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RESEARCH ARTICLE

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Whose promises are worth more? How social status affects trust in promises

Philip R. Blue[1] Jie Hu[1] Lu Peng[1] Hongbo Yu[1] Huiying Liu[2] Xiaolin Zhou[1,3,4,5]

Abstract

3

4

promise (or not) to return at least half of the multiplied amount (i.e., 4 × the amount

Importantly, in both lab-manipulated (Exps. 1–3: math-induced) and pre-existing (Exp. 4: university-based) hierarchies, participants invested more in promises given

Correspondence

Email: xz104@pku.edu.cn

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KEYWORDS

1 INTRODUCTION

Falk, & Brown, 2013; math competition: Hu et al., 2015; time-estimation task: Hu, Cao, Blue, & Zhou, 2014), which is usually indicated

2014, 2015), responses to resource allocation (Albrecht et al., 2013;

Van Campenhout, 2009; Hu et al., 2014, 2015).

high status partners (Lount & Pettit, 2012, Exp. 3). In this study, par

tus counterparts in Lount and Pettit's study (2012, Exp. 3).

& Sznycer, 2013; Schweitzer, Hershey, & Bradlow, 2006), as they

Robinson, Kraatz, & Rousseau, 1994; Rousseau, 1989) to social psychology (i.e., commitments; Rusbult, 1980, 1983) and law (i.e., a state

& Knoch, 2013), promisees need to consider what kind of person

on why people keep promises (Baumgartner et al., 2013; Charness & Dufwenberg, 2006, 2010; Ellingsen & Johannesson, 2004; Ismayilov

Pettit's (2012) study did not mention promises, in Experiment 3 we

ise opportunity was given. In Experiment 4 we looked to replicate the effects of Experiments 1 and 3 in a pre-existing social hier

