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## **“Excellence Invites Criticism” or “Virtue Inspires Emulation” ? The Double-Edged Sword Effect of Workplace Upward Comparison on Employee Behavior**

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### **Abstract**

Grounded in the cognitive appraisal theory of stress, this study investigates from a rational cognitive perspective the self-improvement and other-derogation effects of workplace upward comparison, along with the boundary conditions and mediating mechanisms that activate distinct pathway effects. Using a round-robin design, this study collected 720 interpersonal dyadic samples from 240 members across 60 teams at three time points, and analyzed the data using the social relations model to draw the following conclusions: Under low performance-prove goal orientation, employees tend to appraise upward comparison targets as challenges, which subsequently stimulates learning behaviors directed toward those targets; conversely, under high performance-prove goal orientation, employees tend to appraise upward comparison targets as threats, thereby driving them to engage in social undermining behaviors targeting those individuals.

### **Full Text**

## **Learn from Others or Put Them Down? The Double-Edged Effect of Upward Social Comparison in the Workplace**

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### **Abstract**

Drawing on the cognitive appraisal theory of stress, this study examines the dual effects of workplace upward social comparison—specifically, its potential

to foster self-improvement or trigger derogation of others—from a rational cognitive perspective. We also identify the boundary conditions and underlying mechanisms that determine which pathway emerges. Using a round-robin design, we collected 720 interpersonal dyadic samples from 240 members across 60 teams at three time points. Social relations model analyses reveal that when employees have low performance-prove goal orientation, they tend to appraise upward comparison targets as challenges, which subsequently motivates learning behaviors directed at those targets. Conversely, when employees have high performance-prove goal orientation, they tend to appraise upward comparison targets as threats, which drives them to engage in social undermining toward those targets.

**Keywords:** workplace upward social comparison, cognitive appraisal theory of stress, performance-prove goal orientation, challenge appraisals, threat appraisals

**Classification Codes:** B849; C93

## 1. Introduction

“When a tree stands out in the forest, the wind will surely topple it; when a mound rises above the shore, the current will surely wash it away; when one’s conduct exceeds others, people will surely criticize him.” —Li Kang  
“When you see a virtuous person, think of equaling them.” —Confucius

Self-evaluation is a common human activity (Smith, 2000), and individuals typically engage in self-assessment by comparing their opinions and abilities with those of others—a phenomenon known as social comparison (Festinger, 1954). As the ancient saying goes, “Beyond the mountains, there are more mountains; beyond people, there are greater people.” Individuals tend to compare themselves with those who are superior, a process termed upward social comparison (Buunk & Gibbons, 2007), which represents a crucial and highly studied form of social comparison (Lee & Duffy, 2019; Koopman et al., 2020). Research indicates that when environments are characterized by uncertainty and competitiveness, individuals are more likely to compare themselves with others to evaluate their own standing (Campbell et al., 2017; Tang et al., 2022). Consequently, the workplace is considered a “breeding ground” for upward social comparison (Watkins, 2021), where employees frequently compare themselves with colleagues on salary, performance, interpersonal relationships, and other dimensions (Brown et al., 2007; Tse et al., 2018).

When employees engage in upward social comparison and perceive themselves as inferior, do they tend to “criticize others” or “learn from the virtuous”? Existing research presents mixed and inconclusive findings. Specifically, most studies suggest that upward social comparison generates negative emotional states (e.g., envy, hostility, resentment) and destructive behaviors (e.g., aggression, exclusion, incivility) (Reh et al., 2018; Sun et al., 2021; Tai et al., 2022). However, a minority of studies have found that upward social comparison can

elicit positive emotional states (e.g., inspiration, benign envy) and constructive behaviors (e.g., helping, learning, self-improvement) (Pan et al., 2021; Watkins, 2021; Liu et al., 2019). These contradictory findings suggest that viewing workplace upward social comparison as having purely positive or negative effects may be overly simplistic, and that a dialectical perspective is needed to examine its dual-edged impact on employee behavior.

