Supplement to "People Are More Moral in Uncertain Environments"

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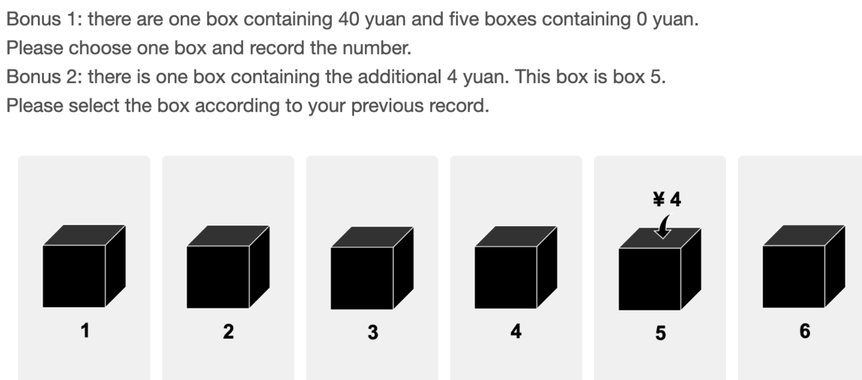
Figure A.1: The Interface of the Main Experiment

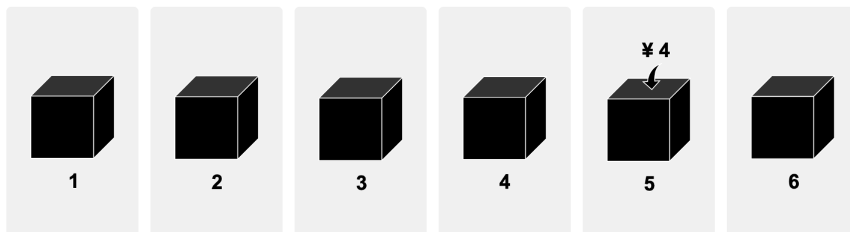


Notes: This is the translated interface of the condition $(40, \frac{1}{6}; 0)$ in the Dice Game experiment. Interfaces of other conditions are similar. Specifically, when $p = 0$ ($p = 1$), the first line will be "*Bonus 1: there are six boxes containing l (h).*" In the experiment, we display each line of sentences sequentially.

Figure A.2: Interfaces of the Two Experiments on Mechanisms

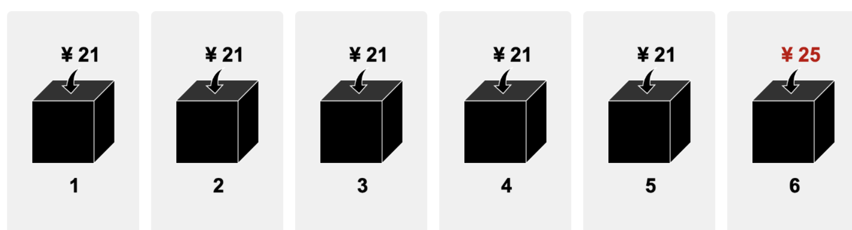
Panel (a): The Interface of the Direct Choice Experiment

Bonus 1: there are one box containing 40 yuan and five boxes containing 0 yuan.
Bonus 2: there is one box containing the additional 4 yuan. This box is box 5.
Please select the box that you would like to receive.



Panel (b): The Interface of the Second Party Experiment

Bonus 1: there are one box containing 40 yuan and five boxes containing 0 yuan. Bonus 1 is for Player A.
Please choose one box and record the number.
Bonus 2: box 6 contains 25 yuan and the remaining five boxes contain 21 yuan. Bonus 2 is for you.
Please select the box according to your previous record.

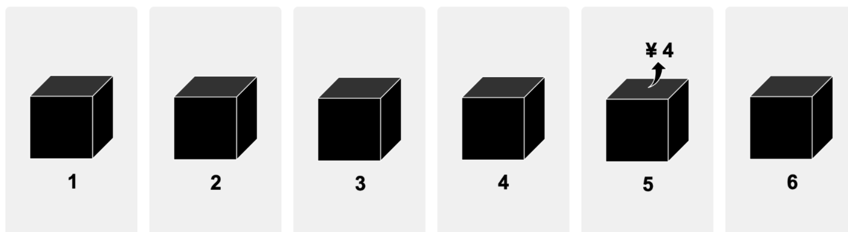


Notes: Panel (a) is the translated interface of the condition $(40, \frac{1}{6}; 0)$ in the Direct Choice experiment. Interfaces of other conditions are similar. Specifically, when $p = 0$ ($p = 1$), the first line will be "*Bonus 1: there are six boxes containing l (h).*" Panel (b) is the interface of the condition $(40, \frac{1}{6}; 0)$ in the Second Party experiment. Interfaces of other conditions are similar. Specifically, when $p = 0$ ($p = 1$), the first line will be "*Bonus 1: there are six boxes containing l (h). Bonus 1 is for Player A.*" In the experiment, we display each line of sentences sequentially.

Figure A.3: Interfaces of the Three Experiments on Robustness and Generalizability

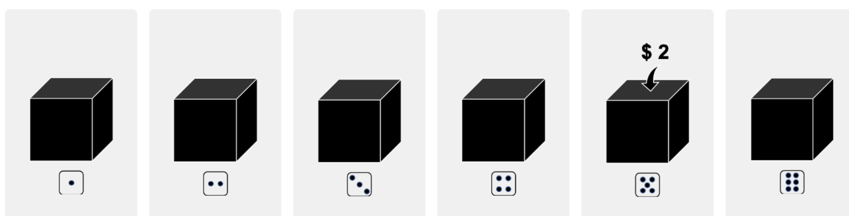
Panel (a): The Interface of the Dice Game Loss Experiment

Bonus: there are one box containing 44 yuan and five boxes containing 4 yuan.
Please choose one box and record the number.
Bonus Deduction: there is one box containing the bonus deduction of 4 yuan. This box is box 5.
Please select the box according to your previous record.



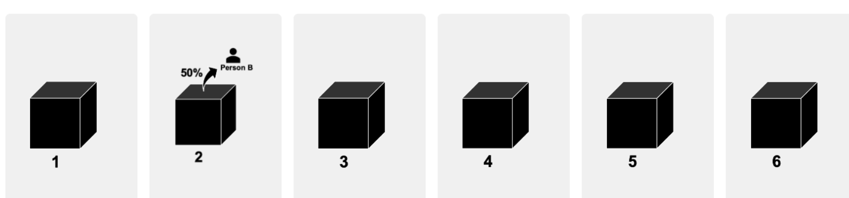
Panel (b): The Interface of the Ex Ante Resolution Experiment

Bonus 1: there are one box containing $20 and five boxes containing $0.
Bonus 2: there is one box containing the additional $2. This box is box 5.
Please throw a die <u>once</u>.
Please select the box according to the result of your throwing.



Panel (c): The Interface of the Dictator Game Experiment

Bonus: there are one box containing $19 and five boxes containing $1.
Sharing ratio: the box with sharing ratio 5:5 is box 2.
Decision: please select your preferred box.



Notes: Panel (a) is the translated interface of the condition $(44, \frac{1}{6}; 4)$ in the Dice Game Loss experiment. Panel (b) is the interface of the condition $(20, \frac{1}{6}; 0)$ in the Ex Ante Resolution experiment. Panel (c) is the interface of the condition $(19, \frac{1}{6}; 1)$ in the Dictator Game experiment. Interfaces of other conditions are similar. Specifically, when $p = 0$ $(p = 1)$, the first line will be "*Bonus: there are six boxes containing l (h).*" In the experiment, we display each line of sentences sequentially.

Table A.1: Summary of Experiments

Experiment	# Subjects	Duration (mins)	Outcome Var Var	Outcome Var Mean	Outcome Var SD	Ave Payoffs
Dice Game	107	18.24	1_{+4}	0.64	0.48	RMB44.06
Direct Choice	102	15.21	1_{+4}	0.94	0.24	RMB42.73
Second Party	107	26.62	1_{+4}	0.56	0.5	RMB36.91
Dice Game Loss	305	17.68	1_{-4}	0.08	0.27	RMB43.45
Ex Ante Resolution	191	14.23	1_{+2}	0.35	0.48	SGD19.77
Dictator Game	148	13.69	1_{share}	0.2	0.4	SGD20.37
Second Party Information	108	25.13	1_{+4}	0.63	0.48	RMB36.10

Notes: Duration reports the time spent on the experiment, including comprehension tests, main experiment, and questionnaires. For the Dictator Game experiment, apart from the dictators' results summarized in this table, 148 subjects are assigned to play the role of recipient. We give recipients a small incentive to predict dictators' choices. Recipients' average payoffs are SGD14.63.

Table A.2: Pairwise Comparisons in the Dice Game Experiment

Panel A: Payoff Pair (40, p; 0)

p	0	$\frac{1}{6}$	$\frac{2}{6}$	$\frac{3}{6}$	$\frac{4}{6}$	$\frac{5}{6}$	1
0							
$\frac{1}{6}$	-0.206***						
$\frac{2}{6}$	-0.299***	-0.093					
$\frac{3}{6}$	-0.168***	0.037	0.131*				
$\frac{4}{6}$	-0.243***	-0.037	0.056	-0.075			
$\frac{5}{6}$	-0.308***	-0.103	-0.009	-0.14**	-0.065		
1	-0.056	0.15**	0.243***	0.112*	0.187***	0.252***	

Panel B: Payoff Pair (30, p; 10)

p	0	$\frac{1}{6}$	$\frac{2}{6}$	$\frac{3}{6}$	$\frac{4}{6}$	$\frac{5}{6}$	1
0							
$\frac{1}{6}$	-0.178***						
$\frac{2}{6}$	-0.262***	-0.084					
$\frac{3}{6}$	-0.308***	-0.131*	-0.047				
$\frac{4}{6}$	-0.178***	0	0.084	0.131*			
$\frac{5}{6}$	-0.178***	0	0.084	0.131*	0		
1	0.028	0.206***	0.29***	0.336***	0.206***	0.206***	

Panel C: Payoff Pair (22, p; 18)

p	0	$\frac{1}{6}$	$\frac{2}{6}$	$\frac{3}{6}$	$\frac{4}{6}$	$\frac{5}{6}$	1
0							
$\frac{1}{6}$	-0.121**						
$\frac{2}{6}$	-0.131**	-0.009					
$\frac{3}{6}$	-0.037	0.084	0.093				
$\frac{4}{6}$	-0.121**	0	0.009	-0.084			
$\frac{5}{6}$	-0.131**	-0.009	0	-0.093	-0.009		
1	-0.075	0.047	0.056	-0.037	0.047	0.056	

Notes: This table presents the pairwise comparisons of 1_{+4} within each payoff pair. The value in each cell is the difference of the mean of 1_{+4} between the two specific conditions, with the value of the condition in rows being the minuend. Statistical significance is based on two-sided t test. *** p<0.01, ** p<0.05, * p<0.1.

Table A.3: Probit Regression Analysis of the Dice Game Experiment

	Probit: 1_{+4}				
	(1)	(2)	(3)	(4)	(5)
Panel A. Full sample and subsamples by payoff pairs					
	All	All	(40, p; 0)	(30, p; 10)	(22, p; 18)
1_h	0.163***	0.159***	0.191***	0.267***	0.030
	(0.031)	(0.032)	(0.049)	(0.049)	(0.038)
1_l	0.205***	0.201***	0.262***	0.225***	0.114***
	(0.029)	(0.030)	(0.049)	(0.046)	(0.042)
Controls	N	Y	Y	Y	Y
Observations	2,247	2,247	749	749	749
Panel B. Subsamples by winning probabilities					
	$\frac{1}{6}$	$\frac{2}{6}$	$\frac{3}{6}$	$\frac{4}{6}$	$\frac{5}{6}$
1_h	0.122***	0.182***	0.126***	0.128***	0.161***
	(0.030)	(0.037)	(0.033)	(0.036)	(0.032)
1_l	0.160***	0.221***	0.165***	0.167***	0.200***
	(0.030)	(0.032)	(0.032)	(0.035)	(0.032)
Controls	Y	Y	Y	Y	Y
Observations	963	963	963	963	963

Notes: This table follows the structure of Table 2 to examine our main results using probit regressions. Coefficients in this table report the marginal effect of the corresponding independent variables. Control variables are the payoff pair fixed effect, the duration of the decision (in seconds), and the order of the decision (between 1 and 21). Standard errors are clustered at individual level in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table A.4: Regression Analyses of the Dice Game Experiment with Alternative Controls

	OLS: 1_{+4}				
	(1)	(2)	(3)	(4)	(5)
Panel A. Full sample and subsamples by payoff pairs					
	All	All	(40, p; 0)	(30, p; 10)	(22, p; 18)
1_h	0.157***	0.152***	0.184***	0.245***	0.030
	(0.028)	(0.028)	(0.044)	(0.041)	(0.039)
1_l	0.191***	0.187***	0.240***	0.212***	0.106***
	(0.025)	(0.025)	(0.042)	(0.041)	(0.037)
Controls	N	Y	Y	Y	Y
Constant	0.591***	-0.431	-0.107	-0.202	-0.849*
	(0.029)	(0.483)	(0.607)	(0.543)	(0.478)
Observations	2,247	2,247	749	749	749
Panel B. Subsamples by winning probabilities					
	$\frac{1}{6}$	$\frac{2}{6}$	$\frac{3}{6}$	$\frac{4}{6}$	$\frac{5}{6}$
1_h	0.127***	0.192***	0.133***	0.136***	0.169***
	(0.031)	(0.037)	(0.035)	(0.038)	(0.034)
1_l	0.162***	0.226***	0.168***	0.170***	0.203***
	(0.030)	(0.033)	(0.033)	(0.036)	(0.032)
Controls	Y	Y	Y	Y	Y
Constant	-0.683	-0.521	-0.316	0.056	-0.315
	(0.443)	(0.457)	(0.454)	(0.454)	(0.437)
Observations	963	963	963	963	963
R-squared	0.241	0.242	0.213	0.206	0.256

Notes: This table follows the structure of Table 2 to examine our main results with different control variables. Control variables are the payoff pair fixed effect, duration of the decision (in seconds), order of the decision (between 1 and 21), and demographic information on gender, age, place of birth, major, and religion. Standard errors are clustered at individual level in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table A.5: Testing the Spillover Effect of the Dice Game Experiment

