

**ARE EFFICIENCY WAGES EQUALITY WAGES?
EXOGENOUSLY INDUCED FAIRNESS NORMS
IN WORKING ENVIRONMENTS**

**GARY BOLTON
PETER WERNER**

Are efficiency wages equality wages? Exogenously induced fairness norms in working environments*

Gary Bolton
University of Texas at Dallas

Peter Werner
University of Cologne

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Abstract

We investigate how the introduction of a salient norm for pay differentiation influences wage offers and effort exertion in a gift exchange experiment. Exogenously induced claims indeed lead to substantial differentiation in wages. At the same time, unequal wage schemes do not crowd out effort exertion. In particular, we do not observe strong detrimental effects resulting from disadvantageous relative wage positions. Finally, we find that specific communication patterns have a significant impact on effort exertion.

Key Words: Communication, entitlements, fairness norms, gift exchange, relative wages

JEL Classification: J31, M52, D63, C92

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Gary Bolton: University of Texas at Dallas, Jindal School of Management, 800 West Campbell Road, Richardson, TX 75080, United States (email: gbolton at utdallas.edu).

Peter Werner: University of Cologne, Department of Economics, Albertus-Magnus-Platz, D-50923 Köln, Germany (email: peter.werner at uni-koeln.de).

1. Introduction

In recent years, a number of empirical and experimental studies have demonstrated the importance of fairness concerns and relative pay for employee motivation both in the lab and in the field, corroborating the influential fair wage-effort hypothesis by Akerlof and Yellen (1990). According to this notion, an employee withdraws effort if her actual wage falls short of a “fair” level. However, a concise definition of the term “fair wage” is hardly possible. While wage equality is one potential reference point for fairness considerations, typically alternative fairness norms conflict with equal pay in work environments.

This study provides a controlled analysis of decisions in a principal-agent setting in a circumstance when employees’ subjective entitlements point towards wage differentiation. Studies on the role of relative wages have predominantly focused on the norm of equal pay or have investigated the effects of individual deviations from average wage levels. In our experiment, subject employees initially engage in a competitive task (‘the priming task’) to determine who is the high or low performer. They then participate in a gift exchange game similar to the settings by Fehr, Kirchsteiger and Riedl (1993) and Fehr, Gächter and Kirchsteiger (1997).¹ Our design allows us to examine the effect of competing fairness norms: if the claims arising from the competitive task alter fairness perceptions of the employees, equality should not be the predominant norm for wage offers. Instead, wage schemes that differentiate between employees should be more acceptable and thus lead to weaker effort reductions by those who are worse off.

Besides the dynamics of wage offers and effort choices, we analyze the interaction of communication and claims and their impact on employee behavior. In two of our experimental treatments, department heads have the possibility to send a “cheap talk” text message to employees in which they explain their wage choices. After learning the wages of themselves and of the co-workers, employees decide about their effort levels.

¹ For surveys of gift exchange experiments see Gächter and Fehr (2002) and, for more recent evidence, Fehr, Götte and Zehnder (2009).

Summarizing, we find that the competitive assignment of advantage indeed leads to heterogeneous entitlements among experimental employees. A norm of wage differentiation clearly dominates a norm for equal pay, resulting in substantial wage discrimination already in the first period of the game. At the same time, we do not find a detrimental impact of disadvantageous relative positions, as effort levels of high-wage and low-wage subjects are similar despite the realized wage differences.

Observed wages are actually higher in treatments where communication is possible. Furthermore, some types of messages have a significant impact on effort decisions: low performing employees generally accept explanations for their inferior positions, and high performing employees react positively to appeals for fairness and joint efficiency gains.

The remainder of this paper is organized as follows: In Section 2, we review the experimental literature related to our study. Section 3 describes our experimental design and our hypotheses. Our results with respect to wage setting, effort choices and the effect of communication are presented in Section 4; in Section 5 we conclude briefly.

2. Multiple Fairness Standards in Working Environments

There is a growing experimental and empirical literature on the impact of relative wages. A number of studies suggest that wages perceived as inequitable influence satisfaction and working performance in a negative way. Among others, a negative effect of inferior wage or wealth positions on self-reported life or job satisfaction measures is found in the studies by Clark and Oswald (1996), Luttmer (2005), Ferrer-i-Carbonell (2005), Ockenfels, Sliwka and Werner (2012) and Card et al. (forthcoming). Controlled laboratory and field experiments (see, for example, Burchett and Willoughby, 2004, Clark, Masclet and Villeval, 2010, Gächter and Thöni, 2010, Cohn et al., 2011, and Greiner, Ockenfels and Werner, 2011) provide evidence that this negative effect is mainly driven by subjects with disadvantageous relative positions who decrease their working performance.

Most of the mentioned studies refer to the norm of pay equality as they investigate the effects of deviations from reference incomes or the introduction of wage dispersion among homogenous agents. In labor environments, however, different norms interact when employees judge the fairness of their remuneration.² Wage differentiation might be necessary to create adequate incentives for effort exertion and may also be justified when workers are heterogeneous concerning productivity and effort. In fact, using an extensive field data set from German retail banks, Kampkötter and Sliwka (2011) find that wage differentiation has a positive impact on subsequent performance.

There are also a number of experimental studies in which multiple fairness norms interact. In the production game by Güth et al. (2001), a principal interacts with two agents of different productivities. Here, wage transparency leads to less wage differentiation by principals, but there is little evidence for wage comparisons among agents. Charness and Kuhn (2007) conduct a gift exchange game with productivity differences between agents whose absolute sizes are only known to the principal and find that agents focus solely on their own wages when deciding about effort levels. In a multi-person gift exchange game where – similar to our case – heterogeneous productivities are assigned on the basis of performances in a task, Rivas (2009) finds that the detrimental impact of varying unequal payment schemes depends on the skewness of the wage distributions. The study by Abeler et al. (2010) investigates the conflict between an “equality norm” (i.e. everyone receives identical wages) and an “equity norm” (i.e. everyone receives a wage according to his or her input in the working environment) and observe that effort declines when the equity norm is violated by the principal in the sense that identical wages are paid when agents differ in their effort levels. An important interaction between wage and effort comparisons is also found in the three-person gift exchange setting by Gächter, Nosenzo and Sefton (forthcoming): if agents can compare themselves via multiple channels, the impact of wage comparisons becomes smaller while the impact of effort comparisons increases. Finally, depending on the production technology, wage inequality might be the optimal choice for a principal even when agents are perfectly homogenous (see Winter,

² For more general theoretical analyses of how norms in the workplace influence behavior of employees and how they interact with incentives see Sliwka (2007), Ellingsen and Johannesson (2008b) and Fischer and Huddart (2008).