Although a few scholars have recently explored this issue, they have unfortunately relied on relatively singular theoretical perspectives, focusing primarily on social comparison theory and examining emotional mechanisms through which specific content comparisons (e.g., performance, leader-member relationships) elicit differential behavioral responses (Ganegoda & Bordia, 2019; Pan et al., 2021; Watkins, 2021). However, cognition—a key internal process distinct from emotion—has received scant research attention (Campbell et al., 2017). While emotion reflects the “hot,” irrational aspect of human response, cognition reflects the “cold,” rational aspect (Liu & Gao, 2021). Unlike non-work contexts, individuals in workplace settings typically base their actions on rational cognitive processes involving cost-benefit analyses when processing external information such as upward comparison targets (Campbell et al., 2017). Therefore, to deepen our understanding of workplace upward social comparison, we need to adopt appropriate theoretical perspectives that leverage cognitive mechanisms to illuminate its dual-edged effects and boundary conditions.

Byron et al. (2010) note that in achievement-oriented contexts like the workplace, information with social evaluation and comparison attributes constitutes a psychological stressor. Building on this, we conceptualize workplace upward social comparison as a psychological stressor and integrate the cognitive appraisal theory of stress to examine its dual-edged effects on employee behavior. This theory posits that individuals appraise stressors as either challenges or threats based on their own circumstances, subsequently generating constructive or destructive coping behaviors (Bliese et al., 2017; Lazarus & Folkman, 1984). Challenge/threat appraisals refer to the degree to which individuals evaluate a stressor as potentially beneficial/detrimental to themselves (Mitchell et al., 2019). Furthermore, research (e.g., Ma et al., 2021) indicates that goal orientation serves as a core benchmark for appraising stressors. Performance-prove goal orientation, defined as the extent to which individuals seek to demonstrate their competence by outperforming others (Elliot & McGregor, 2001), influences how employees interpret upward social comparison information (Downes et al., 2021). We therefore propose that performance-prove goal orientation is the key factor determining whether employees appraise upward social comparison as a challenge or a threat.

Employees with different levels of performance-prove goal orientation hold divergent beliefs about whether abilities are fixed or malleable (Dweck, 1986; Dweck & Leggett, 1988). Consequently, when processing social information, they employ two distinct cognitive heuristic mindsets: evaluative (viewing social information as a reference for self-evaluation) and directive (viewing social

information as an instructive model) (Downes et al., 2021). Employees with high performance-prove goal orientation tend to believe abilities are fixed and frequently use evaluative mindsets to process social information (Watson et al., 2013). When they discover that comparison targets outperform them, they tend to appraise these targets as threats, which drives them to engage in social undermining toward the targets. Conversely, employees with low performance-prove goal orientation tend to believe abilities are developable and frequently use directive mindsets to process social information (Downes et al., 2021). When they discover that comparison targets outperform them, they tend to appraise these targets as challenges, which motivates them to learn from the targets. The theoretical model is presented in Figure 1 [Figure 1: see original paper].

### 1.1 Cognitive Appraisal Theory of Stress

#### Figure 1. Theoretical Model

The cognitive appraisal theory of stress posits that individuals' differential appraisals of stressors drive distinct coping strategies (Lazarus & Folkman, 1984). When a stressor poses potential loss/gain to an individual, they tend to appraise it as a threat/challenge (Mitchell et al., 2019). Existing stress research reviews (Bliese et al., 2017; Ganster & Rosen, 2013) demonstrate that threat/challenge appraisals drive destructive/constructive coping behaviors. As noted above, workplace upward social comparison elicits both constructive and destructive behavioral responses (Pan et al., 2021; To et al., 2020; Watkins, 2021). Based on the cognitive appraisal theory of stress, we argue that these contradictory behavioral outcomes depend on how employees appraise workplace upward social comparison as a stressor. Specifically, when employees appraise it as a threat, it triggers social undermining—a destructive behavior—toward the comparison target. When employees appraise it as a challenge, it drives learning—a constructive behavior—from the comparison target.

The cognitive appraisal theory of stress further posits that individuals conduct differential cognitive appraisals of external stressors based on their own circumstances (Lazarus & Folkman, 1984). Goal orientation influences how individuals view and process information in achievement-oriented contexts like the workplace and is considered a key benchmark for cognitive appraisal (Downes et al., 2021; Ma et al., 2021; Poortvliet & Darnon, 2010). Goal orientation comprises three types: learning, performance-prove, and performance-avoid. Learning goal orientation refers to the desire to improve knowledge and skills, performance-prove goal orientation refers to the desire to demonstrate competence and outperform others, and performance-avoid goal orientation refers to the desire to avoid appearing incompetent (Elliot & McGregor, 2001).

