of anger, thus the goal of the target is to fight against the perpetrators to either stop any further harmful actions or keep the perpetrators. Although direct communication represents an approach-oriented behavior that is aligned with the approach orientation of anger, I propose that it is less likely to be the default behavioral outcome. Direct communication involves negotiating priorities between the target and perpetrators, it does not guarantee an effective outcome for the target, if the only motivational goal of anger is to fight against or get even with the perpetrators. Therefore, I predict that an increasing proportion of undermining coworkers leads to less direct communication with perpetrators via anger.

Hypothesis 6b: Anger mediates the negative relationship between the proportion of coworkers undermining the target and direct communication with perpetrators.

3.3.3 The Proportion of Undermining Coworkers and Self-directed Behavioral Response

The behavioral response of the target can be directed toward the self, beyond those actions targeted at the perpetrators. Although social undermining research has identified avoidance as a possible behavioral response besides revenge or retaliation, avoidance is less clearly other-directed or self-directed. The target could have engaged in avoidance because he or she aims to stay away from the perpetrators, with which the perpetrators are the focus of the action. By drawing on the broader mistreatment literatures, I thus identify social withdrawal as the proximal self-directed behavioral outcome that is likely influenced by coworker undermining. I define social withdrawal as “actions aimed at staying away from other people or preventing other people from knowing about a stressful situation or its emotional effects” (Skinner, Edge, Altman, & Sherwood, 2003). Nifadkar and Bauer (2016) found that newcomers having more relationship conflict with coworkers experienced more social anxiety and were less likely to seek information from coworkers. Kammeyer-Mueller et al. (2013) also found that newcomers who experienced supervisor and coworker undermining were less socially integrated. Next, I will argue how the proportion of undermining coworkers influences the target’s tendency to socially withdraw.

When there are more perpetrators in the team, the target is more motivated to protect oneself from further threat by avoiding exposure in the social environment. From intrapersonal attributional perspective, as the target becomes more convinced

that he or she has caused the undermining because of the negative self-evaluative information sent by the perpetrators, the target is more motivated to prevent any more harm to his or her image by avoiding interactions with others and minimizing the chance that others can judge oneself further (Weiner, 2000). Also because of the attribution to the problem of the global self, which cannot be repaired, the only feasible way is to hide the flaw from others. This parallels the evidence in the stigmatization literature; dirty work employees are very aware of the perceived stereotypes (Mikolon, Kreiner, & Wieseke, 2016), and such awareness made them very sensitive toward others' slights (Kramer, 1998). As such, individuals in stigmatized occupations usually withdraw from the bigger communities, and only resort to their own inner circle for support (Wolfe & Blithe, 2015). When an increasing proportion of coworkers are undermining the target, the target becomes more motivated to create distance from the general others in the team.

Besides, according to belongingness theory, when the target experiences negative interactions and feels left out, they feel socially anxious (Baumeister & Leary, 1995). When there is a minority of perpetrators, this feeling of exclusion is less salient. Also, the target can approach the non-perpetrators to fulfill the need for belongingness. However, this possibility becomes slimmer when the proportion of undermining coworkers gradually increases and becomes the majority in the team. The social connections in the team become generally damaged. The feasible option remained would be to withdraw from others altogether.

Hypothesis 7: The proportion of coworkers undermining the target is positively related to social withdrawal.

3.3.4 *The Mediation Role of Shame*

When one experiences shame, the strategy of coping is to move the self away (Roseman, 2013; Roseman et al., 1994). The motivational goal of this emotional experience is to get the self out of sight and protect the self from further threat to the identity, especially in situations with social risks (De Hooge, Zeelenberg, & Breugelmans, 2010). Accordingly, the action tendency is to hide and withdraw from others whom the focal individual anticipates disapproval (Frijda et al., 1989; Tangney, Miller, Flicker, & Barlow, 1996). Moreover, due to the negative evaluation signalled by undermining and the internalization of blame toward oneself, the target would consider his or her further contribution to the team as worthless. Hence, the target is likely to minimize any involvement at work. This is aligned with what humility literature suggests. Self-abasing humility, an emotional sentiment including the feeling of shame, was positively associated with negative self-insights and the action tendency to hide and be alone (Weidman, Cheng, & Tracy, 2018). Extending this to undermining literature, I thus expect that increased shame is the underlying mechanism of why the target facing a larger proportion of undermining coworkers would exhibit a greater tendency of social withdrawal.

Hypothesis 8: Shame mediates the positive relationship between the proportion of coworkers undermining the target and social withdrawal.

3.4 Overall Moderated-mediated Relationships

Up till now, I have identified two distinct pathways, through which the proportion of undermining coworkers in a team would influence three behavioral responses, namely revenge, direct communication, and social withdrawal, as different ways of coping. Coping strategies can have more homogeneous or distinct functionalities, which in turn bring different consequences for the individual

(Skinner et al., 2003). It is thus important to also examine who among the targets are more or less likely to pursue each type of the responses.

Upon the overarching framework of the cognitive appraisals leading to emotions and corresponding behavioral reactions, individual differences could play a role in moderating how one appraises the situation of undermining, as well as how one reacts to the elicited emotion. Earlier on, I have delineated how individual job performance influences whether one would be more or less likely to experience anger and shame. In this section, I will integrate the moderating effect of another emotion-based individual difference, emotion regulation, on the relationship between emotions and behavioral responses, to establish the overall moderated mediating relationships stipulated in my conceptual model.

In the emotion regulation literature, researchers have suggested that different actions can serve the same emotivational goal associated with each specific emotion, contingent on the presence of situational constraints or individual emotional regulation skills (Gross, 1998, 2001, 2008). Emotion regulation involves the ability to override automatic processing tendencies (Gross, 1998). Individuals higher in this capability can take into account of the long-term consequences of their actions, mitigate impulsive responses, and strive for emotional states that are beneficial for the self and others (Mayer & Salovey, 1995). Extending this notion to the mistreatment literature, Oh and Farh (2017) proposed that abused subordinates with higher emotional regulation skills are able to engage in proactive coping (Aspinwall & Taylor, 1997) and increase work efforts to enhance one's own leverage when facing the supervisors. Aligned with this reasoning, I argue that emotion regulation differentially influences the extent to which the target of undermining would

respond by revenge or direct communication, which differs in their impulsiveness and potential outcomes.

Revenge can be costly for the target in the modern social context in the long term. While it might stop the threat in the short term because the perpetrators are harmed as well, it also puts the target in a disadvantaged position in the bigger social environment. From the deontic justice perspective of a third party (Cropanzano, Goldman, & Folger, 2003), the target who takes revenge also violates the social norm of not harming others. Indeed, in situations of customer mistreatment toward employees, observers (i.e., other customer witnesses) were less likely to give support to the employees who responded in an uncivil manner toward the perpetrators (Hershcovis & Bhatnagar, 2017). Since the target reactions toward the undermining coworkers likely have subsequent effect on how they are judged by other coworkers or even the supervisor, I argue that those with higher emotion regulation engage in more sophisticated and long-term consideration of these potential risks. These targets, compared to those with lower emotion regulation, are less likely to take revenge, which is a more automatic and default action tendency (Frijda, 1987), even when they are equally furious with the perpetrators' actions.