	OLS: 1_{+4}	
	(1)	(2)
1_h	0.156***	0.148***
	(0.030)	(0.054)
1_l	0.180***	0.211***
	(0.025)	(0.041)
$L.1_{+4}$	-0.102***	-0.097***
	(0.025)	(0.030)
$1_h \times L.1_{+4}$		0.014
		(0.056)
$1_l \times L.1_{+4}$		-0.048
		(0.047)
Controls	Y	Y
Constant	0.371***	0.366***
	(0.030)	(0.034)
Observations	2,140	2,140
R-squared	0.395	0.395

Notes: This table examines the effect of the decision lagged one round on the effect of uncertainty in the current round. $L.1_{+4}$ denotes the value of 1_{+4} lagged one round. Therefore, decisions in the first round are excluded from the analysis. The set of control variables are the payoff pair fixed effect, individual fixed effect, and order and duration of the decision. Standard errors are clustered at individual level in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table A.6: Testing Effect of the Size of Endowment in the Dice Game Experiment

	OLS: 1_{+4}			
	(1)	(2)	(3)	(4)
endowment	-0.001			
	(0.001)			
p		-0.012	-0.027	
		(0.045)	(0.025)	
$1_{uncertain}$			-0.172***	
			(0.023)	
Mean				-0.001
				(0.001)
Var				-0.001***
				(0.000)
Controls	Y	Y	Y	Y
Constant	0.364***	0.361***	0.484***	0.518***
	(0.045)	(0.035)	(0.029)	(0.039)
Observations	642	1,605	2,247	2,247
R-squared	0.526	0.389	0.383	0.371

Notes: Column 1 uses data on the 6 choices under certainty, with *endowment* being the amount of the corresponding certain payoff. Column 2 uses data on the 15 choices under uncertainty, with p being the winning probability. Column 3 regresses 1_{+4} on p and $1_{uncertain}$, the latter of which equals 1 for conditions under uncertainty and 0 otherwise. Column 4 regresses 1_{+4} on the mean and variance of the lottery in each choice. All columns control for the individual fixed effect, duration of the decision, and order of the decision. In addition, columns 2-4 control for the payoff pair fixed effect. Standard errors are clustered at individual level in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table A.7: Individual Types of the Dice Game Experiment

Classification	Type	# Subjects (%)	Mean		
			$+4^l$	$+4^u$	$+4^h$
(1)	(2)	(3)	(4)	(5)	(6)
$+4^u < +4^l$, $+4^u < +4^h$	More-Moral	54 (50.47)	0.877	0.536	0.901
$+4^u > +4^l$, $+4^u > +4^h$	Less-Moral	5 (4.67)	0.133	0.32	0.133
$+4^l < +4^u < +4^h$	Increase	7 (6.54)	0.19	0.371	0.524
$+4^l > +4^u > +4^h$	Decrease	12 (11.21)	0.75	0.422	0.139
$+4^l = +4^u = +4^h$	Invariant	20 (18.69)	1	1	1
All other cases	Unclassified	9 (8.41)	0.593	0.556	0.593

Notes: For each subject, we compute three measures. $+4^l$ is the mean of 1_{+4} of the 3 choices under certain low payoffs 0, 10, and 18. $+4^u$ is the mean of 1_{+4} among the 15 choices under uncertain payoffs. $+4^h$ is the mean of 1_{+4} of the 3 choices under certain high payoffs 40, 30, and 22. Column 1 presents the classification criteria and column 2 assigns a descriptive name for each type. Column 3 shows the number and proportion of subjects of each type. Columns 4-6 give the mean values of $+4^l$, $+4^u$, and $+4^h$ among each type. Using the same criteria, we can identify a type for each subject at each payoff pair, which shows that individual types are internally consistent. For example, types are consistent across the payoff pairs $(40, p; 0)$ and $(30, p; 10)$ (Pearson chi2 test, Pr=0.000).

Table A.8: Regression Analyses of the Dice Game Loss Experiment

	OLS: 1_{-4}				
	(1)	(2)	(3)	(4)	(5)
Panel A. Full sample and subsamples by payoff pairs					
	All	All	(44, p; 4)	(34, p; 14)	(26, p; 22)
1_h	-0.028***	-0.028***	-0.028	-0.032*	-0.024*
	(0.009)	(0.009)	(0.017)	(0.018)	(0.013)
1_l	-0.023**	-0.023**	-0.022	-0.036*	-0.011
	(0.011)	(0.011)	(0.018)	(0.019)	(0.014)
Controls	N	Y	Y	Y	Y
Constant	0.085***	0.067***	-0.003	0.174***	0.024*
	(0.006)	(0.010)	(0.014)	(0.016)	(0.014)
Observations	6,405	6,405	2,135	2,135	2,135
R-squared	0.002	0.107	0.203	0.213	0.195
Panel B. Subsamples by winning probabilities					
	$\frac{1}{6}$	$\frac{2}{6}$	$\frac{3}{6}$	$\frac{4}{6}$	$\frac{5}{6}$
1_h	-0.038***	-0.030**	-0.027**	-0.031**	-0.014
	(0.013)	(0.014)	(0.012)	(0.013)	(0.012)
1_l	-0.033**	-0.025*	-0.022	-0.027*	-0.009
	(0.014)	(0.014)	(0.014)	(0.014)	(0.013)
Controls	Y	Y	Y	Y	Y
Constant	0.029	0.009	0.025	0.025	0.130***
	(0.018)	(0.015)	(0.017)	(0.017)	(0.016)
Observations	2,745	2,745	2,745	2,745	2,745
R-squared	0.162	0.160	0.171	0.163	0.174

Notes: 1_{-4} equals 1 if subjects choose the box with the payoff deduction of RMB4 and 0 otherwise. 1_h (1_l) equals 1 if the condition gives certain high (low) payoff and 0 otherwise. In Panel A, column 1 uses all data without controls. Column 2 further controls for the payoff pair fixed effect, individual fixed effect, duration of the decision (in seconds), and order of the decision (between 1 and 21). Columns 3-5 report results using data on the seven choices under the payoff pair $(44, p; 4)$, $(34, p; 14)$, and $(26, p; 22)$, respectively. In Panel B, each of columns 1-5 uses data on the nine choices, including six choices under certainty and three choices under uncertainty with the winning probability being $\frac{1}{6}$ to $\frac{5}{6}$, respectively. Standard errors are clustered at individual level in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table A.9: Regression Analyses of the Ex Ante Resolution Experiment

	OLS: 1_{+2}				
	(1)	(2)	(3)	(4)	(5)
Panel A. Full sample and subsamples by payoff pairs					
	All	All	(20, p; 0)	(15, p; 5)	(11, p; 9)
1_h	0.129***	0.130***	0.151***	0.200***	0.038
	(0.021)	(0.022)	(0.038)	(0.039)	(0.037)
1_l	0.117***	0.117***	0.140***	0.166***	0.045
	(0.023)	(0.024)	(0.039)	(0.037)	(0.035)
Controls	N	Y	Y	Y	Y
Constant	0.314***	0.406***	0.510***	0.373***	0.413***
	(0.017)	(0.021)	(0.033)	(0.031)	(0.037)
Observations	4,011	4,011	1,337	1,337	1,337
R-squared	0.014	0.266	0.310	0.349	0.369
Panel B. Subsamples by winning probabilities					
	$\frac{1}{6}$	$\frac{2}{6}$	$\frac{3}{6}$	$\frac{4}{6}$	$\frac{5}{6}$
1_h	0.133***	0.130***	0.127***	0.146***	0.117***
	(0.027)	(0.029)	(0.029)	(0.028)	(0.028)
1_l	0.119***	0.116***	0.113***	0.133***	0.105***
	(0.029)	(0.030)	(0.029)	(0.030)	(0.029)
Controls	Y	Y	Y	Y	Y
Constant	0.576***	0.676***	0.547***	0.555***	0.451***
	(0.034)	(0.034)	(0.031)	(0.037)	(0.033)
Observations	1,719	1,719	1,719	1,719	1,719
R-squared	0.383	0.344	0.346	0.356	0.352

Notes: 1_{+2} equals 1 if subjects choose the box with the additional SGD2 and 0 otherwise. 1_h (1_l) equals 1 if the condition gives certain high (low) payoff and 0 otherwise. In Panel A, column 1 uses all data without controls. Column 2 further controls for the payoff pair fixed effect, individual fixed effect, duration of the decision (in seconds), and order of the decision (between 1 and 21). Columns 3-5 report results using data on the seven choices under the payoff pair $(20, p; 0)$, $(15, p; 5)$, and $(11, p; 9)$, respectively. In Panel B, each of columns 1-5 uses data on the nine choices, including six choices under certainty and three choices under uncertainty with the winning probability being $\frac{1}{6}$ to $\frac{5}{6}$, respectively. Standard errors are clustered at individual level in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table A.10: Regression Analyses of the Dictator Game Experiment

	OLS: 1_{share}				
	(1)	(2)	(3)	(4)	(5)
Panel A. Full sample and subsamples by payoff pairs					
	All	All	(19, p; 1)	(15, p; 5)	(11, p; 9)
1_h	-0.085***	-0.086***	-0.148***	-0.082***	-0.032
	(0.021)	(0.022)	(0.034)	(0.031)	(0.026)
1_l	-0.046**	-0.048**	-0.070*	-0.029	-0.046*
	(0.022)	(0.022)	(0.037)	(0.033)	(0.025)
Controls	N	Y	Y	Y	Y
Constant	0.222***	0.155***	0.159***	0.013	0.133***
	(0.021)	(0.019)	(0.025)	(0.022)	(0.023)
Observations	3,108	3,108	1,036	1,036	1,036
R-squared	0.006	0.368	0.401	0.425	0.522
Panel B. Subsamples by winning probabilities					
	$\frac{1}{6}$	$\frac{2}{6}$	$\frac{3}{6}$	$\frac{4}{6}$	$\frac{5}{6}$
1_h	-0.195***	-0.117***	-0.080***	-0.050**	0.010
	(0.030)	(0.029)	(0.028)	(0.025)	(0.023)
1_l	-0.157***	-0.079***	-0.042	-0.012	0.048*
	(0.028)	(0.029)	(0.028)	(0.025)	(0.025)
Controls	Y	Y	Y	Y	Y
Constant	0.187***	0.137***	0.081***	0.159***	0.106***
	(0.036)	(0.035)	(0.029)	(0.029)	(0.026)
Observations	1,332	1,332	1,332	1,332	1,332
R-squared	0.458	0.434	0.446	0.500	0.494

Notes: 1_{share} equals 1 if subjects choose to share and 0 otherwise. 1_h (1_l) equals 1 if the condition gives certain high (low) payoff and 0 otherwise. In Panel A, column 1 uses all data without controls. Column 2 further controls for the payoff pair fixed effect, individual fixed effect, duration of the decision (in seconds), and order of the decision (between 1 and 21). Columns 3-5 report results using data on the seven choices under the payoff pair $(19, p; 1)$, $(15, p; 5)$, and $(11, p; 9)$, respectively. In Panel B, each of columns 1-5 uses data on the nine choices, including six choices under certainty and three choices under uncertainty with the winning probability being $\frac{1}{6}$ to $\frac{5}{6}$, respectively. Standard errors are clustered at individual level in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

B An Additional Experiment

This Section presents the design and results of an additional experiment, which is related to the Second Party experiment on moral wiggle room referred in Subsection 3.2.

The main text reports the Second Party experiment, which is designed to test whether uncertainty imposed on decision-makers themselves is critical for our observation. In the Second Party experiment, Player A is endowed with a lottery $(h, p; l)$ and makes no decision, while Player B faces no uncertainty and makes decisions with honesty concern. Such a design allows us to examine individuals' moral decision-making when others face uncertainty, and is closely related to the literature on moral wiggle room.

Most studies on moral wiggle room focus on how decision-makers respond to uncertainty about others. In their baseline experiment, Dana, Weber, and Kuang (2007) compare decisions under two situations: (1) subjects know the influence of their decisions on the payoff for an anonymously paired subject or (2) they have no such information but can reveal it without cost. In the first situation, subjects tend to avoid the option that maximizes their payoffs when they know that this option reduces the payoff of the paired subjects. In the second situation, they choose to avoid the information and directly choose the option with maximum payoffs. Exley (2016) shows that such behavior is related to the notion of excuse-driven selfishness. To shed further light on the difference between moral wiggle room and our main observation, we modify the Second Party experiment to incorporate the paradigm of Dana, Weber, and Kuang.

B.1 Design

The *Second Party Information* experiment also involves two players.[1] Player A receives a lottery $(h, \frac{1}{2}; l)$ that yields high outcome h with probability $\frac{1}{2}$ and low

[1] In this Section, to maintain consistency with the Second Party experiment in the main text, we refer to the active player as Player B and the passive player as Player A. However, in the instructions, to enhance clarity, we refer to the active player as Player A (the decision-maker).

outcome l otherwise.[2] To facilitate implementation, we only include three payoff pairs $(20, \frac{1}{2}; 0)$, $(15, \frac{1}{2}; 5)$, and $(11, \frac{1}{2}; 9)$. Player B receives a fixed amount of RMB21 and may need to decide whether to lie to get an additional RMB4. Similar to other experiments in this paper, we use a six-box framework. Three boxes contain h and the remaining three boxes contain l, which will be received by Player A. Additionally, for Player B, one box contains RMB25 and five boxes contain RMB21. In other words, the box that contains RMB25 for Player B may contain either h or l for Player A. Therefore, Player B's decisions on choosing a box also affect Player A's payoffs. Following Dana, Weber, and Kuang (2007), we predetermine the outcome of the lottery $(h, \frac{1}{2}; l)$ in the current experiment. The randomization device we use is the RANDBETWEEN function in Excel.

We generate three conditions. In the *Certain* condition, Player B receives information on the resolution of Player A's lottery $(h, \frac{1}{2}; l)$, which shows how her decision in choosing a box affects Player A's payoffs. In the *Uncertain* condition, Player B receives no information on the resolution of Player A's lottery $(h, \frac{1}{2}; l)$. In the *Choosing* condition, Player B is asked to choose whether to receive the information on the resolution of $(h, \frac{1}{2}; l)$, which leads to either the Certain or Uncertain condition depending on the predetermined outcome of the lottery $(h, \frac{1}{2}; l)$. When the resolution information is revealed, the condition can be further separated into two conditions, *Aligned* whereby the box with RMB25 for Player B contains a high payoff for Player A, and *Unaligned* whereby the box with RMB25 for Player B contains a low payoff for Player A. Whether the condition is Aligned or Unaligned is, as stated above, predetermined by chance. To collect enough data for comparisons between uncertainty and certainty, we repeat each payoff pair $((20, \frac{1}{2}; 0)$, $(15, \frac{1}{2}; 5)$, or $(11, \frac{1}{2}; 9))$ and each condition (Certain, Uncertain, or Choosing) three times, which results in 27 rounds.