2004, for the theoretical notion and Goerg, Kube and Zultan, 2010, for experimental evidence along these lines). In contrast to the mentioned studies, the goal of our design is to provide a clean test of the conflict between the equal pay norm and an exogenously introduced norm for wage differentiation and the resulting impact on wage setting and subsequent effort exertion. In particular, as we introduce the norm before the actual experiment starts, a potential effect of the norm on principals' and agents' decisions is not overlaid by behavioral dynamics. Moreover, we investigate if and how communication by the principal is suited to mitigate potential tensions arising from wage discrimination.

Studies on free-form negotiation using an initial task quite similar to the one in our experiment have provided evidence that claims strongly shape entitlements which are in turn widely accepted by the negotiating parties (see Gächter and Riedl, 2005, Karagözoglu and Riedl, 2010). In particular, when the two parties have differing claims the outcomes of their negotiations typically deviate from the prominent 50-50 norm.

Finally, the possibility to communicate has potentially large effects in our setting which is prone to relative comparisons. Principals can potentially influence fairness perceptions of employees, for example, by justifying wages that would have otherwise been perceived as unacceptable. A number of experimental studies have demonstrated that the possibility to communicate can have dramatic impacts on game outcomes. For one, communication can be a powerful means to establish cooperation in social dilemmas (see, for example Bochet and Putterman, 2009, for recent evidence and Balliet, 2010, for a survey of the literature) and increases transfers in dictator games (Rankin, 2006, Mohlin and Johannesson, 2008). Promises, i.e. non-binding statements of intended behavior can positively influence beliefs about trustworthiness and subsequently the willingness to trust (Charness and Dufwenberg, 2006).

Up to now, only a few studies focus on communication in principal-agent settings. One of them is the experiment by Brandts and Cooper (2007) who investigate how communication influences behavior of employees in a company turnaround game (similar to a weakest-link game by van Huyck, Battalio and Beil, 1990) and find that it fosters coordination of workers to the extent that the possibility of a manager to communicate

with her subordinates improves coordination to a larger extent than increasing financial incentives. A recent study by Cooper and Lightle (2011) explores the effect of communication in a gift exchange game: Agents have the possibility to send a text message together with their effort decision when receiving a wage offer. Wages increase on average in this setting mainly due to the advice that is transmitted through the messages. When agents emphasize a positive relationship between wages and efforts, principals react to this information by increasing wage offers in later rounds, which in turn leads to higher effort choices.

3. Experimental Design and Hypotheses

Before the experiment started, participants were assigned either the role of a department head or the role of an employee. Roles remained constant throughout the entire game. To introduce heterogeneous claims about wages, we make use of a competitive task:³ Subjects assigned the roles of employees completed a general knowledge quiz consisting of 20 questions and were informed that quiz performances would be compared before each round. The participant who achieved the higher number of correct quiz answers would be assigned the role of a high performer whereas the participant with the lower number of correct answers would be deemed the low performer in the particular round. As we will describe in detail below, these roles were also associated with differences in how employee effort translated into revenues for the principal.

The actual decision situation consisted of a gift exchange game similar to the seminal study by Fehr et al. (1993) and Fehr et al. (1997). In each round, a department head was assigned two employees. First, the three subjects were informed about the quiz scores of the employees. Then, the department head assigned a wage for each employee from the

³ The way we use the competitive task is similar to “priming”, a term which subsumes psychological methods to increase accessibility of specific information to experimental subjects (see Bargh and Chartrand, 2000, for an overview of diverse priming techniques, and Crusius, van Horen and Mussweiler, 2012, for examples how priming techniques affect subsequent behavior in a way consistent with the content of the prime).

interval [0 points; 150 points]. Employees were informed about their own and the co-workers' wage and each subsequently chose an effort level to put into production.

The payoff function⁴ of the department head was

$$\pi_D = (150p_H - w_H) \cdot e_H + (150p_L - w_L) \cdot e_L.$$

Variables p_H and p_L are productivity factors of the high and the low performing employee. The values were set to $p_H = 2$ and $p_L = 1$ so that in case of identical wages, the revenue associated with one unit of effort from the high performer was twice as high as the revenue from the low performer's effort. Wages and effort levels of the high (low) performing employee are denoted with w_H (w_L) and e_H (e_L). Payoffs for the high (low) performing employee H (L) were determined by

$$\pi_i = w_i - c(e) \text{ for } i = H, L.$$

Note that the cost function $c(e)$ with $c' > 0$ and $c'' > 0$ was identical for both employees. Hence, the marginal cost an employee had to bear when providing effort was irrespective of her productivity. Table 1 displays the feasible effort levels and the associated costs in points.

Table 1. Effort levels and associated costs

Effort level e_i	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1
Costs in points	0	1	2	4	6	9	12	16	20	25

Subjects interacted in the described decision situation for 9 rounds. After each round participants were informed about all decisions and the resulting payoffs for the department head and the employee. Before the next round started, three new participants were randomly matched who had not previously interacted with each other.⁵ By implementing a perfect strangers matching, we tried to rule out repeated game effects as much as possible. Moreover, as we were interested in isolating the behavioral effects of a

⁴ The form of the payoff function was chosen to ensure that the department head could not suffer losses in the experiment.

⁵ Due to this procedure, a complete experimental session is one statistically independent observation.

norm for wage differentiation and the role of communication, we wanted to ensure that experimental employees interacted with as many department heads as possible, being confronted with a sufficiently high variety of wage profiles and communication styles.

We conducted three treatments: First, in the baseline treatment (*BASE*), the decision situation was played as described above. Second, in the cheap talk treatment (*CT*), department heads had the possibility to send a text message to both employees that was transmitted together with the wage information. Department heads were not required to send a message, and the content of the message was not restricted. Finally, the ultimatum treatment (*ULT*) was identical to the *CT* treatment except that employees additionally had the option to reject an offer after receiving the information about wages and the message of the department head. If an employee accepted a wage offer, she would then choose her effort level. If an employee instead rejected a wage offer, both she and the department head would receive a payoff of 0 points in the respective round.

The equilibrium of the one shot game is simple. Due to the fixed wage, it is optimal for employees to exert the cost-minimizing effort of $e_i^* = e_j^* = 0.1$, and, foreseeing this, department heads should choose the minimum wage of $w_H^* = w_L^* = 0$.⁶ Yet parameters in this game make maximum effort levels socially efficient; numerous repetitions of gift exchange experiments have shown a substantial share of positive wages and effort levels chosen by experimental subjects.⁷

With respect to the effect of our design variations, we first hypothesize that the priming task induces claims that in turn affect behavior of department heads and employees. More precisely, we expect that relative performance in the quiz and the resulting productivity differences shape entitlements of the employees, with high performing employees expecting higher wages, and that department heads react to this demand by differentiating in wages (Hypothesis 1a). This might be due to two reasons: first, high past performance in the quiz potentially results in a demand for high wages. Second, a high productivity

⁶ As the implemented matching process in our game ensures that players do not interact with each other for a second time, additional motivations for higher-than-minimum wages and effort levels such as reputation building are excluded.