On the contrary, direct communication reflects a more deliberative approach to respond to undermining. Direct communication, akin to negotiation that is considered as a higher-order family of coping, involves compromising and exploring priority between the two parties (Skinner et al., 2003). It focuses on the way forward and relationship maintenance, instead of destroying the source of harm that damages the relationships further; Tepper et al. (2001) conceptualized direct communication as a more constructive resistance toward abusive supervision. To embrace the more strategic way of coping with mistreatment, the target needs to effectively manage the

emotional experience, so that he or she is able to retain the energy fuelled by the negative emotion, and yet able to maintain the perspective of long-term benefits and costs, as well as keep a cool-headed manner when carrying out the actions. Although not directly speaking to the mistreatment literature, Lebel (2017) proposed in his conceptual paper regarding a potentially positive relationship between anger and proactive behavior, depending on the level of emotion regulation knowledge. Given the emphasis on bringing a positive change to the relational dynamic between the target and the perpetrators, I expect that anger can similarly facilitate a constructive reaction of direct communication, when the target possesses high rather than low emotion regulation.

Recalled from the previous theorizing of the moderating effect of individual job performance, I predict that individuals with higher job performance are more likely to experience anger, which in turn are more motivated to exhibit approach-oriented behaviors. Further, among these individuals who are fuelled by the arousal of anger, those with higher emotion regulation possess better skills in mitigating impulsive and destructive response like revenge, as well as facilitating the more constructive behavioral response like direct communication with the undermining coworkers. These arguments give rise to the following two hypotheses.

Hypothesis 9a: Individual job performance and emotion regulation moderate the mediated relationship between the proportion of coworkers undermining the target and revenge via anger, such that the relationship is the most positive when individual job performance is high and emotion regulation is low.

Hypothesis 9b: Individual job performance and emotion regulation moderate the mediated relationship between the proportion of coworkers undermining

the target and direct communication via anger, such that the relationship is the most positive when individual job performance is high and emotion regulation is also high.

For the self-directed pathway, the primary motivational goal triggered by the emotional experience of shame is to hide oneself from social connections. Since social withdrawal has no explicit and immediate adverse impact on other coworkers in the team, on the one hand, I maintain that individuals high in emotion regulation might not necessarily see the need to mitigate such actions. In fact, being able to protect oneself from further exposure of threats might facilitate better work conditions within the team. On the other hand, social withdrawal might be perceived as submissive that invites recurrent undermining. Because of potentially competing arguments, I do not develop specific prediction regarding the moderating effect of emotion regulation on the relationship between shame and social withdrawal. In general, I expect that individuals with better job performance is less likely to engage in social withdrawal, because they tend to retain a level of social support simultaneously with undermining and experience less shame.

Hypothesis 10: Individual job performance moderates the mediated relationship between the proportion of coworkers undermining the target and social withdrawal via shame, such that the relationship is weaker when individual job performance is higher rather than lower.

CHAPTER 4 METHOD

4.1 Participants and Procedure

A field study was conducted to empirically test the hypotheses of the research model. This research study has been approved by the Human Subjects Ethics Sub-committee at the Hong Kong Polytechnic University (reference number: HSEARS20190331001). Nine organizations from a variety of industries, including manufacturing, jewellery and watches, retail, and employment agency, based in Hong Kong participated in the study. One hundred and fifty-two employees working in 37 teams were invited to participate. 125 employees from 35 teams completed the whole survey, with a response rate of 82.2%. Among these participants who completed, when asked to verify if the provided coworker names were their team members, 8 of them could only confirm one or less team member. These 8 participants were excluded, because their responses would not be based on a team context with at least three members in total. Then, responses from 117 employees (82 women, 35 men; $M_{\text{age}} = 37.83$ years, $SD_{\text{age}} = 8.47$) in 35 teams were kept for the analyses reported in the next section. The average team size was 3.34. Team leaders were also invited to participate and evaluate the individual job performance of every team member. One hundred and six matched responses were collected from the leaders; the job performance of the 11 employees who did not receive a matched response from their leaders were handled as missing values.

All key variables in the theoretical model were self-rated by the employees, except that team leaders rated their individual job performance, at one time point. At the beginning of both the leader and employee surveys, I provided general information regarding the research and obtained written consent from each participant. When participants completed the whole study, they were thanked and

received a supermarket voucher valued at HK\$50 as a token of gratitude for their participation.

Before the survey was conducted, I obtained complete participant name lists from each organization through their human resources departments. The name lists included the team member information, such as full names and email addresses, as well as the names of their corresponding team leaders to indicate the teams they worked in. As such, after data were collected, I was able to match the leader response with each team member response, based on the name lists. Moreover, the name lists enabled a personalized design of the online survey to be distributed to each employee via email. In each survey, social relations design was deployed to measure the social undermining behaviors, which each participant perceived each of his or her coworkers in the team had performed toward himself or herself.

4.2 Measures

All measures undergone the back-translation procedure (Brislin, 1970) to ensure the validity of items that were presented in Traditional Chinese in the surveys.

Proportion of coworkers undermining the focal target. Before computing the proportion of undermining coworkers, I first identified who within the team was perceived by the focal participant to have engaged in undermining behaviors over the last three months. Employees rated the frequency of undermining behaviors by each of their coworkers, using the 7-item scale developed by Duffy et al. (2006). Sample items included “This coworker belittled me or my ideas” and “This coworker criticized me in front of other coworkers” (1 = *never* to 7 = *all the time*). Because social undermining is a low base-rate behavior, even a low level of occurrence has been shown to be predictive of negative outcomes for the targets. I

categorized the coworker who had engaged in any level of undermining behaviors as a perpetrator and this coworker was coded as “1”. The proportion of undermining coworkers for each focal participant was computed by the number of perpetrators divided by the total number of coworkers.

Anger. Anger was measured by asking the focal participant to rate the extent to which he or she had felt “angry”, “hostile”, “enraged”, and “irritated” during their interactions with his or her team of coworkers over the last three months (1 = *not at all* to 7 = *extremely*). These 4 items were adapted from PANAS (Watson, Clark, & Tellegen, 1988) and the scale used in previous undermining research (Crossley, 2009).

Shame. Shame was assessed by asking participant to rate the extent to which he or she had felt “ashamed”, “humiliated”, and “disgraced” during the interactions with coworkers during the previous three months (1 = *not at all* to 7 = *extremely*). These items were initially developed by Tangney et al. (1996).

