

Performance-based pay is fair, particularly when I perform better: Differential fairness perceptions of allocators and recipients

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Abstract

We examined in two experiments the impact of the roles that people enact (allocator or recipient) and performance attributions (talent or effort) on fairness perceptions of pay systems (performance-based pay or job-based pay). To test the relative effects of the roles that people enact, in the control conditions, participants were asked to evaluate the fairness of both allocation norms from 'behind a veil of ignorance' (Rawls, 1971). As hypothesized, the results consistently demonstrate that whereas recipients were biased in their fairness perceptions, allocators tended to be non-biased in their fairness perceptions. The self-interest bias among recipients was particularly strong when talent rather than effort attributions were imposed on them. Copyright © 2005 John Wiley & Sons, Ltd.

The ways in which rewards are distributed within organizations and their relative amounts have considerable impact on employee motivation (Porter, Bigley, & Steers, 2003). Accordingly, pay systems are among the most prominent and frequently discussed features of organizations (Lawler, 1987) and constitute an important element of theorizing and research in social and organizational psychology (e.g. Diekmann, Samuels, Ross, & Bazerman, 1997). The social justice literature has revealed that views about fairness and justice are key determinants of how people react to decisions made and respond to outcomes obtained in organizations and other social situations (for overviews, see Brockner & Wiesenfeld, 1996; Folger & Cropanzano, 1998; Greenberg, 1987; Tyler & Lind, 1992; Van den Bos & Lind, 2002). Because no one pay system can be considered fairest and most motivating under all circumstances, we were interested in the conditions under which a particular pay system is perceived as fairer and more motivating than other pay systems. The main purpose of the present research was to examine under what conditions people perceive performance-based pay as fairer and when they perceive job-based pay to be fairer. *Performance-based pay* is pay contingent on job performance; that is, employees receive higher salaries when they perform better than their colleagues who occupy positions with identical job descriptions. In contrast, in a *job-based pay* system, pay is based on the employee's job description; that is, employees who occupy positions with identical job descriptions receive the same salary, irrespective of their actual job performance.

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In the present studies, we investigated people's perceptions of the fairness of performance-based and job-based pay systems in general and the differential fairness perceptions resulting from holding the role of allocator or recipient in particular (e.g. Tyler & Lind, 1992). To provide a rigorous test of the relative effects of the roles that people enact (allocator or recipient), we included control conditions in our designs in which participants were asked to evaluate pay systems from 'behind a veil of ignorance' (Rawls, 1971). We examined whether the fairness perceptions of allocators, recipients, or both deviated from the 'completely fair' perceptions of participants who were ignorant of their roles or positions in the organization. We first briefly discuss the equity and equality concerns that play an important role in performance- and job-based pay systems. Next, we explore the differences between the roles of allocator and recipient that may impact the relative importance of these equity and equality concerns.

EQUITY AND EQUALITY CONCERNS

Performance-based pay systems and job-based pay systems are applications of the allocation norms of equity and equality, respectively. The *equity norm* prescribes that the ratio of one's rewards to one's inputs must be equal to the rewards/inputs ratio of others (Adams, 1965). When the rewards allocated are proportional to each individual's contributions, the allocation is perceived as fair. In contrast, the *equality norm* expresses the idea that individuals must receive an equal share of the reward being allocated, irrespective of their contributions (Deutsch, 1975; Messick, 1993). In general, in situations in which competition and productivity are emphasized, for example, in the context of business and economic relations, equity is considered to be the fairer and more appropriate allocation norm (e.g. Deutsch, 1975; Greenberg, 1982; Leventhal, 1976). Among friends and in groups in which maintaining a high level of harmony and satisfaction is given priority, people tend to favour equality over equity (Deutsch, 1975).

Different fairness theories within the social justice literature (e.g. Brockner & Wiesenfeld, 1996; Folger & Cropanzano, 1998; Van den Bos & Lind, 2002; Thibaut & Walker, 1975; Tyler & Lind, 1992) emphasize different fairness concerns. For example, based on the assumption that people try to maximize their own outcomes (Walster, Berscheid, & Walster, 1973), social exchange theories predict that when making allocations, people opt for the allocation norm that is most profitable for themselves. Accordingly, people may advocate equality when their contributions are relatively low, and equity when their own contributions are higher than those of the other parties involved. Other fairness theories state that equality is the preferred option for most, if not all, people (Messick, 1993), or highlight the noninstrumental, nonselfish quality of people's fairness concerns (e.g. Tyler & Lind, 1992). We examined people's fairness perceptions by returning to an element that was central in the pioneering work of Thibaut and Walker (1975) but has since been largely neglected, namely the impact of enacting the role of allocator or recipient.

ALLOCATORS VERSUS RECIPIENTS

As noted by Greenberg (1987; see also Brockner & Wiesenfeld, 1996; Folger & Cropanzano, 1998; Tyler & Lind, 1992), the literature on social justice has concentrated strongly on the fairness concerns of the recipients of fair and unfair treatment or fair and unfair outcome distributions. In contrast, prior studies in the literature on human decision making have focused predominantly on the allocator who

had to allocate to self and others (e.g. Major & Deaux, 1982). An important study for the current purposes is the research by Diekmann et al. (1997), who extended the reward allocation paradigm by comparing the fairness perceptions of allocators and recipients in a setting in which there were performance differences. In their study, one third of the participants were instructed to divide a bonus pool between themselves (Manager A) and a rival manager (Manager B). The other participants, the recipients, were informed that they were Manager B, who had to evaluate the fairness of an allocation made by Manager A. Half of the recipients were asked to evaluate a distribution of the bonus pool that favoured them whereas the other half were asked to evaluate a distribution that favoured Manager A. Performance criteria were manipulated. In the identical-claims condition, the two managers obtained similar results on two performance criteria (market share and profit), whereas in the different-claims condition, their performances were complementary (i.e. Manager A performed well on market share, but performed poorly on profit, and the results of Manager B were exactly the opposite).