⁷ There is experimental evidence that the inclusion of multiple agents in the gift exchange game does not change the fundamental behavioral patterns (see Maximiano, Sloof and Sonnemans, 2007).

employee has also the potential to create higher revenues for the department head at a given effort level. At the same time, as the priming task makes productivity differences and the corresponding norm of wage differentiation salient, we expect a decline in the importance of the simple equality norm (i.e. identical payments for both players). Thus, we hypothesize that differentiation has little detrimental impact on effort exertion in our setting (Hypothesis 1b).

Furthermore, we hypothesize that enabling employer-to-employee messages will have a significant effect on employee decisions despite their cheap talk character (Hypothesis 2). For example, sending an appropriate message might be a way to “buy-in” the agents by justifying wage choices and thus increasing the acceptance of a given wage. In this case, controlling for the absolute wage, average effort levels should be higher if a message was sent. However, because it seems reasonable to assume that the effect of communication will depend on the content transmitted in the message, it is hardly possible to formulate more clear-cut hypotheses about the interaction of message types and effort. Instead, we will perform a detailed exploratory analysis on this issue in Section III.

Finally, in our *ULT* treatment, we hypothesize that the option for employees to reject a wage offer will increase wages on average, as department heads foresee that “unfair” wages may be rejected and adjust their offers accordingly (Hypothesis 3).

Six sessions of the experiment were conducted in the Laboratory for Economics Management and Auctions (LEMA) at the Pennsylvania State University in March 2011. The experiment was implemented with the software z-tree (Fischbacher, 2007). Altogether 171 subjects took part, and every session lasted about one and a half hours. Subjects arrived at the laboratory and were randomly seated in the cubicles. The experimental instructions were read out aloud, and all subjects received a printed copy that also included tables displaying payoffs for department head and employees resulting from various wage and effort levels.⁸

One experimental round was randomly chosen for payoffs. Experimental points were converted at a rate of 10 points = 1 US-Dollar; all amounts were rounded up to the next

⁸ Sample instructions can be found in the Appendix A.1.

Dollar. The average payoff (standard deviation) was 15.00 US-Dollars (4.97 US-Dollars) including a show-up fee of 5.00 US-Dollars. After each session, participants filled out a post-experimental questionnaire in which they were asked about demographical data and the motivations for their decisions in the experiment. Participants then privately received their payments and left the laboratory.

4. Results

We will first consider the wages set by the department heads and the resulting effort choices of the agents. We will then focus on the effect of communication.

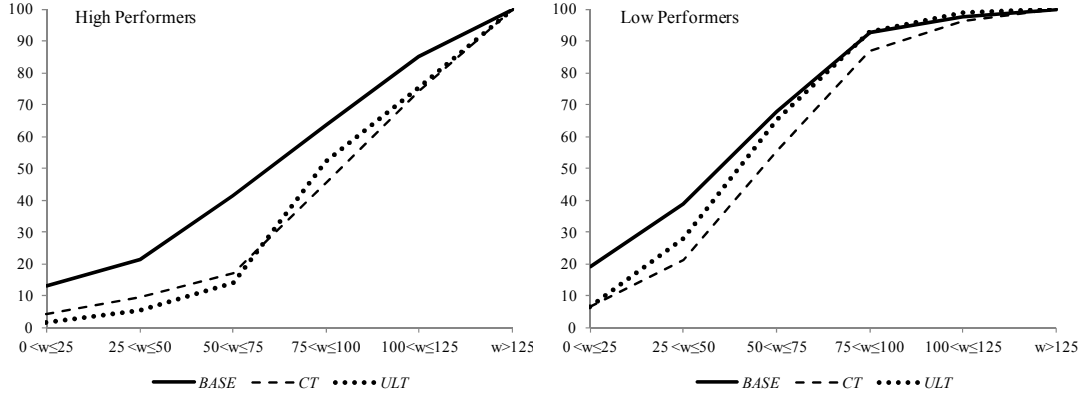
4.1 Wages

The first thing to notice is that department heads generally differentiate in wages between high and low performers in all treatments. Calculated over all treatments, department heads pay unequal wages to the high and the low performing employee in 86.3% of the cases.⁹ On average, high performers receive $w_H = 84.3$, $w_H = 103.9$, and $w_H = 104.5$ in treatments *BASE*, *CT* and *ULT*, respectively. The corresponding values for low performers are $w_L = 61.8$, $w_L = 73.3$, and $w_L = 68.9$. Hence, wage differences are also economically significant, as, depending on the treatment, low performers receive between 26.5% and 34.0% less than high performing employees. Hence, our Hypothesis 1a that employees' claims influence the wage setting process is clearly supported by the data. Moreover, we observe the differentiation in wages already in the first round of the game.¹⁰ As these initial wage differences are not influenced by previous interactions, they can be directly related to the competitive task manipulation.

⁹ The same wage was paid to high and low performers in 8.8% of the cases; in 4.9% of the decisions, the low performer received a higher wage.

¹⁰ The corresponding average wages for high performers in round 1 are $w_H = 83.9$, $w_H = 98.8$, and $w_H = 97.1$, and $w_L = 59.7$, $w_L = 62.5$, and $w_L = 68.8$ for low performers in treatments *BASE*, *CT* and *ULT*, respectively. Comparing the wage profiles chosen by department heads in round 1 yields a significant difference between high and low performers' wages in each of the treatments (all two-sided Wilcoxon Matched Pairs Signed Ranks tests are significant with $p < 0.001$).

Figure 1. Cumulative distributions of wage offers (w) per productivity type and treatment (in % of observations)



Average wages are generally higher in the treatments with communication. This effect is more pronounced for high performing employees who receive on average some 20 points more than in the reference treatment. Figure 1 plots cumulative wage distributions for the treatments, dividing offers of the department heads into six 25-points intervals. The left part of Figure 1 shows that high performers receive substantially higher wages in both the *CT* and the *ULT* treatment compared to the baseline condition. This difference is corroborated also by non-parametric tests.¹¹ A similar but less pronounced pattern is found for low performers (right part of Figure 1): in the communication treatments, we observe mainly a shift from low to medium wage offers.¹²

¹¹ Pairwise treatment comparisons show that the share of observations in the $0 < w \leq 50$ interval is significantly higher in the *BASE* treatment than in the communication conditions – 21.6% in *BASE* versus 9.4% in *CT* ($p = 0.002$, two-sided χ^2 -test) and 5.3% in *ULT* ($p < 0.001$, two-sided χ^2 -test). On the contrary, the shares of observations in the $100 < w \leq 150$ interval are with 36.4% significant smaller in the *BASE* treatment than in the *CT* treatment (54.4%, $p = 0.001$, two-sided χ^2 -test) and the *ULT* treatment (48.0%, $p = 0.036$, two-sided χ^2 -test). Finally, the shares of wages in the intermediate interval $50 < w \leq 100$ account for 42.0%, 36.1% and 46.8% in treatments *BASE*, *CT* and *ULT*, respectively (the share of intermediate offers is significantly higher in *ULT* than in *CT*, $p = 0.042$, two-sided χ^2 -test). All other pairwise comparisons are insignificant on conventional levels. The number of wage choices for high performers accounts for 162 in *BASE*, 180 in *CT*, and 171 in *ULT*, respectively.

