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**Citation for published version:**

Xu, X, Cropanzano, R, McWha-Hermann, I & Lu, C 2024, 'Multiple salary comparisons, distributive justice and employee withdrawal', *Journal of Applied Psychology*, pp. 1-22. <https://doi.org/10.1037/apl0001184>

**Digital Object Identifier (DOI):**

[10.1037/apl0001184](https://doi.org/10.1037/apl0001184)

**Link:**

[Link to publication record in Edinburgh Research Explorer](#)

**Document Version:**

Peer reviewed version

**Published In:**

Journal of Applied Psychology

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**Multiple Salary Comparisons, Distributive Justice, and Employee Withdrawal**

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The authors have no conflicts of interest to disclose.

We gratefully acknowledge funding from the National Natural Science Foundation of China (Grant No. 72302205) awarded to Xiaomin Xu, and the National Natural Science Foundation of China (Grant No. 72271011) awarded to Chang-qin Lu.

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### **Abstract**

Salary comparison has well-established implications for employees' attitudes and behaviors at work. Yet how employees process information about simultaneous comparisons, particularly when internal and external comparison information is incongruent, remains controversial. In this paper, we draw from the model of dispositional attribution and equity theory to predict how the incongruence of internal and external salary comparisons affects perceptions of distributive justice and subsequent employee withdrawal behavior. We hypothesized that the effect of salary comparisons on perceived distributive justice follows a hierarchically restrictive schema in which a lower salary in comparison to a referent has a greater effect than a higher salary. This further affects employee withdrawal (neglect, turnover intention and voluntary turnover). We also propose that the effects of salary comparisons are bounded by employees' zero-sum construal of success. Three studies were conducted to test our hypotheses: a quasi-experimental study and two time-lagged field studies. Consistent with our hypotheses, we observed that when comparison information was incongruent, underpayment compared with others more strongly affected perceived distributive justice than overpayment did. The subsequent impact on perceived distributive justice was negatively related to employee withdrawal. As expected, the effect of incongruent salary comparison information was stronger for employees with lower zero-sum construal of success. The theoretical and practical implications of these findings are discussed.

*Keywords:* internal/external salary comparison, model of dispositional attribution, equity theory, distributive justice, employee withdrawal, zero-sum construal of success

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### Multiple Salary Comparisons, Distributive Justice, and Employee

#### Withdrawal

Salaries are important for employees around the world (Hsee et al., 2009; Skitka, 2009; Trevor & Wazeter, 2006). Accumulated evidence shows that salary comparisons are determinants of many different workplace outcomes, such as voluntary turnover, performance, and deviant behavior (e.g., Gerhart & Fang, 2014; Kish-Gephart et al., 2010; Williams et al., 2006). Although salaries are sometimes confidential, employees are likely to discuss and compare their salaries with others (Leung et al., 1996; Luna-Arocas & Tang, 2015), and these comparisons affect how employees perceive and react to their own salaries. Based on salary comparisons, employees can derive their ratio of input (i.e., effort) to output (i.e., salary) compared to that of a chosen referent (e.g., a colleague). If these ratios are found to be unequal, they may cause an employee to feel unfairly treated by the organization and they may therefore decide to leave (Adams, 1965; Ridge et al., 2017).

While this model works well in theory, in the real world such comparisons are more complicated. Specifically, employees are likely to engage in *multiple salary comparisons* – comparing their salary with multiple referents (i.e., internal and external) simultaneously. Employees commonly choose two referents as points of comparison: (a) similar peers in the company (*internal salary comparison*); and (b) people external to the company who are doing comparable work (*external salary comparison*) (Harris et al., 2008; Hill et al., 2017; Kacperczyk & Balachandran, 2018; Williams et al., 2006). However, the information gained from internal and external salary comparisons be *incongruent* (Gupta et al., 2012; Trevor & Wazeter, 2006). In some cases, an employee's salary could be higher than that of a colleague but lower than that of employees in other companies, or vice versa. This raises the question of how incongruent comparison information (e.g., when internal and external salary comparisons differ) affects employees' perceptions of distributive justice (i.e., "the perceived

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fairness of decision outcomes, especially the degree to which outcomes are equitable"; Colquitt et al., 2013, p. 200).

It is often proposed that when confronted with incongruent comparison information, employees utilize an "average assumption" to make sense of salary difference. This assumption argues that different salary comparison information is simply averaged to generate a single mean score of relative salary. This average score will then impact perceived distributive justice (as well as other work outcomes). When the averaged information indicates that a salary level is lower, perceived distributive justice will be lower. A typical study making this assumption, for example, calculates the person's own relative salary level by averaging comparisons with different referents. This mean is then used to predict current or subsequent work outcomes such as pay satisfaction and performance (e.g., Connelly et al., 2016; Harris et al., 2008; Torre et al., 2015). Note that this perspective attaches equal importance to different comparison outcomes, regardless of the valence of the information. Thus, both positive comparisons (overpayment) and negative comparisons (underpayment) are considered to have equal weighting in their assessment of distributive justice. The average assumption approximates normative rationality, in that it only considers the mean level of an individual's perceived economic outcomes.

While this is an intuitively appealing way to combine referents, questions remain as to the extent to which perceptions of organizational justice follow economic rationality. Theoretical and empirical studies have highlighted that moral attribution plays a central role in employees' motivation and reaction to organizational justice (e.g., Folger & Cropanzano, 1998, 2001; O'Reilly & Aquino, 2011; Rupp & Bell, 2010; Skarlicki & Turner, 2014; Van de Vyver & Abrams, 2015). From this perspective, employees seek information (e.g., through salary comparisons) to understand the extent to which their organization behaves morally. These types of judgment often depart from economic rationality. As such, there is a

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conceptual imperative to use frameworks of moral attribution to re-evaluate how multiple salary comparisons are integrated to inform distributive justice perceptions and why.

To address this limitation of previous research, we propose the following competing hypothesis. Drawing from the model of dispositional attribution (Reeder & Brewer, 1979), individuals tend to attribute the informational cues they collect to dispositional factors. Depending on the type of attributed qualities, people adopt different schemas. For example, rather than pooling all cues regardless of their valence (i.e., the average assumption), the model of dispositional attribution argues that moral attributions tend to be asymmetrical, placing less weight on good conduct (because moral behavior is less diagnostic) and more weight on immoral conduct (because immoral behavior is more diagnostic) (Reeder & Brewer, 1979; Trafimow & Trafimow, 1999). This is termed a “hierarchically restrictive schema” because some cues matter more than others (Reeder & Brewer, 1979, p. 67). Consistent with this, we propose that the attribution of organizational distributive justice follows a *hierarchically restrictive schema*, such that negative salary comparison information will have stronger effects on distributive justice than positive comparison information will.

Our research sets out to test whether the *hierarchically restrictive schema* is more appropriate than the *average assumption* in explaining how multiple salary comparisons are integrated to inform perceptions of distributive justice. As explained later in the paper, these two theoretical perspectives offer competing predictions on distributive justice when internal and external salary comparisons are incongruent. We therefore conducted three empirical studies modelling the extent of incongruence between internal and external salary comparisons. Varying configurations of referents, in turn, should differentially cause evaluations of distributive justice. Extrapolating from the model of dispositional attribution (Reeder & Brewer, 1979), we expect support for the hierarchically restricted schema, because distributive justice should function as moral attribution, rather than economic rationality.

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Moreover, if this mechanism is correct, the hierarchically restricted schema of salary comparisons should be less prevalent among individuals whose primary focus is on economic gains rather than moral attribution (Reeder & Brewer, 1979; Trafimow & Trafimow, 1999).

A zero-sum construal of success is a general mindset in which a person regards their resource gains as losses to another person (Esses et al., 1998). People with a higher zero-sum construal of success favor economic rationality over moral attribution (Różycka-Tran et al., 2015; Uziel & Hefetz, 2014), potentially mitigating the proposed hierarchically restrictive schema of salary comparison. We therefore directly test the boundary condition of a zero-sum construal of success.

Finally, we argue that hierarchically restrictive schemas have implications for work behaviors. In particular, employee withdrawal, which includes behaviors such as reduced work effort and leaving the workplace (Hanisch & Hulin, 1990, 1991), carries significant ramifications for organizations. Not only is employee withdrawal costly, but it can also have detrimental effects on the morale of other employees (Berry et al., 2012; Podsakoff et al., 2007). According to equity theory (Adams, 1965), the effects of salary comparisons on distributive justice can influence employee withdrawal, such that low distributive justice can motivate employees to reduce their work efforts as a way to restore the equity of inputs and outputs. A recent meta-analysis by Rubenstein et al. (2018) has highlighted the lack of research exploring the underlying mechanism through which pay may affect employee withdrawal. Although some research has hinted at a potential mediating role of distributive justice (e.g., Riddell, 2011; Sieweke et al., 2017), empirical investigations in this area remain scarce. This creates a gap in the literature that calls for further examination. Thus, our studies seek to explore the impact of salary comparisons via distributive justice on employee withdrawal (i.e., neglect, turnover intention, and voluntary turnover). Our proposed model is depicted in Figure 1.

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Overall, our research offers a more nuanced theoretical framework to explain the mechanisms underpinning multiple salary comparisons and their link to distributive justice, compared to the existing average assumption, which typically employs a straightforward averaging approach in understanding multiple salary comparisons. This allows us to make a number of contributions. First, we contribute to salary comparison research by explaining *how* multiple salary comparisons are processed to affect employee perceptions of justice. Salary comparison has well-established implications for employee attitudes and behaviors at work (e.g., Gerhart & Fang, 2014; Kish-Gephart et al., 2010; Williams et al., 2006), yet how employees process the information from multiple salary comparisons has not been adequately articulated. Existing studies commonly employ an average approach (e.g., Connelly et al., 2016; Harris et al., 2008; Torre et al., 2015), which we view as incomplete, particularly when the information derived from multiple comparisons is incongruent. In our paper, we propose an alternative model – a hierarchically restrictive schema – to explain how employees integrate multiple salary comparisons. The main tenet is that individuals place greater emphasis on negative versus positive comparison outcomes (i.e., being underpaid rather than overpaid). We contrast propositions based on the average assumption with predictions grounded in a hierarchically restrictive schema, and we test these competing propositions across three studies. Our integrated view suggests that previous findings based on averaging incongruent comparison outcomes oversimplify how employees process multiple salary comparisons to generate distributive justice perceptions.

Second, we provide a theoretically grounded framework to explain *why* multiple salary comparisons are processed through a hierarchically restrictive schema. Employees integrate multiple salary comparisons to understand how morally just their organization's behavior is. In line with the model of dispositional attribution (Reeder & Brewer, 1979; Trafimow & Trafimow, 1999), lower salaries hold greater diagnostic significance in a



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comparison than higher salaries when evaluating the moral attributes of the organization. This clarifies why individuals prioritize the underpaid comparison outcome over the overpaid one in cases of incongruent salary comparisons. However, the extent to which individuals utilize the hierarchically restrictive schema depends upon the underlying attributions they seek to make. To the extent that individuals de-emphasize moral concerns, such as when they have a high zero-sum construal of success, they will give similar weight to lower and higher salaries in a comparison. In this way, our paper provides novel insights into how salary comparison influences moral judgments. Building on these observations, we further identify a boundary condition to provide a more sophisticated framework explaining why negative salary comparisons outweigh positive ones. Specifically, employees who favor economic rationality (i.e., have a high zero-sum construal of success) are less likely to utilize the hierarchically restrictive schema compared to those who favor moral principles (i.e., have a low zero-sum construal of success).

Third, our work also has practical implications for organizations. We find that negative salary comparisons sometimes overpower the influence of positive salary comparisons. The resulting sense of distributive injustice, in turn, can lead the employee to withdraw from the organization. This includes both withdrawal from work (e.g., lateness, effort reduction) and withdrawal from the job (e.g., voluntary turnover, turnover intentions) (Hanisch & Hulin, 1990, 1991).

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Insert Figure 1 about here

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### **Theory and Hypotheses**

#### **Salary Comparisons: Internal and External Referents**

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Salary comparison is a critical component that shapes how employees understand organizational distributive justice (Colquitt et al., 2013). We specifically focus on employee perceptions of distributive justice rather than other justice dimensions because salary information addresses the outcome of distribution, linking back to Colquitt's (2001) definition of distributive justice. As suggested by equity theory (Adams, 1965), when an employee's salary is lower than that of their chosen referent, the employee will ultimately feel there is less distributive justice. Smith et al. (2012) similarly found that comparisons (e.g., of salary, status, privilege) with referents induce justice-related affect. The choice of referents is important, as it affects perceptions of fair treatment (Crosby, 1982; Skitka, 2009). For example, an employee will perceive a distribution as unjust when compared to a referent who has a similar job but earns more. That same employee will feel fairly or over rewarded when compared to a referent with a similar job earning the same or less. Salary comparisons with different referents can therefore lead to different reactions to organizations (Buunk & Gibbons, 2007; Buunk et al., 2003).