Diekmann et al. (1997) found that participants in the allocator role opted for the equality norm, even in the different-claims condition where allocators could have cited performance differences that favoured themselves to justify equitable allocations. In contrast, recipients tended to favour themselves by rating the unequal distribution in favour of themselves as fairer than the unequal distribution that favoured the other manager. Furthermore, the unequal allocations that benefited themselves were rated as less unfair in the different-claims condition than in the identical-claims condition. Recipients justified the unequal distribution by exaggerating the importance of the performance criterion on which they had outperformed the other manager.

The Diekmann et al. (1997) findings are important for the social psychology of fairness judgments. That said, however, we argue here that an important shortcoming in the Diekmann et al. study is that it is not clear whether the participants acted as they did in reaction to the actual outcome divisions, as the authors argued, or to the differences in the two input dimensions. It is possible that, when the participants imagined themselves to be either one or the other manager, they started attaching relatively more value to the job dimension on which they were doing well. This may explain how they subsequently formed their judgments of distributive fairness. In our experiments, unambiguous performance information was presented to the participants by stating that one employee performed better than another employee. Our use of a within-subjects manipulation of performance differences without sensitizing participants to different job dimensions ruled out the alternative interpretation of the results obtained by Diekmann et al. (1997).

Another, and perhaps even more important, shortcoming of the Diekmann et al. study that was addressed in the present research is that the roles of allocator and recipient were confounded. In the allocator condition, participants were instructed to allocate resources to themselves as well as to others, so that they were *both* allocator and recipient. In the present research, allocators allocated rewards exclusively to others, and not to themselves, whereas recipients had to evaluate distributions only between coworkers and themselves. Thus, recipients had no decision-making authority. Orthogonally inducing the allocator role and the recipient role was important because of the differences in social responsibility between allocators and recipients. Recipients merely go along with the existing allocation norm suggested by an empowered allocator, which makes it easier for them to justify allocations that favour themselves (Diekmann et al., 1997). In contrast, allocators are supposed to make proactive fairness judgments for which they are accountable, and to look after the interests of all parties involved (e.g. Greenberg, 1987; Rawls, 1971).

On the basis of the literature on fairness and attribution (e.g. Lind & Lissak, 1985; Van den Bos, Bruins, Wilke, & Dronkert, 1999), we argue that, in the case of unequivocal performance differences between employees, allocators can justify both equity and equality as fair allocation norms. On the one hand, equity is generally considered to be the fairer and more appropriate allocation norm in the context of business and economic relations (e.g. Deutsch, 1975; Greenberg, 1982; Leventhal, 1976).

On the other hand, equality is a simple, highly available allocation heuristic that is ideologically approved and generally perceived as fair (Messick, 1993). Diekmann et al. (1997) found evidence that allocators (who were also recipients) favoured equal distributions, even in the different-claims condition in which they had a strong justification for favouring themselves.

In contrast to allocators, recipients may be more inclined to maximize their own outcomes (Wade-Benzoni, Tenbrunsel, & Bazerman, 1996; Walster et al., 1973). Particularly when offered by an empowered authority, an outcome that favours oneself at the cost of another individual may easily be justified. Therefore, employees (i.e. recipients) who outperform their colleagues may consider a pay system introduced by their manager to be fairer when it is performance-based rather than job-based. In this situation, performance-based pay would yield more profit for them. In contrast, when a colleague turns out to be the better performer, performance-based pay is disadvantageous for the self, so recipients may no longer favour equity over equality. Thus, assuming that recipients tend to be affected to some extent by self-interest, whereas allocators are not, *Hypothesis 1* was as follows: Recipients would perceive the equitable division of outcomes as fairer than an equal division primarily when they performed better than their colleague.

Another important extension of previous work (e.g. Diekmann et al., 1997) is that we included control conditions in our experimental designs to provide a rigorous test of the relative effects of the roles that people enact (allocator or recipient) on fairness perceptions. We examined whether the fairness perceptions of allocators, recipients, or both deviated from the 'completely fair' perceptions of control participants who were ignorant of their roles or positions in the organization. According to Rawls (1971), in a just society, decisions regarding the fairness of procedures and outcomes ideally should be made by people who do not know their position or role. Rawls (1971) argued that people can maintain perceptions that are completely fair only 'behind a veil of ignorance,' that is, in a situation in which there is no knowledge of place in society, class position, or social status. When people make decisions 'behind a veil of ignorance', they do not know how the various alternatives will affect them. This restriction on knowledge ensures that no one is able to design principles that favour his or her particular condition, and no one is advantaged or disadvantaged in the choice of principles and by the outcomes based on these principles.

EXPERIMENT 1

Method

Participants and Procedure

The participants ($N = 203$) were students at professional schools and institutes in the Netherlands (83.3%) or college students (16.7%) from diverse disciplines: psychology, education, medicine, technology, management, mathematics and physics, and social work. The participants were recruited during first-year lectures and were paid five euros (approximately six US dollars) for their participation. The mean age was 20.0 years ($SD = 2.53$) and most of the participants were female (78.3%). Gender differences were explored, but we found no evidence of gender-related effects of the relationships identified.