Revenge toward perpetrators. I measured revenge toward perpetrators with three items that were initially developed by Aquino, Tripp, and Bies (2001) and used in the undermining study by Crossley (2009). One of the sample items was “I did something to make them get what they deserve” (1 = *strongly disagree* to 7 = *strongly agree*).

Direct communication with perpetrators. I will measure direct communication with perpetrators with a 4-item scale adapted from the original scale developed by Waldron (1991) and later used by Tepper et al. (2007). The employee participant will complete this measure at Time 3. Sample items include “I spoke up when I felt they have treated me unjustly” and “I explicitly told them how I expected to be treated at work” (1 = *strongly disagree* to 7 = *strongly agree*).

Social withdrawal. Social withdrawal is assessed by a 6-item scale adapted to the organizational context, based on the original scale developed by Repetti (1989) and used by Lim et al. (2018). The employee participant will complete this measure at Time 3. Sample items include “I wanted to be alone”, “I avoided talking about problems that I had with my coworkers”, and “I was withdrawn” (1 = *strongly disagree* to 7 = *strongly agree*).

Emotion regulation. Emotion regulation was self-reported by the focal participant, with a 4-item scale used in Wang, Liao, Zhan, and Shi (2011). Sample items included “I am quite capable of controlling my own emotions” and “I am able to control my temper and handle difficulties rationally” (1 = *strongly disagree* to 7 = *strongly agree*).

Individual job performance. Job performance was evaluated by the team leader, to whom each employee participant directly reported. To capture the relative performance that reflected each employee’s position and value in the team, compared to the rest of the members, I measured job performance with a 5-item scale developed by Ashford and Black (1996) and further used by Grant (2012). The leader rated the employee performance, for example, “overall performance”, “achievement of work goals”, and “ability to get the task done on time” with a 9-point scale that represents the bottom 10 percent to top 10 percent.

CHAPTER 5 RESULTS

5.1 Descriptive Statistics

Table 1 displays descriptive statistics, correlations, and reliabilities for study variables. Both within- and between-level correlations are reported. Given the nested nature of individual observations within teams, all study variables of individual employees were specified as level-1 variables in subsequent analysis. As shown in Table 1, the demographic control variables (i.e., gender, age, organizational tenure, team tenure) were insignificantly related to most of the key variables. Including these controls yielded largely consistent patterns of results, thus I excluded them in the following report of hypotheses testing results¹ (Becker, 2005).

5.2 Confirmatory Factor Analyses

To examine the discriminant validity of the key variables, which composite scores were used directly for subsequent analysis, I conducted the confirmatory factor analysis using a two-level model in Mplus. All indicators were centered by their group means and entered in the within-level model only, aligned with the specification that all variables in the hypothesized model were level-1 variables. The measurement model with seven factors demonstrated good fit to the data ($\chi^2 = 626$, $df = 356$; comparative fit index [CFI] = .87; root mean square error of approximation [$RMSEA$] = .076; standardized root mean square residual [$SRMR$] = .081). This model demonstrated better fit than the other alternative models I tested. Table 2 shows details of fit indices of all the comparison models.

¹ Two discrepancies in terms of significance level, but not in terms of direction, between the models with and without control variables are reported in footnotes with respect to specific hypotheses.

Table 1

Means, standard deviations, reliabilities, and correlations among study variables

	Mean	SD (within -level)	SD (between n-level)	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1 Proportion of undermining coworkers	.46	.41	.20		.33	.17	.36*	.20	.19	.03	-.08	-.04	.11	.35*	.37*	.55**	.83**
2 Anger	2.25	1.00	.41	.38**	(.92)	.72**	.52**	.31	.61**	.17	-.49**	.18	-.15	.00	-.00	.28	.29
3 Shame	1.74	.86	.40	.28*	.66**	(.93)	.47**	.22	.51**	.27	-.43*	.04	-.22	-.19	-.16	.15	.13
4 Revenge	1.82	.92	.45	.36**	.35*	.38**	(.93)	.04	.34*	.53**	-.31	.05	.11	.12	.10	.16	.17
5 Direct communication	4.16	1.30	.29	.20	.05	-.13	.17*	(.88)	.08	-.11	.06	.03	.23	-.19	-.23	.01	.13
6 Social withdrawal	2.77	1.08	.43	.24*	.41**	.45**	.23	-.11	(.88)	.33	-.40*	.03	-.04	-.01	.10	.39*	.21
7 Individual job performance	7.31	.92	.64	-.17	-.18	-.11	-.02	.06	-.08	(.93)	-.15	.07	.13	.01	.04	-.20	-.07
8 Emotion regulation	5.34	1.07	.11	-.14	-.45**	-.36**	-.09	.11	-.24*	-.02	(.95)	-.18	.06	-.12	-.16	-.19	-.09
9 Gender	.70	.44	.14	.03	.12	-.16	-.15	-.02	.03	.04	-.02		-.14	-.12	-.03	-.35*	.07
10 Age	37.83	7.66	3.48	.11	-.02	.04	.37**	-.02	-.04	.12**	.04*	.10		.59**	.42*	.01	.09
11 Organizational tenure	6.90	5.22	2.44	.12	.08	-.06	.03	.12	-.02	.02	-.07	.22*	.02		.87**	.28	.36*
12 Team tenure	6.30	5.29	2.80	-.02	.10	-.17**	-.01	.18*	-.06	-.04	-.02	.19*	.02	.82**		.32	.37*
13 Frequency of undermining	1.32	.58	.13	.53**	.35**	.30*	.41**	.01	.29**	.04	-.19*	-.14	.03	-.02	-.09	(.94)	.48**
14 Number of undermining coworkers	1.62	1.55	.95	.91**	.36**	.27**	.33**	.21	.22*	-.28*	-.12	.03	.09	.05	-.09	.50**	

Note. $N = 117$ for level-1 correlations that are shown below the diagonal. $N = 35$ for level-2 correlations that are presented above the diagonal. Reliabilities are reported in brackets.

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

Table 2
 Confirmatory factor analysis of key variables

	χ^2	df	<i>CFI</i>	RMSEA	SRMR
7-Factor model: anger, shame, revenge, direct communication, social withdrawal, job performance, emotion regulation	626	356	.87	.081	.076
6-Factor model: two emotions combined	776	362	.80	.099	.088
5-Factor model: three behaviors combined	1001	367	.69	.121	.126
4-Factor model: emotions and behaviors combined as two latent variables respectively	1145	371	.62	.134	.134
2-Factor model: all self-rated latent variables combined	1642	376	.38	.170	.152

Note. *CFI* = comparative fit index; RMSEA = root-mean-square-error of approximation; SRMR = standardized root-mean-square residual.