2 EXPERIMENT 1

2.1 Participants

To determine the sample size, we used G*Power 3 software (Faul,

(2012, Exp. 3) study, opens up the possibility for a different pattern

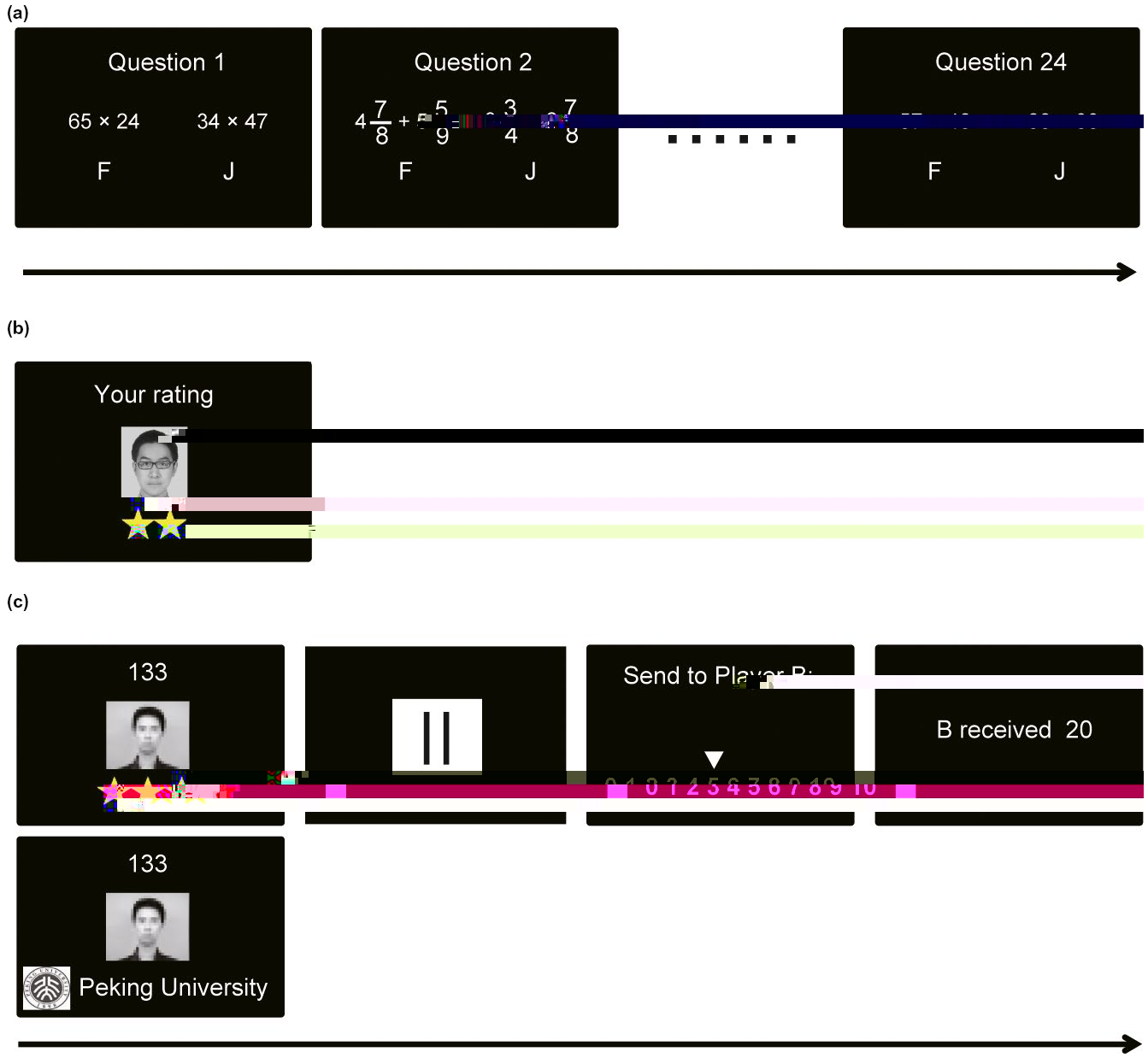

FIGURE 1

(TG). The math quiz was composed of 24 arithmetic expressions (a). For each math question, participants were given 10 s to indicate which

3) or at the beginning of the experiment (Exp. 4), participants acted as Investor in TG with partners (Trustees) of varying social status (c). Participants played a total of 144 TG trials in Exp. 1 or 96 trials in Experiments 3 and 4; in each trial participants played with a new Trustee

with presentation of the ID number, blurred facial portrait, and social status information (Exps. 1 and 3: c, top, math-induced rank; Exp. 4: c,

of the multiplied sum; "- -" = "no promise" condition, indicating no promise to return at least 50% of the multiplied sum; Exps. 1 and 4: "| |" = "unknown" condition, indicating promise information was concealed; Exp. 3: "| |" = "unknown/no opportunity" condition, indicating partner

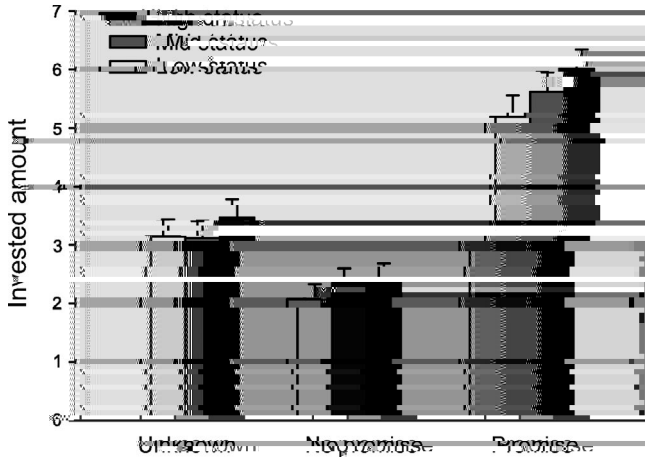

FIGURE 2

range from 0 to 20 yuan and that they would receive no <30 yuan,

the rank-inducing task, participants completed a series of 24 math

2.3 Design and procedure

The experiment had a 3 × 3 within-participants factorial design, with

composed of 24 arithmetic problems (12 easy, 12 highly difficult).

either two-digit multiplication (e.g., 45*72) or complex fraction addi

$$4\frac{7}{8}+5\frac{5}{9}$$

Groups of same-sex participants ranging from 1 to 3 individuals

(Figure 1c, top). At the start of each TG trial (144 trials in total, with

of the Trustee for that trial (facial portraits, subtended 1.5 × 1.6;