Prior studies have pointed out that employees tend to draw on multiple referents to understand their pay (e.g., Brown, 2001; Trevor & Wazeter, 2006). In principle, employees can compare their salary with anyone else's. However, in practice, employees are most likely to make comparisons with referents who have similar professions, experiences and education (Chen et al., 2002; Greenberg, 1983; Kim et al., 2019; Summers & Hendrix, 1991). Two types of salary comparisons are considered critical in the pay literature – internal salary comparison (i.e., salary comparisons with similar peers in their company), and external salary comparison (i.e., salary comparison with similar peers in other companies) (Harris et al., 2008; Hill et al., 2017; Kacperczyk & Balachandran, 2018; Williams et al., 2006).

### **Internal and External Comparisons: Congruence and Incongruence**

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As noted above, employees are likely to compare their salary with multiple referents – such as internal and external referents – at the same time (Hill et al., 2017; Kacperczyk & Balachandran, 2018). Distributive justice is impacted by the pattern of these assessments. When employees concurrently conduct internal and external salary comparisons, there are four potential categories of resulting comparison information (see Figure 2): internal and external salaries are both higher; internal salary is higher and external salary is lower; internal salary is lower and external salary is higher; and internal and external salaries are both lower. Thus, the two sources of salary information can be congruent or incongruent.

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Insert Figure 2 about here  
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In the case of information congruence, both internal and external salary comparisons indicate the same salary status for the individual. This means that the individual's salary is perceived as being better, equal, or worse both within the organization (internally) and outside the organization (externally). When both comparisons reveal equal or greater salary, people are more likely to view the compensation system as distributively fair (Choi & Chen, 2007). When comparisons consistently reveal a disadvantage, this can produce unfairness perceptions and negative reactions (Smith et al., 2012). Taken together, when internal and external salary comparisons are *congruent*, disadvantaged salary comparisons should be negatively related to distributive justice, such that perceived distributive justice is lower in the “both-lower” quadrant compared to the “both-higher” quadrant in Figure 2.

However, information from internal and external salary comparisons can be *incongruent*. For example, employees can have a higher salary compared to internal referents but a lower salary when compared externally, or a lower salary internally but a higher salary externally (see Figure 2). When confronted with incongruent information, it becomes more

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complex for employees to make inferences. The average assumption suggests that people average out the incongruent information to generate an overall judgment, which in turn affects distributive justice. As we will argue, this perspective may oversimplify the process of comparison and we offer, as an alternative, a hierarchically restrictive schema based on the model of dispositional attribution (Reeder & Brewer, 1979).

### **Incongruent Salary Comparisons and Distributive Justice: Two Competing**

#### **Perspectives**

##### *The Average Assumption*

Research into socio-economic inequality has studied the impact of income on various outcomes and been confronted with the problem of how to integrate contradictory information from a variety of referents. The most common method is to average the difference between a person's income and the income of others' in their society to generate an index (e.g., Gini coefficient), and then use this index to predict social inequality, poverty, and individual well-being (e.g., Deaton, 2003; Ren & Pan, 2016; Yitzhaki, 1979). Recently, organization studies scholars have adopted a similar method to calculate relative salary level, and then used it to predict current or subsequent work outcomes such as pay satisfaction, voluntary turnover and performance (e.g., Connelly et al., 2016; Harris et al., 2008; Torre et al., 2015). For example, Harris et al. (2008) adopted this averaging method by asking participants to average the salaries of referents, and then compare it with their own salary to inform pay satisfaction. The implicit assumption behind this method is that different comparison information is equally important and any comparison outcomes, whether they are positive or negative, can be averaged to predict distributive justice and other relevant outcomes.

The average assumption is based on economic rationality, such that people process multiple salary comparisons in order to understand their economic position relative to

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comparable others. However, this method neglects the valence of different comparison information and in doing so may oversimplify how people integrate salary comparisons. As described below, we offer an alternative approach based on the model of dispositional attribution (Reeder & Brewer, 1979), proposing a higher valence for negative salary outcomes (underpayment) than positive salary outcomes (overpayment).

### *The Hierarchically Restrictive Schema*

The model of dispositional attribution proposes that different schemas are followed when attributing different dispositional characteristics (Reeder & Brewer, 1979). These schemas may be *partially restrictive* or *hierarchically restrictive* in nature. In a partially restrictive schema, positive and negative information is considered to be of symmetrical importance (Reeder & Brewer, 1979; Trafimow & Trafimow, 1999). For example, if we want to believe someone is a friendly person, unfriendly cues are tolerated at times. Similarly, if we want to believe someone is an unfriendly person, occasional friendly cues may be expected. Note that a partially restrictive schema results in attributions that are similar to the average assumption.

However, when it comes to dispositional attributions that are relevant to morality, positive and negative information carry asymmetrical importance. These attributions follow a hierarchically restrictive schema (Brown et al., 2005; Reeder & Brewer, 1979; Trafimow & Trafimow, 1999). For example, an honest person is expected to engage in no dishonest behaviors, while a dishonest person can occasionally engage in honest behaviors. Put differently, to occupy the positive pole of an attribution – honesty – a person must engage in honest behaviors only, whereas to occupy the negative pole of the dimension – dishonesty – the person can engage in both honest and dishonest behaviors. Thus, the information is asymmetrical because dishonest cues hold greater diagnostic value than honest cues. By itself, an honest cue does not allow one person to judge another as honest or dishonest,

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whereas a dishonest cue makes this attribution straightforward. This hierarchically restrictive schema explains the much stronger effect of negative information on morally relevant attributions.

To demonstrate this asymmetrical schema of attribution on morality, Reeder and Coovert (1986) conducted two experiments in which participants were primed with an initial impression of a stimulus person's morality. The participants then received a final item, which was inconsistently very moral or very immoral. The results showed that a single honest behavior was insufficient to change an impression that a person is dishonest, while a single dishonest behavior was sufficient to alter an attribution that a person is honest. Likewise, Trafimow and Trafimow (1999) asked participants to indicate the number of contrary behaviors necessary to change an original impression that a target person has particular traits of concern. They found that partially restrictive attributions (e.g., charitable-uncharitable, cooperative-uncooperative, and friendly-unfriendly) were rated as more difficult to disconfirm than hierarchically restrictive attributions (e.g., honest-dishonest). This was because only a single negative instance could disconfirm the latter attributions.

Moral attributions play a key role in the formation of organizational justice perceptions (e.g., Folger & Cropanzano, 1998, 2001; O'Reilly & Aquino, 2011; Rupp & Bell, 2010; Skarlicki & Turner, 2014; Van de Vyver & Abrams, 2015). Extending this reasoning, employees may seek salary comparison information to inform their assessment of how morally just their organization is in its behavior toward them. Similar to honesty, we argue that distributive justice follows a hierarchically restrictive schema (Reeder & Brewer, 1979; Trafimow & Trafimow, 1999), such that a negative salary comparison outcome (i.e., underpayment) indicates a violation of justice and therefore will have a stronger impact on distributive justice than a positive comparison outcome (i.e., overpayment).

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To occupy the positive pole of a hierarchically restrictive dimension (distributive justice), an organization is expected to engage in just distributions only (e.g., positive comparison outcomes only). To occupy the negative pole of the dimension (distributive injustice), the organization can engage in both unjust and just distributions (e.g., positive and negative comparison outcomes are both possible). Thus, negative salary comparison outcomes will be more diagnostic than positive outcomes when making attributions of distributive justice. With a positive cue, an organization can be judged as fair or unfair, while with a negative cue the organization is most likely to be viewed as unfair. Therefore, when internal and external salary comparisons are incongruent, information that corresponds to a negative attribution (i.e., lower salary) will have a stronger effect on distributive justice than information that corresponds to a positive attribution (i.e., higher salary).

### *The Average Assumption versus Hierarchically Restrictive Schema*

The two theoretical perspectives offer very different predictions regarding the antecedents of distributive justice when internal and external salary comparisons reveal incongruent results (see the “higher and lower” and the “lower and higher” quadrants in Figure 2). These competing theoretical approaches argue that distributive justice judgments are affected by different configurations of internal and external referents. To illustrate these contrasting predictions, consider two incongruent scenarios with an absolute equal point (i.e., both internal and external referent salaries are equal). Suppose that employee A’s salary is \$500 more than an internal referent and \$500 less than an external referent (i.e., the “higher & lower” quadrant in Figure 2); or employee B’s salary is \$500 less than an internal referent and \$500 more than an external referent (i.e., the “lower and higher” quadrant in Figure 2). According to the average assumption, employee A and B average +\$500 and -\$500, resulting in a \$0 difference on average. As such, perceived distributive justice for employees A and B should be the same as that in the absolute equal point, where the average difference is also

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\$0. According to the hierarchically restrictive schema, however, this is not the case. For employee A, earning \$500 less than an external referent will have a strong negative impact on distributive justice, which is not sufficiently remedied by earning \$500 more than an internal referent, and *vice versa* for employee B, earning \$500 more than an external referent does not sufficiently remedy their earning \$500 less than an internal referent. Therefore, distributive justice perceptions for both employee A and employee B are significantly lower than that in the absolute equal point, where no injustice cue is detected.

In general, the average assumption predicts the same level of distributive justice as long as the average scores from internal and external salary comparisons are also the same. In contrast, the hierarchically restrictive schema predicts that as the degree of incongruence between internal and external salary comparisons increases, distributive justice perceptions decrease. This is the position taken here. From the model of dispositional attribution, we propose that the effect of salary comparisons on distributive justice follows a hierarchically restrictive schema.

***Hypothesis 1:** When employees' internal and external salary comparisons are incongruent, the relationship between salary comparisons and distributive justice follows a hierarchically restrictive schema, such that as the degree of incongruence between internal and external salary comparisons increases, distributive justice perceptions decrease.*

### **Salary Comparisons, Distributive Justice, and Employee Withdrawal**

Employee withdrawal broadly refers to reduced participation at work or leaving the workplace altogether (Hanisch & Hulin, 1990, 1991). It can be divided into two types: work withdrawal and job withdrawal (Hanisch & Hulin, 1990, 1991). Work withdrawal describes employees devoting less time to the workplace or withdrawing effort in specific work tasks (Hanisch & Hulin, 1990, 1991). For example, "neglect" captures the core aspects of work



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withdrawal, wherein employees allow conditions to deteriorate via effort reduction, lateness or absences (Bruning & Campion, 2018; Rusbult et al., 1988). Job withdrawal indicates efforts to leave the organization, such as voluntary turnover (Hanisch & Hulin, 1990, 1991; Sims et al., 2005). When voluntary turnover information is difficult to obtain, researchers also use turnover intention as an indicator of job withdrawal (Hanisch & Hulin, 1990, 1991; Kao et al., 2014).

Employee withdrawal can be costly for organizations and have negative effects on teammates' morale and work motivation (Berry et al., 2012; Podsakoff et al., 2007). Prior research has examined a wealth of factors that predict employees' withdrawal attitudes and behaviors. Rubenstein et al.'s (2018) meta-analysis summarized various predictors of employee turnover, such as individual attributes (e.g., tenure, age, personality), job design (e.g., job characteristics, work load), and job attitudes (e.g., organizational commitment, job satisfaction). Among other things, Rubenstein et al. (2018) found that a composite measure of justice predicted turnover, "emphasizing how much individuals value fair and equitable treatment/outcomes from their employers" (p. 39). This finding raises the possibility that salary comparisons, which are often the basis of distributive justice assessments, could also be antecedents of employee withdrawal (e.g., Bloom & Michel, 2002; Kacperczyk & Balachandran, 2018; Ridge et al., 2017; Torre et al., 2015).

According to Adams' (1965) equity theory, inequity of input-output ratio (e.g., effort-salary ratio) compared with a salient referent leads to perceptions of low distributive justice, which motivates employees to reduce input/effort as a means of restoring equity. In particular, individuals can devote less time to the workplace and withdraw the effort made in specific work tasks to lower their input (Adams, 1965; De Boer et al., 2002). Alternatively, when the magnitude of inequity is high and there is no other means available, employees can adopt a more radical type of withdrawal – e.g. leaving the organization (Adams, 1965). In

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Hypothesis 1, we argued that as the degree of incongruence between internal and external salary comparisons increases, distributive justice perceptions decrease. Using Adams' equity theory (1965), this decrease in perceived distributive justice should further trigger employee withdrawal in order to restore equity.