Each round has four steps. First, in the frame of six boxes, Player B chooses a box and writes the number on a piece of paper. Second, Player B learns that

[2] In the paradigm of Dana, Weber, and Kuang (2007), the effect of uncertainty is documented by comparing situations in which the uncertainty is unresolved and when it is resolved, which is different from our other experiments that compare $p \in (0, 1)$ with $p = 1$ and $p = 0$, respectively. To closely follow Dana, Weber, and Kuang and simplify the experiment, we fix the winning probability to be $\frac{1}{2}$ in this experiment and include the three conditions of Certain, Uncertain, and Choosing.

"*Box y contains RMB25 and the remaining five boxes contain RMB21.*" The third step includes information on the result of Player A's endowed lottery $(h, \frac{1}{2}; l)$. When Player B faces the Certain condition, she learns that "*Boxes abc contain h and boxes xyz contain l,*" in which "*abc*" and "*xyz*" are exact numbers. When Player B faces the Uncertain condition, she learns that "*Boxes ??? contain h and boxes ??? contain l,*" with hidden information. When Player B faces the Choosing condition, she receives the hidden information first but can click a button to review the information or decline to do so. In the last step, Player B is asked to select the box she has chosen in step 1.[3]

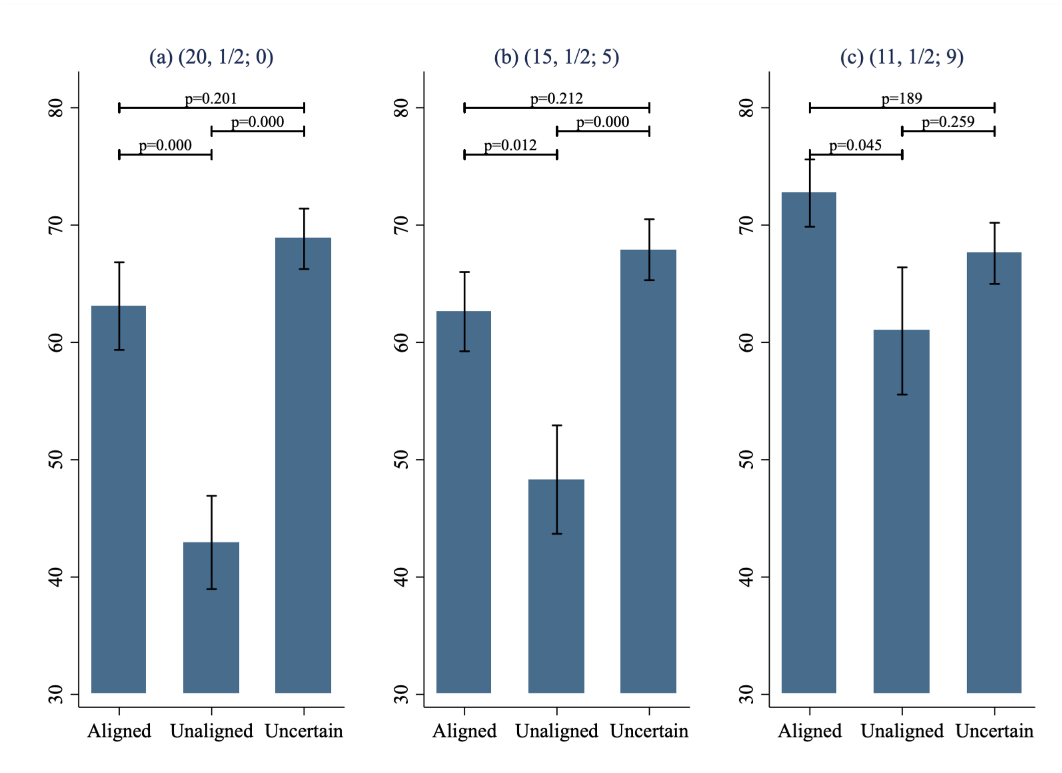
B.2 Results

We are interested in examining whether uncertainty in others leads to subjects' truth-telling behavior. To illustrate this point, we investigate subjects' tendency to lie under the Uncertain condition compared with the Aligned and Unaligned conditions, respectively, since they are the two degenerate certainty conditions for the Uncertain condition. Figure B.1 presents the proportions of reporting +4 under these three conditions for the payoff pairs $(20, \frac{1}{2}; 0)$, $(15, \frac{1}{2}; 5)$, and $(11, \frac{1}{2}; 9)$, respectively. Across the three payoff pairs, we find that the proportions of reporting +4 are significantly higher in the Aligned condition than in the Unaligned condition. That is, subjects are more likely to lie when lying also benefits Player A. More importantly, the proportions of reporting +4 are indistinguishable between the Aligned and Uncertain conditions. This pattern suggests that when subjects do not know whether Aligned or Unaligned will occur, they behave as if Aligned will occur and are more likely to lie. For example, they may adjust the probability weight of the condition Aligned, in order to lie for their own interest, which is in line with Exley's (2016) findings that people use risk as an excuse for selfishness. As for the Choosing condition, the proportion of subjects

[3]Role assignment here followed that in the Second Party experiment. We recorded the process of predetermining the lotteries. Moreover, even though we repeated each payoff pair and each condition three times in the experiment, the predetermination may still be "unbalanced" because of chance. Therefore, we separately predetermined the lotteries for three different subsamples of subjects.

choosing to avoid the resolution information is 33.7 percent on average. The observed information avoidance is also consistent with Dana, Weber, and Kuang (2007).

Figure B.1: Truth-telling Behavior in the Second Party Information Experiment



Notes: This figure compares truth-telling behavior between the Certain and the Uncertain conditions. The y-axis is the proportion of decisions that choose the box with the additional RMB4. We display the proportions when the payoff pair is $(20, \frac{1}{2}; 0)$, $(15, \frac{1}{2}; 5)$, and $(11, \frac{1}{2}; 9)$ in Panels (a), (b), and (c), respectively. Under each payoff pair, we further separate the Certain condition into two conditions: Aligned and Unaligned. Standard error bars correspond to +/- one standard error. Top horizontal bars indicate the p-values for two-sided t tests between different conditions.

In summary, when uncertainty is imposed on others rather than on decision-makers themselves, we find that it would not give rise to morality. Contrarily, it can lead to selfish behavior and information avoidance. This is consistent with our observation in the Second Party experiment, and in line with studies of moral wiggle room and excusing selfishness (Dana, Weber, and Kuang, 2007; Haisley and Weber, 2010; Exley, 2016; Gino, Norton, and Weber, 2016; Garcia, Massoni, and Villeval, 2020).

C Theoretical Discussions

This appendix provides more details on theoretical discussions. First, we introduce existing models of social preference under uncertainty. We are interested in whether these models can account for the increased altruism under uncertainty observed in our Dictator Game experiment. Second, we provide more details about two simple frameworks to model magical thinking and quasi-magical thinking, respectively. Last, we discuss the implications on state space.

C.1 Existing Models on Social Preference

In studies on social preference under uncertainty, an important literature examines the distinction between preference for ex ante and ex post fairness (Brock, Lange, and Ozbay, 2013; Saito, 2013). The framework described in the main text captures the ex post consideration. Namely, the dictator first evaluates the utility of each contingent allocation between herself and the recipient based on social preference, which results in the four consequences $\{h_m, l_m, h_i, l_i\}$. The dictator then aggregates across consequences in all states based on risk preference. As the discussion in the main text suggests, the observation that subjects are more other-regarding in uncertain environments violates dominance for models with ex post consideration.

Under ex ante consideration, the dictator first evaluates the lottery for herself and for the recipient separately based on risk preference, then aggregates across the two valuations based on social preference. We assume that the dictator uses the expected payoffs to evaluate the lotteries of both players (Brock, Lange, and Ozbay, 2013; Saito, 2013) and uses the social preference $f(x, y)$ to evaluate the allocation that gives herself x and the recipient y. If the dictator chooses to share evenly, the uncertain allocation $((\frac{h}{2}, \frac{h}{2}), p; (\frac{l}{2}, \frac{l}{2}))$ is evaluated as $f(p\frac{h}{2} + (1-p)\frac{l}{2}; p\frac{h}{2} + (1-p)\frac{l}{2})$; if the dictator chooses not to share, the uncertain allocation $((h, 0), p; (l, 0))$ is evaluated as $f(ph + (1-p)l, 0)$. Most existing social preference models predict that if the dictator decides not to share under certain stakes h and l, she would continue to do so under an intermediate stake $ph + (1-p)l$.[4] In addition, the observed sharing behavior in our experiment and in the literature is monotonically decreasing rather than hump-shaped in stake size.

In this regard, the ex post or ex ante approach alone is hard to explain the increased sharing behavior under uncertainty. Saito (2013) proposes an expected inequality-averse (EIA) model that adopts a linear combination of ex post and ex ante consideration. EIA captures common properties of Brock, Lange, and Ozbay (2013). Applying the EIA model to evaluate the two options of the dictator, $((\frac{h}{2}, \frac{h}{2}), p; (\frac{l}{2}, \frac{l}{2}))$ and $((h, 0), p; (l, 0))$, we have the following utility:

$$U(share) = \delta(pf(\frac{h}{2}, \frac{h}{2}) + (1-p)f(\frac{l}{2}, \frac{l}{2})) + (1-\delta)f(p\frac{h}{2} + (1-p)\frac{l}{2}, p\frac{h}{2} + (1-p)\frac{l}{2})$$

$$U(not\ to\ share) = \delta(pf(h, 0) + (1-p)f(l, 0)) + (1-\delta)f(ph + (1-p)l, 0)$$

The first term captures the preference for ex post fairness, in which social preference function f is used to evaluate the allocations and the expectation is then used to aggregate across the social preference of each allocation. The second term captures the preference for ex ante fairness, in which the expected payoff is calculated for each individual and then social preference function f is used to evaluate the expected allocations of individuals. The weight δ measures the relative importance of ex post and ex ante fairness. For individuals who choose not to share under both certain stakes h and l, we know that $f(h, 0) > f(\frac{h}{2}, \frac{h}{2})$ and $f(l, 0) > f(\frac{l}{2}, \frac{l}{2})$. Consequently, social preference that is not hump-shaped predicts that $f(ph + (1-p)l, 0) > f(\frac{ph+(1-p)l}{2}, \frac{ph+(1-p)l}{2})$. Therefore, the EIA model predicts that these selfish individuals will choose not to share under uncertain stake $(h, p; l)$, and thus fails to account for the observed behavior.

We can also allow the social preference to define over the player's utility rather than over the payoffs, and use the non-expected utility model to capture risk attitudes. Specifically, suppose $u(\cdot)$ captures the utility of monetary payoffs with

[4] Existing models, including Fehr and Schmidt (1999); Bolton and Ockenfels (2000); Andreoni and Miller (2002); Charness and Rabin (2002) satisfy the property that social preference is not hump-shaped.

$u'(\cdot) > 0$. We consider that the dictator uses $f(u(x), u(y))$ to evaluate the allocation (x, y) that gives herself x and the recipient y, and uses $\Theta(x_1, p; x_2) = w(p)u(x_1) + (1 - w(p))u(x_2)$ to evaluate the binary prospect that yields x_1 with probability p and x_2 otherwise. Under the linear combination of ex post and ex ante consideration in EIA, we have the following utility:

$$\begin{aligned}
U(\mathit{share}) =& \delta(w(p)f(u(\frac{h}{2}), u(\frac{h}{2})) + (1 - w(p))f(u(\frac{l}{2}), u(\frac{l}{2}))) \\
&+ (1 - \delta)f(w(p)u(\frac{h}{2}) + (1 - w(p))u(\frac{l}{2}), w(p)u(\frac{h}{2}) + (1 - w(p))u(\frac{l}{2})) \\
U(\mathit{not\ to\ share}) =& \delta(w(p)f(u(h), 0) + (1 - w(p))f(u(l), 0)) \\
&+ (1 - \delta)f(w(p)u(h) + (1 - w(p))u(l), 0)
\end{aligned}$$

Similarly, for individuals who choose not to share under both certain stakes h and l, we know that $f(u(h), 0) > f(u(\frac{h}{2}), u(\frac{h}{2}))$ and $f(u(l), 0) > f(u(\frac{l}{2}), u(\frac{l}{2}))$. If the social preference model is homogeneous of degree 1, which is a common property in most existing models (i.e., Fehr and Schmidt, 1999; Andreoni and Miller, 2002; Charness and Rabin, 2002), then we have $u(h)f(1, 0) > u(\frac{h}{2})f(1, 1)$ and $u(l)f(1, 0) > u(\frac{l}{2})f(1, 1)$. Therefore, $(w(p)u(h)+(1-w(p))u(l))f(1, 0) > (w(p)u(\frac{h}{2})+(1-w(p))u(\frac{l}{2}))f(1, 1)$, and thus $f(w(p)u(h)+(1-w(p))u(l), 0) > f(w(p)u(\frac{h}{2})+(1-w(p))u(\frac{l}{2}), w(p)u(\frac{h}{2}) + (1 - w(p))u(\frac{l}{2}))$. That is, selfish individuals will continue to choose not to share under uncertainty. In this regard, the ex post approach, the ex ante approach, and their combination encounter difficulties in explaining the documented pattern.