¹² The share of low wages is significantly higher in *BASE* (38.9%) than in *CT* (21.1%, $p < 0.001$, two-sided χ^2 -test) and *ULT* (28.1%, $p = 0.036$, two-sided χ^2 -test), whereas the opposite is true for intermediate wages: 53.7% in *BASE* versus 65.6% in *CT* ($p = 0.026$, two-sided χ^2 -test) and 64.9% in *ULT* ($p = 0.037$, two-sided χ^2 -test). Finally, the share of low performer wages in the highest interval is with 13.3% weakly significantly larger in the *CT* treatment than in the other treatments (7.4% in *BASE* and 7.0% in *ULT*, $p = 0.075$ and $p = 0.051$, respectively, two-sided χ^2 -tests). As principals simultaneously chose wages for the high and the low performer in each round, the number of observations for low performers corresponds to the number of wage choices for high performers (see the previous footnote).

Somewhat surprisingly, introducing the ultimatum option in treatment *ULT* does not result in a further upward shift in wages which contradicts our Hypothesis 3. Therefore, the positive wage trend in the communication treatments cannot be attributed primarily to the fear of department heads that their wage offers will be rejected. On the contrary, the mere possibility of communication and therefore the perceived necessity of justifying wage choices may put department heads under social pressure to make more generous offers even though employees cannot respond to the transmitted messages (see also Ellingsen and Johannesson, 2008a, for evidence that communication and the anticipation of feedback increases dictator giving). A similar mechanism might be that the possibility to communicate decreases social distance between department head and employees. Related experimental studies showed that lower social distance may result in more pro-social behavior (see, for example, Buchan, Johnson and Croson, 2006).

Our results concerning wage choices on the aggregate are corroborated by regression analysis on the individual level. We calculate linear models with the wage offered as the dependent variable (see Table 2). Random effects per department head are included in the model to control for individual heterogeneity. In our baseline regression (Model 1), we use the treatment dummies *CT* and *ULT*, the number of rounds (*ROUND*), and a dummy variable for high performing employees (*HIGHPROD*) as the dependent variables. The high productivity dummy has a positive sign indicating a markup of some 30 points paid to high performers. The upward shift of wages in the treatments with communication is reflected in the positive and (weakly) significant signs of both treatment dummies *CT* and *ULT*. Finally, we do not observe a time trend in the wage choices, as *ROUND* is insignificant.

Table 2. Determinants of wage choices by department heads

Model	1	2	3	4	5	6
Dependent Variable	Wage	Wage	Wage	Wage	Wage	Wage
<i>CT</i>	15.555** [6.886]	16.217** [6.925]	15.814** [6.898]	15.091** [6.781]	10.196 [6.512]	21.367** [8.412]
<i>ULT</i>	13.665* [6.973]	15.803** [7.019]	16.222** [6.805]	15.684** [6.691]	12.568** [6.412]	19.852** [8.302]
<i>ROUND</i>	0.350 [0.313]	0.348 [0.306]	0.348 [0.306]	0.373 [0.311]	0.071 [0.387]	0.626 [0.441]
<i>HIGHPROD</i>	29.639*** [1.616]	21.996*** [1.928]	23.032*** [7.496]	23.937*** [1.996]		
<i>CORRECT</i>		2.188*** [0.317]	2.225*** [0.410]		2.153*** [0.376]	2.195*** [0.508]
<i>HIGHPROD X CORRECT</i>			-0.091 [0.637]			
<i>DIFF</i>				0.069*** [1.604]		
<i>Constant</i>	56.452*** [5.242]	35.170*** [6.092]	34.823*** [6.512]	59.659*** [5.153]	39.988*** [6.240]	52.596*** [9.152]
Sample	All	All	All	All	Low Performers	High Performers
Observations	1026	1026	1026	1017	513	513
Wald Chi-square value	343.6	407.7	406.7	356.1	36.1	28.3

Standard errors are given in brackets. *, ** and *** denote significance on the 10%, 5% and 1%-level, respectively. All models are calculated with random effects on the level of individual department heads.

The following specifications further test the influence of the competitive task for decisions of department heads. In Model 2, we additionally include the number of correct quiz answers of an employee (*CORRECT*).¹³ Its coefficient turns out to be significant and positive, suggesting that a subject earns more with higher absolute performances in the quiz, as her wage increases by estimated 2 points per correct answer. Hence, wage offers react to the actually irrelevant information about quiz performance which corroborates our hypothesis that department heads take the heterogeneous claims of employees into account for wage offers. To check for the possibility that high and low productivity workers may be rewarded differently for their quiz performances, we add the interaction term *HIGHPROD X CORRECT* (Model 3). However, this is not the case, as its coefficient is highly insignificant while all other conclusions remain the same. Moreover, as an alternative variable for claims we include the relative performance difference between the employee and her co-worker measured in percent of correctly answered quiz questions (*DIFF*) in Model 4. Similar to the number of correct answers, its coefficient is positive and highly significant, but its economic importance is rather small: Controlling

¹³ The mean of correct quiz answers accounts for 11.0 with a standard deviation of 3.1 answers. The highest (lowest) performance in the quiz is 17 (0) correct answers.

for an employee’s productivity, a change from a relative performance difference of 0% to 50% is associated with an additional wage increase of some 3.5 points. It appears, then, that the absolute rather than the relative performance difference between employees is the more relevant decision variable for department heads. Finally, as an alternative robustness check whether wage choices of department heads follow different patterns for high and low performers, we calculate regression models similar to Model 2 separately for each subgroup (Model 5 and 6, respectively). However, the previously described influence factors have similar effects for both groups of workers.^{14,15}

Summing up, the subjective entitlements of the employees are found to matter for wage choices of department heads: high performers receive higher wages; and wages respond positively to the performance of a particular employee in the general knowledge quiz.

4.2 Effort Exertion

Similar to the majority of related experiments we find a robust gift exchange effect: Irrespective of worker productivity, there is a significant positive correlation between wages and efforts. Table 3 lists mean effort levels and Spearman-rho values between wages and effort levels for each treatment and both productivity types. All reported correlations are significant with $p < 0.001$.