The participants were randomly assigned to conditions in a 2 (Payment: performance-based pay vs. job-based pay) \times 3 (Role: control vs. allocator vs. recipient) factorial design. Performance differences between two employees (Wil and Adri, which are gender-neutral names in Dutch) were used as a within-subjects factor (Performance: Wil had outperformed Adri vs. Adri had outperformed Wil). In

the *control* condition, the participants were ignorant of their positions within the organization. In the *experimental conditions*, the participants were asked to imagine that they were either the managing director (allocator) or an employee (recipient) working for an external management consultancy firm.¹

Dependent Variables

Two items were used to measure perceived fairness: (1) 'How fair do you consider this compensation system if you know that Wil performs [you perform] better than Adri?' and (2) 'How fair do you consider this compensation system if you know that Adri performs better than Wil [you]?' Both items were answered on a 7-point scale (1 = *very unfair*, 7 = *very fair*). The order in which the items were presented was randomized by computer.²

Results

A payment (job-based pay vs. performance-based pay) \times role (control vs. allocator vs. recipient) \times performance (favouring Wil vs. favouring Adri) analysis of variance (ANOVA) with repeated measures on the latter factor yielded main effects of payment, $F(1, 197) = 6.69$, $p < 0.01$, $\eta^2 = 0.03$,³ and role, $F(2, 197) = 3.18$, $p < 0.05$, $\eta^2 = 0.02$; no reliable two-way interactions, $ps > 0.10$; and, most importantly, the predicted three-way interaction, $F(2, 197) = 4.53$, $p < 0.01$, $\eta^2 = 0.04$. These effects are illustrated in Figure 1. *Hypothesis 1* was that recipients would perceive the equity norm as fairer than the equality norm primarily when they performed better than their colleague. Strong evidence for this hypothesis was obtained in Experiment 1, as a significant interaction between payment and performance was found in the recipient condition only, $F(1, 199) = 11.57$, $p < 0.001$, $\eta^2 = 0.06$. As

¹In the *control* condition, the pilot-tested scenario read as follows [job-based pay condition in brackets]:

Two consultants (Wil and Adri), who occupy positions with identical job descriptions, work for an external management consultancy firm. The business climate is good and the firm is successful. A managing director is responsible for policy and decision-making issues, including the firm's compensation policy. The managing director considers introducing a performance-based [job-based] pay system to the firm. Performance-based [job-based] pay systems base pay on the employee's job performance [job description]. This implies that Wil and Adri may not [will] receive the same salary.

In the *allocator* condition:

You are the founder of an external management consultancy firm. The business climate is good and the firm is successful. The company now consists of two consultants, Wil and Adri, and a managing director. Wil and Adri occupy positions with identical job descriptions. You are the managing director and responsible for policy and decision-making issues, including the firm's compensation policy. You consider introducing a performance-based [job-based] pay system to your firm. Performance-based [job-based] pay systems base pay on the employee's job performance [job description]. This implies that your employees, Wil and Adri, may not [will] receive the same salary.

In the *recipient* condition:

You are Wil, an employee working for an external management consultancy firm. The business climate is good and the firm is successful. The company now consists of two consultants (you and Adri) and a managing director. You and your colleague Adri occupy positions with identical job descriptions. The managing director is responsible for policy and decision-making issues, including the firm's compensation policy. The managing director has decided to introduce a performance-based [job-based] pay system to the firm. Performance-based [job-based] pay systems base pay on the employee's job performance [job description]. This implies that you and your colleague Adri may not [will] receive the same salary.

²It was not possible to test order effects because the software used did not register the order in which the randomized items were presented.

³Cohen (1988, pp. 283–288) has provided some useful guidelines for interpreting effect sizes in the behavioural sciences. He characterized effect sizes around $\eta^2 = 0.01$ as 'small', around $\eta^2 = 0.06$ as 'moderate', and around $\eta^2 = 0.14$ as 'large'.

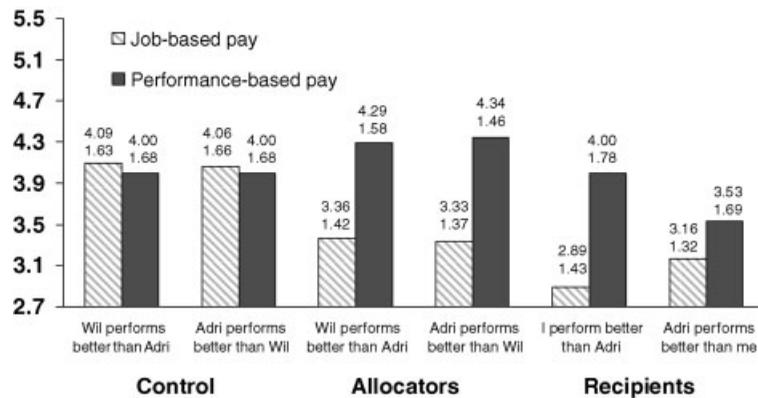


Figure 1. Fairness perceptions of allocators, recipients, and control participants in Experiment 1
 Note: Means and standard deviations are displayed in the figure.
 Wil and Adri are gender-neutral names in Dutch.

predicted in *Hypothesis 1*, the recipients perceived performance-based pay as fairer than job-based pay when they performed better than their colleague Adri, $F(1, 201) = 8.86$, $p < 0.01$, $\eta^2 = 0.04$. When Adri performed better, the recipients considered performance-based pay to be as fair as job-based pay, $F(1, 201) = 1.27$, ns.

Follow-up tests indicated that there were no main or interaction effects in the control condition, $ps > 0.70$. Unexpectedly, however, allocators perceived equity ($M = 4.32$, $SD = 1.47$) as fairer than equality ($M = 3.35$, $SD = 1.34$), $F(1, 199) = 7.75$, $p < 0.01$, $\eta^2 = 0.04$, when either Wil or Adri performed better.

EXPERIMENT 2

Experiment 1 emphasized not only the strength of the effect of self-interest with regard to perceptions of fairness, but also the importance of disentangling the roles of allocator and recipient. Participants who were ignorant of the role that they enacted showed no preference for either equity or equality when two employees unambiguously performed at different levels. In line with the expectations, *the recipients* in Experiment 1 perceived equity as fairer than equality only when they performed better than their colleague. When recipients were informed that they were outperformed by their colleague, they did not perceive equity as the fairer allocation norm. This result is striking, particularly because the difference in job performance between the self (Wil) and the other (Adri) was employed as a within-subjects factor.