5.3 Hypotheses Testing

Similar to the CFA reported above, I specified a two-level model in Mplus and all relationships to be tested at the within-level. To produce an estimate of the within-level effect that is not conflated with the between-level effect (Enders & Tofighi, 2007), I centered the predictor (i.e., the proportion of undermining coworkers), mediators (i.e., anger and shame), and moderators (i.e., individual job performance) by their group means, then created the interaction terms using the mean-centered scores (Aiken & West, 1991). Further, I specified a fixed-slope model in testing each of the hypotheses. In the following sections, I first report results for Hypotheses 1–4, which predicted the direct and moderating effects of the proportion of undermining coworkers on the two emotional outcomes. I then present results for Hypotheses 5–8, which predicted the direct and mediating effects between the proportion of undermining coworkers and the three behavioral responses. Results for Hypotheses 9–10 that predicted the two-stage moderated mediating effects of the proportion of undermining on behavioral responses are presented last.

Coworker Undermining and Emotional Responses

Hypothesis 1 posited that the proportion of undermining coworkers would be positively related to anger. Results showed a significant positive relationship ($\beta = .92, p < .001$), supporting Hypothesis 1. Hypothesis 2 also predicted a positive relationship between the proportion of undermining coworkers and shame and received support ($\beta = .52, p = .05$). Hypothesis 3 proposed that individual job performance would accentuate the positive relationship between the proportion of undermining coworkers and anger. Results indicated that the moderating effect was insignificant ($\beta = -.41, p = .21$), thus Hypotheses 3 was not supported. Hypothesis 4

predicted that individual job performance would attenuate the effect of the proportion of undermining on the feeling of shame. While the interaction term of the proportion of undermining coworkers and individual job performance on shame was insignificant yet in the predicted direction ($\beta = -.34, p = .24$), the significance levels for the two simple slopes diverged. It is noteworthy that the simple slope at low level of individual job performance ($-1 SD$) was significant ($\beta = .75, p = .03$), whereas the simple slope at high level ($+1 SD$) was insignificant ($\beta = .23, p = .51$). Despite the statistically insignificant difference between the two simple slopes, the coefficients of each slope indicated that only poor performers, but not their high performing counterparts, were more likely to feel shameful when there were more coworkers in the team undermining them. As such, Hypothesis 4 was partially supported². Table 3 shows details of these path analytic results for Hypotheses 1–4, and Figure 2 presents the plot of interacting effects of the proportion of undermining coworkers and job performance on shame.

² When demographic variables (i.e., gender, age, organizational tenure, and team tenure) were controlled, job performance indeed significantly moderated the positive relationship between the proportion of undermining coworkers and shame ($\beta = -.49, p = .05$). Similar to the model analysis without control variables, the simple slope at low level of individual job performance ($-1 SD$) was significant ($\beta = .83, p = .01$), whereas the simple slope at high level ($+1 SD$) was insignificant ($\beta = .07, p = .83$).

Table 3

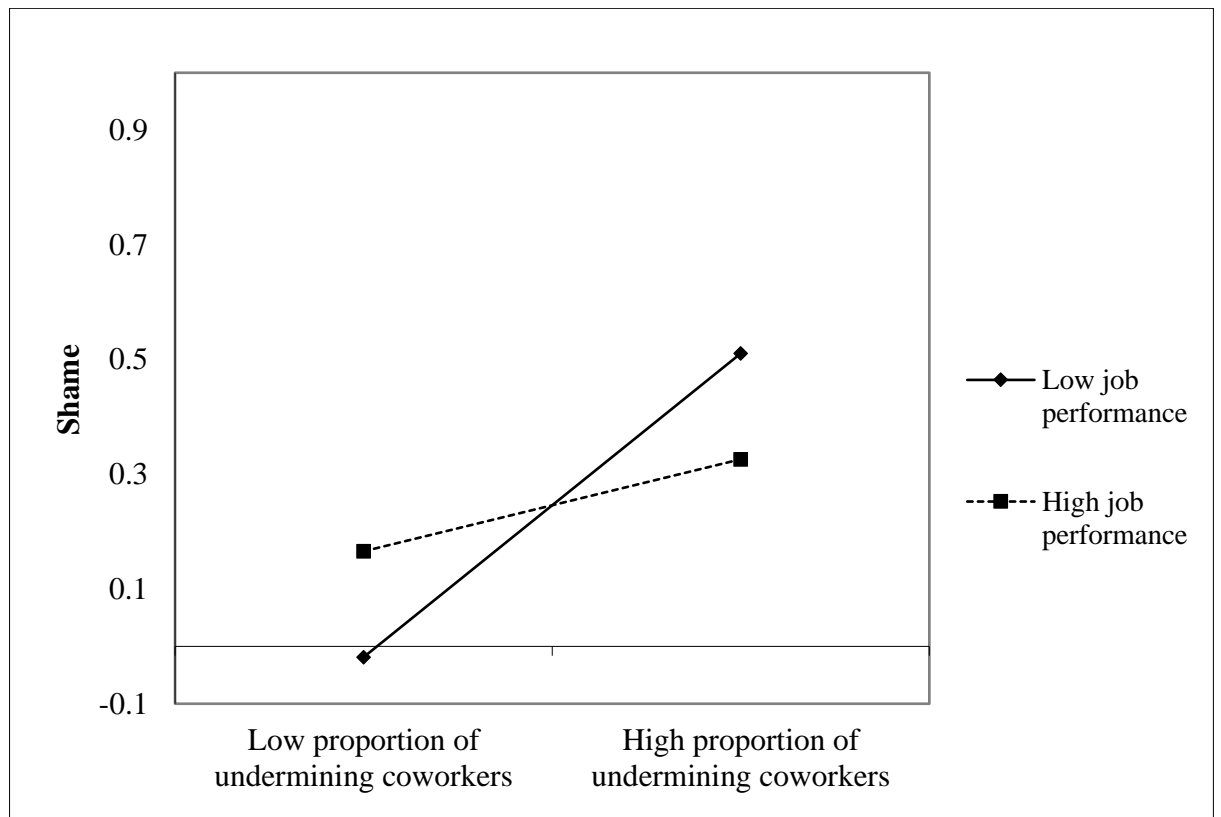
Multilevel path analysis for study variables predicting emotional outcomes

	Anger				Shame			
	Model 1		Model 2		Model 3		Model 4	
	Estimate	<i>SE</i>	Estimate	<i>SE</i>	Estimate	<i>SE</i>	Estimate	<i>SE</i>
Independent variable								
Proportion of undermining coworkers	.92**	.25	.92**	.26	.52*	.26	.49 [†]	.27
Moderator								
Job performance			-.10	.15			.00	.11
Interaction term								
Proportion of undermining coworkers × Job performance			-.41	.33			-.34	.28

Note. For individual-level, $n = 117$; for team-level, $n = 35$. Unstandardized coefficients were reported. *SE* = Standard error.

[†] $p < .10$. * $p < .05$. ** $p < .01$.

Figure 2. Interactive effect of the proportion of undermining coworkers and job performance on shame.