We focus on performance-prove rather than the other two goal orientations for two reasons. First, during self-evaluation, individuals with learning/performance-prove goal orientation rely on internal/external reference systems (Downes et al., 2021). Individuals with learning goal orientation tend

to engage in self-referential longitudinal comparisons, focusing on whether they have improved compared to their past selves (Elliot, 2005). In contrast, individuals with performance-prove goal orientation tend to engage in horizontal comparisons with others, focusing on their relative superiority or inferiority (Elliot, 2005). Second, performance-avoid goal orientation is a dysfunctional state that primarily drives resignation rather than adaptive and proactive coping processes. Consequently, individuals with performance-avoid goal orientation do not engage in upward social comparison but instead focus on seeking social information that helps them avoid appearing incompetent (Downes et al., 2021).

## 1.2 The Moderating Role of Performance-Prove Goal Orientation

We propose that whether workplace upward social comparison triggers challenge or threat appraisals depends on employees' level of performance-prove goal orientation. Specifically, we predict that employees with high performance-prove goal orientation are more likely to view upward social comparison targets as threats for two reasons. First, the cognitive appraisal theory of stress suggests that employees with different levels of performance-prove goal orientation focus on different aspects when appraising stressors (Lazarus & Folkman, 1984). Low performance-prove goal orientation individuals do not focus exclusively on seeking social information to demonstrate their self-worth. Therefore, when engaging in upward social comparison, their attention is not on outperforming others but on deriving benefits and achieving improvement, such as using the comparison as a roadmap to enhance their own performance (Watkins, 2021). Second, due to limited cognitive resources, people employ directive and evaluative cognitive heuristic mindsets to simplify the processing of complex social information (Bandura, 1997; Downes et al., 2021). Low performance-prove goal orientation individuals tend to believe abilities can be developed and frequently use directive mindsets to process social information (Downes et al., 2021). Downes et al. (2021) found that upward comparison targets' behaviors, strengths, and achievements provide references for how individuals can develop and improve. Therefore, under the influence of a directive mindset, workplace upward social comparison represents greater referential value for low performance-prove goal orientation employees. In summary, these employees tend to focus on the benefits that upward social comparison brings to themselves. Thus, we propose:

**H1:** When employees have low performance-prove goal orientation, workplace upward social comparison is positively related to challenge appraisals.

Conversely, we predict that employees with high performance-prove goal orientation are more likely to view upward social comparison targets as threats for two reasons. First, high performance-prove goal orientation individuals enjoy proving themselves through comparison with others (Dweck, 1986; Dweck & Leggett, 1988). Consequently, when processing upward social comparison information, these employees tend to focus on their own deficiencies relative to the comparison target and the threat posed by the target (Darnon et al., 2009;

Tai et al., 2022). Second, high performance-prove goal orientation individuals tend to believe abilities are fixed and frequently use evaluative mindsets to process social information (Dietz et al., 2015; Downes et al., 2021; Dweck, 1986). Bandura (1997) notes that evaluative mindsets focus attention on the difficulties of learning and improvement, accompanied by decreased self-efficacy. In other words, when high performance-prove goal orientation employees discover that comparison targets outperform them, they believe it will be difficult to surpass those targets and achieve success in the workplace. In summary, these employees tend to focus on the losses that upward comparison targets bring to themselves. Thus, we propose:

**H2:** When employees have high performance-prove goal orientation, workplace upward social comparison is positively related to threat appraisals.