C.2 Magical Thinking

This subsection provides more details of the framework on magical thinking in Subsection 4.3. In this framework, individuals believe that with α chance the world is karmic, whereby a moral act leads to high payoff and vice versa, and with $1 - \alpha$ chance the world is objective as described, whereby high and low payoffs occur with probabilities p and $1 - p$, respectively. This simple framework involves two common perceptions, spiritual and materialistic; the former is in line with beliefs in the just world, moralistic gods, and karmic doctrine. As Karni (2017) observes, the assignment of subjective probabilities is a matter of the perception of the decision-maker. We assume that individuals are expected utility maximizers and make decisions based on a comparison of the following:

$$U(immoral) = \alpha u(l_i) + (1-\alpha)(pu(h_i) + (1-p)u(l_i))$$
$$U(moral) = \alpha u(h_m) + (1-\alpha)(pu(h_m) + (1-p)u(l_m))$$

Here we assume that individuals are selfish and $u(\cdot)$ captures the utility of monetary payoffs with $u'(\cdot) > 0$. Selfish individuals prefer the moral act over the immoral act if

$$\alpha(u(h_m) - u(l_i)) > (1-\alpha)(p(u(h_i) - u(h_m)) + (1-p)(u(l_i) - u(l_m))).$$

The left-hand side $\alpha(u(h_m) - u(l_i))$ captures the benefit of the moral act conditional on the karmic world. The right-hand side $(1-\alpha)(p(u(h_i) - u(h_m)) + (1-p)(u(l_i) - u(l_m)))$ captures the expected cost of the moral act conditional on the objective world, which negatively affects the likelihood of choosing the moral act. This simple model has the following predictions: Individuals act more morally under uncertainty when (1) the belief in karma α is sufficiently large; (2) the difference between h_m and l_i is sufficiently large; and (3) the expected cost of moral act $p(u(h_i) - u(h_m)) + (1-p)(u(l_i) - u(l_m))$ is sufficiently small. These predictions are generally in line with our experimental observations—people are more honest and more altruistic under uncertainty than certainty, and this effect is stronger for lotteries with a wider spread between the two outcomes.

In addition, this framework helps to reconcile the observed difference in the two behavioral domains: While the different in honesty between uncertainty and certainty is not affected by the winning probability, the difference in altruism is present only when the winning probability is small. In our Dice Game and Ex Ante Resolution experiments, lying delivers an additional a (RMB4 or SGD2) that is independent of the winning probability. According to this model, when the marginal benefits of getting a are similar under high and low payoffs, namely, $u(h+a)-u(h) \approx u(l+a)-u(l)$, the winning probability p plays no role in the lying behavior. In our Dictator Game experiment, suppose it is costlier to share evenly under high than low payoff, namely, $u(h)-u(\frac{h}{2}) > u(l)-u(\frac{l}{2})$;[5] larger winning probability p leads to a higher expected cost and hence to a lower proportion of sharing. Taking lotteries under (19, p; 1) as an example, when it is costlier to share evenly on stake 19 than on 1, the cost of sharing increases with p. To sum, in this model, the role of the winning probability p is determined by the cost of acting morally in the high state $u(h_i)-u(h_m)$ relative to that in the low state $u(l_i)-u(l_m)$, which explains the observed difference in the two types of experiment.

C.3 Quasi-magical Thinking

This subsection provides more details of the framework on quasi-magical thinking in Subsection 4.3. In this framework, individuals view the morality of an act as a source of uncertainty. Chew and Sagi (2008) axiomatize the probabilistic sophistication within each source of uncertainty, and Abdellaoui et al. (2011) model source dependence through distinct probability weighting functions for different sources. In our setting, we can have two source-dependent probability weighting functions $w_m(p)$ and $w_i(p)$, for the moral and immoral acts correspondingly. Here, $w_m(0)=w_i(0)=0$, $w_m(1)=w_i(1)=1$, $w'_m(p)>0$, and $w'_i(p)>0$. Therefore, individuals make decisions based on the comparison among the following utility.

$$U(immoral) = w_i(p)u(h_i) + (1-w_i(p))u(l_i)$$
$$U(moral) = w_m(p)u(h_m) + (1-w_m(p))u(l_m)$$

We assume that individuals are more optimistic and assign a higher decision weight to the high outcome under the moral act than under the immoral act, namely, $w_m(p) > w_i(p)$. After the rearrangement of the inequality, individual acts morally if

[5]The condition is satisfied under common forms of a utility function, such as $u(x)=x^{\gamma}$.

$$(w_m(p) - w_i(p))(u(h_m) - u(l_m)) > w_i(p)(u(h_i) - u(h_m)) + (1 - w_i(p))(u(l_i) - u(l_m))$$

The left-hand side captures the benefit of the moral act based on the comparison of the two act-dependent weights. The right-hand side captures the expected cost of the moral act. This model has the following predictions: Individuals act more morally under uncertainty when (1) $w_m(p) - w_i(p)$ is sufficiently large; (2) the difference between h_m and l_m is sufficiently large; and (3) the expected cost of moral act $w_i(p)(u(h_i) - u(h_m)) + (1 - w_i(p))(u(l_i) - u(l_m))$ is sufficiently small. Thus, the predictions in this framework are analogous to those in the previous subsection with similar intuitions.

C.4 Magical Thinking or Quasi-magical Thinking

Our findings are more consistent with the notion of quasi-magical thinking. First, our design makes it hard for subjects to consciously embrace magical thinking. To avoid confusion and suspicion, we strive to make sure that subjects understand the independence between their choices and the resolution of the uncertainty, with corresponding comprehension tests and detailed explanations. Second, we measure a form of karmic belief in a survey at the end of the experiment—the winning probability of the high payoff conditional on choosing the box with an additional RMB4 and choosing one of the other five boxes. We find that 72.9 percent of subjects reveal an objective belief and 23.4 percent report a lower winning probability for choosing the box with an additional RMB4. We find no significant difference in the main behavioral pattern between these two subgroups of subjects (Table C.1). Third, in the Ex Ante Resolution experiment, uncertainty has been resolved prior to the decisions, but is unknown to subjects. Even though subjects are unlikely to believe that they can undo the resolved uncertainty by acting morally, we continue to observe that people are more honest in uncertain environments.

Table C.1: Regression Analyses of Karmic Belief in the Dice Game Experiment

	OLS: 1_{+4}			
	Objective	Karmic	Other	All
	(1)	(2)	(3)	(4)
1_h	0.150***	0.193***	0.021	0.144***
	(0.034)	(0.061)	(0.023)	(0.033)
1_l	0.190***	0.246***	-0.150	0.174***
	(0.030)	(0.051)	(0.096)	(0.030)
1_{Karmic}				0.221***
				(0.015)
$1_h \times 1_{\text{Karmic}}$				0.045
				(0.066)
$1_l \times 1_{\text{Karmic}}$				0.068
				(0.058)
Controls	N	Y	Y	Y
Constant	0.306***	0.208***	1.085***	0.301***
	(0.033)	(0.068)	(0.140)	(0.029)
#Subjects	78	25	4	107
Observations	1,638	525	84	2,247
R-squared	0.395	0.349	0.358	0.384

Notes: In our main (Dice Game) experiment, we include five unincentivized questions to measure karmic belief at the end of the experiment. More specifically, we present the five uncertain conditions under the payoff pair $(40, p; 0)$. Under each condition, we ask subjects who is more likely to win the high payoff of 40—the subject who chooses the box with the additional RMB4 or the subject who chooses one of the remaining five boxes. We classify a subject as the Objective type if she reveals objective beliefs in all five questions—i.e., chooses "*equally likely.*" We classify a subject as the Karmic type if she reveals karmic beliefs in one of the five questions—i.e., chooses "*those who choose one of the remaining five boxes are more likely to win 40.*" All remaining subjects are classified as Other. Columns 1-3 report the main regression results use data on Objective, Karmic, and Other types, respectively. Column 4 uses all data, in which 1_{Karmic} equals 1 if subjects are the Karmic type and 0 otherwise. All columns involve a full set of controls. Standard errors are clustered at individual level in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

There are various reasons for the lack of explicit acceptance of karmic belief in our survey. One possible explanation is that subjects may have reservations about disclosing their superstitious beliefs and consider these beliefs cognitively wrong. Moreover, subjects may avoid making claims that their moral behavior will bring them good fortune, which can be perceived to be tempting fate. Risen (2016) suggests that magical thinking, along with widespread beliefs in a similar spirit, is likely to serve as a heuristic in System 1 to guide our daily behavior, and sophisticated System 2 is aroused to deny such erroneous beliefs when we are asked. In this regard, it is difficult to measure those beliefs and to separate magical thinking and quasi-magical thinking.

C.5 A More General Formulation

To capture the perceived link between moral behavior and uncertainty, a more general framework is to reformulate the state space, as described by Schmeidler and Wakker (1987) and Karni and Schmeidler (1991). Instead of using states and consequences as primitives, in the causal state space, acts and consequences are taken as primitives, and states are defined as all mappings from acts to consequences. This allows the perceived causality between acts and consequences (see Chapter 11 of Gilboa (2009) for a detailed discussion).[6]

We assume that individuals are selfish, and thus consequences in the causal state space are the monetary payoffs of decision-makers. Namely, h_m and l_m are the consequences of the moral act under high and low payoffs ($h_m \geq l_m$), and correspondingly, h_i and l_i are the consequences of the immoral act under high and low payoffs ($h_i \geq l_i$). As the moral act is costly, we have $h_m \leq h_i$ and $l_m \leq l_i$. Our setting has two acts, and each has two possible consequences; this gives rise to four states in the causal state space, as shown below.

	s_h	s_k	s_{rk}	s_l
moral	h_m	h_m	l_m	l_m
immoral	h_i	l_i	h_i	l_i

[6]The causal state space is related to the Newcomb's Paradox as follows. There are two boxes. The first contains \$1,000 and the second contains either \$1M or \$0. You are to choose between taking both boxes and taking only the second box. A being with superpower predicts your choice and puts \$0 (\$1M) in the second box if she predicts that you will take both boxes (the second box). After the being makes the prediction and prepares the second box, you make the choice. While some individuals would take both boxes with a dominance argument, others may take only the second box, since taking the second box would have been predicted and lead to the \$1M. The paradox attributed to Newcomb first appeared in Nozick (1969). One can extend the state space: \$1M regardless of the act, \$0 regardless of the act, \$0 if taking both boxes and \$1M if taking the second box (following the being with superpower), and \$M if taking both boxes and \$0 if taking the second box. With the causal state space, taking only the second box does not violate dominance. See more related discussions in Jeffrey (1965); Gilboa and Schmeidler (1995); Karni and Vierø (2013); Schipper (2016); Karni (2017); Gilboa, Minardi, and Samuelson (2020).

The two states s_h and s_l, as reflected in the standard space, capture the occurrence of high and low payoffs regardless of the acts. The two new states s_k and s_{rk} can be interpreted as the perceived correlation between acts and consequences. Namely, s_k captures the karmic doctrine whereby moral behavior leads to the high payoff and immoral behavior leads to the low payoff. In contrast, s_{rk} represents the reverse karmic situation. If a nonzero probability is assigned to s_k, the observation that people are more moral in uncertain environments does not violate dominance. Our theoretical framework of magical thinking directly assigns a subjective probability α to the state s_k, while in the quasi-magical thinking approach, the inflated probability weight to the high outcome under the moral act (i.e., $w_m(p) - p$) captures the belief in the state s_k. Therefore, causal state space provides a more general formulation to accommodate both magical thinking and quasi-magical thinking underlying the behavioral pattern documented in this paper.

D Experimental Instructions

D.1 Dice Game Experiment

D.1.1 Instructions

Welcome to our study on decision making. In this study, you will be given a participation fee 20 yuan and a potential bonus. The bonus you earn today depends partly on the decisions you make, and partly on chance. All information provided will be kept confidential and will be used for research purpose only. We will first introduce the experiment. Afterward, we will provide you with the link for the experiment, which you will complete on your computer. Before introducing our study, there are several things to remind you:

- Please prepare a piece of paper and a pen
- Cell phones are not allowed
- Please do not use other apps or browse other websites
- Please do not communicate with others during the experiment
- If you have any questions, please contact our experimenters through the chat box in the online meeting room at any time

There are 21 rounds in this study. We label each round with a unique string of three random uppercase letters. In each round, there are six boxes, numbered from 1 to 6. There are two bonuses, Bonus 1 and Bonus 2, among these six boxes. The followings describe the bonus scheme and what you should do in each round.

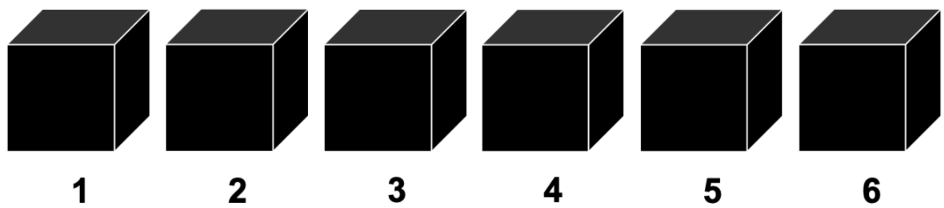
Bonus 1

There are some boxes containing H (high amount of Bonus 1) and the rest of boxes containing L (low amount of Bonus 1). You know the composition: how many boxes containing H and how many boxes containing L. You do NOT know the exact distribution: which boxes containing H and which boxes containing L.

Example:

Round: ABC

Bonus 1: there are three boxes containing 20 yuan and three boxes containing 0 yuan.



In this example, you know that this round has three boxes containing 20 yuan and the rest of three boxes containing 0 yuan, but you do not know which boxes have 20 yuan.

Task 1

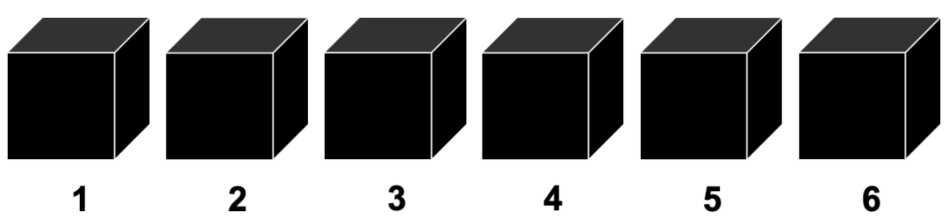
After you receive the information about Bonus 1, you need to choose one box out of the six boxes numbered from 1 to 6, and record the number on the paper you have prepared, in the format of “round number - box number.”

Example:

Round: ABC

Bonus 1: there are three boxes containing 20 yuan and three boxes containing 0 yuan.

Please choose one box and record the number.