Coworker Undermining and Behavioral Responses

Before testing the mechanisms, I first examined whether the proportion of undermining coworkers had main effects on the behavioral outcomes. Table 4 presents the results for testing these three hypotheses. Hypotheses 5a and 7 predicted positive effects of the proportion of undermining coworkers on revenge toward perpetrators and social withdrawal respectively. As shown in Table 4, both of these relationships yielded significant positive results (revenge toward perpetrators: $\beta = .87, p < .001$; social withdrawal: $\beta = .75, p = .00$), supporting Hypotheses 5a and 7. Hypothesis 5b posited that the proportion of undermining coworkers would have a negative effect on direct communication with perpetrators. This hypothesis was not supported, as the relationship was in fact marginally significant yet in an opposite direction as the predicted one ($\beta = .59, p = .06$).

Table 4

Multilevel path analysis for study variables predicting behavioral outcomes

	Revenge				Direct communication				Social withdrawal			
	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	Estimate	<i>SE</i>	Estimate	<i>SE</i>	Estimate	<i>SE</i>	Estimate	<i>SE</i>	Estimate	<i>SE</i>	Estimate	<i>SE</i>
Independent variable												
Proportion of undermining coworkers	.87**	.21	.64**	.21	.59 [†]	.32	.65*	.30	.75**	.25	.48*	.20
Mediator												
Anger			.25*	.12			-.07	.19				
Shame											.51**	.15

Note. For individual-level, $n = 117$; for team-level, $n = 35$. Unstandardized coefficients were reported. *SE* = Standard error.

[†] $p < .10$. * $p < .05$. ** $p < .01$.

To test the mediating effects of the proportion of undermining coworkers on behavioral responses via anger and shame, I computed the indirect effects, using the product of the coefficient estimates relating the proportion of undermining coworkers to emotions (referred as path *a* coefficient) and the estimates relating emotions to the hypothesized behavioral outcomes (referred as path *b* coefficient) (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002). Moreover, to test the statistical significance of the indirect effects, I adopted the Monte Carlo resampling method to compute the 95% confidence intervals (CIs; Preacher & Selig, 2012; Preacher et al., 2010) via a web program designated to estimate indirect effects for multilevel models (Selig & Preacher, 2008). Confidence intervals excluding zero indicate significant indirect effects based on the specified level of confidence.

Table 5 presents the indirect (i.e., mediating) effects between the proportion of undermining coworkers and behavioral outcomes. Hypothesis 6a proposed a positive indirect relationship between the proportion of undermining coworkers and revenge toward perpetrators via anger. The indirect relationship was significantly positive (indirect effect $ab = .23$, 95% CI [.007, .545]), thus Hypothesis 6a was supported. Hypothesis 6b proposed a negative indirect relationship between the proportion of undermining coworkers and direct communication with perpetrators via anger. The indirect effect was insignificant (indirect effect $ab = -.06$, 95% CI [-.492, .257]). This was due to an insignificant relationship between anger and direct communication ($\beta = -.07$, $p = .74$). As such, Hypothesis 6b was not supported. The proposed positive effect of the proportion of undermining coworkers on social

withdrawal via shame in Hypothesis 8 received significant support (indirect effect $ab = .26$, 95% CI [.004, .605])³.

³ This indirect effect became marginally significant (indirect effect $ab = .24$, 90% CI [.005, .526]), when demographic variables were controlled, even though the estimate was still in the predicted direction.

Table 5

Indirect effects of the proportion of undermining coworkers on behavioral outcomes (via anger or shame)

Indirect effects	Path <i>a</i>		Path <i>b</i>		Indirect effect via mediator <i>a * b</i>	
	Estimate	<i>SE</i>	Estimate	<i>SE</i>	Estimate	95% Confidence Interval
Proportion of undermining coworkers on revenge (via anger)	.92**	.25	.25*	.12	.23	[.007, .545]
Proportion of undermining coworkers on direct communication (via anger)	.92**	.25	-.07	.19	-.06	[-.492, .257]
Proportion of undermining coworkers on social withdrawal (via shame)	.52*	.26	.51**	.15	.26	[.004, .605]

Note. For individual-level, $n = 117$; for team-level, $n = 35$. Unstandardized coefficients were reported. *SE* = Standard error.

† $p < .10$. * $p < .05$. ** $p < .01$.

Moderated Mediating Effects

To test the full model of each moderated mediating relationship, I computed the conditional indirect effects for the four combinations of high (+1 *SD*) and low (−1 *SD*) levels of the two moderators respectively (Preacher, Rucker, & Hayes, 2007). As an illustration, the first conditional indirect effect was computed using the product of coefficient connecting the proportion of undermining with anger at high level of job performance (path a_H coefficient) and that connecting anger and revenge at high level of emotion regulation (path b_H coefficient). After estimating the four conditional indirect effects (i.e., coefficients $a_H b_H$, $a_H b_L$, $a_L b_H$, $a_L b_L$), I tested the statistical significance through generating the 95% confidence intervals of each estimate, similar to how mediating effects were tested in the previous section. Table 6 presents the path coefficients of each tested model and Table 7 shows details of the conditional indirect effects.

Hypotheses 9a and 9b predicted that individual job performance would moderate the first-stage of the mediated relationships between the proportion of undermining coworkers and two behavioral outcomes (i.e., revenge and direct communication with perpetrators) via anger, whereas emotion regulation would moderate the second-stage of these mediated relationships. Specifically, Hypothesis 9a predicted that the proportion of undermining coworkers would lead to the highest level of revenge, when job performance was high and when emotion regulation was low. Results showed that none of the four conditional indirect effects were significant (conditional indirect effects: $a_H b_H = .27$, 95% CI [−.015, .792]; $a_H b_L = .20$, 95% CI [−.019, .581]; $a_L b_H = .21$, 95% CI [−.019, .769]; $a_L b_L = .15$, 95% CI [−.027, .543]). Therefore, it is inconclusive on any two-stage moderated mediating relationships between the proportion of undermining coworkers and revenge.

Hypothesis 9a was not supported. Hypothesis 9b predicted the positive relationship between the proportion of undermining coworkers and direct communication would be the strongest, when job performance and emotion regulation were both high. Again, same as the previous hypothesis, Hypothesis 9b did not receive support, as the 95% confidence intervals of all four conditional indirect effects included zero (conditional indirect effects: $a_H b_H = .24$, 95% CI $[-.097, .614]$; $a_H b_L = -.16$, 95% CI $[-.637, .096]$; $a_L b_H = .19$, 95% CI $[-.081, .599]$; $a_L b_L = -.13$, 95% CI $[-.520, .095]$). However, notably the second-stage interaction term in this model was significant (Model 2 of Table 6: $\beta = .29$, $p = .04$). Also, the respective estimates of the conditional indirect effects were consistently in opposite directions, when emotion regulation was high versus low. As such, I proceeded to further probe the moderating effect of emotion regulation on the mediated relationship. As a supplementary analysis, I tested the moderated mediating relationship between the proportion of undermining coworkers and direct communication via anger, by including emotion regulation as the second-stage moderator only. Again, emotion regulation significantly moderated the second stage of the mediating relationship ($\beta = .29$, $p = .03$). More importantly, the proportion of undermining coworkers had a marginally significant mediated positive relationship with direct communication via anger, when the target's emotion regulation was high (indirect effect $ab_H = .27$, 90% CI $[.007, .560]$), whereas the mediated relationship became negative, though insignificant, when the capability was low (indirect effect $ab_L = -.15$, 90% CI $[-.507, .068]$).