Table 3. Average effort levels and correlations to wages

	High performers		Low performers	
	Mean effort	Spearman-rho (wage/effort)	Mean effort	Spearman-rho (wage/effort)
<i>BASE</i>	0.38	0.429	0.35	0.419
<i>CT</i>	0.42	0.268	0.41	0.319
<i>ULT</i>	0.40	0.458	0.34	0.302

¹⁴ The dummy for *CT* is insignificant for low productivity subjects, suggesting a smaller upward shift of wages in this treatment than for high productivity subjects in *ULT* for which the coefficient is significant. However, comparing the size of the treatment effects across models by simple t-tests does not indicate significant differences (p -values account for $p = 0.353$ for the *CT* dummy and $p = 0.526$ for the *ULT* dummy).

¹⁵ We obtain very similar results if we calculate separate models for high and low productivity agents using the variable for the relative productivity difference.

Most importantly, the results in Table 3 give a first indication that wage differentiation does not have a strong detrimental impact in our setting. Low productivity subjects are generally willing to accept lower wages; their average efforts do not differ much from the average efforts of high performers. Within-treatment effort differences between high and low performers are small for all treatments despite the substantial differences in wages. Moreover, the responsiveness of low performers to wages as measured by the correlation coefficients is similar to the responsiveness of high performers.

To analyze influence factors on individual effort decisions, we calculate linear regression models with random effects per experimental subject (see Table 4). In our baseline specification (Model 1), we include the treatment dummies *CT* and *ULT*, a subject's wage (*OWNWAGE*) and the number of rounds (*ROUND*). Besides the effect of *OWNWAGE* on effort exertion that is, as expected, positive and significant, the negative and significant sign of *ROUND* indicates a downward trend of effort exertion over time. In contrast to the models for department heads, we do not observe a treatment effect for employees, as the dummies for the communication treatments are both insignificant.

Next, we focus on the effect of employees' entitlements and add the dummy variable for high productivity (*HIGHPROD*) in Model 2. The coefficient of this variable is insignificant, suggesting that there is no systematic difference in effort exertion between high and low performing employees. In Model 3, we additionally include the number of correctly answered quiz questions (*CORRECT*). Here, we find significant evidence that the claims induced by the initial priming task influence employee choices. Controlling for productivity and wage, predicted effort falls with an increase in the number of correctly answered quiz questions. It appears that the subjective entitlement of a player increases with her quiz score. In turn, it becomes less likely with higher quiz performance that a given wage is perceived as being kind and triggers a positive effort response.¹⁶ Moreover, this effect remains robust if we also insert the interaction effects of the claim variables with a subject's own wage (*OWNWAGE X HIGHPROD* and *OWNWAGE X CORRECT*) which both turn out to be insignificant.

¹⁶ An analogous result is found if we run the model separately for high and low performers or additionally control for the relative performance differences between the employees (models not reported here).

Table 4. Individual effort decisions and claims

Model	1	2	3	4
Dependent Variable	Effort	Effort	Effort	Effort
<i>CT</i>	0.004 [0.037]	0.003 [0.037]	-0.002 [0.037]	-0.004 [0.037]
<i>ULT</i>	-0.022 [0.038]	-0.024 [0.038]	-0.039 [0.038]	-0.040 [0.038]
<i>OWNWAGE</i>	0.003*** [0.000]	0.003*** [0.000]	0.003*** [0.000]	0.002*** [0.001]
<i>ROUND</i>	-0.023*** [0.002]	-0.023*** [0.002]	-0.023*** [0.002]	-0.022*** [0.002]
<i>HIGHPROD</i>		-0.023 [0.016]	-0.011 [0.016]	0.003 [0.042]
<i>CORRECT</i>			-0.015*** [0.005]	-0.022*** [0.008]
<i>OWNWAGE X HIGHPROD</i>				0.000 [0.000]
<i>OWNWAGE X CORRECT</i>				0.000 [0.000]
Constant	0.252*** [0.032]	0.257*** [0.032]	0.418*** [0.064]	0.488*** [0.090]
Observations	1005	1005	1005	1005
Sample	All	All	All	All
Wald Chi-square value	332.9	334.3	344.6	345.5

Standard errors are given in brackets. *, ** and *** denote significance on the 10%, 5% and 1%-level, respectively. All models are calculated with random effects on the level of individual employees.

In the final step, we consider the effect of relative wage positions on effort exertion. Given the asymmetry of behavioral adjustments to wage differences found in the literature (see Section I) it seems plausible that relative positions mainly affect decisions of low performers. To capture this, we calculate all models separately for high and low performing employees.¹⁷ Our results are displayed in Table 5.

In Models 5 and 6 for the samples of low and high performers, we control for the absolute wage gap in points, calculated as the difference between own wage and co-worker's wage divided by 100 (*WAGEDIFF*), to investigate the role of peer wages for effort decisions. Contrary to previous studies, the co-worker's wage does not have an impact on effort decisions – the coefficient of *WAGEDIFF* is positive but insignificant for both subsamples. This result does not change in alternative specifications where we use the relative wage difference between employees in % (*REL_WAGEDIFF*, the

¹⁷ Our results do not change if we calculate all models with the full sample.

absolute wage difference weighted by one's own wage, Models 7 and 8).¹⁸ Finally, as the relation between relative wage positions and effort exertion might be non-linear, we include dummy variables that measure the degree of wage differentiation by a particular department head (*WAGEDIFF Q2* to *Q4*). We divide all observations into quartiles with respect to the degree of absolute wage difference between the high performing and the low performing employee, with higher quartiles reflecting stronger discrimination in wages (Models 9 and 10). The reference group consists of observations with the lowest degree of wage differentiation in favor of the high performer. Yet, in neither specification we find a significant influence of peer wages, while all other effects remain similar to the previous models.

Taken together, our models for effort exertion suggest that heterogeneous claims emerging from the priming task are relevant for effort decisions. Moreover, the differentiation in wages that follows from employees' claims is largely accepted: effort choices are only contingent on own wage levels. These observations therefore support our Hypothesis 1b and corroborate the observation of Gächter and Riedl (2005) from free-form negotiation games that subjective entitlements enforce unequal allocations among players. Although low performing employees receive on average some 30% less than high performing employees, this is generally not perceived as being unfair and thus does not cause a negative reciprocal reaction.

¹⁸ In Models 7 and 8, we had to exclude observations with a value of zero for *OWNWAGE*, as *WAGEDIFF* is not defined in these cases.