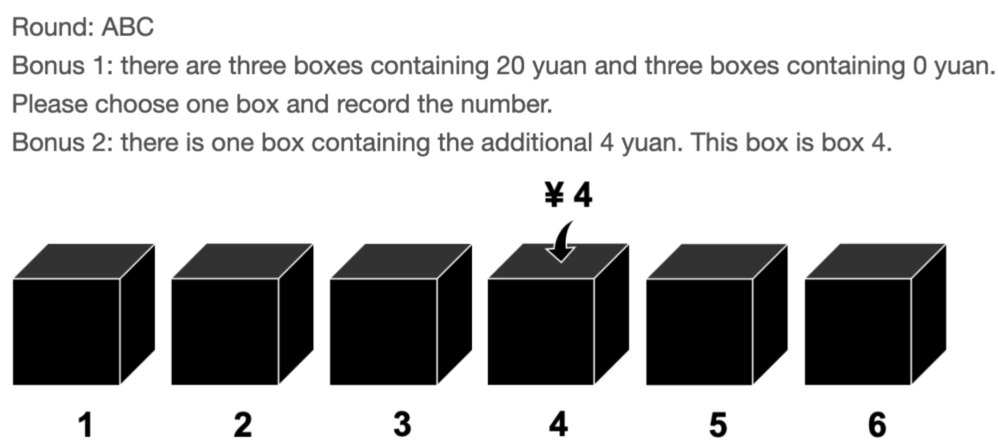


In this example, if you want to choose box 1, you should record "ABC - 1" on your paper; if you want to choose box 2, you should record "ABC - 2"; so on and so forth.

Bonus 2

There is an additional 4 yuan given to one of the six boxes. You know exactly which box contains the 4 yuan after you finish Task 1.

Example:



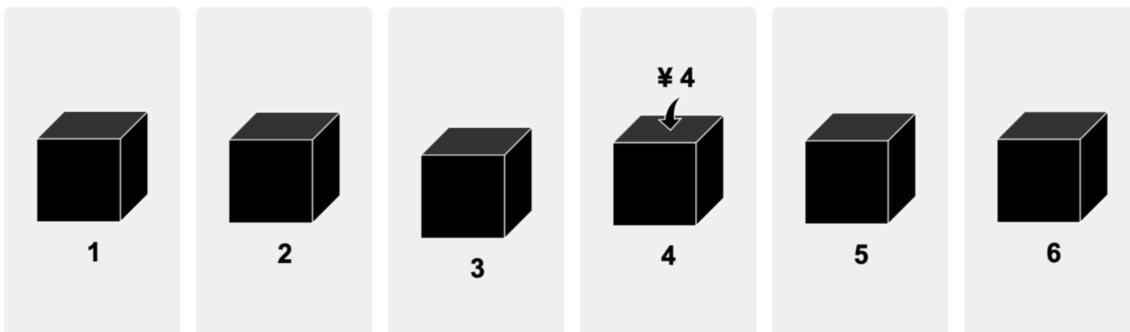
In this example, you know that, in this round, box 4 contains additional 4 yuan. That is, apart from Bonus 1, box 4 has 4 yuan on top.

Task 2

After you receive the information about Bonus 2, you need to report the box you selected in Task 1 by clicking. Please note that your choice in Task 1 is known only to you. Other people, including experimenters, cannot see the choice you recorded. At any time during or after the experiment, you do not need to upload or show the record of your choice in Task 1.

Example:

Round: ABC
Bonus 1: there are three boxes containing 20 yuan and three boxes containing 0 yuan.
Please choose one box and record the number.
Bonus 2: there is one box containing the additional 4 yuan. This box is box 4.
Please select the box according to your previous record.



In this example, you need to click on the choice you recorded in Task 1. In Task 1, if you recorded "ABC - 1", you need to click on box 1; if you recorded "ABC - 2", you need to click on box 2; so on and so forth.

Summary

Each round has five screens as follows.

- First screen: the beginning of a round.
- Second screen: the composition of Bonus 1—how many boxes containing H and how many boxes containing L.
- Third screen: Task 1—choose a box and record your choice.
- Forth screen: the distribution of Bonus 2—which box contains the additional 4 yuan.
- Fifth screen: Task 2—click on the box you selected based on the record from Task 1.

Using the Random Device to determine Bonus 1 and Bonus 2

Bonus 1 and Bonus 2 are given randomly and independently. Whether a box has H or L is NOT correlated with its chance to be given the additional 4 yuan. The random device in this study is the RANDBETWEEN function provided by Excel.

Bonus 1: In each round, we specify the composition of Bonus 1, that is, how many boxes with H and how many boxes with L. After you finish all decisions, we will use the RANDBETWEEN function in Excel to determine which boxes have H and the remaining boxes have L.

Example: For the composition "three boxes containing 20 yuan and three boxes containing 0 yuan", we will use the RANDBETWEEN(1,6) function to generate three integers between 1 and 6 to determine which three boxes have 20 yuan. Suppose the numbers drawn are 1, 2, and 5, there will be 20 yuan in box 1, 2, and 5, and 0 yuan in the other three boxes. Suppose the numbers drawn are 2, 3, and 6, there will be 20 yuan in box 2, 3, and 6, and 0 yuan in the other three boxes. If the RANDBETWEEN function generates duplicate numbers, we will continue to draw until three distinct integers between 1 and 6 are produced.

Bonus 2: In each round, we specify the distribution of Bonus 2. Before we start the experiment, we used the RANDBETWEEN(1,6) function to generate one integer between 1 and 6 to determine which box has the additional 4 yuan. In each round, you will know which box has an additional 4 yuan.

Example: If the number drawn is 4, box 4 will have an additional 4 yuan. If the number drawn is 6, box 6 will have an additional 4 yuan. We have already completed this random selection before the experiment starts.

Payment Collection

After completing the entire experiment, you need to fill in the mobile phone number you used when registering your account on Weikeyan, so that we can match the data to transfer the payment. We will pay you the reward within 48 hours through the Weikeyan platform, which can be directly withdrawn to your WeChat wallet. Your experiment reward includes a participation fee of 20 yuan and a possible bonus.

We will randomly select one of the 21 rounds of your decisions to determine your bonus. In that round, the amount in the box you selected is your bonus for this experiment. Specifically, we will use the function RANDBETWEEN(1,21) to randomly select an integer between 1 and 21 to determine which round will determine your bonus. Then, as explained earlier for Bonus 1, we will use RANDBETWEEN(1,6) to determine how Bonus 1 will be distributed in that round. You will receive the amount in the box you selected, including Bonus 1 and 2 (if any).

Please note that the random selection part will be completed by the staff in real-time through screen sharing to ensure transparency. This experiment uses a random selection of one round to determine the reward. You should treat every round of decision-making as the one that will ultimately determine your reward and make decisions carefully.

The experiment instructions are now complete. If you have any questions, please raise your hand and ask. Thank you!

D.1.2 Understanding Tests

Before the experiment begins, you need to answer eight questions to test your understanding of the experiment. Please answer the questions carefully.

Understanding Test 1

Suppose in one round, you know that "Bonus 1: there are two boxes containing 30 yuan and four boxes containing 0 yuan." Which box has the highest probability of containing 30 yuan?

Box 1

Box 2

Box 3

Box 4

Box 5

Box 6

All boxes have the same probability to contain 30 yuan

Understanding Test 1 - Answer and Explanations

Question:
Suppose in one round, you know that "Bonus 1: there are two boxes containing 30 yuan and four boxes containing 0 yuan." Which box has the highest probability of containing 30 yuan?

Your answer: All boxes have the same probability to contain 30 yuan

Your answer is **correct**. Suppose in one round, among the six boxes, two boxes contain 30 yuan and four boxes contain 0 yuan, all boxes have the same probability to contain 30 yuan.

Understanding Test 2

Suppose in one round, you know that "Bonus 1: there are two boxes containing 30 yuan and four boxes containing 0 yuan." What is the probability for you to earn 30 yuan?

- 0
- 1/6
- 1/3
- 1/2
- 2/3
- 5/6
- 1

Understanding Test 2 - Answer and Explanations

Question:
Suppose in one round, you know that "Bonus 1: there are two boxes containing 30 yuan and four boxes containing 0 yuan." What is the probability for you to earn 30 yuan?

Your answer: 1/3

Your answer is **correct.** Suppose in one round, among the six boxes, two boxes contain 30 yuan and four boxes contain 0 yuan, the probability for each box to contain 30 yuan is 2/6=1/3.

Understanding Test 3

Suppose in one round, you know that "Bonus 1: there are two boxes containing 30 yuan and four boxes containing 0 yuan." Which box has the highest probability of containing Bonus 2 (the additional 4 yuan)?

- Box 1
- Box 2
- Box 3
- Box 4
- Box 5
- Box 6
- All boxes have the same probability to contain the additional 4 yuan

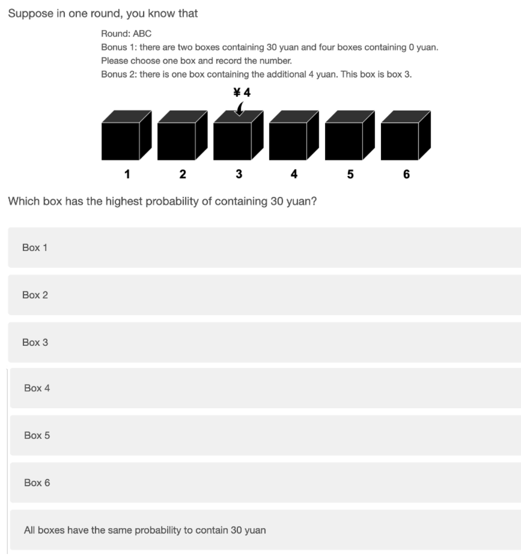
Understanding Test 3 - Answer and Explanations

Question:
Suppose in one round, you know that "Bonus 1: there are two boxes containing 30 yuan and four boxes containing 0 yuan." Which box has the highest probability of containing Bonus 2 (the additional 4 yuan)?

Your answer: All boxes have the same probability to contain the additional 4 yuan

Your answer is **correct**. In each round, all boxes have the same probability to contain Bonus 2 (the additional 4 yuan).

Understanding Test 4


Suppose in one round, you know that

Round: ABC
Bonus 1: there are two boxes containing 30 yuan and four boxes containing 0 yuan.
Please choose one box and record the number.
Bonus 2: there is one box containing the additional 4 yuan. This box is box 3.

¥ 4

1 2 3 4 5 6

Which box has the highest probability of containing 30 yuan?

Box 1

Box 2

Box 3

Box 4

Box 5

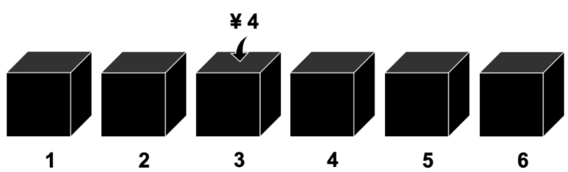
Box 6

All boxes have the same probability to contain 30 yuan

Understanding Test 4 - Answer and Explanations

Question: Suppose in one round, you know that

Round: ABC
Bonus 1: there are two boxes containing 30 yuan and four boxes containing 0 yuan.
Please choose one box and record the number.
Bonus 2: there is one box containing the additional 4 yuan. This box is box 3.



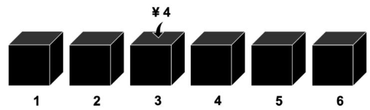
Which box has the highest probability of containing 30 yuan?
Your answer: All boxes have the same probability to contain 30 yuan

Your answer is **correct**. Suppose in one round, among the six boxes, two boxes contain 30 yuan and four boxes contain 0 yuan, and Box 3 contains Bonus 2. All boxes have the same probability to contain 30 yuan. Containing 30 yuan and containing Bonus 2 (the additional 4 yuan) are randomly and independently determined.

Understanding Test 5

Suppose in one round, you know that

Round: ABC
Bonus 1: there are two boxes containing 30 yuan and four boxes containing 0 yuan.
Please choose one box and record the number.
Bonus 2: there is one box containing the additional 4 yuan. This box is box 3.



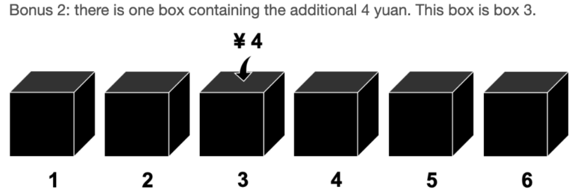
What are the possible amounts in Box 3 (considering both Bonus 1 and Bonus 2)?

- Box 3 contains either 30 yuan or 0 yuan
- Box 3 contains either 4 yuan or 0 yuan
- Box 3 contains either 34 yuan or 4 yuan
- Box 3 contains either 34 yuan or 0 yuan
- Box 3 contains either 30 yuan or 4 yuan

Understanding Test 5 - Answer and Explanations

Question:
Suppose in one round, you know that

Round: ABC
Bonus 1: there are two boxes containing 30 yuan and four boxes containing 0 yuan.
Please choose one box and record the number.
Bonus 2: there is one box containing the additional 4 yuan. This box is box 3.



What are the possible amounts in Box 3 (considering both Bonus 1 and Bonus 2)?

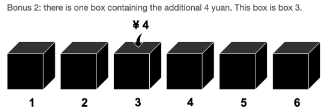
Your answer: Box 3 contains either 34 yuan or 4 yuan

Your answer is **correct**. As for Bonus 1, Box 3 contains either 30 yuan or 0 yuan. As for Bonus 2, Box 3 contains 4 yuan for sure. Therefore, if we consider both Bonus 1 and Bonus 2, box 3 contains 34 yuan or 4 yuan.

Understanding Test 6

Suppose in one round, you know that

Round: ABC
Bonus 1: there are two boxes containing 30 yuan and four boxes containing 0 yuan.
Please choose one box and record the number.
Bonus 2: there is one box containing the additional 4 yuan. This box is box 3.



What are the possible amounts in Box 1 (considering both Bonus 1 and Bonus 2)?

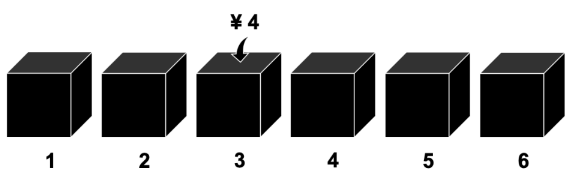
- Box 1 contains either 30 yuan or 0 yuan
- Box 1 contains either 4 yuan or 0 yuan
- Box 1 contains either 34 yuan or 4 yuan
- Box 1 contains either 34 yuan or 0 yuan
- Box 1 contains either 30 yuan or 4 yuan

Understanding Test 6 - Answer and Explanations

Question:

Suppose in one round, you know that

Round: ABC
Bonus 1: there are two boxes containing 30 yuan and four boxes containing 0 yuan.
Please choose one box and record the number.
Bonus 2: there is one box containing the additional 4 yuan. This box is box 3.