Finally, Hypothesis 10 predicted that individual job performance would moderate the mediated relationship between the proportion of undermining coworkers and social withdrawal via shame. Table 7 shows that the 95% CIs of the

conditional indirect effects computed using the same product coefficient approach at high and low levels of job performance included zero (conditional indirect effects $a_{Hb} = .27$, 95% CI $[-.100, .658]$; $a_{Lb} = .20$, 95% CI $[-.111, .659]$). Further, the interaction term did not yield significance either ($\beta = .07$, $p = .76$). Hence, Hypothesis 10 was not supported.

Table 6

Multilevel moderated mediation path models predicting behavioral outcomes

	Model 1				Model 2				Model 3			
	Anger		Revenge		Anger		Direct Communication		Shame		Social Withdrawal	
	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE
Independent variable												
Proportion of undermining coworkers	.68*	.30	.57**	.22	.68*	.30	.51	.12	.43	.27	.50*	.20
First-stage Moderator												
Job performance	-.16 [†]	.09	-.03	.10	-.16 [†]	.09	-.02	.15	-.06	.10	.03	.13
First-stage Interaction term												
Proportion of undermining coworkers × Job performance	.12	.17	.69**	.22	.10	.17	.25	.43	.07	.24	-.43	.33
Mediator												
Anger			.25*	.12			.05	.16				
Shame											.54**	.15
Second-stage Moderator												
Emotion regulation			.07	.12			.14	.10				
Second-stage Interaction term												
Anger × Emotion regulation			.05	.11			.29*	.14				

Note. For individual-level, $n = 117$; for team-level, $n = 35$. Unstandardized coefficients were reported. SE = Standard error.

[†] $p < .10$. * $p < .05$. ** $p < .01$.

Table 7

The 95% confidence intervals for the moderated mediating effects predicting behavioral outcomes (via anger or shame)

Indirect effects via mediators	Path <i>a</i>		Path <i>b</i>		Indirect effect via mediator <i>a * b</i>	
	Estimate	<i>SE</i>	Estimate	<i>SE</i>	Estimate	95% Confidence Interval
Proportion of undermining coworkers on revenge (via anger)						
High job performance and high emotion regulation	.77*	.31	.35 [†]	.19	.27	[-.015, .792]
High job performance and low emotion regulation	.77*	.31	.26 [†]	.15	.20	[-.019, .581]
Low job performance and high emotion regulation	.59 [†]	.35	.35 [†]	.19	.21	[-.019, .769]
Low job performance and low emotion regulation	.59 [†]	.35	.26 [†]	.15	.15	[-.027, .543]
Proportion of undermining coworkers on direct communication (via anger)						
High job performance and high emotion regulation	.76*	.30	.31	.21	.24	[-.097, .614]
High job performance and low emotion regulation	.76*	.30	-.21	.19	-.16	[-.637, .096]
Low job performance and high emotion regulation	.60 [†]	.35	.31	.21	.19	[-.081, .599]
Low job performance and low emotion regulation	.60 [†]	.35	-.21	.19	-.13	[-.520, .095]
Proportion of undermining coworkers on social withdrawal (via shame)						
High job performance	.49	.34	.54**	.15	.27	[-.100, .658]
Low job performance	.38	.31	.54**	.15	.20	[-.111, .659]

Note. For individual-level, $n = 117$; for team-level, $n = 35$. Unstandardized coefficients were reported. *SE* = Standard error.

[†] $p < .10$. * $p < .05$. ** $p < .01$.

5.4 Post-hoc Exploratory Analyses

To explore the incremental predictive validity of the proportion of undermining coworkers beyond that of the undermining frequency that was used in extant literature, I conducted further analysis by entering the proportion and the frequency of undermining in models separately and together to test their respective effects on each of the emotional and behavioral outcomes. Table 8 displays results of the exploratory analyses. In most cases, the proportion of undermining coworkers remained significant after controlling for the frequency of undermining. The only exception was the effect on shame. When the predictors were entered in the model separately, both had positive effects. The proportion of undermining coworkers was significantly associated with shame ($\beta = .52, p = .05$), whereas the effect of frequency was marginally significant ($\beta = .38, p = .10$). Additionally, I explored the potential difference in the predictive validity of the proportion of undermining coworkers from the number of undermining coworkers, which could be an alternative way to operationalize the undermining relationships existed for the focal target within his or her team. Even though the number of undermining coworkers has not been used in previous studies, this exploratory analysis is intended to offer more information for future research to consider the value of each variable. When the proportion and the number of undermining coworkers were entered separately, each of them was independently and significantly associated with anger, revenge, and social withdrawal. However, when both variables are entered, none remained significant in predicting any of the two emotional and three behavioral outcomes. It is noteworthy that in the current study, the proportion was highly correlated with the number of undermining coworkers ($r = .91, p < .01$). The results from models including both variables should be interpreted with caution. Table 9 provides the

results of mediation tests when both the proportion and frequency of undermining were entered as predictors. Consistent with the above analyses on main effects, the effect of the proportion on shame became insignificant when controlling for the frequency of undermining, thus the mediating relationship between the proportion of undermining coworkers on social withdrawal via shame was also insignificant (indirect effect $ab = .17$, 95% CI $[-.137, .560]$). When controlling for the frequency of undermining, the mediating relationship between the proportion of undermining coworkers and revenge via anger became insignificant. In this case, although both path a and b coefficients were at least marginally significant, the overall indirect effect did not reach significant ($ab = .15$, 95% CI $[-.019, .415]$). I will return to the implications of these exploratory analyses in the Discussion section.