Unexpectedly, participants in the role of *allocator* (managing director) favoured equity over equality. These results contrast with those of Diekmann et al. (1997), who found evidence that allocators (who were simultaneously recipients) preferred equality to equity, even in the different-claims condition in which allocators had a strong justification for applying the equity norm that would have favoured themselves. Allocators who are also recipients may have a greater interest in not appearing to have committed an impropriety (by unequal allocation) than in benefiting from their own distribution. This explanation is in accordance with the notions ventilated by Greenberg (1983) that impression management of acting fairly may play an important role in social psychological studies of fairness perceptions.

The aim of Experiment 2 was to replicate these findings, and, more importantly, to investigate the psychological process underlying the findings observed in Experiment 1. Following the literature on

fairness and attributions (e.g. Lind & Lissak, 1985; Van den Bos et al., 1999), we examined the impact of attributions of job performance on people's perceptions of fairness. Causal inference is important because of people's need to predict and anticipate the future and to control and influence events (Heider, 1958; Weiner, 1985).

Rather than measuring attribution perceptions (which is known to be difficult to do, partly because of people's shortcomings in drawing inferences; see, e.g. Nisbett & Ross, 1980), we imposed attributions on the participants. We focused on the two classic attribution factors in achievement settings: effort and talent (or natural ability). In Weiner's (1985) attribution theory, effort and talent are internal factors that differ on the dimensions of controllability and stability. According to Weiner (1985), effort is a factor that can be controlled because people decide themselves how much effort they put into a job. In addition, effort is considered to be an unstable cause since the effort people exert differs over time and situations. In contrast, (innate) talent is a stable attribution factor and more or less *not* controllable, particularly relative to effort (Weiner, 1985). Hence, we proposed that when job performance is described as a function of the employee's effort, poor performers have apparently chosen to exert less effort than better performers. In contrast, when job performance is unmistakably attributed to talent, poor performers are likely to be perceived as unfortunate because they lack the talent needed to perform at a high level. Consequently, allocating rewards contingent on performance may be perceived as fairer when job performance is explained in terms of effort rather than talent. This perception may even be shared by recipients who are less supportive of performance-based pay when their performance level is worse than that of others (see Experiment 1). They may feel that it is inappropriate and unfair to persist in serving their own interests when their own poor job performance can be ascribed to a lack of effort. Therefore, *Hypothesis 2* stated the following: When performance differences are presented as a function of effort, participants in either role perceive an equitable division as fairer, regardless of who is the better-performing employee.

We expected that when *talent* attributions for the performance differences were imposed on the participants, differences in perceived fairness would occur between allocators and recipients. For allocators, allocating rewards on the basis of factors that are not under employees' control may conflict with their accountability and social responsibility (Van Dijk & Vermunt, 2000) and may seem inappropriate. In contrast, for self-oriented recipients (cf. Diekmann et al., 1997), talent attributions may help to serve their own interests. Recipients may perceive equity as fairer than equality when they perform better than others owing to talent ('I perform well because I am very talented: Because I contribute more in terms of talent, I deserve more than untalented poor performers'). In contrast, when they are outperformed by a more talented colleague, recipients may feel that performance-based pay is unfair because they cannot help *not* being blessed with innate talent. They may reason that they are an unfortunate party that should not be victimized on the basis of a factor for which they are not accountable. *Hypothesis 3* was as follows: When performance differences are presented as a function of talent, recipients would perceive an equitable division as fairer than an equal allocation primarily when they performed better than their colleague. *Hypothesis 1* (recipients would perceive the equitable division of outcomes as fairer than an equal division primarily when they performed better than their colleague) was also tested in Experiment 2.

Method

Participants and Procedure

The participants ($N=178$) were students at professional schools and institutes in the Netherlands (53.3%) or college students (46.7%) and, as in Experiment 1, the students' disciplines were diverse:

psychology, medicine, technology, management, mathematics and physics, and sociology. The participants were recruited during first-year lectures and were paid five euros for their participation. The mean age was 20.5 years ($SD = 3.41$) and most of the participants were female (76.4%). We used the same experimental procedure as in Experiment 1. In addition, attributions of effort or talent were examined as causes of the differences in job performance between the two employees. As in Experiment 1, we found no evidence of gender-related effects of the relationships identified.

Dependent Variables

The same two items as in Experiment 1 were used to assess perceived fairness *without* presenting a cause for the performance differences. In addition, the participants were asked to respond to the same items with the only, but crucial, difference that a cause was presented for the performance differences: (1) 'How fair do you consider this compensation system if you know that Wil performs [you perform] better than Adri because Wil puts [you put] *more effort* into the job than Adri?' (2) 'How fair do you consider this compensation system if you know that Adri performs better than Wil [you] because Adri puts *more effort* into the job than Wil [you]?' (3) 'How fair do you consider this compensation system if you know that Wil performs [you perform] better than Adri because Wil is [you are] *more talented* than Adri?' (4) 'How fair do you consider this compensation system if you know that Adri performs better than Wil [you] because Adri is *more talented* than Wil [you]?' The four items were presented in random order and answered on a 7-point scale (1 = *very unfair*, 7 = *very fair*).

Results

First, the two items used to assess perceived fairness *without* attributions were analysed using a payment (job-based pay vs. performance-based pay) \times role (control vs. allocator vs. recipient) repeated-measures ANOVA with performance (performance differences favouring Wil [self] vs. performance differences favouring Adri [other]) as the within-subjects factor. Most importantly, the predicted three-way interaction observed in Experiment 1 was strongly replicated, $F(2, 172) = 23.78$, $p < 0.001$, $\eta^2 = 0.22$ (see Figure 2). This three-way interaction qualified the main effect of payment, $F(1, 172) = 7.82$, $p < 0.01$, $\eta^2 = 0.04$, and the two-way interaction between payment and performance, $F(1, 172) = 21.47$, $p < 0.001$, $\eta^2 = 0.11$. As shown in Figure 2, the recipients in Experiment 2 responded in exactly the same way as their counterparts in Experiment 1. Also corresponding with Experiment 1, the interaction of payment and performance was significant only in the recipient condition, $F(1, 174) = 65.96$, $p < 0.001$. The very large effect size ($\eta^2 = 0.27$) indicates that the self-interest bias found in Experiment 1 (see Figure 1) was even more pronounced in Experiment 2. Only when recipients performed better than their colleague was performance-based pay perceived as fairer than job-based pay, $F(1, 176) = 10.81$, $p < 0.001$, $\eta^2 = 0.06$. When recipients were outperformed by their colleague Adri, they perceived both pay systems as equally fair, $F(1, 176) = 0.00$, ns. Thus, in Experiment 2, strong support was again found for *Hypothesis 1*, which stated that recipients would perceive the equity norm as fairer than equality primarily when they performed better than their colleague.