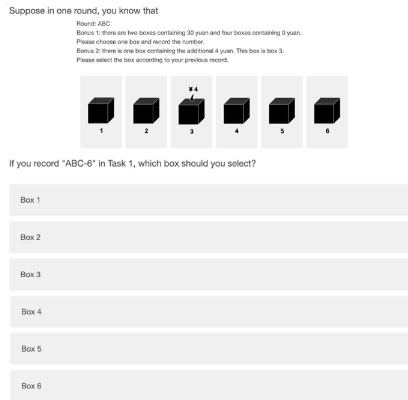


What are the possible amounts in Box 1 (considering both Bonus 1 and Bonus 2)?

Your answer: Box 1 contains either 30 yuan or 0 yuan

Your answer is **correct**. As for Bonus 1, Box 1 contains either 30 yuan or 0 yuan. As for Bonus 2, Box 1 contains 0 yuan for sure. Therefore, if we consider both Bonus 1 and Bonus 2, box 1 contains 30 yuan or 0 yuan.

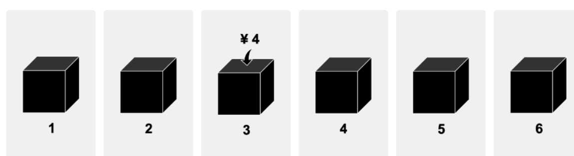
Understanding Test 7



Understanding Test 7 - Answer and Explanations

Question: Suppose in one round, you know that

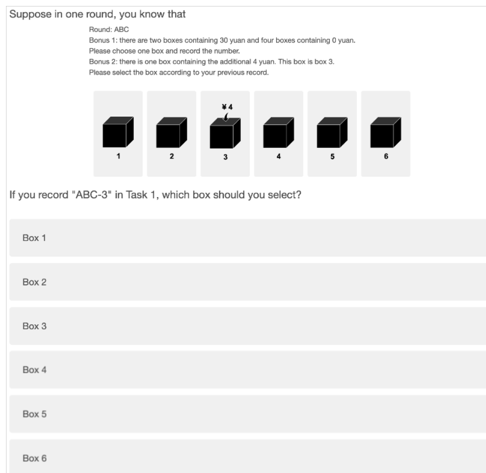
Round: ABC
Bonus 1: there are two boxes containing 30 yuan and four boxes containing 0 yuan.
Please choose one box and record the number.
Bonus 2: there is one box containing the additional 4 yuan. This box is box 3.
Please select the box according to your previous record.



If you record "ABC-6" in Task 1, which box should you select?
Your answer: Box 6

Your answer is **correct**. If you choose Box 6 in Task 1, you should record "ABC-6", and you should select Box 6 in Task 2 accordingly.

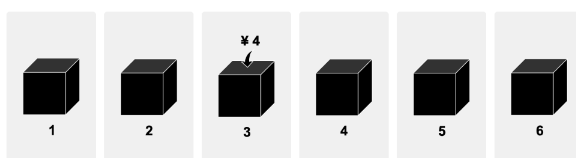
Understanding Test 8



Understanding Test 8 - Answer and Explanations

Question: Suppose in one round, you know that

Round: ABC
Bonus 1: there are two boxes containing 30 yuan and four boxes containing 0 yuan.
Please choose one box and record the number.
Bonus 2: there is one box containing the additional 4 yuan. This box is box 3.
Please select the box according to your previous record.



If you record "ABC-3" in Task 1, which box should you select?
Your answer: Box 3

Your answer is **correct**. If you choose Box 3 in Task 1, you should record "ABC-3", and you should select Box 3 in Task 2 accordingly.

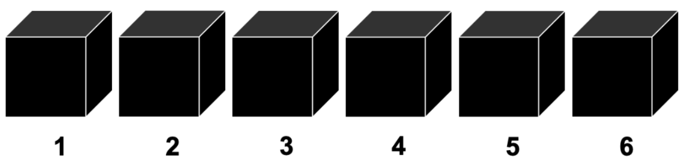
D.1.3 Screens in One Round

Screen 1

Round: JSZ

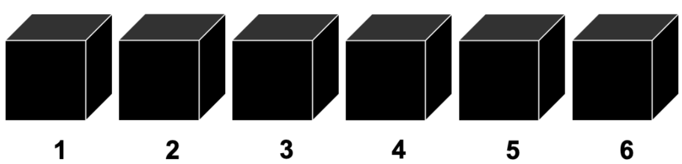
Screen 2

Round: JSZ
Bonus 1: there are six boxes containing 0 yuan.



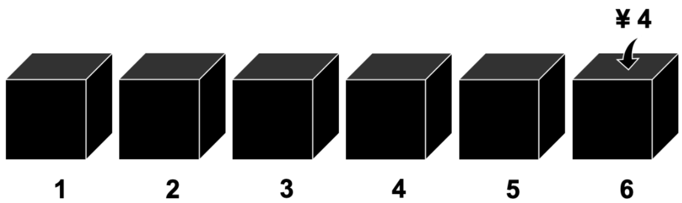
Screen 3

Round: JSZ
Bonus 1: there are six boxes containing 0 yuan.
Please choose one box and record the number.



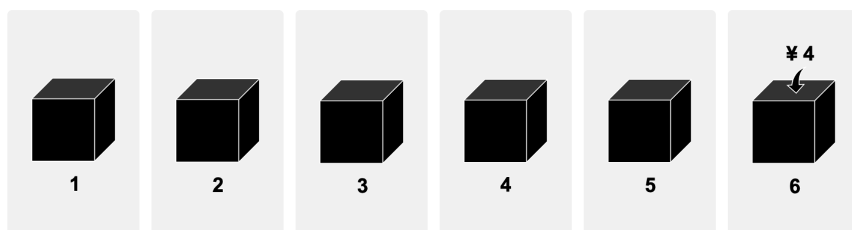
Screen 4

Round: JSZ
Bonus 1: there are six boxes containing 0 yuan.
Please choose one box and record the number.
Bonus 2: there is one box containing the additional 4 yuan. This box is box 6.



Screen 5

Round: JSZ
Bonus 1: there are six boxes containing 0 yuan.
Please choose one box and record the number.
Bonus 2: there is one box containing the additional 4 yuan. This box is box 6.
Please select the box according to your previous record.



Please click the arrow below to proceed to the next round.

Screen 6

Please wait for the next round.

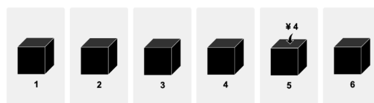
D.1.4 Belief Elicitation

In this experiment, different participants will receive different payoffs based on their choices and chance. In each of the following scenarios, please predict the payoffs that different participants will receive.

Question 1

Consider the following decision scenario for a round:

Bonus 1: there are one box containing 40 yuan and five boxes containing 0 yuan.
Please choose one box and record the number.
Bonus 2: there is one box containing the additional 4 yuan. This box is box 5.
Please select the box according to your previous record.



- Some participants chose box 5 and received Bonus 2 (an additional 4 yuan);
- Some participants chose one of the other five boxes (box 1, 2, 3, 4, or 6) and did not receive Bonus 2.

Which group of participants is more likely to receive the 40 yuan as Bonus 1?

Participants who choose Box 5			equally likely			Participants who choose one of the remianing five boxes
○	○	○	○	○	○	○

D.2 Direct Choice Experiment

Welcome to our study on decision making. In this study, you will be given a participation fee 20 yuan and a potential bonus. The bonus you earn today depends partly on the decisions you make, and partly on chance. All information provided will be kept confidential and will be used for research purpose only. We will first introduce the experiment. Afterward, we will provide you with the link for the experiment, which you will complete on your computer. Before introducing our study, there are several things to remind you:

- Cell phones are not allowed
- Please do not use other apps or browse other websites
- Please do not communicate with others during the experiment
- If you have any questions, please contact our experimenters through the chat box in the online meeting room at any time

There are 21 rounds in this study. We label each round with a unique string of three random uppercase letters. In each round, there are six boxes, numbered from 1 to 6. There are two bonuses, Bonus 1 and Bonus 2, among these six boxes. The followings describe the bonus scheme and what you should do in each round.

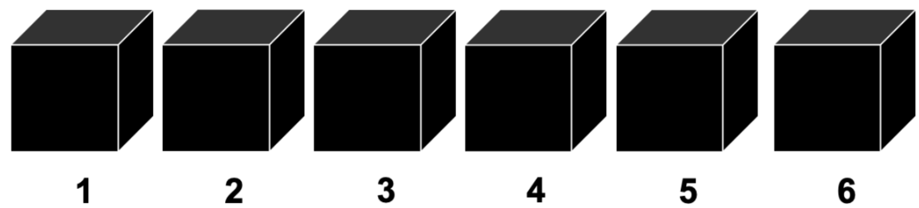
Bonus 1

There are some boxes containing H (high amount of Bonus 1) and the rest of boxes containing L (low amount of Bonus 1). You know the composition: how many boxes containing H and how many boxes containing L. You do NOT know the exact distribution: which boxes containing H and which boxes containing L.

Example:

Round: ABC

Bonus 1: there are three boxes containing 20 yuan and three boxes containing 0 yuan.



In this example, you know that this round has three boxes containing 20 yuan and the rest of three boxes containing 0 yuan, but you do not know which boxes have 20 yuan.

Bonus 2

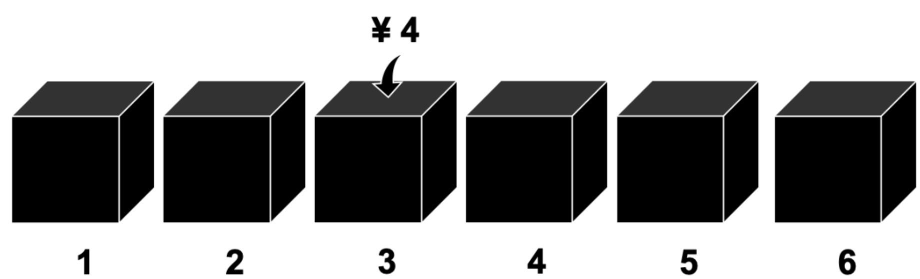
There is an additional 4 yuan given to one of the six boxes. You know exactly which box contains the 4 yuan.

Example:

Round: ABC

Bonus 1: there are three boxes containing 20 yuan and three boxes containing 0 yuan.

Bonus 2: there is one box containing the additional 4 yuan. This box is box 3.



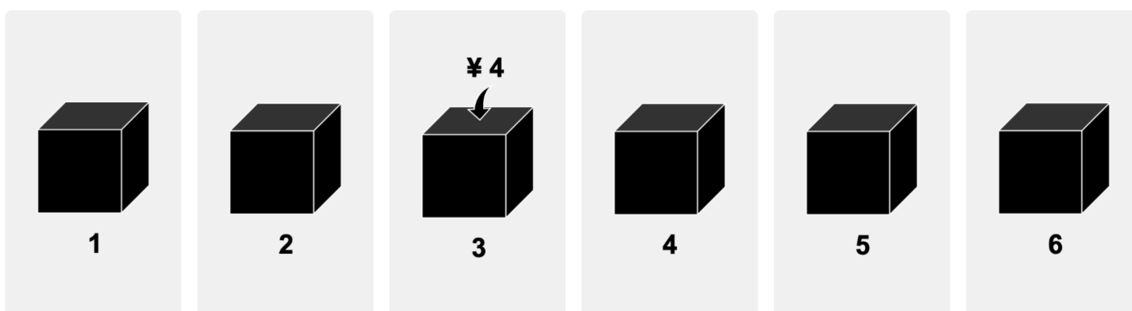
In this example, you know that, in this round, box 3 contains additional 4 yuan. That is, apart from Bonus 1, box 3 has 4 yuan on top.

Task

After you receive the information about Bonus 1 and Bonus 2, you need to report the box you want to receive by clicking.

Example:

Round: ABC
Bonus 1: there are three boxes containing 20 yuan and three boxes containing 0 yuan.
Bonus 2: there is one box containing the additional 4 yuan. This box is box 3.
Please select the box that you would like to receive.



In this example, you need to click on the choice you want to select. If you want to receive box 1, you need to click on box 1; if you want to receive box 2, you need to click on box 2; so on and so forth.

Summary

Each round has four screens as follows.

- First screen: the beginning of a round.
- Second screen: the composition of Bonus 1—how many boxes containing H and how many boxes containing L.

- Third screen: the distribution of Bonus 2—which box contains the additional 4 yuan.
- Forth screen: Click on the box you want to receive.

Using the Random Device to determine Bonus 1 and Bonus 2

Bonus 1 and Bonus 2 are given randomly and independently. Whether a box has H or L is NOT correlated with its chance to be given the additional 4 yuan. The random device in this study is the RANDBETWEEN function provided by Excel.

Bonus 1: In each round, we specify the composition of Bonus 1, that is, how many boxes with H and how many boxes with L. After you finish all decisions, we will use the RANDBETWEEN function in Excel to determine which boxes have H and the remaining boxes have L.

Example: For the composition "three boxes containing 20 yuan and three boxes containing 0 yuan", we will use the RANDBETWEEN(1,6) function to generate three integers between 1 and 6 to determine which three boxes have 20 yuan. Suppose the numbers drawn are 1, 2, and 5, there will be 20 yuan in box 1, 2, and 5, and 0 yuan in the other three boxes. Suppose the numbers drawn are 2, 3, and 6, there will be 20 yuan in box 2, 3, and 6, and 0 yuan in the other three boxes. If the RANDBETWEEN function generates duplicate numbers, we will continue to draw until three distinct integers between 1 and 6 are produced.

Bonus 2: In each round, we specify the distribution of Bonus 2. Before we start the experiment, we used the RANDBETWEEN(1,6) function to generate one integer between 1 and 6 to determine which box has the additional 4 yuan. In each round, you will know which box has an additional 4 yuan.