### 1.3 The Constructive Effect of Workplace Upward Social Comparison on Learning Behavior

We predict that under conditions of low performance-prove goal orientation, workplace upward social comparison stimulates learning behavior through challenge appraisals. Learning behavior refers to individuals' efforts to improve themselves by observing colleagues and seeking advice in the workplace (Lee & Duffy, 2019). Observation involves indirectly acquiring information by watching target individuals' attitudes and approaches without necessarily having direct contact (Lee & Duffy, 2019). Advice seeking involves directly consulting target individuals to obtain problem-solving strategies and related information (Lee & Duffy, 2019). We argue this hypothesis from two perspectives. First, when employees appraise workplace upward social comparison as a challenge, they tend to exhibit more rational thinking and adaptive cognitive states (Bliese et al., 2017; Eisenberger & Aselage, 2009), which further prompts constructive behaviors that actualize the potential benefits of upward social comparison (Mitchell et al., 2019). Under the influence of a directive mindset, employees tend to view comparison targets as role models and learn from them through indirect observation or direct advice seeking (Downes et al., 2021). Second, when employees appraise workplace upward social comparison as a challenge, they become more focused on self-improvement, which drives them to take action (e.g., learning) to pursue growth and development (Mitchell et al., 2019). Festinger (1954) noted that upward comparison targets possess the most relevant and useful information for employees' self-improvement, which employees can acquire through observation and advice seeking (Lee & Duffy, 2019). In summary, challenge appraisals facilitate learning behavior. Combining H1, we propose:

**H3:** When employees have low performance-prove goal orientation, workplace upward social comparison enhances learning behavior through challenge appraisals.

#### 1.4 The Destructive Effect of Workplace Upward Social Comparison on Social Undermining

We predict that under conditions of high performance-prove goal orientation, workplace upward social comparison stimulates social undermining through threat appraisals. Social undermining is a low-intensity, ambiguous-intent interpersonal deviance behavior that violates organizational norms of mutual respect, including hostile treatment, isolation, and rumor-spreading (Andersson & Pearson, 1999). We argue this hypothesis from two perspectives. First, when employees appraise a stressor as a threat, it triggers negative states and maladaptive coping processes (Bliese et al., 2017). Workplace upward social comparison reveals the presence of superior colleagues, and high performance-prove goal orientation employees tend to focus on the potential harm of upward comparison. This negative focus depletes self-resources (Baumeister, 2002) and reduces employees' ability to adhere to interpersonal norms (Baumeister et al., 2007). Consequently, employees may engage in relatively low-intensity, ambiguous-intent social undermining toward those who pose a threat (Mitchell et al., 2019). Second, threat appraisals of workplace upward social comparison lead employees to distance themselves from comparison targets and generate hostile reactions (Campbell et al., 2017). Previous research has found that employees attack high-performing colleagues they perceive as threatening (Li et al., 2022) and disparage them without basis (Xing & Yu, 2006). In summary, threat appraisals facilitate social undermining. Combining H2, we propose:

**H4:** When employees have high performance-prove goal orientation, workplace upward social comparison enhances social undermining through threat appraisals.

## 2. Method

### 2.1 Research Sample and Data Collection

We conducted a three-wave data collection at a company in southwestern China, with a two-week interval between each wave. In the company we surveyed, members of the same business team typically work in the same office and have close work interactions, providing an ideal context for capturing interpersonal dynamics among team members (Zhang et al., 2021; Tang et al., 2022). With approval from senior leadership, we distributed invitation letters and instructions (including collection procedures and voluntary participation) through the company's internal communication channels. Ultimately, 270 members from 65 business teams voluntarily participated, covering positions in sales, marketing, and administration.

We employed a round-robin design (Kenny & La Voie, 1984) to measure workplace upward social comparison, challenge and threat appraisals, learning behavior, and social undermining. Specifically, in Wave 1 (T1), employees assessed their upward social comparison with each team colleague, their own performance-prove goal orientation, social comparison orientation, learning goal

orientation, and demographic information. This wave yielded 251 valid responses (effective response rate = 93%). Two weeks later, in Wave 2 (T2), the 251 employees evaluated their challenge and threat appraisals of each team colleague, yielding 240 valid responses (effective response rate = 95.6%). Another two weeks later, in Wave 3 (T3), the 240 employees reported their learning behaviors toward each colleague. To reduce common method bias, social undermining was assessed through peer ratings, where each employee reported the social undermining they received from colleagues. This wave yielded 240 valid responses (effective response rate = 100%). Participants who completed all three waves and passed quality checks received a small gift worth approximately 50 RMB.

After matching the questionnaires, we obtained a final sample of 720 interpersonal dyads from 240 members across 60 teams. In the final member sample, 35.8% were female; the mean age was 30.55 years (SD = 6.41); the majority held bachelor's degrees (62.5%); and the average tenure was 5.06 years (SD = 4.83). Tests revealed no significant differences in demographic variables between the final 240 employees and the initial 270 employees (F-statistics,  $p = 0.316\sim 0.497$ ).