Although Figure 2 *may* suggest that participants in both the control and the allocator conditions preferred equity to equality, this main effect in both the control condition, $F(1, 174) = 2.70$, $p > 0.10$, $\eta^2 = 0.01$, and the allocator condition, $F(1, 174) = 2.29$, $p > 0.10$, $\eta^2 = 0.01$, was not reliable. Thus, also in Experiment 2, participants who were ignorant of their role did not perceive equity and equality differently in terms of fairness when performance differences were observed between employees. Furthermore, in contrast to the results of Experiment 1, but in accordance with those of Diekmann et al.

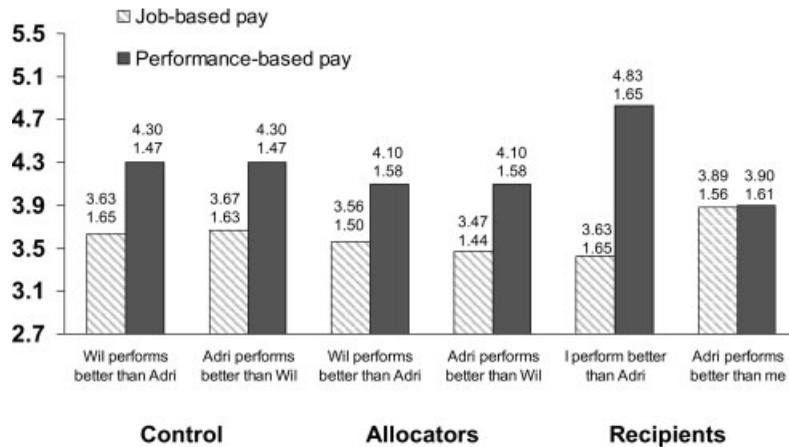


Figure 2. Fairness perceptions of allocators, recipients, and control participants in Experiment 2

(1997), the findings of Experiment 2 suggest that allocators did not perceive performance-based pay as fairer than job-based pay.

Next, we examined to what extent the fairness perceptions of allocators, recipients, and control participants were influenced by the imposition of either effort or talent as the cause of the performance differences. Therefore, a payment (job-based pay or performance-based pay) \times role (control, allocator, or recipient) repeated-measures ANOVA with two within-subjects factors was executed. The within-subjects factors were performance (performance differences favouring Wil [self] vs. performance differences favouring Adri [other]) and attribution (effort vs. talent). Figure 3 presents means and standard deviations for each cell.

The main effect of attribution, $F(1, 172) = 8.90$, $p < 0.01$, $\eta^2 = 0.05$, was qualified by the interaction between attribution and payment, $F(1, 172) = 114.51$, $p < 0.001$, $\eta^2 = 0.40$. Follow-up analyses indicated that, overall, equity rather than equality was perceived as the fairer allocation norm *only* when performance differences were presented as a function of effort ($M_{p-b \text{ pay}} = 5.11$, $SD = 1.46$ vs. $M_{j-b \text{ pay}} = 3.18$, $SD = 1.60$), $F(1, 176) = 70.54$, $p < 0.001$, $\eta^2 = 0.29$. When performance differences were explained in terms of talent, there was no overall difference in perceived fairness ($M_{p-b \text{ pay}} = 3.96$, $SD = 1.53$ vs. $M_{j-b \text{ pay}} = 3.83$, $SD = 1.65$; $F(1, 176) = 0.28$, ns). Furthermore, when effort rather than talent was presented as the cause of the performance differences, performance-based pay was perceived as fairer ($M_{p-b \text{ pay}} = 5.11$ vs. $M_{j-b \text{ pay}} = 3.96$), $F(1, 89) = 86.67$, $p < 0.001$, $\eta^2 = 0.49$, whereas job-based pay was perceived as fairer when performance differences were attributed to talent rather than effort ($M_{j-b \text{ pay}} = 3.96$ vs. $M_{j-b \text{ pay}} = 3.18$), $F(1, 87) = 34.52$, $p < 0.001$, $\eta^2 = 0.28$. Thus, strong support was found for *Hypothesis 2*: When performance differences were presented as a function of effort, participants in both roles perceived an equitable division as fairer, regardless of who was the better-performing employee.

There was one other reliable two-way interaction between payment and performance, $F(1, 172) = 5.76$, $p < 0.05$, $\eta^2 = 0.03$, which was qualified by the three-way interaction among payment, role, and performance, $F(2, 172) = 10.91$, $p < 0.001$, $\eta^2 = 0.11$. The other higher-order interactions were not significant ($ps > 0.10$). As shown in Figure 3, follow-up tests indicated that when performance differences were attributed to *either effort or talent*, the pattern of the interaction *in the*