Table 8

Results of Post-hoc Exploratory Analyses on Main Effects Controlling for Frequency and Number of Undermining coworkers

		Anger									
Independent variable	Est.	<i>SE</i>	Est.	<i>SE</i>	Est.	<i>SE</i>	Est.	<i>SE</i>	Est.	<i>SE</i>	
Proportion of undermining coworkers	.92**	.25			.68*	.31			.72	.50	
Frequency of undermining			.59**	.21	.33	.24					
Number of undermining coworkers							.23**	.05	.06	.10	
		Shame									
Independent variable	Est.	<i>SE</i>	Est.	<i>SE</i>	Est.	<i>SE</i>	Est.	<i>SE</i>	Est.	<i>SE</i>	
Proportion of undermining coworkers	.52*	.26			.34	.32			.55	.48	
Frequency of undermining			.38†	.23	.25	.28					
Number of undermining coworkers							.12	.07	-.01	.10	
		Revenge									
Independent variable	Est.	<i>SE</i>	Est.	<i>SE</i>	Est.	<i>SE</i>	Est.	<i>SE</i>	Est.	<i>SE</i>	
Proportion of undermining coworkers	.87**	.21			.53*	.26			.86	.45	
Frequency of undermining			.68**	.14	.48**	.18					
Number of undermining coworkers							.21**	.06	.00	.10	
		Direct Communication									
Independent variable	Est.	<i>SE</i>	Est.	<i>SE</i>	Est.	<i>SE</i>	Est.	<i>SE</i>	Est.	<i>SE</i>	
Proportion of undermining coworkers	.59†	.32			.77*	.36			.24	.96	
Frequency of undermining			.05	.26	-.25	.32					
Number of undermining coworkers							.16	.10	.10	.27	

Note. For individual-level, $n = 117$; for team-level, $n = 35$. Est. = unstandardized coefficients. *SE* = Standard error.

† $p < .10$. * $p < .05$. ** $p < .01$.

Table 8 (continued)

Results of Post-hoc Exploratory Analyses on Main Effects Controlling for Frequency and Number of Undermining coworkers

Independent variable	Social Withdrawal									
	Est.	<i>SE</i>	Est.	<i>SE</i>	Est.	<i>SE</i>	Est.	<i>SE</i>	Est.	<i>SE</i>
Proportion of undermining coworkers	.75**	.25			.53 [†]	.31			.39	.63
Frequency of undermining			.51**	.11	.31 [†]	.16				
Number of undermining coworkers							.19**	.05	.11	.13

Note. For individual-level, $n = 117$; for team-level, $n = 35$. Est. = unstandardized coefficients. *SE* = Standard error.

[†] $p < .10$. * $p < .05$. ** $p < .01$.

Table 9

Results of Post-hoc Exploratory Analyses on Indirect Effects Controlling for Frequency of Undermining

Indirect effects	Path <i>a</i>		Path <i>b</i>		Indirect effect via mediator <i>a * b</i>	
	Estimate	<i>SE</i>	Estimate	<i>SE</i>	Estimate	95% Confidence Interval
Proportion of undermining coworkers on revenge (via anger) controlling for frequency of undermining	.68*	.31	.22†	.12	.15	[-.019, .415]
Frequency of undermining on revenge (via anger) controlling for proportion of undermining coworkers	.33	.24	.22†	.12	.07	[-.025, .264]
Proportion of undermining coworkers on direct communication (via anger) controlling for frequency of undermining	.68*	.31	-.05	.21	-.03	[-.416, .232]
Frequency of undermining on direct communication (via anger) controlling for proportion of undermining coworkers	.33	.24	-.05	.21	-.02	[-.182, .173]
Proportion of undermining coworkers on social withdrawal (via shame) controlling for frequency of undermining	.34	.32	.49**	.16	.17	[-.137, .560]
Frequency of undermining on social withdrawal (via shame) controlling for proportion of undermining coworkers	.25	.28	.49**	.16	.12	[-.156, .453]

Note. For individual-level, $n = 117$; for team-level, $n = 35$. Unstandardized coefficients were reported. *SE* = Standard error.

† $p < .10$. * $p < .05$. ** $p < .01$.

CHAPTER 6 DISCUSSION

6.1 Overview of Results

In this thesis, I develop and test a model to examine how the undermining target differentially copes with coworker undermining in a team context, as a function of the varied number of perpetrators and non-perpetrators toward the focal target within the team. I conclude that there are three key findings from this study. First, results supported that the proportion of undermining coworkers led to greater likelihood of revenge toward perpetrators and social withdrawal through the emotional mechanisms of anger and shame respectively. Second, the proportion of undermining coworkers was also positively related to more direct communication with perpetrators via anger, but only when the target possessed high level of emotion regulation. Third, individual job performance moderated some, yet not most, of the proposed relationships between the proportion of perpetrators and the target responses. Specifically, the target experienced a greater feeling of shame caused by the increasing proportion of perpetrators, only for the low performers but not the high performing ones. However, the same moderating effect was not found for the mediated effect on social withdrawal through shame. In general, job performance did not have significant moderating effects on the other-directed emotion and behaviors. Overall, these findings support the dual pathway model, drawn on interpersonal and intrapersonal attribution-based theories, and hold implications for a few areas in research and practices.

6.2 Theoretical Implications

First, this research advances our understanding of the mechanisms that drive coworker undermining consequences. The comprehensive model consists of dual pathways that examine emotions directed toward others in the team and the self as

the mediators. Prior studies of social undermining primarily focus on the evaluation about the perpetrators and subsequent outcomes, for example, interpersonal justice and anger as the mechanisms. However, theory about social undermining suggests that the poor treatment sends negative self-evaluative information to the target and influences his or her self-efficacy (Duffy et al., 2002). By including both anger and shame in the model, I present empirical evidence that the target reactions toward undermining is not only limited to blaming the perpetrators, but also involve the internalization of blame. Further, a recent article on an approach-avoidance framework of workplace aggression has stipulated that social undermining, with a clear intent to harm, leads to anger and approach-oriented counterproductive work behaviors, instead of anxiety and avoidance-oriented counterproductive work behaviors (Ferris et al., 2016). My research suggests an alternative perspective that social undermining can simultaneously influence approach and avoidance emotions and behaviors. While the approach-avoidance framework might be able to organize the workplace aggression literature more systematically, the findings here suggest researchers to pay more attention to the range of negative emotions being studied.

Second, I also contribute to the undermining literature by specifying when the target is more likely to adopt a specific coping behavior. While the only study on proximal coping responses identifies two possible behavioral outcomes (i.e., revenge and avoiding the perpetrators) caused the feeling of anger (Crossley, 2009), both outcomes are considered relatively destructive. Revenge in itself is a kind of aggressive behavior, and avoidance style coping could lead to an increase in emotional exhaustion. Hence, the present research sheds light on the conditions that can mitigate the likelihood of destructive behavior or increase the chance for a more constructive behavior. Specifically, higher performance attenuated the effect of the

proportion of undermining coworkers on shame, that has a downstream association with social withdrawal, despite the full moderated mediating effect was not significant. Targets with higher emotion regulation were also more likely to convert the anger elicited by undermining to direct communication, compared to their counterparts with lower capability.