Table 5. Individual effort decisions and wage differences

Model	5	6	7	8	9	10
Dependent Variable	Effort	Effort	Effort	Effort	Effort	Effort
<i>CT</i>	0.019 [0.038]	-0.020 [0.049]	0.019 [0.038]	-0.020 [0.050]	0.019 [0.038]	-0.023 [0.048]
<i>ULT</i>	-0.027 [0.039]	-0.048 [0.050]	-0.028 [0.040]	-0.047 [0.051]	-0.036 [0.039]	-0.048 [0.049]
<i>OWNWAGE</i>	0.003*** [0.000]	0.003*** [0.000]	0.003*** [0.000]	0.003*** [0.000]	0.003*** [0.000]	0.003*** [0.000]
<i>ROUND</i>	-0.024*** [0.004]	-0.019*** [0.003]	-0.025*** [0.004]	-0.020*** [0.003]	-0.023*** [0.004]	-0.019*** [0.003]
<i>CORRECT</i>	-0.012** [0.006]	-0.031*** [0.008]	-0.012** [0.006]	-0.031*** [0.008]	-0.012** [0.006]	-0.031*** [0.008]
<i>WAGEDIFF</i>	0.047 [0.035]	0.027 [0.033]				
<i>REL_WAGEDIFF</i>			0.014 [0.011]	0.006 [0.006]		
<i>WAGEDIFF Q2</i>					0.037 [0.030]	0.013 [0.026]
<i>WAGEDIFF Q3</i>					-0.015 [0.032]	0.029 [0.030]
<i>WAGEDIFF Q4</i>					-0.009 [0.033]	0.039 [0.032]
Constant	0.416*** [0.071]	0.605*** [0.103]	0.414*** [0.073]	0.603*** [0.105]	0.392*** [0.074]	0.605*** [0.103]
Observations	499	506	490	497	499	506
Sample	Low performers	High performers	Low performers	High performers	Low performers	High performers
Wald Chi-square value	122.7	217.7	112.6	195.8	125.5	217.6

Standard errors are given in brackets. *, ** and *** denote significance on the 10%, 5% and 1%-level, respectively. All models are calculated with random effects on the level of individual employees.

4.3 Communication

The majority of department heads uses the possibility to communicate with employees across both treatments. Calculated over all 9 rounds of the game, department heads sent a message in 60% (83%) of all cases in the *CT* (*ULT*) treatment. Messages were transmitted significantly more often in treatment *ULT* ($p < 0.001$, two-sided χ^2 -test) where employees could reject wage offers, reflecting a stronger perceived necessity for the department heads to explain their decisions.

For the analysis of the free text messages, we followed a similar approach as Brandts and Cooper (2007), coding our messages according to the following procedure: first, two research assistants (RA) received an excerpt of the messages and independently

developed categories for the content. Then, both categorizations were discussed and transformed into a final version. In the next step, three other RA coded all messages according to the developed categories. As categories were not exclusive, each message could be assigned multiple codes. No agreement was enforced among the RAs with respect to how a message was coded; our later regression analysis is based on the average assignment of a particular category (for example, if two of the three RA assigned a given code to a message, the corresponding value for the category is 0.67).

Overall, eight main categories emerged from this procedure. Table 6 shows and explains all categories.¹⁹ The frequencies with which categories were assigned differ strongly.²⁰ By far the largest category is *FAIRNESS*, referring either to a department head's own fairness related to the wage setting or to requests for reciprocal behaviors of the employees: more than half of the messages were coded under this category by at least one RA. The second largest category *CLAIMS* (more than one third of the messages) was assigned when the department head justified her wage choices referring to performance differences in the quiz. The third largest category does not directly relate to content, but to the way by which a message was transmitted. Messages of department heads that address employees in a particular polite way (e.g. by thanking them in advance or praising their quiz performances) are coded under the category *POLITENESS*. This category was assigned also in roughly one third of the cases. In messages assigned to the category *JOINT_PROFIT* (32% of the messages), the department head asked the employees to realize possible efficiency gains by exerting effort. In some 31% of the messages (category: *NOCONTENT*), department heads either simply repeated their wage choices without giving any explanations or further comments, made jokes or their messages did not refer to the experimental decision situation. Department heads requested a particular (high) effort level in roughly 16% (*EFFORT_DEMAND*) of the cases. They announced an intention to increase or decrease wages in upcoming rounds

¹⁹ Sample messages for each category can be found in the Appendix A.2. Subcategories, for example categories referring to various aspects of fairness, were not included in the analysis; as these aspects were often discussed in the same message, including subcategories would lead to co-linearity of the respective variables.

²⁰ If we compare the coding of the three RAs pairwise and calculate separate measures for the inter-rater reliability in all message categories, we obtain a mean value for *Kappa* of 0.722, indicating substantial agreement among coders.

depending on their experience in the present round in some 9% (*PROMISE_THREAT*) and mentioned being cheated as the reason for paying low wages in 8% of all cases (*EXCUSE*).

In our analysis of how communication affects effort exertion, we first check whether communication generally changes the perception of a given wage. We calculate Model 1 from Table 4 for the sample of employees in the communication treatments *CT* and *ULT* and include a dummy variable *MESSAGE_SENT* equal to one if the department head used the option to send a message to the two employees. Model 1 from Table 7 (see below) shows that, controlling for the wage paid to an employee, communication generally tends to have a positive impact on effort exertion. However, the coefficient of the message dummy is only weakly significant. This suggests heterogeneous effects of communication contents: certain ways of addressing employees might be more successful in inducing effort than others. The remaining models test and confirm this conjecture.²¹ In Model 2 we use the message categories listed in Table 6 as explanatory variables for effort exertion in the sample of employees from the *CT* and *ULT* treatments. Indeed, we find diverse effects of the categories. Department heads who mention fairness aspects and the possibility to maximize joint profits can expect that this (weakly) significantly increases employees' efforts. On the contrary, asking for a particular effort level (*EFFORT_DEMAND*) leads to a significant drop in subsequent efforts. For the other categories, we do not find a significant influence on behavior. Most notably, although claims resulting from the productivity differences shape wages and efforts, mentioning this aspect in the message has no additional positive impact.

²¹ One could ask whether department heads use the content of their messages strategically in the first place. Our data, however, provides mixed evidence for such a pattern: if we calculate models with the wage paid as the dependent variable similar to the models reported in Subsection 4.1 (not reported here), we find that categories *POLITENESS* and *EFFORT_DEMAND* are positively correlated with wages while there is a negative correlation to the category *EXCUSE*. All other message types are not significantly related to wage choices.