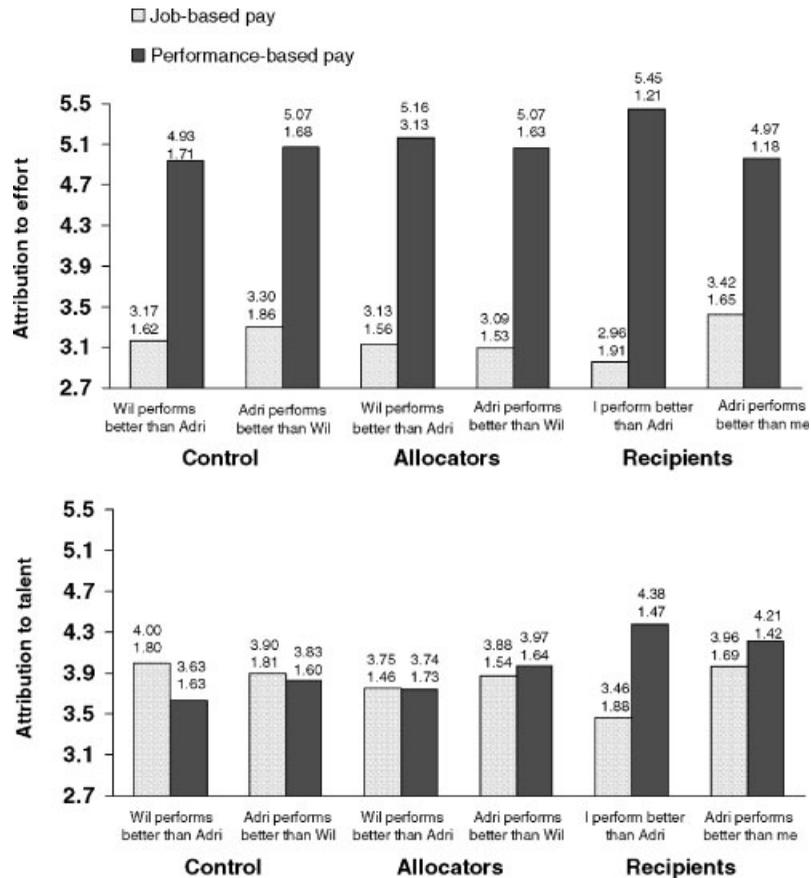


Figure 3. Fairness perceptions of allocators, recipients, and control participants in Experiment 2 when performance differences were attributed to either *effort* or *talent*

recipient conditions, $F(1, 174) = 25.85$, $p < 0.001$, $\eta^2 = 0.13$, was in line with the earlier-reported self-interest effect among recipients (see Figures 1 and 2). Specifically, when recipients performed better than their colleague because they had *worked harder*, performance-based pay was perceived as fairer than job-based pay, $F(1, 176) = 27.15$, $p < 0.001$, $\eta^2 = 0.13$. When their colleague performed better because of exerting more effort, the difference in the perceived fairness of the pay systems was smaller than when the participants themselves had a better performance record. However, there was still a significant difference in the perceived fairness of performance-based pay and job-based pay, $F(1, 176) = 10.52$, $p < 0.001$, $\eta^2 = 0.06$. Thus, although recipients tended to be self-interested when performance differences were presented as a function of effort, the effect sizes clearly suggest that recipients also considered performance-based pay to be fairer than job-based pay when either employee had performed better as a result of exerting more effort. It can be concluded that, in line with *Hypothesis 2*, participants in both roles perceived the equity norm as much fairer than the equality norm when performance differences were presented as a function of effort, regardless of who was the better-performing employee. However, the difference in perceived fairness among recipients was moderate rather than large when the other was the hard-working, superior performer.

Figure 3 further shows that, as hypothesized, when *talent* attributions for the performance differences were imposed on the recipients, performance-based pay and job-based pay were perceived

as equally fair when their colleague performed better owing to a surplus of talent ($M = 4.21$ vs. $M = 3.96$), $F(1,176) = 0.36$, ns. When the recipients themselves performed better than their colleague, they perceived performance-based pay as fairer than job-based pay ($M = 4.38$ vs. $M = 3.46$), $F(1,176) = 4.35$, $p < 0.05$, $\eta^2 = 0.02$. Thus, we found empirical support for *Hypothesis 3*: When performance differences were presented as a function of talent, recipients perceived an equitable division as fairer than an equal allocation only when *they* performed better than their colleague. However, comparisons of means across attributions (see Figure 3) revealed that performance-based pay was perceived as even fairer when the recipient's better performance was explained in terms of effort rather than talent ($M = 5.45$ vs. $M = 4.38$), $F(1,28) = 29.12$, $p < 0.001$, $\eta^2 = 0.51$. Note also that job-based pay was perceived as fairer when the recipient's better performance was attributed to talent rather than effort ($M = 3.46$ vs. $M = 2.96$), $F(1,25) = 5.70$, $p < 0.05$, $\eta^2 = 0.19$.

GENERAL DISCUSSION

According to Rawls (1971), people can maintain perceptions that are completely fair only 'behind a veil of ignorance'; that is, in a situation in which they have no knowledge of their place in society, class position, or social status. The results of the two experiments presented here suggest that, when participants were ignorant of their positions within the organization, performance-based pay and job-based pay were perceived as equally fair when differences in job performance were observed between employees. The same results were obtained in Experiment 2, when the performance differences were presented as a function of *talent* (or natural ability). Only when *effort* attributions for the performance differences were imposed on the participants did people who were unaware of their positions favour equity over equality. These findings point to the important role of attributions in social justice (cf. Lind & Lissak, 1985; Van den Bos et al., 1999), and suggest that, when explanations for performance differences are not explicitly presented, people who are ignorant of their roles may regard talent rather than effort as the cause of the observed performance differences.