Going further, distributive justice could act as a core mechanism linking salary comparisons to withdrawal. However, existing research has generally utilized tournament theory (for a review, see Shaw, 2014), leaving the role of distributive justice somewhat unclear. Notably, a few studies have incorporated equity theory in their rationale, positing that distributive justice is a key mechanism between salary comparisons and employee withdrawal (e.g., Riddell, 2011; Sieweke et al., 2017). Yet the mediating role of distributive justice has received little empirical examination in the extant literature. Exploring this mediating mechanism offers theoretical insights into why employees may withdraw when facing incongruent internal and external salary comparisons. Simultaneously and to the best of our knowledge, accumulated evidence has shown that salary comparisons are associated with perceptions of justice, yet little research has examined whether these comparisons contribute to employee withdrawal (e.g., Kim, Edwards, et al., 2015; Kim et al., 2019; Trevor & Wazeter, 2006). Extending the understanding of impacts on employees' work behavior therefore provides valuable managerial insights. To fill this void, we aimed to test whether the effects of salary comparisons on distributive justice can be extended to various forms of employee withdrawal – neglect, turnover intention, and voluntary turnover. Neglect represents work withdrawal, and voluntary turnover and turnover intention are job withdrawal (Hanisch & Hulin, 1990, 1991). Each represents potentially costly negative consequences for employers (Kao et al., 2014).

Based on this, we formulated Hypothesis 2, which posits a mediating role for distributive justice. We propose that distributive justice has a negative effect on employee

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withdrawal and more importantly, that distributive justice mediates the relationship between salary comparisons and employee withdrawal. Specifically, our research focuses on employees expressing work through neglect behavior (Study 2 & 3), and job withdrawal through voluntary turnover (Study 2) and turnover intention (Study 3).

***Hypothesis 2:** Distributive justice is negatively related to: a) neglect; b) turnover intention; and c) voluntary turnover. Distributive justice mediates the relationship between salary comparisons and these multiple forms of employee withdrawal.*

### **The Moderating Role of the Zero-Sum Construal of Success**

A key premise of our research is that people draw from multiple sources for salary comparison information, thereby allowing them to ascertain the extent to which their organization adheres to moral principles. Extrapolating from the model of dispositional attribution (Reeder & Brewer, 1979; Trafimow & Trafimow, 1999), salary comparisons provide individuals with information to make inferences on moral-related attributes (i.e., distributive justice). Moral attributions should follow a hierarchically restrictive schema where cues signaling the immoral pole outweigh cues signaling the moral pole, rather than averaging all cues, as would be expected in a traditional model of economic rationality. In human decision-making, negative information is often more salient than positive information (Baumeister et al., 2001). However, the present theoretical claim extends this idea by emphasizing the relevance of dispositional moral attributions.

Although it is expected that positive and negative outcomes of salary comparison have an incongruent impact on distributive justice as a function of moral attribution, the magnitude of this incongruence pattern results from the usefulness of negative observations in formulating dispositional moral attributions. If this claim is correct, then positive and negative information should have a similar value when making strictly economic judgments. Thus, the size of the incongruence pattern should be mitigated by the extent to which people

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endorse an economically rational mindset. However, if this claim is incorrect – the negative-positive asymmetrical effect is irrelevant to moral attributions – then the effect should remain equivalently significant for individuals no matter whether they endorse an economically rational or moral mindset. This suggests an important boundary condition for our model, and one that provides evidence for the underlying mechanism of dispositional moral attribution.

Zero-sum construal of success refers to a general view that a person's own resource gains represent losses to another (Esses et al., 1998). This can be chronic or situationally induced (Esses et al., 2001; Jun et al., 2023). High zero-sum construal of success enhances egoistic choice and economic rationality (Różycka-Tran et al., 2015; Uziel & Hefetz, 2014). For example, high zero-sum construal of success shifts people's attention to their own interest and economic gains, resulting in less prosocial behavior (Siroła & Pitesa, 2017). Research has found that in zero-sum situations (e.g., dictator games), people are prone to making egoistic and economically rational choices (Engel, 2011; Uziel & Hefetz, 2014). High zero-sum construal of success also amplifies dehumanizing cognitions and emotions (Louis et al., 2013), which can weaken moral considerations (Haslam, 2006). As such, we expect that employees with a higher zero-sum construal of success are less likely to engage in moral attribution in response to salary comparisons – and the hierarchically restrictive schema should be less relevant to them. People who are low in zero-sum construal of success, on the other hand, are more likely to consider the moral implications of salary comparisons and thus the hierarchically restrictive schema is more likely to be observed. Hence, drawing from the model of dispositional attribution (Reeder & Brewer, 1979), we predict that zero-sum construal of success mitigates the effect of incongruent salary comparisons on perceived distributive justice.

***Hypothesis 3:** Employees' zero-sum construal of success moderates the relationship between salary comparisons and distributive justice, such that the effect of incongruent*

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*salary comparisons on distributive justice perceptions is stronger (versus weaker) when zero-sum construal of success is lower (versus higher).*

### **Overview of the Present Research**

We conducted three studies to test our hypotheses. In Study 1, we employed a scenario paradigm to prime participants' internal and external salary comparisons, aiming to examine the influence of three scenarios on perceptions of distributive justice (Hypothesis 1). Study 2 utilized a two-wave field survey to explore the degree of incongruence between internal and external salary comparisons and its impact on distributive justice (Hypothesis 1). We also investigated Hypothesis 2 by examining the indirect effect of salary comparisons on employee withdrawal (i.e., neglect, voluntary turnover). In Study 3, we conducted an additional two-wave field survey. This study aimed to test the effect of salary comparisons on distributive justice (Hypothesis 1) and its subsequent impact on employee withdrawal (Hypothesis 2). Furthermore, we explored the moderating effect of a zero-sum construal of success (Hypothesis 3).

### **Transparency and Openness**

We describe our sampling plan, data exclusions (if any), manipulations, and measures utilized in Studies 1, 2 and 3. Our research adheres to the methodological checklist of the *Journal of Applied Psychology*. Research materials and measures are provided in Appendix A. The data, syntax, and output of Study 1 are accessible at the following link<sup>1</sup>. Due to the confidentiality agreements made with the participating companies in Studies 2 and 3, we cannot make the data public. However, the analysis code is available upon request from the first author. We ran the descriptive statistics and Study 1 analyses with IBM SPSS 27.0. All other analyses were conducted in Mplus 8.4 (Muthén & Muthén, 2012). Response surfaces

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<sup>1</sup> Open Science Framework (OSF) link: [https://osf.io/feshk/?view\\_only=5e0899022996410ca6eb56bea67cd7b6](https://osf.io/feshk/?view_only=5e0899022996410ca6eb56bea67cd7b6)

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figures were plotted using SYSTAT 13.0 (Edwards, 2002). The study design, hypotheses, and analysis were not preregistered.

### **Study 1: An Experimental Examination of Salary Comparison as a Hierarchically Restrictive Schema**

#### **Participants**

We collected data from people with a minimum working age of 18 who were currently employed in the United States. Invitation links were sent through Amazon Mechanical Turk to potential respondents for a scenario survey about salary and compensation. Participation was voluntary and participants received \$0.60 USD for completing the survey. Informed consent was gained from all participants.

A total of 127 qualified participants returned the scenario survey and 122 of them passed the attention check. Among the 122 participants, 83.6% identified their ethnic group as White, 7.4% as Black or African American, 0.8% as American Indian or Alaska Native, 10.7% as Asian, 1.6% as others, and 1.6% preferred not to say. The average age was 38 years ( $SD = 10.1$ ), 46.7% were female, 39.3% were married, and 57.4% had a bachelor's degree or higher. Their average work experience was 16.2 years ( $SD = 10.4$ ); 65.6% had supervisory experience. The most recent occupations for the participants were: manager (22.1%), professional (26.2%), technicians and associate professionals (7.4%), clerical support worker (16.4%), service and sales worker (18.0%), skilled agricultural, forestry and fishery workers (0.8%), craft and related trades workers (1.6%), plant and machine operators and assemblers (1.6%), armed forces occupations (0.8%), others (3.3%), and preferred not to say (1.6%).

#### **Procedure and Measures**

Participants read a vignette that included salary comparison information from similarly qualified and experienced employees from both the same (internal) and a different (external) company. We varied whether the participants' salaries were higher, lower, or the

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same compared to the two referents' salaries. The participants were randomly allocated into one of the following three conditions: (a) USD \$10,000 higher external salary + USD \$10,000 lower internal salary; (b) USD \$10,000 lower external salary + USD \$10,000 higher internal salary; and (c) same external salary + same internal salary. To prevent any contamination effect, the internal and external comparison information was presented in random order. The vignette read as follows:

*Imagine that you work for a software company called Digital Systems. You know that compared to similarly qualified and experienced employees with the same job responsibilities at another comparable software company, your annual compensation is USD \$10,000 less/more/the same, which is 10% of your annual compensation at Digital Systems. Recently, you learned that your annual compensation is USD \$10,000 less/more/the same than similarly qualified and experienced colleagues with the same job responsibilities at Digital Systems.*

After reading this vignette, we asked the participants to answer two questions for *manipulation checks*. External comparison perception was measured using one item: "Digital Systems pays me ... than another software company pays for similarly qualified and experienced employees with similar job responsibility." Internal comparison perception was measured using one item: "Digital Systems pays me ... than paying similarly qualified and experienced employees with similar job responsibility inside the company." Participants responded to these items on a 7-point scale (ranging from 1 = *much less* to 7 = *much more*). Then participants were asked to answer questions measuring distributive justice and other background information.

*Distributive justice* was measured using Kim and Leung's (2007) three-item distributive justice scale ( $\alpha = .96$ ). This scale has been used by prior research to measure distributive justice (e.g., Kim, Lin, et al., 2015) and has been proven to have high reliability

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as well as construct validity (e.g., Kim & Leung, 2007). Original wordings were modified to match the scenario we provided. A sample item is “The *annual compensation* I receive at *Digital Systems* are quite fair.” The participants responded to these items on a 6-point scale (ranging from 1 = *strongly disagree* to 6 = *strongly agree*).

### Strategy of Analysis

To test Hypothesis 1, we compared distributive justice scores in condition *a* and *b* with condition *c* to examine whether the *average assumption* or the *hierarchically restrictive schema* can better predict perceptions of distributive justice. Among these three groups, participants have the same average score from the two salary comparisons (i.e., all equal to USD \$0). According to the average assumption, distributive justice should be the same across the three groups given the same average comparison score. According to the hierarchically restrictive schema, however, participants in condition *a* and *b* should have a lower level of distributive justice than condition *c*, because the negative comparison outcome has a stronger impact on distributive justice than the positive comparison outcome.

### Results and Discussion

*Manipulation check.* We performed two one-way analyses of variance (ANOVA) using external/internal comparison conditions (i.e., USD \$10,000 less, the same, USD \$10,000 more) as the independent variable and external/internal comparison perception as the dependent variable. Results revealed significant differences of external comparison perception among the three groups –  $M_{less} = 2.91, SD = 1.78$ ;  $M_{same} = 4.06, SD = .36$ ;  $M_{more} = 5.09, SD = 1.38$ ;  $F(2, 119) = 27.98, p < .001$ . In particular, participants in the less external condition had a lower level of external comparison perception compared to those in the same external condition (mean difference =  $-1.15, SE = .32, p < .01$ ); participants in the same external condition had a lower level of external comparison perception compared to those in the higher external condition (mean difference =  $-1.02, SE = .32, p < .01$ ). Similarly, results



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revealed significant differences of internal comparison perception among the three groups –  $M_{less} = 2.48, SD = 1.17; M_{same} = 4.03, SD = .18; M_{more} = 5.20, SD = 1.59; F(2, 119) = 58.08, p < .001$ . Participants in the less internal condition had a lower level of internal comparison perception compared to those in the same internal condition (mean difference =  $-1.55, SE = .28, p < .001$ ); and participants in the same internal condition had a lower level of internal comparison perception compared to those in the higher internal condition (mean difference =  $-1.17, SE = .28, p < .001$ ).

*Test of competing hypotheses.* We performed a univariate analysis of variance in which the vignette condition was the independent factor and distributive justice was the dependent variable. Results revealed significant differences in distributive justice among the three conditions,  $F(2, 119) = 27.80, p < .001, \eta^2 = .318$ . Post hoc comparisons showed that distributive justice in condition *c* ( $M_c = 4.86, SE = .18$ ) was significantly higher than that in condition *a* ( $M_a = 3.17, SE = .15$ ; mean difference =  $1.69, SE = .24, p < .001$ ) and condition *b* ( $M_b = 3.47, SE = .15$ ; mean difference =  $1.39, SE = .24, p < .001$ ). Distributive justice in condition *a* and *b* did not significantly differ from each other (mean difference =  $-.31, SE = .21, p = .151$ ). Results supported the hierarchically restrictive schema over the average assumption. Incongruent salary comparison outcomes cannot be functioned as an average score to predict distributive justice. Rather, the negative salary comparison outcome significantly lowers perceived distributive justice regardless of the positive outcome.