2.4 Results

(2, 52) = 96.643, η^2_{partial}

, 5.889 ± 0.154) than when facing a middle status (4.630 ± 0.143) or high status Trustee (3.370 ± 0.208),

(2, 54) = 6.175,

= 0.014, η^2_{partial} (2, 54) = 59.505,

η^2_{partial}

als (5.607 ± 0.328) than in "unknown" trials (3.248 ± 0.281) and "no

in high status Trustees (3.963 ± 0.246) than middle status Trustees (3.694 ± 0.233, = 0.027) and low status Trustees (3.470 ± 0.242,

= 0.033.

(4, 108) = 6.833,

η^2_{partial}

high status Trustees (6.016 ± 0.328) than in low status Trustees (5.190 ± 0.368),

tus Trustees (5.616 ± 0.337),

invested more in middle status promises (5.616 ± 0.337) than low status promises (5.190 ± 0.368),

more in high status Trustees (3.473 ± 0.308) than middle status Trustees (3.123 ± 0.286),

(3.147 ± 0.291), = 0.333; there was also no difference in invest

2.5 Discussion

3 EXPERIMENT 2

3.1 Participants

We determined the sample size using G*Power 3 software (Faul

β
= 0.20). Among the 54 undergradu

participant's DG behavior was classified as an outlier (>3

ing 53 participants (28 females) were between 18 and 26 years of age (mean 21.415 years,
that the basic payment for participation would be 45 Chinese yuan

screen, along with the photos of the six confederates (Figure 3a);

(Figure 3a) and DG (acting as Dictator, Figure 3c). During the instruc

The first task was the rank-inducing task (Figure 3a), which was

the ranks of the six same-sex confederates (Figure 3b). In the sec

ates from the math quiz (Figure 3c). Participants were informed that

At the start of each DG trial (44 trials in total; 20 trials/con

anonymous partner for that particular trial (Figure 3c). Then, the

(Gneezy, 2005; Zhu et al., 2014). After the computer recorded the

Zhu et al. (2014) and were tested in a pilot experiment (= 32, results

partner in DG (i.e., amount given). This amount can range from 5.354 (completely selfish) to 10.636 (completely altruistic).

3.2 Results

(1, 52) = 213.849,
$\eta^2_{partial}$ = 0.804. Participants reported perceiving themselves as more
, 5.472 ± 0.106)
than when facing a high status partner (3.377 ± 0.112).

TABLE 1

	Option A		Option B	
Trial type	Own	Other	Own	Other
		4	4	
				13
	4	14	13	3
	4			4.99
		4.99		
	14			
	4			
	14	4.4	3	

= 0.649.

3.3 Discussion

no reference to promises at any point. As a result, in Experiment 3,

3, we refer to the “unknown” condition as the “unknown/no oppor

4 EXPERIMENT 3

4.1 Participants

Verhoogen, 2003), and to rule out any possibility of reciprocity or

fined as an outlier (>3

the results presented below. The remaining 61 participants (33 fe
males) were between 18 and 26 years of age (mean 20.410 years,

for participation would be 35 Chinese yuan (about 6 USD) and that

4.2 Design and procedure

The experiment had a 2 × 3 within-participants factorial design,

3 = ; 4 =

100,000 yuan; 3 = 100,000–300,000 yuan; 4 = 300,000–500,000

4.3 Results

(1, 60) = 336.517,
$\eta^2_{partial}$ = 0.849. Participants perceived themselves as more superior