## 2.2 Variable Measurement

We used established Western scales for all variables and employed the translation-back-translation method to develop Chinese versions (Brislin, 1986). Unless otherwise specified, all variables were measured using 5-point Likert scales (1 = strongly disagree, 5 = strongly agree).

**Workplace Upward Social Comparison (T1).** We used the 8-item scale developed by Brown et al. (2007), which covers eight dimensions including job performance, salary, and relationships with leaders. Following Reh et al. (2018), we asked employees to evaluate their comparison with each colleague on these eight dimensions. A sample item is “This colleague's salary is \_\_\_\_ than mine” (1 = much worse, 2 = slightly worse, 3 = the same, 4 = slightly better, 5 = much better) (Cronbach's  $\alpha = 0.90$ ).

**Performance-Prove Goal Orientation (T1).** We used the 4-item scale developed by VandeWalle (1997). A sample item is “I am very concerned with showing that I am better than others” (Cronbach's  $\alpha = 0.89$ ).

**Challenge and Threat Appraisals (T2).** Both variables were measured using the 3-item scale developed by LePine et al. (2016). A sample item for challenge appraisal is “This colleague contributes to my personal development and success” (Cronbach's  $\alpha = 0.93$ ). A sample item for threat appraisal is “This colleague threatens my personal development and success” (Cronbach's  $\alpha = 0.94$ ).

**Learning Behavior (T3).** We used the 5-item scale from Lee and Duffy (2019) for round-robin designs, comprising two dimensions: observation and

advice seeking. Sample items include “I carefully reflect on and analyze this colleague’s ways of doing things” (observation) and “I actively seek this colleague’s opinions and suggestions regarding work tasks” (advice seeking). The second-order factor structure showed good fit indices:  $\chi^2(df = 3) = 34.93$ , CFI = 0.97, TLI = 0.91, RMSEA = 0.09, SRMR = 0.03 (Cronbach’s  $\alpha = 0.81$ ).

**Social Undermining (T3).** We used the 4-item scale from Lee and Duffy (2019) for round-robin designs (Sun et al., 2021). A sample item is “This colleague spreads rumors about me” (Cronbach’s  $\alpha = 0.74$ ).

**Control Variables.** We controlled for employees’ and colleagues’ age, gender, education, and tenure, as these variables affect workplace interpersonal interactions (Settoon & Mossholder, 2002; To et al., 2021). Team size and team age also influence intra-team interaction processes (Tang et al., 2022), so we controlled for these as well. Additionally, Buunk et al. (2003) found that some individuals have stronger social comparison tendencies, which amplify the effects of social comparison. To isolate this effect, we controlled for employees’ social comparison orientation (Reh et al., 2018), measured using the 11-item scale developed by Gibbons and Buunk (1999) (Cronbach’s  $\alpha = 0.90$ ). Finally, following Dietz et al. (2015), we also controlled for employees’ learning goal orientation to demonstrate that it is performance-prove goal orientation—not other positive goal orientations—that differentiates the effects of workplace upward social comparison. This variable was measured using VandeWalle’s (1997) 5-item scale (Cronbach’s  $\alpha = 0.88$ ).

### 2.3 Analytical Strategy

The data structure for relationship variables collected through round-robin designs contains three levels: the dyadic level (member A-B), the individual level (members A and B), and the group level. These levels have a complex nested structure (Kenny et al., 2006), where dyadic-level data are nested within individuals, which are further nested within teams. We used the social relations model (SRM; Kenny, 1994) for data analysis. SRM is an analytical method for studying intra-group relationship variables that decomposes variable variance into four components: group effect, actor effect, partner effect, and dyadic effect, thereby accommodating the complex variance structure of relationship variables (Xu et al., 2015). This method has been widely used by scholars to analyze interpersonal interactions in teams (e.g., Lee & Duffy, 2019; To et al., 2021; Zhang et al., 2021).