The results of Study 1 provided encouraging initial support for our Hypothesis 1. Nevertheless, Study 1 was limited in a few respects. First, we used a scenario paradigm to test our arguments, which raises concerns about external validity (Brown & Lord, 1999). Although our scenario design enabled us to infer causality (Van den Bos, 2001), examining the model in the field would improve the generalizability of our findings. In Study 2 and 3, we therefore adopted time-lagged field surveys to examine whether similar effects can be

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found in actual work organizations. Second, in Study 1, we primed the participants with three different comparison situations, and consequently simplified the comprehensive comparison information. In real world employment settings, the degree of incongruence between internal and external salary comparisons can vary, which may have implications for how an employee reacts. In Study 2 and 3, we therefore asked participants to rate their salary comparisons on a continuous scale, allowing us to examine the degree of incongruence and its impact on distributive justice. Third, in Study 1, we did not test Hypothesis 2 due to the low fidelity of asking respondents about their withdrawal behaviors from a company described in a brief vignette. Hence, in Study 2 and 3, we conducted field studies to measure two dimensions of withdrawal behavior: work withdrawal (e.g., neglect) and job withdrawal (e.g., voluntary turnover, turnover intentions) (Kao et al., 2014). This allowed us to test the indirect effect of salary comparisons on organizational outcomes.

### **Study 2: A Field Study of the Salary Comparison Effect**

#### **Sample and Procedure**

We collected data from employees in an online education enterprise located in China. We did so at two points in time that were three months apart. Research assistants provided consent forms and information sheets to participants and assured them of confidentiality. To match survey responses with turnover data from company records, a unique code was assigned to each participant. Although the human resources department knew the names of employees, their unique codes, and their turnover data, it did not have access to participants' survey responses. In contrast, the research team had access to the unique codes, survey responses, and turnover data, but not employee names. Participation was voluntary and participants were given the option to skip any questions that they did not know the answer to, or if they felt uncomfortable responding. All measures were administered in Chinese. Translation and back-translation procedures were performed on measures when Chinese

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versions of the measures did not already exist (Brislin, 1980). Internal salary comparisons, external salary comparisons, and distributive justice were all measured at Time 1. Neglect was measured at Time 2. Turnover data were collected through organizational records at Time 2. We distributed 450 questionnaires at Time 1, and 307 participants took part in our survey (response rate of 68.2%). The average age of the participants was 28 years ( $SD = 4.2$ ); 48.9% were female; and 30.6% were married. Their average organizational tenure was 18.2 months ( $SD = 13.7$ ). We distributed 400 questionnaires at Time 2, and 289 participants took part in our survey (response rate of 72.3%).

### Measures

***Internal and external salary comparisons.*** Research into pay comparison tends to measure employees' subjective perceptions of salary comparisons (e.g., Chen et al., 2002; Harris et al., 2008; Kim et al., 2019; Summers & Hendrix, 1991). We thus asked our participants to rate their own salary compared to internal and external referents at Time 1 using six items (three for each) adapted from Kim, Edwards, et al.'s (2015) scale. Kim, Edwards, et al. (2015) measured the pay of an internal referent other using three items originating from the Work Values Scale (Super, 1973). Specifically, they defined a referent other as "someone who has similar job responsibilities and similar levels of education and experiences that s/he brings into the organization" and asked participants to assess how much their referent others are paid (e.g., their salary level) (Kim, Edwards, et al., 2015, p. 405). We amended their narratives in order to measure pay comparisons with both internal and external referent others – e.g., "Compared with someone in your company/in another company who has similar job responsibilities and similar levels of education and experiences that s/he brings into the organization as you, your salary level is...." Participants responded to these items on a 7-point scale (ranging from 1 = *very low* to 7 = *very high*). The reliability (i.e., Cronbach's  $\alpha$ ) of the adapted scales are .90 and .93 respectively.

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**Distributive justice.** Consistent with Study 1, we measured distributive justice at Time 1 using the three-item distributive justice scale of Kim and Leung (2007) ( $\alpha = .94$ ). A sample item is “The rewards I receive here are quite fair.” The participants responded to these items on a 6-point scale (ranging from 1 = *strongly disagree* to 6 = *strongly agree*).

**Neglect.** As a measure of work withdrawal, we assessed neglect at Time 2. We did so using six items from Rusbult et al. (1988) ( $\alpha = .89$ ). A sample item is “Sometimes when I just don’t feel like working, I will call in sick.” The participants responded to these items on a 5-point scale (ranging from 0 = *never* to 4 = *always*). As we were unable to distribute surveys to participants who had left the company at Time 2, their neglect data were labelled as missing values.

**Voluntary turnover.** Based on Hanisch and Hulin (1990, 1991), we assessed job withdrawal with voluntary turnover. Three months after the first survey, at Time 2, we obtained turnover information from organizational records. Of the 307 study participants, 23 had left the organization. 19 (6.2%) employees who left for similar positions in other companies or cities were included in our dataset and coded as “turnover”. One employee who left involuntarily and three employees who left to change occupations were not coded as “turnover” in our analysis because they were not considered to be “job-hopping.” We coded “turnover” as “1” and “no turnover” as “0”.

**Control variables.** We followed the suggestions of Bernerth and Aguinis (2016) to select our control variables – age, gender, marital status, and tenure. We included participants’ gender as a control variable because prior research suggests that women seem to have higher acceptance of lower pay and thus have lower pay expectation compared to men (Ramamoorthy & Flood, 2004). We also included participants’ marital status as a control variable because this can affect employee attitude toward pay (Gorman, 2000). For example, married individuals tend to view pay as more important and want more because pay is

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instrumental for enhancing the material welfare of their families and is a source of power within the household. We also controlled for participants' age and tenure, as these factors have been recognized as significant covariates in studies related to employee turnover (Rubenstein et al., 2018). Younger workers tend to have a stronger cosmopolitan orientation than older workers and thus are more likely to leave the current company (Chang et al., 2008). Long-tenured workers may feel reluctant to leave because they have already achieved high person-organization (P-O) fit and feel attached to their current employers (Schneider et al., 1995). Note that the results were comparable when these control variables were excluded from the model.<sup>2</sup>

### Strategy of Analysis

In Study 2, we adopted polynomial regressions (Edwards & Cable, 2009) and response surface modeling (Edwards & Parry, 1993) to test Hypothesis 1. Edwards et al. advocated using polynomial regression to generate three-dimensional response surfaces to enable the examination of congruence and incongruence effects on outcome variables (Edwards & Parry, 1993; Edwards & Van Harrison, 1993). We concurrently regressed distributive justice on five polynomial terms (see Equation 1): internal salary comparison (I); external salary comparison (E); internal salary comparison squared ( $I^2$ ); internal salary comparison  $\times$  external salary comparison ( $I \times E$ ); and external salary comparison squared ( $E^2$ ).

$$\text{Equation 1. Distributive justice} = b_0 + b_1I + b_2E + b_3I^2 + b_4I \times E + b_5E^2 + e$$

To test whether the *average assumption* or the *hierarchically restrictive schema* can better predict perceptions of distributive justice, we examined the effect of salary comparisons on distributive justice along the incongruence line, where the average scores of internal and external comparisons are all equal to zero. According to the average assumption, distributive justice should be the same along this incongruence line because each point in this

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<sup>2</sup>Results without control variables are available upon request from the first author.

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line shares the same average score of salary comparisons. Therefore, the data should reveal a non-significant term for the incongruence slope as well as curvature. According to a hierarchically restrictive schema, however, the negative comparison outcome outweighs the positive comparison outcome in predicting distributive justice. Therefore, the data should reveal a negative and significant incongruence curvature.

To test the indirect effects of salary comparisons on employee withdrawal via distributive justice (Hypothesis 2), we adopted the block variable approach recommended by Edwards and Cable (2009). This approach has been commonly utilized in polynomial models and is regarded as a reliable method (e.g., Cole et al., 2013; Lam et al., 2018; Lanaj et al., 2018; Zhang et al., 2012). The block variable approach allows us to obtain a single coefficient representing the joint effect (i.e., congruence and incongruence effect) of the five polynomial terms on distributive justice. Following recommendations by Edwards and Cable (2009), we constructed a block variable, which is a weighted linear composite of the five polynomial term multiplied by the estimated regression coefficients in the polynomial regression respectively. This block variable then replaces the five polynomial terms. The indirect effect of salary comparisons on an outcome variable can be calculated as a product of the coefficient of the block variable on distributive justice and the coefficient of distributive justice predicting the outcome variable. We simultaneously estimated the indirect effects of the block on both neglect and voluntary turnover via distributive justice perception using Mplus 8.4. We obtained the parameters for the path between the block variable on distributive justice (the “ $\alpha$ ” path in the mediation model), and the path from distributive justice to withdrawal and voluntary turnover (the “ $\beta$ ” path in the mediation model). The significance of the indirect effects was tested using 20,000 bootstrap samples.

## Results and Discussion

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The descriptive statistics, reliabilities, and correlations for the Study 2 variables are presented in Table 1. Before testing our hypotheses, we conducted a confirmatory factor analysis of the hypothesized four-factor model (internal salary comparison, external salary comparison, distributive justice, and neglect). We then compared the fit of this four-factor model with three alternative models: a three-factor model in which internal and external salary comparisons were combined into one factor; a two-factor model in which the internal and external salary comparisons and distributive justice were combined into one factor; and a one-factor model. As shown in Table 2, the four-factor model fit the data well and was better than the alternative models. All the scale items also had significant loadings on their corresponding latent constructs. These results provided encouraging evidence for the discriminant validity of the main variables in our model.

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Insert Table 1 and Table 2 about here  
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Table 3 shows the results of the polynomial regressions. The congruence ( $I = E$ ) line slope was significantly related to distributive justice (slope = .41,  $SE = .06$ ,  $p < .001$ ), suggesting a linear relationship along the line of perfect agreement. That is, perceptions of distributive justice decrease as both internal and external salary comparison decreases. More importantly, as Table 3 illustrates the curvature along the incongruence line ( $I = -E$ ) was negative and significant (curvature =  $-.27$ ,  $SE = .09$ ,  $p < .01$ ), suggesting a convex surface. That is, distributive justice decreased more sharply when the degree of incongruence between internal and external salary comparison increased.

Figure 3 depicts the surface plot for this polynomial regression. The congruence line ( $I = E$ ) runs from the near left corner to the far-right corner (solid line), and the incongruence line ( $I = -E$ ) runs from the far left corner and the near right corner (dotted line). The surface

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of Figure 3 shows a slope along the congruence line, indicating that distributive justice perception is lower when salary is lower than both internal and external referent salaries and higher when salary is higher than both internal and external referent salaries. Thus, when the comparisons with internal and external referents agree, salary comparison is positively related to distributive justice. More importantly, the surface plot shows an inverted U-shaped curve along the incongruence line, indicating that when internal and external comparisons are incongruent (internal higher and external lower, or external higher and internal lower), negative information (i.e., lower salary) strongly decreases the perception of distributive justice regardless of the positive information (i.e., higher salary). Together, these results reveal that incongruent salary comparison information cannot be modeled as an average score to predict distributive justice. Rather, it follows a hierarchically restrictive schema. Taken together, the results provide support for Hypothesis 1.

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Insert Table 3, 4 & Figure 3 about here  
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As shown in Table 4, the salary comparison block variable was significantly related to distributive justice ( $\beta = .46, p < .001$ ), and distributive justice was significantly related to neglect ( $\beta = -.23, p < .01$ ) and voluntary turnover ( $\beta = -.20, p < .01$ ). The indirect effect of the block variable, via distributive justice, was significant for both neglect (indirect effect =  $-.11, p < .01, 95\% \text{ CI} = [-.200, -.042]$ ) and voluntary turnover (indirect effect =  $-.09, p < .05, 95\% \text{ CI} = [-.180, -.027]$ ) (see Table 4). These results show that distributive justice mediated the combined effects of internal and external salary comparisons on employees' neglect and voluntary turnover, supporting Hypothesis 2.

Consistent with Study 1, Study 2's findings support a hierarchically restrictive schema over the average assumption using a two-wave field study with archival turnover data. Study



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2 also provides support for the indirect effect of salary comparisons on employee neglect and voluntary turnover. Nevertheless, in Study 2, participants were asked to compare their salary with a single internal and a single external referent. This may be problematic because we cannot know on what basis a single referent was selected, leading to the potential for unaccounted variables playing a role. Real world comparisons are also likely to include more referents both within and outside the organization. In Study 3, we therefore followed Chen et al. (2002), who measured comparisons with a group of internal referents and external referents. In Study 3 we further conducted a test of our whole model including the proposed moderator – zero-sum construal of success.