Table 6. Coding categories of free text messages²²

No.	Category	Description	Frequency of coding
1	<i>FAIRNESS</i>	Points out own fairness with respect to wage setting, also: stresses own fairness compared to other department heads (“others pay less”); appeal to fairness of the employees, e.g. asks for reciprocal behavior; refers to risk of “trusting” the employees	55.6%
2	<i>CLAIMS</i>	Refers to performance in the general knowledge quiz related to the wages of high and low performer	36.8%
3	<i>POLITENESS</i>	Greets or thanks the employees in advance, praises performance in the quiz	33.2%
4	<i>JOINT_PROFIT</i>	Points out realizable efficiency gains through effort exertion; calls on employees to “make money”	32.0%
5	<i>NOCONTENT</i>	Department head just repeats wage levels without further explanation or makes jokes	31.2%
6	<i>EFFORT_DEMAND</i>	Asks for particular effort level	16.4%
7	<i>PROMISE_THREAT</i>	Refers to own behavior in subsequent rounds, e.g. if high effort is provided now, department head promises to increase wages in the future	8.8%
8	<i>EXCUSE</i>	Mentions bad experience in previous rounds as the reason for low wages in the present round	8.0%

For the calculation of the frequencies with which a particular category was used, we refer to all cases in which the message was assigned to the category at least by one RA.

To check if message contents have different effects on high and low performers’ choices, we calculate Model 2 again for subsamples of high performers (Model 3) and low performers (Model 4). In case of high performers, effects are qualitatively and quantitatively similar to the previously described results. This suggests that the positive overall impact of messages referring to fairness and efficiency aspects is mainly driven by responses of high productivity employees. Given that high performers typically receive higher wages than low performers, department heads can foster positive reciprocal reactions of those employees referring to this issue.

²² If we compare the occurrence of categories between treatments *ULT* and *CT* by two-sided χ^2 -tests, we observe that messages were assigned to the categories *FAIRNESS* and *POLITENESS* significantly more often ($p < 0.001$ in both cases) and weakly significantly less often to the category *NOCONTENT* ($p = 0.082$) in the *ULT* treatment. Concerning the other categories, we find no significant differences between treatments.

Table 7. Individual effort decisions and communication

Model	1	2	3	4
Dependent Variable	Effort	Effort	Effort	Effort
<i>ULT</i>	-0.035 [0.037]	-0.038 [0.038]	-0.032 [0.051]	-0.049 [0.039]
<i>OWNWAGE</i>	0.003*** [0.000]	0.003*** [0.000]	0.004*** [0.000]	0.003*** [0.000]
<i>ROUND</i>	-0.021*** [0.003]	-0.020*** [0.003]	-0.016*** [0.004]	-0.020*** [0.005]
<i>MESSAGE_SENT</i>	0.033* [0.017]			
<i>FAIRNESS</i>		0.042** [0.021]	0.066** [0.026]	0.023 [0.035]
<i>CLAIMS</i>		0.010 [0.020]	0.007 [0.025]	0.038 [0.033]
<i>POLITENESS</i>		0.005 [0.021]	0.004 [0.026]	-0.003 [0.035]
<i>JOINT_PROFIT</i>		0.053** [0.024]	0.049* [0.029]	0.046 [0.041]
<i>NOCONTENT</i>		-0.005 [0.025]	-0.015 [0.030]	0.006 [0.041]
<i>EFFORT_DEMAND</i>		-0.094*** [0.035]	-0.122*** [0.043]	-0.104* [0.059]
<i>PROMISE_THREAT</i>		0.05 [0.039]	0.029 [0.049]	0.052 [0.063]
<i>EXCUSE</i>		0.029 [0.055]	-0.101 [0.068]	0.196** [0.091]
Constant	0.212*** [0.037]	0.209*** [0.038]	0.168*** [0.051]	0.248*** [0.050]
Sample	All	All	High performers	Low performers
Observations	681	681	344	337
Wald Chi-Square value	222.9	237.2	173.5	74.7

Standard errors are given in brackets. *, ** and *** denote significance on the 10%, 5% and 1%-level, respectively. All models are calculated with random effects on the level of individual employees.

On the contrary, appeals to fairness and to the maximization of joint profits have no impact on effort decisions of low performers. However, the sign of *EXCUSE* is positive and significant, suggesting a substantial effort increase of low performers compared to the case where no message was sent. A low wage is more acceptable if the department head justifies it with his or her bad experience in previous rounds. This observation can be related to findings from psychology that suggest an increased acceptance of bad

outcomes in working environments when explanations are provided to employees (see Schaubroek, May and Brown, 2000, and Werner and Ones, 2000). Finally, similar to the previous models, the sign of *EFFORT_DEMAND* is negative and weakly significant.

5. Conclusion

We conducted a three-person gift exchange game in which we manipulated employees' entitlements through a priming task consisting of a competitive quiz exercise. In contrast to previous experimental studies with a focus on endogenously evolving fairness norms (see Section 2), we thereby introduced a salient norm for wage differentiation exogenously, enabling us to isolate the effect of the norm on wage and effort choices.

We find that principals react to the introduction of the norm by generally differentiating in wages. In addition, – contrary to related studies – relative wage differences do not substantially crowd out effort exertion of low paid subjects. All in all, our experiment suggests that wage equality may not be a necessary component for gift exchange and detrimental impacts of unequal wage profiles can be mitigated as long as wage differences are backed by a commonly accepted norm. An organization that succeeds in establishing a norm for payments based on performance differences might therefore be successful in mitigating potential drawbacks associated with relative concerns of employees.

That said, we realize that the effect of our exogenous norm variation might be so strong, because it refers to both past performance and potential future productivity differences of the employees. In the present study, we cannot disentangle the exact contributions of the two aspects of the norm to our result, although our analysis suggests that both are relevant for wage setting and effort exertion.²³ We also note that in real-world settings, past performance and future productivity typically go along with each other from an employer's perspective.

²³ Our regression models in Section 4 show significant effects of the quiz performance on wage choices and effort exertion once an employee's productivity factor is controlled for.

Furthermore, we caution that the acceptance of a norm for differentiation may crucially hinge on the availability of clear standards that translate differences in productivity into differences in remuneration. Our simple setting satisfies this requirement: claims of the agents are clear and comprehensible, as they solely depend on quantitative performances in our pre-experimental quiz. However, in environments where comparison standards are less salient and relate to multiple dimensions, we would expect more rivalry among employees' claims which in turn might foster the prominence of an equal pay norm and result in negative adjustments in response to violations of this norm.

Moreover, we find in our setting that communication may positively affect employee behavior. Department heads can induce higher effort exertion among employees if they adhere to successful communication strategies: appeals to fairness and the emphasis of mutual efficiency gains foster effort of high performing employees, and justifications for inferior payments are suited to avoid negative adjustments of low performers. At the same time, we note that the possibility of explaining wage choices does not have an unambiguously positive effect from the perspective of the department head, as they do not succeed in enforcing lower wages by means of communication. Instead, wage offers even increase compared to the case where communication is ruled out.