Since our study focuses on how workplace upward social comparison affects learning behavior and social undermining among team members, we used the R software package developed by Kenny and Wong (2016) to conduct SRM analyses (Lam et al., 2021; Tang et al., 2022). The specific steps for SRM analysis are similar to traditional regression analysis, and the resulting effect estimates are analogous to regression coefficients (Kenny et al., 2006). To reduce multicollinearity in constructing interaction terms, we grand-mean-centered the

predictor variables (Raudenbush & Bryk, 2002). To test conditional indirect effects, we used the procedure recommended by Preacher et al. (2010) and employed the Monte Carlo approach with 20,000 replications to test indirect effects in R 3.5.

### 3. Results

#### 3.1 Confirmatory Factor Analysis

We conducted multilevel confirmatory factor analysis using Mplus 8.2 to examine the discriminant validity of individual-level variables (i.e., performance-prove goal orientation) and dyadic-level variables (i.e., workplace upward social comparison, challenge and threat appraisals, learning behavior, and social undermining). The results showed that the hypothesized six-factor model fit the data well:  $\chi^2(df = 222) = 649.31$ , CFI = 0.94, TLI = 0.93, RMSEA = 0.05, SRMR (dyadic level) = 0.03, SRMR (individual level) = 0.05. This model fit significantly better than alternative five-factor models ( $417.41 \leq \Delta^2(\Delta df = 4) \leq 1580.71$ ) and a two-factor model ( $\Delta^2(\Delta df = 10) = 4422.62$ ), indicating good discriminant validity among our variables.

#### 3.2 Variance Decomposition

Before testing hypotheses, we decomposed the variance of endogenous variables. As shown in Table 1, the dyadic level accounted for 20.3% of the total variance in A's challenge appraisals of B and 28.7% of the variance in A's threat appraisals of B. For A's learning behavior toward B and A's social undermining of B, the dyadic level accounted for 21.3% and 33.8% of total variance, respectively. These results indicate that the four endogenous variables are substantially influenced by interpersonal interactions.

**Table 1. Variance Decomposition Results**

| Variance Source | A' s Challenge Appraisal of B | A' s Threat Appraisal of B | A' s Learning Behavior toward B | A' s Social Undermining of B |
|-----------------|-------------------------------|----------------------------|---------------------------------|------------------------------|
| Group Effect    | 20.4%                         | 37.4%                      | 33.0%                           | 22.7%                        |
| Actor Effect    | 58.6%                         | 33.4%                      | 45.7%                           | 41.6%                        |
| Partner Effect  | 0.7%                          | 0.5%                       | 0.0%                            | 1.9%                         |
| Dyadic Effect   | 20.3%                         | 28.7%                      | 21.3%                           | 33.8%                        |

*Note: Group level  $N = 60$ , individual level  $N = 240$ , dyadic level  $N = 720$ .*

### 3.3 Hypothesis Testing

Table 2 presents the means, standard deviations, reliability coefficients, and correlations among all variables.

**H1** predicted that when employees have low performance-prove goal orientation, workplace upward social comparison is more likely to elicit challenge appraisals. As shown in Model 3 of Table 3, the interaction between A-B workplace upward social comparison and A' s performance-prove goal orientation negatively predicted A' s challenge appraisals of B ( $b = -0.19$ ,  $SE = 0.07$ ,  $p = 0.011$ ). To interpret this interaction, we plotted the effect and conducted simple slope analyses to verify the direction of the moderation (Aiken & West, 1991). As shown in Figure 2 [Figure 2: see original paper], the relationship between A-B workplace upward social comparison and A' s challenge appraisals of B was non-significant when A' s performance-prove goal orientation was high (simple slope =  $-0.04$ ,  $t = -0.60$ ,  $p = 0.548$ ) but positively significant when it was low (simple slope =  $0.22$ ,  $t = 2.94$ ,  $p = 0.003$ ). H1 was supported.

**H2** predicted that when employees have high performance-prove goal orientation, workplace upward social comparison is more likely to elicit threat appraisals. As shown in Model 6 of Table 3, the interaction between A-B workplace upward social comparison and A' s performance-prove goal orientation positively predicted A' s threat appraisals of B ( $b = 0.19$ ,  $SE = 0.08$ ,  $p = 0.002$ ). As shown in Figure 3 [Figure 3: see original paper], the relationship between A-B workplace upward social comparison and A' s threat appraisals of B was positively significant when A' s performance-prove goal orientation was high (simple slope =  $0.25$ ,  $t = 3.49$ ,  $p = 0.001$ ) but non-significant when it was low (simple slope =  $-0.08$ ,  $t = -1.13$ ,  $p = 0.27$ ). H2 was supported.