We extended prior work (e.g. Diekmann et al., 1997) by orthogonally inducing the allocator role and the recipient role so that the roles of allocator and recipient were not confounded. In addition, we varied performance differences within subjects without making salient different job dimensions. In Experiment 1, we found that allocators perceived equity as fairer than equality, but this unexpected result was not replicated in Experiment 2, in which allocators perceived both allocation norms as equally fair. In the case of unambiguous performance differences, equity considerations are justified (Messick, 1993), particularly in the context of business and economic relations (Deutsch, 1975; Greenberg, 1982; Leventhal, 1976). However, the present research suggests that allocators do not consistently favour equity over the highly available allocation heuristic of equality, which is ideologically approved and generally perceived as fair (Diekmann et al., 1997; Messick, 1993). Only when effort was presented as the cause of the performance difference was an equitable division perceived as fairer. When performance differences were attributed to talent, equality rather than equity was perceived as the fairer distribution rule. With regard to allocators, however, the most important conclusion may be that, considering the similarity of the patterns observed in the control and allocator conditions, they tend to be non-biased in their fairness perceptions.

The most remarkable result of the present research is that recipients consistently perceived equity as fairer than equality when they performed better than their colleague, but when they were outperformed by their colleague, equity and equality were perceived as equally fair. When they had outperformed their colleague, equity or performance-based pay yielded higher outcomes for themselves. In contrast, when the other had performed better, performance-based pay was obviously more disadvantageous for

the self. The aim of Experiment 2 was to obtain insights into the psychological process underlying these findings. We first observed an even more pronounced self-interest bias among recipients. More importantly, however, the results suggest that this bias was particularly strong when performance differences were presented as a function of talent rather than effort. Future research may focus on what exactly goes on in the minds of the recipients in these situations. One might speculate that recipients felt they deserved higher rewards when they performed better than their colleague owing to their talent. In contrast, when their colleague turned out to be the most talented and the best-performing employee, the recipients no longer perceived performance-based pay as fairer than job-based pay. Their egocentric reasoning in the latter case may have been that they could not help being less talented than their colleague. They were an unfortunate party that should not be victimized on the basis of a factor out of their control. This consistent pattern observed in the recipient condition was clearly a self-interest effect because it deviated from the pattern observed in the control condition.

In contrast, when the performance difference was presented as a function of effort, participants in both roles perceived an equitable division as fairer, regardless of who was the better-performing employee, albeit that this significant difference was relatively small among recipients when the other was the hard-working, superior performer. A possible explanation is that the self-oriented recipients could not wriggle out of their full accountability for the lack of effort they put into the job which resulted in a poor performance (cf. Folger & Cropanzano, 1998). The reason to favour equity over equality when one party clearly works harder may be that employees are in control of the amount of effort they put into the job (cf. Heider, 1958). Furthermore, employees who work hard and perform well at least suggest that they are interested and involved in their jobs. To encourage good job performance and favourable attitudes toward the job, which clearly serve organizational goals, a performance-based pay system may be a useful motivational tool (cf. Lawler, 1987). That is, a performance-based pay system may be considered fair, and, accordingly, motivate employees, when pay is based on employees' contributions (e.g. effort) for which they are accountable (cf. Folger & Cropanzano, 1998). We think that these insights have clear implications for both scientists and practitioners in the field of social and organizational psychology in general and social justice in particular (cf. Brockner & Wiesenfeld, 1996; Folger & Cropanzano, 1998; Greenberg, 1987; Van den Bos & Lind, 2002; Tyler & Lind, 1992).

A potential limitation of the present research is the use of single items as dependent variables. It should be noted, however, that several researchers have indicated that single-item measures compare favourably with multiple-items scales in terms of producing similar correlations with outcome variables (e.g. Wanous, Reichers, & Hudy, 1997). More importantly, the expected three-way interactions among payment, role, and performance on perceived fairness were virtually identical in both experiments. This consistency of results across experiments may be considered an indicator for the reliability of the utilized measures.

In the scenario experiments we used here, ecological validity may be another cause for some concern. An important question that should be explored in future research is whether the present results generalize to real-life situations in which participants have something at stake, such as money, promotions, interdependency, and ongoing relationships. A related limitation of the present research may be that the participants were Dutch and that the majority (76–78%) were female students. The present research and the sole study in which the fairness perceptions of allocators and recipients were compared in a setting that included performance differences (Diekmann et al., 1997) at least indicate that, in the different experimental conditions, male and female undergraduates from the Netherlands and the United States responded quite consistently to the types of scenarios used in both studies. Furthermore, neither our findings nor the results of the study conducted by Diekmann et al. (1997) interacted with participants' gender. Nevertheless, it should be noted that both gender and culture have been found to be explanatory factors in preferences for allocation norms (e.g. Austin & McGinn,

1977). James (1993) reviewed a number of studies of reward allocation and noted that equality is preferred in collectivistic cultures whereas equity is advocated in individualistic cultures. Similarly, in a recent study, Wade-Benzoni et al. (2002) demonstrated that allocators (who were also recipients) from a collectivistic culture (Japan) were more likely to adopt an equal allocation distribution rule than were allocators from an individualist culture (the United States). However, Marin (1985) and Chen (1995) found that collectivistic allocators in a supervisory role (i.e. allocating to others only) showed a stronger preference for the equity norm than did individualistic allocators. In a similar vein, people's *explanations* for performance differences among employees may differ across cultures. Although Weiner (1985) asserted that attributional processes are similar across cultures, others have argued that attributions represent implicit theories that are influenced by culture (e.g. Choi, Nisbett, & Norenzayan, 1999).

In line with Tyler and Lind (1992), we conclude that the social role that a person enacts appears to be a structural factor that determines the extent and degree to which justice concerns are activated. Allocators are supposed to make proactive fairness judgments for which they are accountable, and to look after the interests of all parties involved, whereas recipients are in a reactive role (Greenberg, 1987). Recipients merely go along with the existing allocation norm suggested by an empowered allocator, which makes it easier for them to justify allocations that favour themselves (Diekmann et al., 1997). The present results suggest that this difference in social responsibility between allocators and recipients leads to differences in fairness perceptions of pay systems. However, performance-based pay was favoured over job-based pay by both allocators and recipients, as well as by people who were ignorant of their roles, when effort was presented as the cause of the observed differences in job performance. This knowledge may be useful for those who are interested in introducing or maintaining a performance-based pay system.