Example: If the number drawn is 4, box 4 will have an additional 4 yuan. If the number drawn is 6, box 6 will have an additional 4 yuan. We have already completed *this random selection before the experiment starts.*

Payment Collection

After completing the entire experiment, you need to fill in the mobile phone number you used when registering your account on Weikeyan, so that we can match the data to transfer the payment. We will pay you the reward within 48 hours through the Weikeyan platform, which can be directly withdrawn to your WeChat wallet. Your experiment reward includes a participation fee of 20 yuan and a possible bonus.

We will randomly select one of the 21 rounds of your decisions to determine your bonus. In that round, the amount in the box you selected is your bonus for this experiment. Specifically, we will use the function RANDBETWEEN(1,21) to randomly select an integer between 1 and 21 to determine which round will determine your bonus. Then, as explained earlier for Bonus 1, we will use RANDBETWEEN(1,6) to determine how Bonus 1 will be distributed in that round. You will receive the amount in the box you selected, including Bonus 1 and 2 (if any).

Please note that the random selection part will be completed by the staff in real-time through screen sharing to ensure transparency. This experiment uses a random selection of one round to determine the reward. You should treat every round of decision-making as the one that will ultimately determine your reward and make decisions carefully.

The experiment instructions are now complete. If you have any questions, please raise your hand and ask. Thank you!

D.3 Second Party Experiment

Welcome to our study on decision making. In this study, you will be given a participation fee 20 yuan and a potential bonus. The bonus you earn today may depend on your decisions, others' decisions, and chance. All information provided will be kept confidential and will be used for research purpose only. We will first introduce the experiment. Afterward, we will provide you with the link for the experiment, which you will complete on your computer. Before introducing our study, there are several things to remind you:

- Please prepare a piece of paper and a pen
- Cell phones are not allowed
- Please do not use other apps or browse other websites
- Please do not communicate with others during the experiment
- If you have any questions, please contact our experimenters through the chat box in the online meeting room at any time

In this experiment, there are two players, A and B. Player A does not need to make any choices, while Player B needs to make choices. Therefore, in the following content, we will explain what choice you need to make if you are Player B.

In this experiment, if you are Player B, the decision you make will affect both the bonus for Player A and the bonus for you. We will determine the specific amount of your bonuses based on the decisions you make and chance. Please note that the bonus for Player A will be paid entirely by the experimenters, not by you.

There are 42 rounds in this study. We label each round with a unique string of three random uppercase letters. In each round, there are six boxes, numbered from 1 to 6. There are two bonuses among these six boxes. Bonus 1 is for Player A and Bonus 2 is for you. The followings describe the bonus scheme and what you should do in each round.

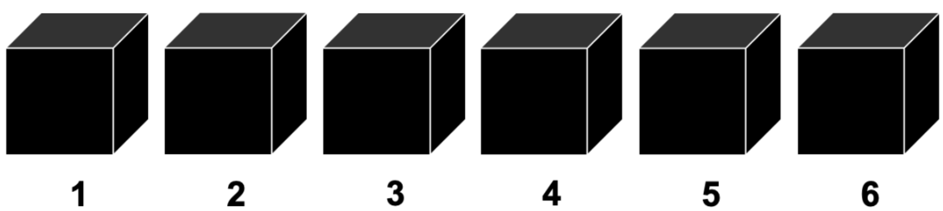
Bonus 1

Bonus 1 is for Player A. There are some boxes containing H (high amount of Bonus 1) and the rest of boxes containing L (low amount of Bonus 1). As Player B, you know the composition: how many boxes containing H and how many boxes containing L. You do NOT know the exact distribution: which boxes containing H and which boxes containing L. The specific amounts of H and L will vary with each round. In the experiment, you will see the specific amounts of H and L for each round.

Example:

Round: ABC

Bonus 1: there are three boxes containing 20 yuan and three boxes containing 0 yuan. Bonus 1 is for Player A.



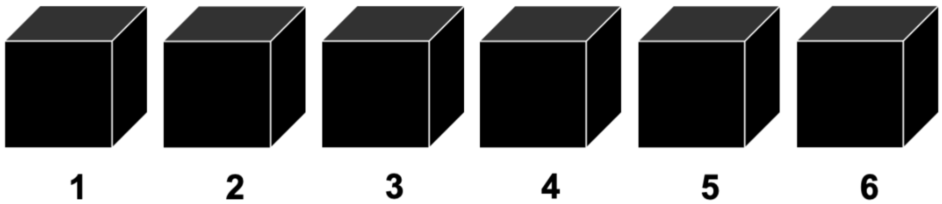
In this example, you know that this round has three boxes containing 20 yuan and the rest of three boxes containing 0 yuan, but you do not know which boxes have 20 yuan. Bonus 1 will be paid to Player A.

Task 1

After you receive the information about Bonus 1, you need to choose one box out of the six boxes numbered from 1 to 6, and record the number on the paper you have prepared, in the format of "round number - box number."

Example:

Round: ABC
Bonus 1: there are three boxes containing 20 yuan and three boxes containing 0 yuan. Bonus 1 is for Player A.
Please choose one box and record the number.



In this example, if you want to choose box 1, you should record "ABC - 1" on your paper; if you want to choose box 2, you should record "ABC - 2"; so on and so forth.

Bonus 2

Bonus 2 is for you. Among the six boxes, there are one box containing 25 yuan as Bonus 2 and five boxes containing 21 yuan as Bonus 2. You know exactly which box contains the 25 yuan after you finish Task 1.

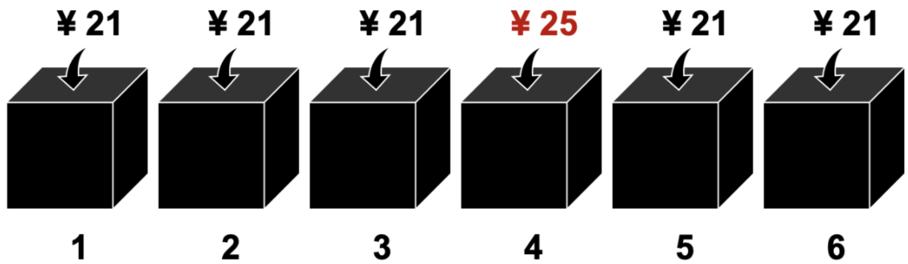
Example:

Round: ABC

Bonus 1: there are three boxes containing 20 yuan and three boxes containing 0 yuan. Bonus 1 is for Player A.

Please choose one box and record the number.

Bonus 2: box 4 contains 25 yuan and the remaining five boxes contain 21 yuan. Bonus 2 is for you.



In this example, you know that, in this round, box 4 contains 25 yuan and the remaining five boxes contain 21 yuan. Bonus 2 will be paid to you.

Task 2

After you receive the information about Bonus 2, you need to report the box you selected in Task 1 by clicking. Player A will receive Bonus 1 from the box you choose, and you will receive Bonus 2 from the box you choose. Please note that your choice in Task 1 is known only to you. Other people, including experimenters, cannot see the choice you recorded. At any time during or after the experiment, you do not need to upload or show the record of your choice in Task 1.

Example:

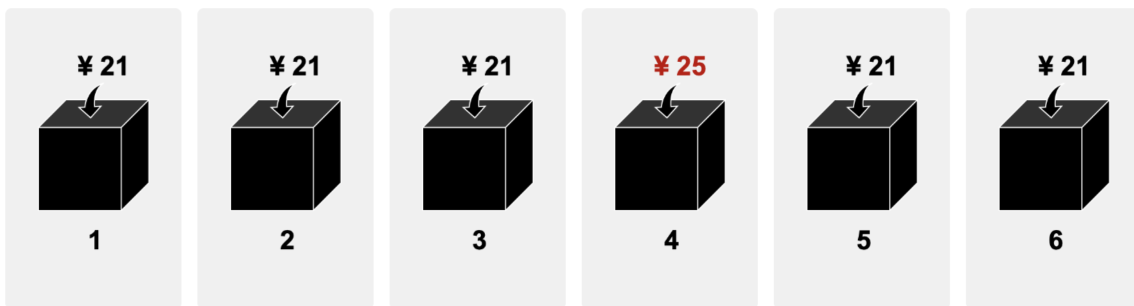
Round: ABC

Bonus 1: there are three boxes containing 20 yuan and three boxes containing 0 yuan. Bonus 1 is for Player A.

Please choose one box and record the number.

Bonus 2: box 4 contains 25 yuan and the remaining five boxes contain 21 yuan. Bonus 2 is for you.

Please select the box according to your previous record.



In this example, you need to click on the choice you recorded in Task 1. In Task 1, if you recorded "ABC - 1", you need to click on box 1; if you recorded "ABC - 2", you need to click on box 2; so on and so forth.

Summary

Each round has five screens as follows.

- First screen: the beginning of a round.
- Second screen: the composition of Bonus 1—how many boxes containing H and how many boxes containing L.
- Third screen: Task 1—choose a box and record your choice.
- Forth screen: the distribution of Bonus 2—which box contains 25 yuan and the remaining boxes contain 21 yuan.
- Fifth screen: Task 2—click on the box you selected based on the record from Task 1. Player A will receive Bonus 1 from the box you choose, and you will receive Bonus 2 from the box you choose.

Using the Random Device to determine Bonus 1 and Bonus 2

Bonus 1 and Bonus 2 are given randomly and independently. Whether a box has H or L as Bonus 1 is NOT correlated with whether it has 25 or 21 yuan as Bonus 2. The random device in this study is the RANDBETWEEN function provided by Excel.

Bonus 1: In each round, we specify the composition of Bonus 1, that is, how many boxes with H and how many boxes with L. After you finish all decisions, we will use the RANDBETWEEN function in Excel to determine which boxes have H and the remaining boxes have L.

Example: For the composition "three boxes containing 20 yuan and three boxes containing 0 yuan", we will use the RANDBETWEEN(1,6) function to generate three integers between 1 and 6 to determine which three boxes have 20 yuan. Suppose the numbers drawn are 1, 2, and 5, there will be 20 yuan in box 1, 2, and 5, and 0 yuan in the other three boxes. Suppose the numbers drawn are 2, 3, and 6, there will be 20 yuan in box 2, 3, and 6, and 0 yuan in the other three boxes. If the RANDBETWEEN function generates duplicate numbers, we will continue to draw until three distinct integers between 1 and 6 are produced.

Bonus 2: In each round, we specify the distribution of Bonus 2. Before we start the experiment, we used the RANDBETWEEN(1,6) function to generate one integer between 1 and 6 to determine which box has 25 yuan as Bonus 2. In each round, you will know which box has 25 yuan.

Example: If the number drawn is 4, box 4 will have 25 yuan. If the number drawn is 6, box 6 will have 25 yuan. We have already completed this random selection before the experiment starts.

Payment Collection

After completing the entire experiment, you need to fill in the mobile phone number you used when registering your account on Weikeyan, so that we can match the data to transfer the payment. We will pay you the reward within 48 hours through the Weikeyan platform, which can be directly withdrawn to your WeChat wallet.

We will determine your rewards through the following process:

- All participants will be randomly divided into two groups, A and B. If the numbers are not equal, we will randomly select participants to balance the groups.
- Each participant in group A will be matched with a participant in group B to form several pairs of A and B.
- You will receive a participation fee of 20 yuan in addition to your bonus.
  - If you are Player A, your bonus will be determined by the choices of the matched Player B and chance.
  - If you are Player B, your bonus will be determined by your choices and chance.
  - Specifically, we will use the function RANDBETWEEN(1,42) to randomly select an integer between 1 and 42 to determine which round will decide bonuses for the pair. Then, as described earlier, we will use RANDBETWEEN(1,6) to determine how Bonus 1 is distributed in that round. Player A will receive Bonus 1 from the box selected by the paired Player B, and Player B will receive Bonus 2 from the selected box.

Please note that the random selection part will be completed by the staff in real-time through screen sharing to ensure transparency. This experiment uses a random selection of one round to determine the reward. Player B should consider each round as a result of re-matching with Player A, and should take each round seriously as a round that will ultimately determine their own and Player A's reward.

The experiment instructions are now complete. If you have any questions, please ask questions in the chat box. Thank you!

D.4 Dice Game Loss Experiment

Welcome to our study on decision making. In this study, you will be given a participation fee 20 yuan and a potential bonus. The bonus you earn today depends partly on the decisions you make, and partly on chance. All information provided will be kept confidential and will be used for research purpose only. We will first introduce the experiment. Afterward, we will provide you with the link for the experiment, which you will complete on your computer. Before introducing our study, there are several things to remind you:

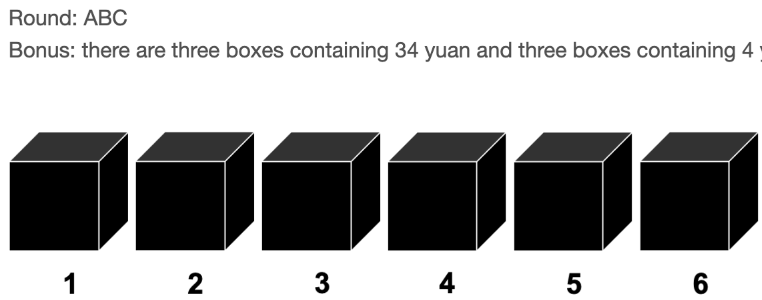
- Please prepare a piece of paper and a pen
- Cell phones are not allowed
- Please do not use other apps or browse other websites
- Please do not communicate with others during the experiment
- If you have any questions, please contact our experimenters through the chat box in the online meeting room at any time

There are 21 rounds in this study. We label each round with a unique string of three random uppercase letters. In each round, there are six boxes, numbered from 1 to 6. There is one Bonus among these six boxes. The followings describe the bonus scheme and what you should do in each round.

<u>Bonus</u>

There are some boxes containing H (high amount of Bonus) and the rest of boxes containing L (low amount of Bonus). You know the composition: how many boxes containing H and how many boxes containing L. You do NOT know the exact distribution: which boxes containing H and which boxes containing L.

Example:

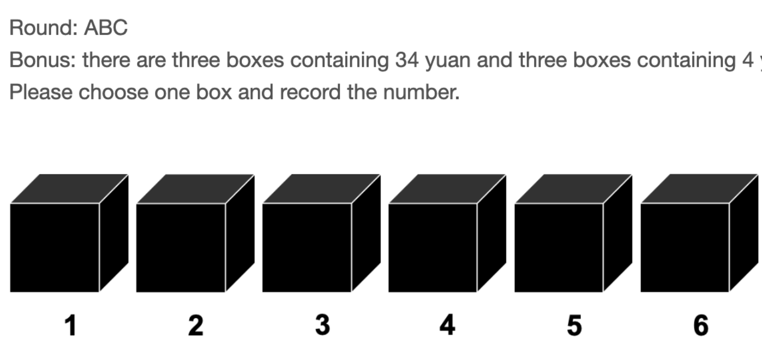


In this example, you know that this round has three boxes containing 34 yuan and the rest of three boxes containing 4 yuan, but you do not know which boxes have 34 yuan.