**H3** predicted that when employees have low performance-prove goal orientation, their workplace upward social comparison enhances learning behavior through challenge appraisals. As shown in Model 2 of Table 4, A' s challenge appraisals of B positively influenced A' s learning behavior toward B ( $b = 0.08$ ,  $SE = 0.02$ ,  $p = 0.001$ ). Furthermore, the indirect effect of A-B workplace upward social comparison on A' s learning behavior toward B through A' s challenge appraisals of B was non-significant when A' s performance-prove goal orientation was high (indirect effect =  $-0.003$ , 95% MC CI [ $-0.02$ ,  $0.01$ ]) but positively significant when it was low (indirect effect =  $0.02$ , 95% MC CI [ $0.004$ ,  $0.04$ ]). The difference in indirect effects was significant (difference =  $-0.02$ , 95% MC CI [ $-0.04$ ,  $-0.003$ ]). H3 was supported.

**H4** predicted that when employees have high performance-prove goal orientation, their workplace upward social comparison enhances social undermining through threat appraisals. As shown in Model 4 of Table 4, A' s threat appraisals of B positively influenced A' s social undermining of B ( $b = 0.11$ ,  $SE = 0.03$ ,  $p < 0.001$ ). Furthermore, the indirect effect of A-B workplace upward social comparison on A' s social undermining of B through A' s threat appraisals of B was positively significant when A' s performance-prove goal orientation was

high (indirect effect = 0.03, 95% MC CI [0.01, 0.05]) but non-significant when it was low (indirect effect = -0.01, 95% MC CI [-0.03, 0.01]). The difference in indirect effects was significant (difference = 0.04, 95% MC CI [0.01, 0.07]). H4 was supported. Re-analyzing the data after removing control variables continued to support our hypotheses.

## 4. Discussion

### 4.1 Conclusions

Grounded in the prevalence of workplace upward social comparison, this study used social relations model analysis of 720 interpersonal dyads from 240 members across 60 teams to clarify the boundary conditions and underlying mechanisms through which workplace upward social comparison drives self-improvement and derogation effects. Specifically, when employees have low performance-prove goal orientation, they tend to appraise upward comparison targets as challenges, which subsequently motivates constructive learning behaviors toward those targets. Conversely, when employees have high performance-prove goal orientation, they tend to appraise upward comparison targets as threats, which drives destructive social undermining behaviors toward those targets. This study expands theoretical understanding of workplace upward social comparison effects and informs organizational talent management practices.

### 4.2 Theoretical Implications

First, this study introduces a novel theoretical perspective for examining workplace upward social comparison. Existing social comparison research has primarily built on Festinger's (1954) social comparison theory to examine the effects of specific content comparisons (Campbell et al., 2017; Downes et al., 2021; Tse et al., 2018). Our study takes a different approach by conceptualizing workplace upward social comparison holistically as a psychological stressor and integrating the cognitive appraisal theory of stress to examine its effects. This expands the theoretical research perspective on workplace upward social comparison and enriches our understanding of social comparison phenomena (Lazarus & Folkman, 1984). Additionally, while existing upward social comparison research has focused largely on why individuals harm comparison targets (e.g., high performers, star employees) (Kim & Glomb, 2014; Lam et al., 2011), limited attention has been paid to how upward comparison promotes self-improvement and affects self-directed appraisals (Campbell et al., 2017). By examining how workplace upward social comparison influences learning behavior and social undermining through cognitive appraisals, our study provides a more comprehensive and dialectical view of upward social comparison effects and contributes to a more systematic social comparison theoretical framework.

Second, this study expands the explanatory mechanisms underlying upward social comparison effects. Previous research has focused primarily on emotional

mechanisms, examining the mediating roles of specific emotions such as envy and inspiration (Kim & Glomb, 2014; Smith, 2000). Our study demonstrates that beyond the “hot” emotional mechanism, individuals’ “cold” rational cognitive appraisals can also explain how they respond to upward social comparison. Specifically, by introducing challenge and threat appraisals as cognitive mediators, we depict the internal cognitive mechanisms through which workplace upward social comparison “how” and “why” drives employees to engage in two distinct behavioral responses—learning and social undermining—from a rational cognitive rather than emotional perspective. This provides a new explanatory mechanism for the inconsistent effects of upward social comparison and offers a diversified perspective for future scholars examining the unfolding processes of upward social comparison and related theoretical topics (e.g., high performers, star employees, proactive employees).