### **Study 3: A Field Study of the Moderated Salary Comparison Effect**

#### **Sample and Procedure**

We collected data from high school teachers working in two branches of an education group located in the same city in Northeast China. Surveys were collected at two time points (Time 1 and Time 2) separated by one month. Invitation letters were sent to all teachers and a survey link was provided to those who agreed to participate. Participation was voluntary and confidentiality was assured. All measures were administered in Chinese. Internal salary comparisons, external salary comparisons, distributive justice, and zero-sum construal of success were measured at Time 1. Neglect and turnover intention were measured at Time 2. We distributed the Time 1 survey to 374 participants who agreed to participate, and 334 valid surveys were received (a completion rate of 89.3%). We distributed the Time 2 survey to 483 participants who agreed to participate, and 410 valid surveys were returned (a completion rate of 84.9%). Of all the participants, 259 completed both surveys. The average age of the participants was 37 years ( $SD = 7.3$ ); 73% were female; their average organizational tenure was 10.9 years ( $SD = 8.3$ ); 6.2% had a permanent contract; and 79.2% were married.

#### **Measures**

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**Internal and external salary comparisons.** We used the same measures as in Study 2 for internal and external salary comparison at Time 1 – e.g., “Compared with employees in your company/in another similar company with similar job responsibilities, levels of education and experiences brought into the organization as you, your salary level is...” ( $\alpha = .93, .97$  respectively). Participants responded to the items on a 7-point scale (ranging from 1 = *very low* to 7 = *very high*).

**Zero-sum construal of success.** We measured zero-sum construal of success at Time 1 with the 6-item “zero-sum construal of success” scale used by Sirola and Pitesa (2017), which was adapted from prior work of Esses et al. (1998) ( $\alpha = .83$ ). A sample item is “People who want to get ahead economically must do so at the expense of others.” The participants responded to these items on a 6-point scale (ranging from 1 = *strongly disagree* to 6 = *strongly agree*).

**Distributive justice.** Distributive justice was assessed at Time 1 using a different measure from Studies 1 and 2. We varied the instrument to ensure that our findings were not dependent upon a particular assessment technique (Hillebrandt & Barclay, 2020). Previous research has also adopted a multi-measure approach to provide further evidence of reliability and external validity of findings (e.g., De Cremer et al., 2010). In Study 3 we used the four-item distributive justice scale developed by Colquitt (2001) ( $\alpha = .96$ ). This scale is widely used to measure distributive justice (e.g., Janssen et al., 2010; Roch & Shanock, 2006). A sample item is “My outcome is appropriate for the work I have completed.” The participants responded to these items on a 6-point scale (ranging from 1 = *strongly disagree* to 6 = *strongly agree*).

**Neglect.** We used the same measures as in Study 2 for neglect at Time 2 ( $\alpha = .92$ ). The participants responded to these items on a 5-point scale (ranging from 0 = *never* to 4 = *always*).

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**Turnover intention.** We assessed employee turnover intention at Time 2 using Armstrong-Stassen and Ursel's (2009) three-item "intention to remain" scale ( $\alpha = .91$ ). Podsakoff et al. (2007) pointed out that intention to remain can be reverse coded to represent turnover intention. A sample item is "I expect to continue working as long as possible in this organization." The participants responded to these items on a 6-point scale (ranging from 1 = *strongly disagree* to 6 = *strongly agree*). The scores were reverse-coded so that the higher score represents the higher level of turnover intention.

**Control variables.** Similar to Study 2, we included participants' age, gender, marital status and tenure as control variables in all our analyses. Participants in this particular company also varied in terms of their type of contract (fixed-term versus permanent), which has been identified as influencing employee turnover intention (De Cuyper et al., 2011). Employees with a permanent contract have a lower intention to leave the company. Thus, in Study 3, we added participants' type of contract as an additional control variable. Note that the results were comparable when these control variables were excluded from the model.<sup>3</sup>

### Strategy of Analysis

We used the same method as in Study 2 to examine Hypothesis 1 and 2. First, we tested Hypothesis 1 using polynomial regressions (Edwards & Cable, 2009) and response surface modeling (Edwards & Parry, 1993). Second, we adopted the block variable approach recommended by Edwards and Cable (2009) to test the indirect effects of salary comparisons on employee withdrawal via distributive justice. Third, we conducted a moderated polynomial regression (Edwards & Parry, 1993; Vogel et al., 2016) to test whether zero-sum construal of success moderated the polynomial effects of salary comparisons on distributive justice (Hypothesis 3). In particular, we added zero-sum construal of success ( $Z$ ) and its product with each term in the polynomial regression equation (see Equation 2). The

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<sup>3</sup> Results without control variables are available upon request from the first author.

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moderating effect of zero-sum construal of success is assessed by the increment in  $R^2$  yielded from the five interaction terms  $Z \times I$ ,  $Z \times E$ ,  $Z \times I^2$ ,  $Z \times I \times E$ , and  $Z \times E^2$  as a set. Since Hypothesis 3 predicts that zero-sum construal of success will interact with salary comparison incongruence in predicting distributive justice, we are primarily concerned with curvature along the line of incongruence at different levels of zero-sum construal of success ( $\pm 1 SD$ ). According to our hypothesis, the incongruence curvature effect will be stronger when zero-sum construal of success is lower and weaker when zero-sum construal of success is higher. Finally, we followed previous practices to test the entire moderated mediation model (Edwards & Parry, 1993; Vogel et al., 2016).

$$\text{Equation 2. Distributive justice} = b_0 + b_1I + b_2E + b_3I^2 + b_4I \times E + b_5E^2 + b_6Z + b_7Z \times I + b_8Z \times E + b_9Z \times I^2 + b_{10}Z \times I \times E + b_{11}Z \times E^2 + e$$

## Results and Discussion

The descriptive statistics, reliabilities, and correlations for the Study 3 variables are presented in Table 5. Before testing our hypotheses, we conducted a confirmatory factor analysis of the hypothesized six-factor model (internal salary comparison, external salary comparison, distributive justice, zero-sum construal of success, neglect, and turnover intention). We then compared the fit of this six-factor model with four alternative models: a five factor model A where internal and external salary comparisons were combined into one factor; a five-factor model B where neglect and turnover intention were combined into one factor; a four-factor model where internal and external salary comparisons and distributive justice were combined into one factor; a two-factor model where variables measured at Time 1 (i.e., internal salary comparisons, external salary comparisons, distributive justice, and zero-sum construal of success) were combined into one factor, and variables at Time 2 (i.e., neglect and turnover intention) into another; and a one-factor model. As shown in Table 6, the six-factor model fit the data well and was better than the alternative models. All the scale

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items also had significant loadings on their corresponding latent constructs. These results provided encouraging evidence for the discriminant validity of the main variables.

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Insert Table 5 & 6 about here  
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Table 7 shows the results of the polynomial regressions. The congruence ( $I = E$ ) line slope was significantly related to distributive justice (slope = .47,  $SE = .06$ ,  $p < .001$ ), suggesting a linear relationship along the line of perfect agreement. Perceptions of distributive justice decrease as both internal and external salary comparison decreases. As Table 7 illustrates, the curvature along the incongruence line ( $I = -E$ ) was negative and significant (curvature = -.46,  $SE = .19$ ,  $p < .05$ ), suggesting a convex surface. Figure 4 depicts the surface plot for this polynomial regression. Together, these results are consistent with the findings in Study 2, indicating that incongruent salary comparison information cannot be modeled as an average score to predict distributive justice. Rather, it follows a hierarchically restrictive schema, such that the negative comparison outcome has a stronger impact than the positive salary comparison outcome. As the degree of incongruence between internal and external comparison increases, distributive justice perceptions decrease. Taken together, the results provide support for Hypothesis 1.

As demonstrated in Table 8, the salary comparison block variable was significantly related to distributive justice ( $\beta = .44$ ,  $p < .001$ ), and distributive justice was significantly related to neglect ( $\beta = -.20$ ,  $p < .01$ ) and turnover intention ( $\beta = -.32$ ,  $p < .001$ ). In support of Hypothesis 2, the indirect effects of the block variable via distributive justice were significant for neglect (indirect effect = -.09,  $p < .01$ , 95% CI= [-.156, -.029]) and turnover intention (indirect effect = -.14,  $p < .01$ , 95% CI= [-.228, -.068]). These results are consistent with

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Study 2, showing that distributive justice mediated the combined effects of internal and external salary comparison on employee withdrawal.

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Insert Table 7, 8 & Figure 4 about here  
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Table 9 shows the results for the equation including zero-sum construal of success ( $Z$ ) in predicting distributive justice. The five terms  $Z \times I$ ,  $Z \times E$ ,  $Z \times I^2$ ,  $Z \times I \times E$ , and  $Z \times E^2$  of Model 2 in Table 9 were jointly significant ( $F_{(5, 242)} = 2.32, p < .05$ ), indicating that zero-sum construal of success significantly interacted with salary comparisons in predicting distributive justice. As shown in Table 10 and illustrated in Figure 5, the curvature along the line of incongruence at the higher level of zero-sum construal of success (+1  $SD$ , curvature =  $-.08$ ,  $SE = .15, p = .596$ ) was significantly smaller than at the lower level of zero-sum construal of success (-1  $SD$ , curvature =  $-.93, SE = .34, p < .01$ ; difference =  $-.85, SE = .32, p < .01$ ). This suggests that the hierarchically restrictive schema was stronger (versus weaker) for employees with lower (versus higher) levels of zero-sum construal of success. Additionally, the indirect effect of salary comparison incongruence on neglect via distributive justice at the higher level of zero-sum construal of success (+1  $SD$ , indirect effect =  $.01, SE = .02, p = .602$ ) was significantly smaller than at the lower level of zero-sum construal of success (-1  $SD$ , indirect effect =  $.12, SE = .06, p < .05$ ; moderated indirect effect =  $-.11, SE = .05, p < .05$ ). The indirect effect of salary comparison incongruence on turnover intention via distributive justice at the higher level of zero-sum construal of success (+1  $SD$ , indirect effect =  $.03, SE = .05, p = .600$ ) was significantly smaller than at the lower level of zero-sum construal of success (-1  $SD$ , indirect effect =  $.32, SE = .14, p < .05$ ; moderated indirect effect =  $-.29, SE = .13, p < .05$ ). Combined, these results support Hypothesis 3.

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Insert Table 9, 10 & Figure 5 about here

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### Supplementary Analyses

To further assess the dynamics of internal and external salary comparisons, we conducted two sets of supplementary analyses. First, in addition to the different valence of positive and negative comparison outcomes, the different types of salary comparisons may not be equally salient (i.e., internal versus external), which may have implications for our findings. To explore this possibility empirically with our data, we followed previous practices to test for an asymmetrical incongruence effect in Study 2 and 3 (Zhang et al., 2012, p. 122). We examined the difference in distributive justice between two points:  $z_a$  (I = -2, E = 2), and  $z_b$  (I = 2, E = -2). Results in Study 2 showed that the perceived distributive justice did not differ across the two points ( $\Delta Z = z_a - z_b = .13$ ,  $SE = .40$ ,  $p = .740$ ). Results in Study 3 similarly showed no significant differences in perceived distributive justice across the two points as well ( $\Delta Z = z_a - z_b = .12$ ,  $SE = .72$ ,  $p = .868$ ). The findings suggest that internal and external salary comparisons are equally important in predicting distributive justice.

Second, previous research into single salary comparisons found “threshold effects,” such that pay fairness increased as salary comparison went from underpayment to pay congruence, continued to increase until overpayment, and then decreased when overpayment became considerable (Kim et al., 2019). We therefore tested for similar threshold effects when employees integrate internal and external salary comparisons, analyzing the curvature along the congruent slope in the polynomial regression. As shown in Table 3, the curvature along the congruence line was not significant in Study 2 (congruence curvature =  $-.07$ ,  $SE = .04$ ,  $p = .058$ ). In Study 3 (see Table 7), the congruence curvature was also not significant (congruence curvature =  $-.02$ ,  $SE = .04$ ,  $p = .627$ ). In the present data, it appears that there are no threshold effects when employees integrate internal and external salary comparisons. As

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noted above, threshold effects occur when employees perceive that their advantageous overpayment is unfair to others. This is less likely with incongruent referents, as at least one source of information is always negative.