Finally, by introducing and measuring the proportion of undermining coworkers within teams, this study makes methodological contributions to the social undermining literature, especially in examining the relational dynamics of social undermining within teams. It presents the first empirical evidence on how relational undermining dynamics between the focal target and each of the coworkers in the team affect the target emotions and the coping behaviors. Previous research has neglected the dyads that are inherent in a team context when studying the experience of social undermining. The focus on the frequency of undermining behavior precluded the examination of the social environment where the undermining behavior and the target responses are embedded. The post-hoc exploratory analyses indicate that the proportion of undermining coworkers significantly influence the emotional response of anger and three behavioral outcomes (i.e., revenge, direct communication, and social withdrawal) when the frequency of social undermining was controlled. It might be noteworthy that the proportion of undermining coworkers that represents the dynamics in the team seem to account for the emotional response (i.e., anger) toward the team to a greater extent than the frequency, as the relationship between the frequency and anger becomes nonsignificant when both predictors are included in the regression model. This could be an initial empirical evidence of the predictive value of the proportion of undermining coworkers beyond the frequency of undermining that I argued to be

theoretically distinct. Yet, it is equally important to note that the same pattern did not show for all relationships examined in the exploratory analysis. In some cases of outcome variables (e.g., shame), both relationships with the frequency and the proportion of undermining become insignificant as they are simultaneously entered in the model. Indeed, the distinction between the proportion and the frequency of social undermining warrant more comprehensive future studies, as the significant moderate correlation between these two variables ($r = .53, p < .01$) might have rendered the significant relationships a statistical artifact. Overall, caution must be exercised in interpreting which outcomes are influenced by each of these variables and to what extent the relationship holds when both are taken into consideration. Moreover, the low statistical power with the current sample size renders largely inconclusive interpretation of the findings on mediating effects, especially the mediated relationship between the proportion of undermining coworkers on revenge via anger. Future research with greater statistical power that examines divergent effects of the proportion and the frequency of undermining on their consequences would be of much value to testify whether and how they are distinct.

An additional note on the potential similarity between the proportion and the number of undermining coworkers is worthwhile. Despite both were not used to measure social undermining in past research, it could be possible that the number of undermining coworkers might as well yield similar empirical results as the findings in the current study. The post-hoc exploratory analyses provided a mixed result regarding the unique predictive value of the proportion of undermining coworkers from the number of undermining coworkers. However, both became insignificant when they were entered together. Importantly, due to very limited variance in the team size, the proportion and the number of undermining coworkers were

significantly and highly correlated ($r = .91, p < .01$). As such, any results from these models with both the proportion and the number as independent variables would be inconclusive because of the statistical artifact produced by the high correlation between the two variables. In sum, while the current study might have shown preliminary empirical evidence for the predictive value of the proportion of undermining coworkers, more research would be required to demonstrate and support its theoretical distinction from the other similar measures: the frequency of undermining and the number of undermining coworkers.

6.3 Practical Implications

This research recommends managers to maintain sensitivity toward any undermining behavior demonstrated by team members. Even though the behaviors might be intermittent, when individual member is the target of many of the other members, he or she would still be adversely impacted and engages in destructive coping behaviors that further worsens the team situation. It is also recommended for Human Resources professionals to equip employees with skills to be mindful of their emotions and ways to manage negative emotions constructively, for example, through trainings and personal coaching. While it is undesirable for social undermining to happen among employees, these support programs can be curative measures to minimize the negative impact on the target employees.

For the individuals who experience undermining by multiple coworkers, the findings suggest them to stay mindful of the unjust treatment and avoid internalizing all the negative information about themselves. It is also important for the targets to build interpersonal resources within the team, if still possible, or from connections outside the team; these could help buffer the negative impact on their sense of self.

6.4 Limitations and Future Research

The present research nevertheless is not without any limitations. The major limitation is the relatively small sample size and thus the power of the study, given the number of estimates required in the hypothesis testing of the theoretical model. Research recommends that a favourable ratio would range from 1:5 to 1:10 (Kline, 2011). To test the moderated mediating relationship between the independent variable and one outcome variable, more than 25 parameters were estimated; the sample size of 117 would be considered as inadequate according to the recommended practice. Given the potentially small power, the insignificant results in the tests for moderated mediating relationships warrant additional studies with a larger sample size to further examine these relationships. A related limitation is that the sample size would not have provided sufficient power to test all paths in the full model simultaneously. The additional study would provide an opportunity to directly test and compare the strength of each pathway. Another limitation is that the present study was correlational and could not establish causality among the variables. Although the field study captures a real team context in organizational setting, which allows a relatively objective operationalization of the undermining dynamics among coworkers with social relations design, an additional experiment or a longitudinal study would complement the present study and strengthen the internal validity of the results. The other limitation worth researchers' attention is that the data in the context of the present study does not allow very stringent examination of the distinctiveness between the proportion and the number of undermining coworkers due to the limited range of team size and hence very high correlation between the two variables. While I speculate that the number of undermining coworkers does not capture the relational dynamics and thus appraisal of the whole team, but only

between the target and the undermining coworkers, this claim will require research design that can measure the two variables without confounding their effects. This can likely be achieved by an experimental design.

This study points to some exciting avenues for future research. First, scholars have called for more direct tests on the negative consequences claimed by the definition of social undermining, including the adverse impact on career success and favourable reputation (Hershcovis, 2011). Both of these outcomes involve the evaluation by individuals, such as team leaders or coworkers in other teams, who might not be directly involved in the undermining at the beginning. Taking the perspective of undermining dynamics within the team context facilitates further exploration of emergence or spreading of undermining beyond the original perpetrators and the target, using a longitudinal design. Second, future research can investigate how the undermining dynamics within the team influence team-level outcomes. It may be an inconvenient truth, but a group of perpetrators targeting the same coworker might potentially lead to greater team cohesiveness. This could be a serious alert to team leaders who mistakenly neglect any interpersonal problem underlying a cohesive team on the surface. Last, researchers can examine the antecedents of the proportion of undermining coworkers in teams. While prior research has identified factors that lead to a higher level of undermining by a specific individual between the dyadic relationship, it would be worthwhile to study what makes an employee a common target in the team.

6.5 Concluding Remarks

The present research set out to examine how, when, and why the proportion of undermining coworkers in a team influences the likelihood for the target to react with different coping behaviors. This research advances our understanding on social

undermining in a team context, where the proportion of perpetrators and non-perpetrators could differ due to the presence of multiple team members. When social undermining happens in a team, the target not only responds to the undermining behavior by a particular perpetrator, he or she takes into consideration the composition of perpetrators and non-perpetrators as a whole. The findings showed that, with a greater proportion of undermining coworkers, the target felt angrier with the team of coworkers and thus was more likely to take revenge toward the perpetrators. Also, the target felt more shameful about oneself and in turn was more likely to withdraw from the social circle at work.

When there are more perpetrators within a team, the target might need more help to buffer the harm caused by undermining. Unfortunately, the results in this research indicated that the target was more likely to react in coping behaviors, such as revenge and social withdrawal, that might further reduce social support and cause even more detrimental outcomes to themselves and the team. I therefore hope the results serve as an alarm and encourage managers to pay close attention to widespread (yet perhaps intermittent) undermining toward a certain employee.

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