Finally, this study identifies a new “key” to differentiate the divergent effects of upward social comparison. Existing research on boundary conditions that separate or reverse upward social comparison effects has primarily adopted a “can do” perspective, examining the moderating roles of comparators’ self-efficacy and sense of control (Ganegoda & Bordia, 2019). However, as Ma et al. (2021) note, individuals’ stress coping processes depend not only on their sense of control but also on whether the stressor touches their core goals. Thus, what individuals “want to do” is also crucial to their stress coping processes. By introducing performance-prove goal orientation as a moderator, our study helps explain the underlying logic behind employees’ divergent cognitive appraisals of workplace upward social comparison as either challenge or threat. This moderator also helps identify another unique “key” that activates different effects of workplace upward social comparison and helps reconcile existing research discrepancies regarding its divergent effects.

### 4.3 Practical Implications

This study offers several practical implications. First, because workplace upward social comparison has negative effects on employees with high performance-prove goal orientation, managers should be attentive to employees’ goal orientation in contexts where upward comparison may occur. For employees with high performance-prove goal orientation, managers should be cautious when providing feedback to avoid triggering upward comparison processes. For example, when delivering performance-related feedback to these employees, managers should minimize the use of horizontal upward comparisons (e.g., “Your performance is much worse than colleague Zhang’s”) to prevent them from viewing comparison targets as threats and generating negative interpersonal consequences. Additionally, when unavoidably delivering relatively negative feedback to these employees, managers could consider providing simultaneous positive feedback to mitigate potential negative effects. For instance, leaders could focus feedback on the employee themselves, using a longitudinal comparison perspective to highlight improvements relative to their previous performance. Another way

to mitigate high performance-prove goal orientation employees' threat appraisals of upward comparison targets is for managers to provide feedback based on absolute rather than relative information. This aligns with communication scholars Kluger and DeNisi's (1996) general recommendation that managers should focus on task performance itself rather than relative comparisons with colleagues. Conversely, when providing feedback to low performance-prove goal orientation employees, managers can appropriately use high-performing colleagues as references to stimulate learning from role models. Finally, since performance-prove goal orientation serves as a switch that separates the positive and negative effects of workplace upward social comparison, and given that Dierdorff et al. (2020) found that individuals' goal orientation changes over time (approximately 19-25 weeks), organizations can take measures to reshape employees' performance-prove goal orientation and calibrate it to lower levels to maximize the positive effects of workplace upward social comparison.

#### 4.4 Limitations and Future Directions

This study has several limitations that warrant future research. First, some aspects of our data could be further optimized. Although we used a three-wave, round-robin design to test our model, we could not completely eliminate potential reverse causality. Future research could collect all variables at each time point to obtain longitudinal panel data for stronger causal inferences. Additionally, regarding measurement, our study used self-reports for learning behavior and peer reports for social undermining. Using different data sources for two parallel outcome variables may reduce comparability. Although we conducted robustness checks using self-reported social undermining, future research could use identical data sources for parallel outcome variables to enhance comparability.

Second, because our study focused on the boundary role of performance-prove goal orientation in separating the differential effects of upward social comparison, we controlled for objective factors such as team size, team age, and team member demographic heterogeneity. However, since our key exogenous variables are individual-level and somewhat subjective, this somewhat limits the practical implications of our findings. We encourage future research to incorporate work characteristics and team or organizational structural factors as boundary conditions to enhance the practical guidance of research on upward social comparison effects.

Finally, social comparison involves three dimensions: comparison direction (upward vs. downward), comparison effect (assimilation vs. contrast), and comparison timing (static vs. dynamic) (Festinger, 1954; Pettit et al., 2013). Although social comparison research is flourishing, most studies have focused on the first two dimensions, with scarce research on the third dimension (Chun et al., 2018; Reh et al., 2018). Therefore, future research could integrate appropriate theoretical perspectives to examine the unfolding processes of dynamic social comparison effects, deepening our understanding of social comparison phenomena.

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