### **General Discussion**

Over the past two decades, the primary focus of the salary literature has been on understanding how salary structure and salary comparison affect employees' thoughts, feelings, and behaviors (e.g., Bloom, 1999; Bloom & Michel, 2002; Downes & Choi, 2014; Messersmith et al., 2011; Shaw et al., 2002). Recent research has explored the effects of salary comparisons with different referents (i.e., internal, external) (e.g., Harris et al., 2008; Sieweke et al., 2017; Torre et al., 2015; Trevor & Wazeter, 2006). Our paper adds to this developing conversation by identifying a useful theoretical framework – the model of dispositional attribution (Reeder & Brewer, 1979; Trafimow & Trafimow, 1999) – to understand multiple salary comparisons and demonstrate how incongruent comparison information is processed to inform distributive justice and employee withdrawal. Consistent with the model of dispositional attribution, the results of our three studies suggest that the relationship between salary comparisons and distributive justice follows a hierarchically restrictive schema, with negative comparisons receiving more weight than positive ones. Salary comparisons have an indirect relationship with employee withdrawal via distributive justice. We discuss the theoretical and practical implications of our findings in the following sections.

### **Theoretical Implications**

Drawing on the model of dispositional attribution (Reeder & Brewer, 1979) and equity theory (Adams, 1965), our research explained the mechanisms underpinning how and why multiple salary comparisons are processed to affect employees' perceptions of



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distributive justice and their subsequent withdrawal. Indeed, doing so led to three important insights.

First, our test of the *hierarchically restrictive schema* versus the *average assumption* provides important insights to the pay literature regarding *how* employees integrate multiple salary comparisons. Extant research tends to average different sources of salary information and use this average to predict outcomes (e.g., Connelly et al., 2016; Harris et al., 2008; Torre et al., 2015). Our research proposes an asymmetric attribution for distributive justice perceptions, such that negative comparisons have greater weight than positive comparisons. This draws on Reeder and Brewer's (1979) model of dispositional attribution. Employees' perceptions of whether an organization is distributively fair (or not) predominantly rely on the availability (or not) of negative salary comparisons: negative salary comparisons are more diagnostic and have a greater impact on perceptions of distributive justice than positive comparisons. We conducted three studies to test these competing models and we observed a similar pattern across all our studies: when internal and external salary comparisons were incongruent, negative comparison outcomes sharply decreased perceived distributive justice, regardless of the presence of other positive comparison outcomes. Our findings therefore highlight limitations in the traditional method of averaging multiple salary comparisons to predict outcomes (e.g., Connelly et al., 2016; Harris et al., 2008; Torre et al., 2015), and speak to a more complex theoretical model (Reeder & Brewer, 1979) – a model that considers the asymmetrical valence between positive and negative comparison outcomes. Taking the average of all comparisons overlooks the asymmetrical valence of different comparisons, such that being underpaid in one comparison is difficult to remedy by being overpaid in another. Importantly, this conclusion is generalized across multiple studies with different designs, highlighting the robustness of the predictions made by the hierarchically

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restrictive schema (Sitkin, 2007). Overall, our research underscores the importance of considering the valence of different salary comparisons in the pay literature.

Second, our research provides a nuanced theoretical framework to explain *why* negative salary comparison information outweighs positive salary comparison information. We move beyond the “negative outweighs positive” observation (Baumeister et al., 2001) by highlighting the moral relevance of salary comparisons. Research suggests that moral judgments, such as those involving distributive justice, are at least somewhat distinct from economic judgments. Based on the model of dispositional attribution (Reeder & Brewer, 1979), employees integrate multiple salary comparisons to understand the extent to which organizations follow the moral principle of justice. Such moral attributions tend to place less weight on good conduct and more weight on immoral conduct (Reeder & Brewer, 1979; Trafimow & Trafimow, 1999). We identified zero-sum construal of success as a boundary condition, which provides a more in-depth explanation of this moral account. High zero-sum construal of success enhances economic rationality and weakens moral considerations (Haslam, 2006; Louis et al., 2013). If our moral account holds, the hierarchically restrictive schema of salary comparisons (i.e., negative salary comparison outweighs positive comparison) should be less salient for employees with higher zero-sum construal of success. If the hierarchically restrictive schema had nothing to do with moral attribution, then the effects should have remained consistent for employees with higher and lower zero-sum construal of success. This explanation adds to the model of dispositional attribution by incorporating individual differences as a boundary condition to provide a more in-depth theoretical account and empirical evidence regarding the key moral mechanism underpinning salary comparisons.

Third, our research advances knowledge on the underlying role of distributive justice in multiple salary comparisons and employee withdrawal. Adams’ (1965) equity theory

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discusses distributive justice as a critical mechanism in the input-output comparison, with perceived injustice resulting in reduced input/effort. We add to this theory by extending the discussion to multiple salary comparisons, such that the incongruence between internal and external salary comparisons motivates employees to withdraw effort as a means of restoring equity. Previous research into multiple salary comparisons has adopted tournament theory to analyze the impact of salary comparisons on withdrawal (e.g., Bloom & Michel, 2002; Kacperczyk & Balachandran, 2018; Ridge et al., 2017; Torre et al., 2015). Our studies address distributive justice as a mechanism through which salary comparisons affect employee withdrawal, which also provides insights to advance understanding of why pay is linked to turnover (Rubenstein et al., 2018). Across Study 2 and 3, we consistently found that the impact of salary comparisons on employee withdrawal was mediated by distributive justice. These findings provide empirical support for equity theory and demonstrate the practical relevance of our research.

That said, our findings also offer a notable theoretical caveat to the original version of equity theory. Historically, equity theory did not necessarily assume that individuals were animated by moral considerations. For example, Berscheid and Walster (1978, p. 125) argued that the first proposition of equity theory was that “individuals will try to maximize their outcomes (where ‘outcomes’ equals the rewards a person experiences minus the costs he endures).” Their second proposition stated that social groups developed “systems of equity” in order to “maximize their collective reward” (for a similar view, see Hatfield et al., 1978). If it were the case that equity was no more than a veiled cover for self-interest, then we would have expected our results to support the average assumption, rather than hierarchically restrictive schema, as the latter are used to make moral attributions (Reeder & Brewer, 1979). We would also not have anticipated that zero-sum construal of success would act as a moderator. While economic considerations are obviously very important to salary judgments,

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workers also appear to evaluate distributive justice as a reflection of moral treatment by their organization. Future research into pay equity should take this into account.

### **Practical Implications**

Given the ongoing discussion of social comparison following the pay transparency movement (Alterman et al., 2021; SimanTov-Nachlieli & Bamberger, 2021; Smit & Montag-Smit, 2019; Wong et al., 2023), understanding how salary comparison information is processed and its impact on employee reactions has timely implications for salary management in the workplace. Our findings indicate that organizations need to recognize the importance of relative salary, as employees care about salaries and compare them to various referents. When integrating multiple salary comparisons, the majority of employees will perceive a lower level of distributive justice – in our research, employees only feel higher distributive justice in one out of four quadrants (when internal and external salaries were “both lower” than their own). Our results further show that unfavorable salary comparisons and perceptions of unfairness can lead to increased work withdrawal and job withdrawal among employees. Thus, organizations need to maintain a reward system that focuses on fairness from *both* an internal *and* external perspective to prevent the harmful impact of employee withdrawal. This can be achieved by using data from industry- and regionally-specific salary surveys to establish appropriate salary levels and ensure fairness in external comparison. Simultaneously, conducting a thorough analysis of the internal salary structure is also critical to enhance fairness in internal salary comparisons.

If unfavorable salary comparisons (either internally or externally) cannot be avoided, organizations need to consider additional factors that contribute to perceptions of distributive justice. While salary is a significant factor in such comparisons, it is also essential to recognize the broader components of total compensation and reward (Fulmer & Li, 2022; Igalens & Roussel, 1999). Emphasizing non-monetary aspects such as paid time off, flexible

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scheduling, and other perks may contribute to a sense of fairness and help alleviate the negative effects of perceived underpayment. Organizations should explore opportunities to enhance the value of these additional components for employees. Another approach for managers to mitigate some of the negative impact is to offer explanations regarding pay procedures or policies (Greenberg, 1990; Montag-Smit & Smit, 2021). Providing employees with a comprehensive understanding of how salaries are determined can help manage employees' salary expectations, foster trust, and minimize negative attributions toward the organization (Montag-Smit & Smit, 2021; SimanTov-Nachlieli & Bamberger, 2021).

Considering this issue more broadly, our findings imply that there will often be disadvantageous comparisons somewhere and thus perceived inequities are likely very common. Due to the way competitive labor markets function, organizations cannot fully solve this problem by solely boosting salaries. Each time a firm improves employee compensation, it risks creating inequitable referents within competitor organizations. This transpires because individuals consider multiple alternative organizations (i.e., they use external referents) when evaluating how they are treated. Thus, if one organization solves its own distributive injustice problem by raising pay levels, it could inadvertently re-create the same problem in peer organizations whose pay levels have now become relatively modest. Wage competition exists and can benefit workers, but a degree of distributive inequity may persist as firms continually adjust and jockey to changing pay rates.

One solution, which has been suggested by organizational justice research, is to consider the process of pay system administration more broadly, rather than adopting a singular focus on pay allocations (cf., Brockner, 2011). Research suggests that individuals can better accept a disadvantageous outcome so long as it is allocated by a fair administrative procedure and the employee is treated with respect and provided with an explanation (Brockner et al., 1990; Brockner et al., 2007; Skarlicki & Folger, 1997). Thus, procedural and

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interactional justice can partially buffer organizations from the ill effects of distributive injustice (Brockner & Wiesenfeld, 1996; Cropanzano et al., 2005). It is important not to overstate these findings. Workers will continue to prefer higher to lower pay, of course, but they are less likely to blame the organization when they are treated with procedural and interactional justice, even when their compensation is less than they would prefer (Brockner, 2002).

### **Limitations and Future Research Directions**

While our research has several strengths, some limitations are nonetheless worth noting. First, although the present paper takes a cross-cultural view, some cultural or industrial context factors may have strengthened or mitigated the relationships we observed. It is worth mentioning that hierarchically restricted schemas have been widely studied in North America, and our Study 1 utilized an American sample. Studies 2 and 3 used workers in China, allowing for more confidence in our findings' generalizability. We also used workers in various occupations. Hence, we are optimistic that our findings pertaining to the hierarchically restrictive schema are applicable to employees across industries and cultures. Nonetheless, future research is warranted to examine whether and to what extent cultural/industrial factors affect the relationships.

Second, as an initial test of salary comparisons within our model, we examined horizontal comparisons that particularly focused on comparisons with similar referents. However, employees can conduct other types of comparisons (e.g., vertical comparisons, functionally different comparisons) and could integrate more than two types of comparisons (Georgellis et al., 2019; Kacperczyk & Balachandran, 2018). It is necessary to examine whether the hierarchically restrictive schema can be applied to these more complex and varied referents, although we suspect that it can. This would be an important area for future research inquiry.

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Third, based on the model of dispositional attribution (Reeder & Brewer, 1979), we expect that internal and external salary comparisons would be equivalently important for predicting distributive justice and our supplemental findings provided support for this expectation. Nevertheless, other theoretical accounts may offer different predictions (e.g., Dornstein, 1988; Weick, 1966). This appears to be a promising direction for future research to explore and to provide a more comprehensive understanding of the relative importance of internal and external pay comparisons. For example, it would be fruitful to identify any contextual cues (e.g., employment opportunity; Xu et al., 2022) that potentially shift a person's focus from internal to external comparison, or *vice versa*.

Fourth, we asked participants to rate their salary relative to similar referents in terms of responsibilities, education, and experiences. This is limited since participants may not be able to make comparisons that are objectively equivalent, and perceptions of other people's pay may not be accurate. Nevertheless, individuals often compare their own salary to the subjective perceptions of other people's pay in real life (Harris et al., 2008). Such subjective perceptions of referents are important for social comparison and justice attributions (Chen et al., 2002). Our randomization design in Study 1 mitigated the problem of subjectivity to some extent. Still, future research is needed to validate the current findings by measuring objectively equivalent comparisons or by statistically controlling the background variables (e.g., responsibilities, education, experiences) of both participants and their referents.

Finally, previous research has suggested that other forms of justice can interact with distributive justice to inform employee attitudes and behaviors (e.g., Fields et al., 2000; Skarlicki & Folger, 1997). Future research examining whether employees' reactions to multiple salary comparisons are influenced by the way salary information is communicated (e.g., interactional justice) would provide key contributions.

## Conclusion

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Previous research has suggested a key role for salary comparisons in employees' work attitudes and behaviors (e.g., Gerhart & Fang, 2014; Kish-Gephart et al., 2010; Williams et al., 2006). However, theoretical and empirical research has rarely explained how different salary comparison information (e.g., internal and external to a person's organization) is simultaneously processed and how it affects work outcomes. Based on concurrent studies of salary comparison, we draw from the model of dispositional attribution and equity theory to account for how different salary comparison information, particularly incongruent information, influences employees' perceptions of distributive justice and withdrawal behaviors. Consistent with our framework, we found that when comparison information was incongruent, distributive justice perceptions followed a hierarchically restrictive schema (rather than an average assumption), such that negative salary comparisons had a stronger effect on distributive justice perceptions than positive comparisons. The impact of incongruent information was stronger for employees with lower levels of zero-sum construal of success. Moreover, this impact of salary comparisons on distributive justice further resulted in employee withdrawal. Accounting for how different comparison information is processed, and its impact on work outcomes, appears to be a promising direction for expanding knowledge of the nature and effects of salary comparisons.