high status partner (3.541 ± 0.083). The status manipulation also af

Rossi, 2003), and Subjective SES referring to an individual's perception

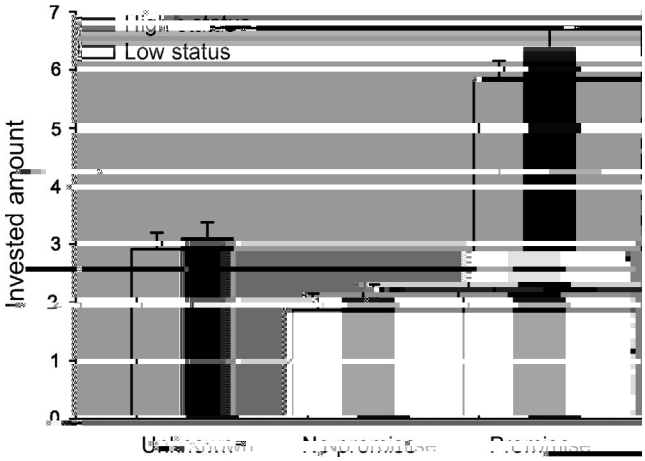

FIGURE 5 Experiment 4 mean and standard error of the means

(2, 120) = 5.204, η^2_{partial}

6.537 ± 0.338; high status: 7.305 ± 0.293, η^2_{partial}
the "unknown/no opportunity" condition (low status: 3.380 ± 0.251; high status: 3.800 ± 0.247, η^2_{partial}
condition (low status: 2.301 ± 0.230; high status: 2.707 ± 0.242, η^2_{partial}

(2,118) = 2.048, = 0.145, η^2_{partial} = 0.034; perceived SES
(2,116) = 2.301,
η^2_{partial} = 0.037), suggesting that the effect of prestige-based status on

= 0.402, η^2_{partial} = 0.014; perceived SES (high status–
(2,116) = 0.138, η^2_{partial}

4.4 Discussion

Experiment 3 replicated the main findings in Experiment 1. As a re

those of Lount and Pettit (2012) and Experiments 1 and 3 in the

5 EXPERIMENT 4

In Experiments 1 and 3, we used a math-based status-inducing task,

Experiment 4, we adopted the university-based rank-inducing ma

5.1 Participants

Among the 35 participants, four participants failed the post-experi

ing 30 participants (20 females) were between 18 and 25 years of

that the basic payment for participation would be 30 Chinese yuan

5.2 Design and procedure

The experiment had a 2 × 3 within-participants factorial design, with

Groups of same-sex participants ranging from 1 to 3 individuals

Similar to Experiment 3, neither participants' own SES nor their

η^2_{partial}

(2,56) = 0.774, 0.466, η^2_{partial}

Experiment 3, when we included SES in the analysis, the interaction

(2,56) = 0.230, η^2_{partial}

(2,56) = 1.463, 0.240, η^2_{partial}

status partners (3.856 ± 0.148) as having less ability than high status

(29) = −7.239,

ference in ratings of benevolence in low status (3.687 ± 0.191) and high status partners (3.813 ± 0.162), 0.384. Participants rated low status partners (4.450 ± 0.154) as having lower integrity than high status partners (4.917 ± 0.138), (29) = −3.558,

0.419,

0.382, 0.037), but did not correlate with low status

0.305). We also found that overall investment

0.362, 0.049), but

0.147) ratings. Taken together, we found that, similar to

promises given by high status partners (5.310 ± 0.141) more than promises given by low status partners (4.517 ± 0.196), (28) = 4.075,

to return a higher percentage of the multiplied sum (49.276 ± 2.717) than low status partners (45.656 ± 2.588) in the "promise" condi

(28) = −2.254, 0.032. Neither of these measures evidenced

5.4 Discussion

Experiment 4 successfully manipulated feelings of social status by

Importantly, the findings from Experiment 4 replicated the find ings from Experiments 1 and 3, thus providing further support for

findings, in combination with those from Experiments 1, 2, and 3,

6 GENERAL DISCUSSION

ished (Exp. 1) or non-existent (Exp. 4) when the partner did not

participants' other-regarding preferences (Cox, 2004). However,

dressed this possibility in Experiment 3 by defining the "unknown"

the Lount and Pettit study (2012; Experiment 3). The pattern of

3 remained the same as the "unknown" condition in Experiment 1,

rent study and those of Lount and Pettit (2012; Exp. 3) is that the

United States (Buchan & Croson, 2004; Buchan, Johnson, & Croson,

low or high ranking (Steckler & Tracy, 2014). Future studies would

2014, 2015).

7 CONCLUSION

524. https://doi.org/10.1016/j.jesp.2010.01.005

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