The role of communication between employer and employee in labor environments is not well understood from an economics perspective. Our design suggests that communication may be effective to increase the acceptance of wage schemes. However, as our experiment is one of the first to explore communication in gift exchange games, it models a highly stylized situation in which communication is restricted to one-way messages and the competing fairness norms are salient. In more realistic settings where claims are ambiguous and employees have the possibility to comment on wages choices of their supervisors, a positive impact of supervisor messages may be much more difficult to achieve. Therefore, further studies should aim at getting deeper insights into the interaction of communication with fairness judgments and their behavioral effects in more complex environments.

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Appendix

A.1 Experiment Instructions

Below you find the instructions for the ULT treatment. Instructions for the other treatments were formulated in a very similar way.

General Information. The purpose of this session is to study how people make decisions. If at any time you have questions, feel free to raise your hand and a monitor will assist you. From now until the end of the session, unauthorized communication of any nature with other participants is prohibited.

Each session consists of 9 rounds. In each of these 9 rounds, you will be given the opportunity to earn points. Upon completion of the session, one of the rounds is randomly selected. Payoffs of this round are converted in US-Dollars and paid out. The exchange rate is

10 points = 1 U.S. dollar.

Payments are confidential: no other participant will be told the amount you earn.

In addition to the payoffs from the experiment, you will receive an amount of 5 U.S. dollars for your participation.

Overview of the Session. Before each of the 9 rounds of this session, you will be randomly paired with two other participants in the lab. Neither during nor after the session will any participant be informed about who was paired with whom. No participant will interact twice with another participant throughout the session.

In each round, one participant acts as a **department head in a company**. The other two participants act as **company employees**.

Roles are **assigned randomly before the session** and remain **constant for all rounds**. You will be informed prior to the start of the session, which role was assigned to you.

Before the first round starts, those assigned to employee roles will do a **general knowledge test**. Performance in this test **determines their performance productivity** in the 9 rounds of the session.

In each round of the experiment, **the department head is assigned two employees**. **The department head then decides on the wage offers for each employee**. **Finally, employees decide subsequently on their effort levels** put into the production. Together the wages and effort levels chosen determine the payoff each person receives for the round.

The Quiz

Before the session starts, employees have to complete a **general knowledge quiz**. The quiz comprises 20 questions from a variety of fields of knowledge. Each question has **one correct answer**. Each participant receives the **same questions** in the **same order**. Unanswered questions count as wrong answers. You have **20 seconds** to answer each question. A question looks like this:

Remaining Time 20 [in secs]

Which colour is contained in the flags of all Islamic countries?

- red
- blue
- green
- yellow
- orange

OK

Choose the option you think correct by clicking the **OK** button.

The performance of each employee in the general knowledge quiz determines his or her productivity in the later session (see below).

In each round, the performances of the two employees in the general knowledge quiz are compared. The employee with the greater number of correct answers is deemed the **high performer** and the one with fewer correct answers is deemed the **low performer**. If both employees have the **same number of correct answers** in the general knowledge quiz, then the high (and low) performer is determined randomly.

Relative Performance in the General Knowledge Quiz. Before each round of the experiment, the department head and both employees will receive information about who is the **high** and who is the **low** performer.

Beliefs on the Number of Correct Answers. Before the first round starts, employees will be asked for an estimation of their own performance in the quiz. No other subject will get to know these estimates.

The employees can earn extra money depending on the accuracy of their estimates:

- If their estimate is equal to the true number of correct answers, they earn **40** points.
- If their estimate is the true number of correct answers -1 or $+1$, they earn **20** points.
- If their estimate is the true number of correct answers -2 or $+2$, they earn **10** points.
- Otherwise, they earn **0** points.

These points are converted into U.S. dollars after the session has ended.

Wage Choices

At the beginning of each round, the department head decides on the wage offer for both employees. **The lowest possible wage the department head can offer is 0 points, the highest possible wage is 150 points.**

After the department head has chosen the wage offer for both employees, he or she can send a text message about the wage offers to both employees.

Each employee is then informed about the wage that the department head offers to him or her and the other employee and sees the message of the department head.

Then, each employee has to decide whether to accept the wage or reject the wage.

If the wage is rejected by an employee, this employee does not take any further decision in this round and receives a payoff of 0 points. The department head also receives a payoff of 0 points from this employee's decision in this round.

If the wage is accepted by an employee, this employee subsequently decides about the effort level put into the production.

Effort Choices

The lowest possible effort level is 0.1; the highest possible effort level is 1. For each effort level, an employee has to incur certain costs that are displayed in the table below. **The costs for each effort level are identical for both employees.**

Effort level	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1
Costs in points	0	1	2	4	6	9	12	16	20	25

Round payoffs of the department head increase with higher effort levels chosen by the employees.

First, the round payoff for the department head that results from the effort choice of the **high performing employee** is calculated as follows:

$(2 \cdot 150 - \text{wage of the high performing employee}) \cdot \text{effort level of the high performing employee}$

Second, the round payoff for the department head that results from the effort choice of the **low performing employee** is calculated as follows:

$(150 - \text{wage of the low performing employee}) \cdot \text{effort level of the low performing employee}$

Round payoffs of the employees who have accepted the wage offer of the department head are calculated as follows:

Wage – Costs for the chosen effort level

On the next pages, you find tables that display round payoffs for the department head and the employees calculated for various wage and effort levels.

This is the end of the instructions. Do you have any questions? If you have questions please raise your hand. If there are no (more) questions the experiment will start shortly.

A.2 Sample Messages

No.	Category	Examples
1	<i>FAIRNESS</i>	"I give a very high wage. Hope you guys can give a high effort."; "I have given both of you what I think are very fair wages; far better than most will give you."
2	<i>CLAIMS</i>	"I decided to give the high performer a wage of 100 considering their amount of answers were double that of the low performer. The low performer's wage I allotted was 50 for the reasons mentioned above."
3	<i>POLITENESS</i>	"I hope you guys are happy with the wages I assigned. I hope you will take the offer. It's a pleasure working with you!"
4	<i>JOINT_PROFIT</i>	"Give some solid effort, we all get more money that way."; "You still make a LOT (and don't lose that much) if you put out a lot of effort. We all benefit."
5	<i>NOCONTENT</i>	"The high performer's wage is 90 for this round. The low performer's wage is 60 for this round."; "Over the past 32 years, I have seen this company build up from nothing. You show enormous potential, and I just can not wait for you to join our team and bring us into the company's future!"
6	<i>EFFORT_DEMAND</i>	"If you guys do at least .4 or .5, we all do well."; "Maybe .6 but .7 would be cool for me."
7	<i>PROMISE_THREAT</i>	"If you continue to put in increased effort, you will keep getting raises! Lower effort will be punished with a decrease in pay."
8	<i>EXCUSE</i>	"Because no one gives decent effort I lower my offers every time."; "Every high performer has ripped me off so far so I gotta play it safe."