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**Table 1**

*Descriptive Statistics, Reliabilities and Correlations (Study 2)*

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
1. Age	27.67	4.24	--								
2. Gender	1.49	0.50	-.18**	--							
3. Marital Status	1.69	0.46	-.57**	.09	--						
4. Tenure	18.15	13.74	.38**	-.15*	-.31***	--					
5. Internal Salary Comparison	3.87	0.89	.12*	-.03	-.19**	.05	(.90)				
6. External Salary Comparison	4.01	1.10	.11	.08	-.12*	-.11	.47***	(.93)			
7. Distributive Justice	4.84	0.89	.07	-.03	-.12*	-.10	.39***	.29***	(.94)		
8. Neglect	1.32	0.69	-.08	.07	.07	-.21**	.02	.03	-.16*	(.89)	
9. Turnover (Archival data)	0.06	0.24	-.001	-.09	.08	-.01	-.03	-.07	-.16*	.00	--

*Note.* Internal and external salary comparison, distribute justice are from Time 1, neglect and turnover are from Time 2. The correlation between neglect and turnover is 0 because people who left the company did not complete the Time 2 questionnaire (neglect). Where applicable, reliability coefficients are reported along the diagonal. Gender: male = 1; female = 2. Marital Status: married = 1; single = 2. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

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**Table 2**

*Measurement Model Comparisons (Study 2)*

<b>Model</b>	$\chi^2$	<i>df</i>	$\Delta\chi^2$	<b>RMSEA</b>	<b>SRMR</b>	<b>CFI</b>	<b>TLI</b>
4-Factor Model	215.8	84		.071	.044	.96	.95
3-Factor Model	1046.3	87	830.5	.190	.101	.73	.67
2-Factor Model	1865.7	89	1649.9	.255	.158	.50	.41
1-Factor Model	2577.0	90	2361.2	.300	.242	.30	.18

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**Table 3**

*Effects of Internal/External Salary Comparisons on Distributive Justice (Study 2)*

<b>Variables</b>	<b>Model 1</b>	<b>Model 2</b>
<i>Control Variables</i>		
Age	.02	-.03
Gender	-.04	-.03
Marital Status	-.07	-.08
Tenure	-.14*	-.12
<i>Polynomial Terms</i>		
b <sub>1</sub> Internal Salary Comparison (I)	.34***	.25***
b <sub>2</sub> External Salary Comparison (E)	.14*	.22**
b <sub>3</sub> I <sup>2</sup>		-.30***
b <sub>4</sub> I x E		.18*
b <sub>5</sub> E <sup>2</sup>		-.04
R <sup>2</sup>	.192***	.241***
F for the 3 quadratic terms		5.87***
<i>Congruence Line (I = E)</i>		
Slope (b <sub>1</sub> +b <sub>2</sub> )		41***(.06)
Curvature (b <sub>3</sub> +b <sub>4</sub> +b <sub>5</sub> )		-.07 (.04)
<i>Incongruence Line (I = -E)</i>		
Slope (b <sub>1</sub> -b <sub>2</sub> )		.03 (.10)
Curvature (b <sub>3</sub> -b <sub>4</sub> +b <sub>5</sub> )		-.27** (.09)

*Note:* Standardized regression coefficients reported in table.

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

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**Table 4**

*Results from Tests of Indirect Effects of Salary Comparison on Employee Withdrawal through Distributive Justice (Study 2)*

<b>Variables</b>	<b>Neglect</b>	<b>Turnover</b>
Coefficient of block variable on distributive justice ( $\alpha$ path)		.46***
Coefficient of distributive justice on outcomes ( $\beta$ path)	-.23*	-.20**
Indirect effect of block variable(congruence) via distributive justice	-.11*	-.09*
95% bootstrapped confidence interval for indirect effect	[-.200, -.042]	[-.180, -.027]

*Note.* Standardized results reported in table. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$



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**Table 5**

*Descriptive Statistics, Reliabilities and Correlations (Study 3)*

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11
1. Age	37.34	7.28	--										
2. Gender	1.73	0.45	-.13*	--									
3. Marital Status	1.21	0.41	-.60***	.03	--								
4. Tenure	10.91	8.25	.77***	-.11	-.44***	--							
5. Type of Contract	0.06	0.24	-.01	-.02	-.09	-.05	--						
6. Internal Salary Comparison	3.41	1.08	-.16**	-.13*	.08	-.13*	.06	(.93)					
7. External Salary Comparison	3.27	1.10	-.17**	-.17**	.12	-.15*	.06	.79***	(.97)				
8. Zero-Sum Construal of Success	2.98	1.00	-.06	.02	-.02	-.06	.03	-.10	-.12*	(.83)			
9. Distributive Justice	4.32	1.06	-.13*	-.04	.13*	-.18**	-.23***	.39***	.40***	-.15*	(.96)		
10. Neglect	1.63	0.70	-.19**	.02	.07	-.10	.10	-.02	-.02	.11	-.18**	(.92)	
11. Turnover Intention	2.17	0.88	-.10	.02	.04	-.02	.09	-.04	-.09	.11	-.33***	.31***	(.91)

*Note.* Internal and external salary comparison, zero-sum construal of success, and distribute justice are from Time 1, neglect and turnover intention are from Time 2. Where applicable, reliability coefficients are reported along the diagonal. Gender: male = 1; female = 2. Marital Status: married = 1; single = 2. Type of Contract: fixed-term = 0; permanent = 1. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

## SALARY COMPARISONS

**Table 6**

*Measurement Model Comparisons (Study 3)*

<b>Model</b>	$\chi^2$	<i>df</i>	$\Delta\chi^2$	<b>RMSEA</b>	<b>SRMR</b>	<b>CFI</b>	<b>TLI</b>
6-Factor Model	651.6	260		.076	.047	.93	.92
5-Factor Model A	961.2	265	309.6	.101	.051	.88	.86
5-Factor Model B	1161.9	265	510.3	.114	.088	.85	.82
4-Factor Model	2032.1	269	1380.5	.159	.117	.70	.66
2-Factor Model	3078.5	274	2426.9	.199	.166	.52	.47
1-Factor Model	4184.6	275	3533.0	.234	.222	.32	.26

SALARY COMPARISONS

**Table 7**

*Effects of Internal/External Salary Comparisons on Distributive Justice (Study 3)*

<b>Variables</b>	<b>Model 1</b>	<b>Model 2</b>
<i>Control Variables</i>		
Age	.12	.12
Gender	.02	.02
Marital Status	.05	.04
Tenure	-.20*	-.21*
Contract	-.26***	-.27***
<i>Polynomial Terms</i>		
b <sub>1</sub> Internal Salary Comparison (I)	.20*	.25**
b <sub>2</sub> External Salary Comparison (E)	.26**	.22*
b <sub>3</sub> I <sup>2</sup>		-.22*
b <sub>4</sub> I x E		.34*
b <sub>5</sub> E <sup>2</sup>		-.20
R <sup>2</sup>	.280***	.312***
F for the 3 quadratic terms		3.84*
<i>Congruence Line (I = E)</i>		
Slope (b <sub>1</sub> +b <sub>2</sub> )		.47*** (.06)
Curvature (b <sub>3</sub> +b <sub>4</sub> +b <sub>5</sub> )		-.02 (.04)
<i>Incongruence Line (I = -E)</i>		
Slope (b <sub>1</sub> -b <sub>2</sub> )		.03 (.18)
Curvature (b <sub>3</sub> -b <sub>4</sub> +b <sub>5</sub> )		-.46* (.19)

Note: Standardized regression coefficients reported in the table.

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

SALARY COMPARISONS

**Table 8**

*Results from Tests of Indirect Effects of Salary Comparison on Employee Withdrawal through Distributive Justice (Study 3)*

<b>Variables</b>	<b>Neglect</b>	<b>Turnover Intention</b>
Coefficient of block variable on distributive justice ( $\alpha$ path)		.44***
Coefficient of distributive justice on outcomes ( $\beta$ path)	-.20**	-.32***
Indirect effect of block variable via distributive justice	-.09**	-.14**
95% bootstrapped confidence interval for indirect effect	[-.156, -.029]	[-.228, -.068]

*Note.* Standardized results reported in the table. \*\*  $p < .01$ , \*\*\*  $p < .001$ .

SALARY COMPARISONS

**Table 9**

*Moderated Polynomial Regression including Zero-Sum Construal of Success (Study 3)*

<b>Variables</b>	<b>Model 1</b>	<b>Model 2</b>
<i>Control Variables</i>		
Age	.11	.09
Gender	.01	.03
Marital Status	.03	.02
Tenure	-.22*	-.22*
Contract	-.27***	-.27***
<i>Polynomial Terms</i>		
b <sub>1</sub> Internal Salary Comparison (I)	.26*	.22
b <sub>2</sub> External Salary Comparison (E)	.21	.24
b <sub>3</sub> I <sup>2</sup>	-.23	-.30*
b <sub>4</sub> I x E	.34*	.39*
b <sub>5</sub> E <sup>2</sup>	-.20	-.17
b <sub>6</sub> Zero-Sum Construal of Success (Z)	-.12	-.15*
<i>Five Interaction Terms</i>		
b <sub>7</sub> I × Z		.02
b <sub>8</sub> E × Z		.05
b <sub>9</sub> I <sup>2</sup> × Z		.13
b <sub>10</sub> I x E × Z		-.37**
b <sub>11</sub> E <sup>2</sup> × Z		.21
<i>R</i> <sup>2</sup>	.299***	.331***
F for the 5 interaction Terms		2.32*

*Note:* Standardized regression coefficients reported in the table.

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

SALARY COMPARISONS

**Table 10**

*Congruence and Incongruence Effects of Salary Comparisons on Distributive Justice at Different Level of Zero-Sum Construal of Success (Study 3)*

Zero-Sum Construal of Success	High Level (+1 <i>SD</i> )		Low Level (-1 <i>SD</i> )	
	<i>Effect</i>	<i>SE</i>	<i>Effect</i>	<i>SE</i>
<i>Congruence Line (I = E)</i>				
Slope	.51 <sup>***</sup>	.08	.37 <sup>***</sup>	.10
Curvature	-.05	.05	.02	.04
<i>Incongruence Line (I = -E)</i>				
Slope	-.05	.24	.01	.43
Curvature	-.08	.15	-.93 <sup>**</sup>	.34

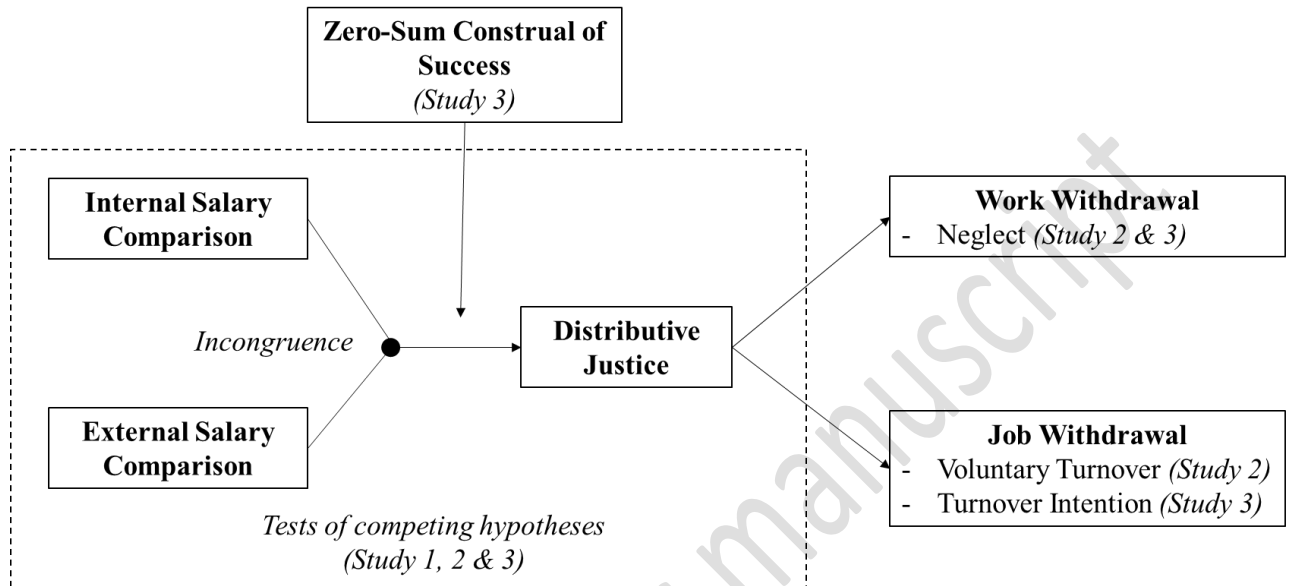
*Note:* Unstandardized coefficients reported in the table.