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REFERENCES

- Adams, J. S. (1965). Inequity in social exchange. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 2, pp. 267–299). New York: Academic Press.
- Austin, W., & McGinn, N. C. (1977). Sex differences in choice of allocation norms. *Journal of Personality*, 45, 379–394.
- Brockner, J., & Wiesenfeld, B. M. (1996). An integrative framework for explaining reactions to decisions: Interactive effects of outcomes and procedures. *Psychological Bulletin*, 120, 189–208.
- Chen, C. C. (1995). New trends in rewards allocation preferences: A Sino-U.S. comparison. *Academy of Management Journal*, 38, 408–428.
- Choi, I., Nisbett, R. E., & Norenzayan, A. (1999). Causal attribution across cultures: Variation and universality. *Psychological Bulletin*, 125, 47–63.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum.
- Deutsch, M. (1975). Equity, equality, and need: What determines which values will be used as a basis of distributive justice? *Journal of Social Issues*, 31, 137–150.
- Diekmann, K. A., Samuels, S. M., Ross, L., & Bazerman, M. H. (1997). Self-interest and fairness in problems of resource allocation: Allocators versus recipients. *Journal of Personality and Social Psychology*, 72, 1061–1074.

- Folger, R., & Cropanzano, R. (1998). *Organizational justice and human resource management*. Thousand Oaks, CA: Sage.
- Greenberg, J. (1982). Approaching equity and avoiding inequity in groups and organizations. In J. Greenberg, & R. L. Cohen (Eds.), *Equity and justice in social behavior* (pp. 389–435). New York: Academic Press.
- Greenberg, J. (1983). Self-image versus impression management in adherence to distributive justice standards: The influence of self-awareness and self-consciousness. *Journal of Personality and Social Psychology*, *44*, 5–19.
- Greenberg, J. (1987). A taxonomy of organizational justice theories. *Academy of Management Review*, *12*, 9–22.
- Heider, F. (1958). *The psychology of interpersonal relations*. New York: Wiley.
- James, K. (1993). The social context of organizational justice: Cultural, intergroup, and structural effects on justice behaviors and perceptions. In R. Cropanzano (Ed.), *Justice in the workplace: Approaching fairness in human resource management* (pp. 21–50). Hillsdale, NJ: Erlbaum.
- Lawler, E. E., III (1987). The design of effective reward systems. In J. W. Lorsch (Ed.), *Handbook of organizational behavior* (pp. 255–271). Englewood Cliffs, NJ: Prentice Hall.
- Leventhal, G. S. (1976). The distribution of rewards and resources in groups and organizations. In L. Berkowitz, & E. Walster (Eds.), *Advances in experimental social psychology* (Vol. 9, pp. 91–131). New York: Academic Press.
- Lind, E. A., & Lissak, R. I. (1985). Apparent impropriety and procedural fairness judgments. *Journal of Experimental Social Psychology*, *21*, 19–29.
- Major, B., & Deaux, K. (1982). Individual differences in justice behavior. In J. Greenberg, & R. L. Cohen (Eds.), *Equity and justice in social behavior* (pp. 43–76). New York: Academic Press.
- Marin, G. (1985). The preference for equity when judging the attractiveness and fairness of an allocator: The role of familiarity and culture. *Journal of Social Psychology*, *5*, 543–549.
- Messick, D. M. (1993). Equality as a decision heuristic. In B. A. Mellers, & J. Baron (Eds.), *Psychological perspectives on justice: Theory and applications* (pp. 11–31). New York: Cambridge University Press.
- Nisbett, R. E., & Ross, L. (1980). *Human inference: Strategies and shortcomings of social judgment*. Englewood Cliffs, NJ: Prentice-Hall.
- Porter, L. W., Bigley, G. A., & Steers, R. M. (2003). *Motivation and work behavior*. New York: McGraw-Hill.
- Rawls, J. (1971). *A theory of social justice*. Cambridge: Harvard University Press.
- Thibaut, J., & Walker, L. (1975). *Procedural justice: A psychological analysis*. Hillsdale, NJ: Erlbaum.
- Tyler, T. R., & Lind, E. A. (1992). A relational model of authority in groups. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 25, pp. 115–191). San Diego, CA: Academic Press.
- Van den Bos, K., & Lind, E. A. (2002). Uncertainty management by means of fairness judgments. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 34, pp. 1–60). San Diego, CA: Academic Press.
- Van den Bos, K., Bruins, J., Wilke, H. A. M., & Dronkert, E. (1999). Sometimes unfair procedures have nice aspects: On the psychology of the fair process effect. *Journal of Personality and Social Psychology*, *77*, 324–336.
- Van Dijk, E., & Vermunt, R. (2000). Strategy and fairness in social decision making: Sometimes it pays to be powerless. *Journal of Experimental Social Psychology*, *36*, 1–25.
- Wade-Benzoni, K. A., Tenbrunsel, A. E., & Bazerman, M. H. (1996). Egocentric interpretations of fairness in asymmetric, environmental social dilemmas: Explaining harvesting behavior and the role of communication. *Organizational Behavior and Human Decision Processes*, *67*, 111–126.
- Wade-Benzoni, K. A., Okumura, T., Brett, J. M., Moore, D. A., Tenbrunsel, A. E., & Bazerman, M. H. (2002). Cognitions and behavior in asymmetric social dilemmas: A comparison of two cultures. *Journal of Applied Psychology*, *87*, 87–95.
- Walster, E., Berscheid, E., & Walster, G. W. (1973). New directions in equity research. *Journal of Personality and Social Psychology*, *25*, 151–176.
- Wanous, J. P., Reichers, A. E., & Hudy, M. J. (1997). Overall job satisfaction: How good are single-item measures? *Journal of Applied Psychology*, *82*, 247–252.
- Weiner, B. (1985). ‘Spontaneous’ causal thinking. *Psychological Bulletin*, *97*, 74–84.