\*\*  $p < .01$ , \*\*\*  $p < .001$ .

# SALARY COMPARISONS

**Figure 1.**

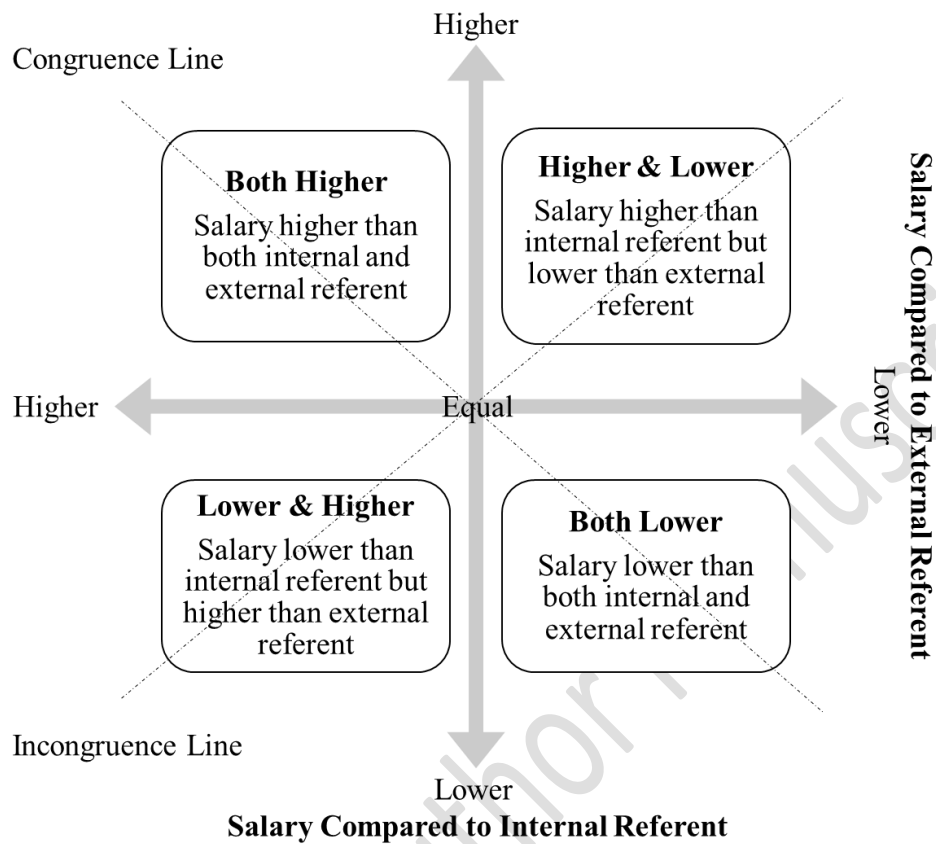
*Proposed Research Model*



## SALARY COMPARISONS

**Figure 2**

*Potential Outcomes of Salary Comparison with Internal and External Referents*



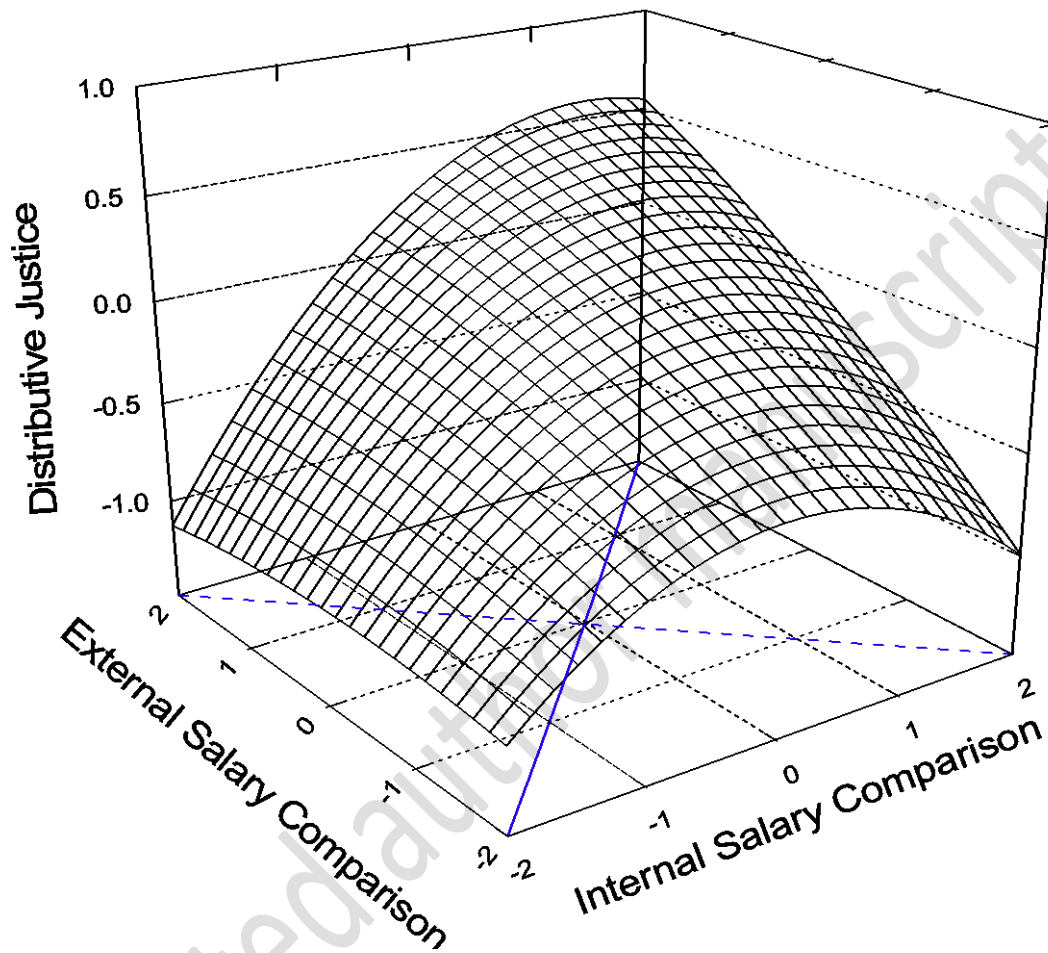


## SALARY COMPARISONS

**Figure 3**

*Estimated Surfaces Relating Distributive Justice to Internal and External Salary Comparisons*

*(Study 2)*

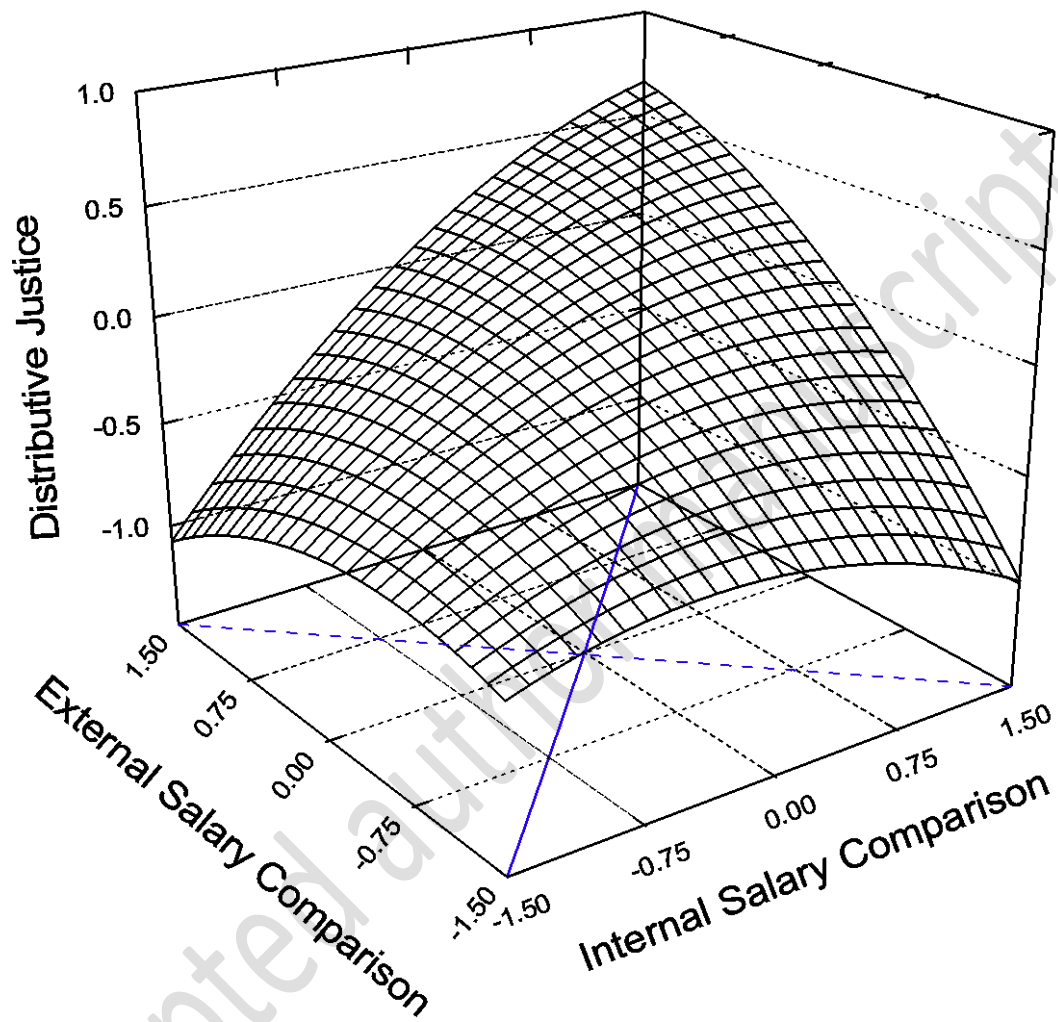


## SALARY COMPARISONS

**Figure 4**

*Estimated Surfaces Relating Distributive Justice to Internal and External Salary Comparisons*

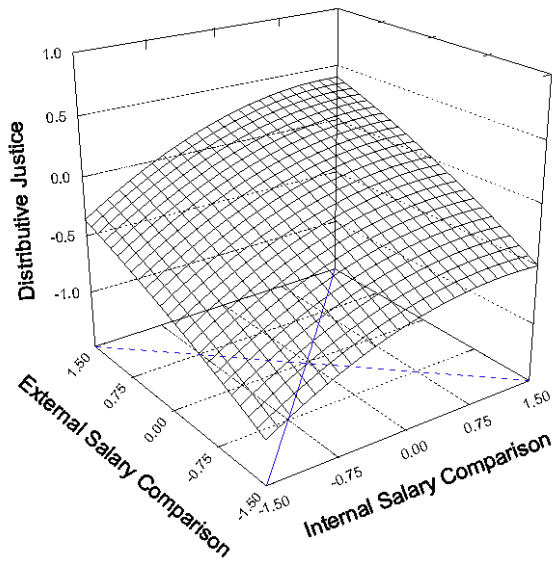
*(Study 3)*



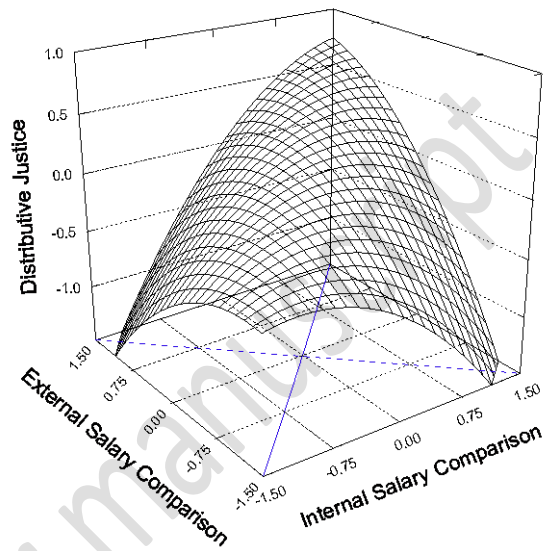
## SALARY COMPARISONS

**Figure 5**

*Estimated Surfaces Relating Distributive Justice to Internal and External Salary Comparisons at High and Low Level of Zero-Sum Construal of Success (Study 3)*



a. High Zero-Sum Construal of Success



b. Low Zero-Sum Construal of Success

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