<u>**Task 1**</u>

After you receive the information about Bonus, you need to choose one box out of the six boxes numbered from 1 to 6, and record the number on the paper you have prepared, in the format of "round number - box number."

Example:

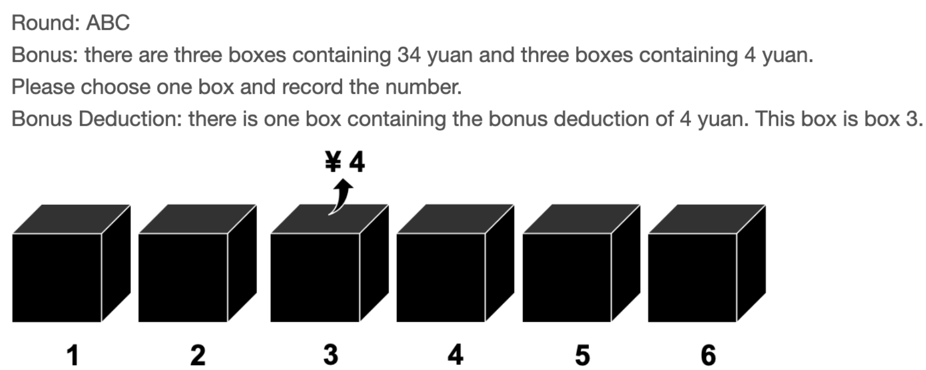


In this example, if you want to choose box 1, you should record "ABC - 1" on your paper; if you want to choose box 2, you should record "ABC - 2"; so on and so forth.

Bonus Deduction

There is a Bonus Deduction of 4 yuan given to one of the six boxes. You know exactly which box will be deducted by 4 yuan.

Example:

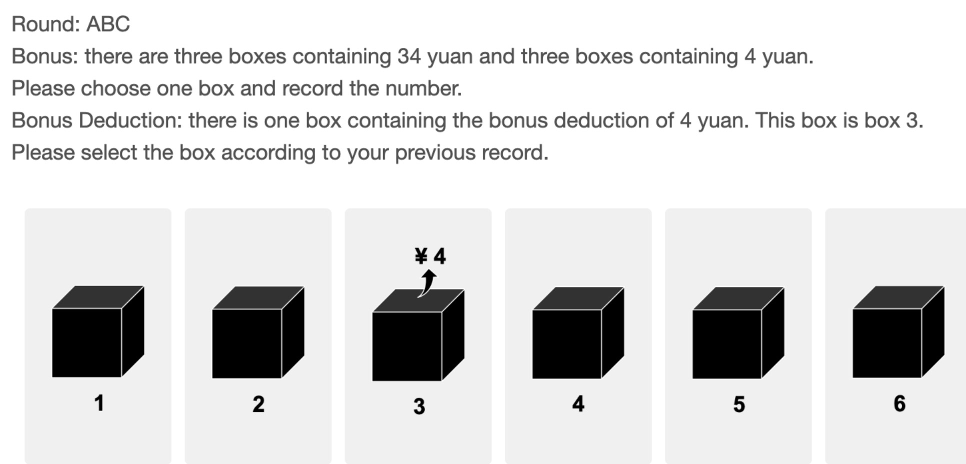


In this example, you know that, in this round, box 3 will be deducted by 4 yuan. Namely, regardless of whether box 3 contains H or L as Bonus, 4 yuan will be taken out of box 3.

Task 2

After you receive the information about Bonus and Bonus Deduction, you need to report the box you selected in Task 1 by clicking. Please note that your choice in Task 1 is known only to you. Other people, including experimenters, cannot see the choice you recorded. At any time during or after the experiment, you do not need to upload or show the record of your choice in Task 1.

Example:



In this example, you need to click on the choice you recorded in Task 1. In Task 1, if you recorded "ABC - 1", you need to click on box 1; if you recorded "ABC - 2", you need to click on box 2; so on and so forth.

Summary

Each round has five screens as follows.

- First screen: the beginning of a round.
- Second screen: the composition of Bonus—how many boxes containing H and how many boxes containing L.
- Third screen: Task 1—choose a box and record your choice.
- Forth screen: the distribution of Bonus Deduction—which box will be deducted by 4 yuan.
- Fifth screen: Task 2—click on the box you selected based on the record from Task 1.

Using the Random Device to determine Bonus and Bonus Deduction

Bonus and Bonus Deduction are given randomly and independently. Whether a box has H or L is NOT correlated with its chance to be given the Bonus Deduction.

The random device in this study is the RANDBETWEEN function provided by Excel.

Bonus: In each round, we specify the composition of Bonus, that is, how many boxes with H and how many boxes with L. After you finish all decisions, we will use the RANDBETWEEN function in Excel to determine which boxes have H and the remaining boxes have L.

Example: For the composition "three boxes containing 24 yuan and three boxes containing 4 yuan", we will use the RANDBETWEEN(1,6) function to generate three integers between 1 and 6 to determine which three boxes have 24 yuan. Suppose the numbers drawn are 1, 2, and 5, there will be 24 yuan in box 1, 2, and 5, and 4 yuan in the other three boxes. Suppose the numbers drawn are 2, 3, and 6, there will be 24 yuan in box 2, 3, and 6, and 4 yuan in the other three boxes. If the RANDBETWEEN function generates duplicate numbers, we will continue to draw until three distinct integers between 1 and 6 are produced.

Bonus Deduction: In each round, we specify the distribution of Bonus Deduction. Before we start the experiment, we used the RANDBETWEEN(1,6) function to generate one integer between 1 and 6 to determine which box will be deducted by 4 yuan. In each round, you will know which box has the Bonus Deduction of 4 yuan.

Example: If the number drawn is 4, box 4 will be deducted by 4 yuan. If the number drawn is 6, box 6 will be deducted by 4 yuan. We have already completed this random selection before the experiment starts.

Payment Collection

After completing the entire experiment, you need to fill in the mobile phone number you used when registering your account on Weikeyan, so that we can match the data to transfer the payment. We will pay you the reward within 48 hours through the Weikeyan platform, which can be directly withdrawn to your WeChat wallet. Your experiment reward includes a participation fee of 20 yuan and a possible bonus.

We will randomly select one of the 21 rounds of your decisions to determine your bonus. In that round, the amount in the box you selected is your bonus for this experiment. Specifically, we will use the function RANDBETWEEN(1,21) to randomly select an integer between 1 and 21 to determine which round will determine your bonus. Then, as explained earlier for Bonus, we will use RANDBETWEEN(1,6) to determine how Bonus will be distributed in that round. You will receive the amount in the box you selected, including Bonus and Bonus Deduction (if any).

Please note that the random selection part will be completed by the staff in real-time through screen sharing to ensure transparency. This experiment uses a random selection of one round to determine the reward. You should treat every round of decision-making as the one that will ultimately determine your reward and make decisions carefully.

The experiment instructions are now complete. If you have any questions, please raise your hand and ask. Thank you!

D.5 Ex Ante Resolution Experiment

Welcome to our study on decision making. In this study, you will be given a participation fee $10 and a potential bonus. The bonus you earn today depends partly on the decisions you make, and partly on chance. All information provided will be kept confidential and will be used for research purpose only. Before introducing our study, there are several things to remind you:

- Cell phones and other electronic devices are not allowed.
- Please do not communicate with others during the experiment.
- If you have any questions, please raise your hand to ask our experimenters at any time.

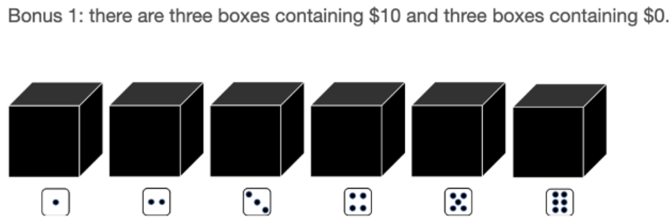
Part 1

There are 21 rounds in this study. We label each round with a unique string of three random uppercase letters. In each round, there are six boxes, numbered from 1 to 6 using symbols from a die. There are two bonuses, Bonus 1 and Bonus 2, among these six boxes. The amount of bonus in each box was randomly predetermined before the experiment started. The followings describe the bonus scheme and what you should do in each round.

Bonus 1

There are some boxes containing $H (high amount of Bonus 1) and the rest of boxes containing $L (low amount of Bonus 1). You know the composition: how many boxes containing $H and how many boxes containing $L. You do NOT know the exact distribution: which boxes containing $H and which boxes containing $L.

Example:

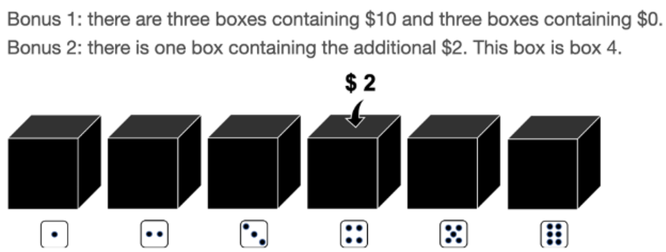


In this example, you know that this round has three boxes containing $10 and the rest of three boxes containing $0, but you do not know which boxes have $10.

<u>Bonus 2</u>

There is an additional $2 given to one of the six boxes. You know exactly which box containing the $2.

Example:



In this example, you know that, in this round, box 4 containing additional $2. That is, apart from the original bonus, box 4 has $2 on top.

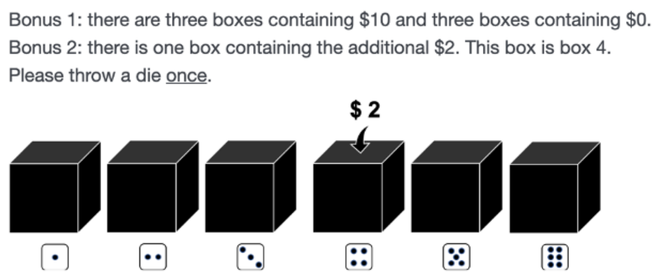
<u>Notice</u>

Bonus 1 and Bonus 2 are given randomly and independently. Whether a box has $H or $L is NOT correlated with its chance to be given the additional $2. We will describe how we determine Bonus 1 and Bonus 2 detailedly in Part 2.

What you should do

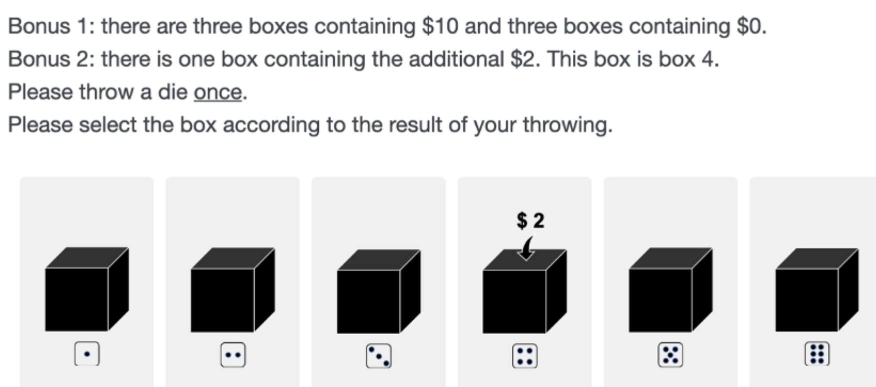
After you are given the information related to Bonus 1 and Bonus 2, you have two actions. First, you will throw a die once in private. The number that the die lands on indicates which box you receive. Note that no one else including experimenters can observe the number from your die throwing.

Example:



Second, you will report which box you receive by clicking on the box.

Example:



In this example, you are to throw a die and report which box you receive. If the die lands on number 1, you are to report that you receive box 1. If the die lands on *number 6, you are to report that you receive box 6.*

<u>Summary of each round</u>

Each round has four screens as follows.

- First screen: the beginning of a round.
- Second screen: the composition of Bonus 1 â how many boxes containing $H and how many boxes containing $L.
- Third screen: the box containing Bonus 2 â the addition $2.
- Forth screen: ask you to throw a die.
- Last screen: ask you to report the box you receive.

<u>Payment collection</u>

After you finish the whole experiment, you will receive a completion code. You should report this code to experimenters when you collect payment. The payment includes participation fee $10 and the potential bonus, the latter of which is decided as follows.

For each of the 21 rounds, you will receive one box according to the above rules. One out of these 21 boxes will be selected to pay you. To select such a box, the experimenters wrote one number randomly chosen from 1 to 21 in to be put into envelopes. These envelopes were distributed to all participants before the experiment. The number in your sealed envelope indicates the round, in which the box you receive will count. Please do not open the envelope before the end of the experiment. This protocol of determining payments suggests that you should treat each round as if it were the round to determine your payment.

Part 2

Part 2 explains how the Bonus 1 and Bonus 2 were predetermined using some random device before the experiment started.

Random Device

The random device in this study is an urn consisting of six balls numbered from 1 to 6.

Using the Random Device to determine Bonus 1

In each round, we specify the composition of Bonus 1, that is, how many boxes with $H and how many boxes with $L. For a given composition, the experimenters draw balls without replacement to determine which boxes have $H.

Example: for the composition "three boxes containing $10 and three boxes containing $0", before the start of the experiment, the experimenter drew three balls from the urn without replacement. Suppose the balls drawn are ball 1, 2 and 5, there will be $10 in box 1, 2 and 5, and $0 in the other three boxes. Suppose the balls drawn are ball 2, 3 and 6, there will be $10 in box 2, 3 and 6, and $0 in the other three boxes. While these numbers can be verified, you do not know these numbers when making decisions.

Using the Random Device to determine Bonus 2

In each round, the experimenters draw one ball from the urn to determine which box has the $2.

Example: suppose the ball drawn is ball 4, box 4 will have the additional $2. Suppose the ball drawn is ball 6, box 6 will have the additional $2.

Records of the Bonus 1 and Bonus 2

For Bonus 1, the experimenters recorded the distribution of Bonus 1 in a table.

Example: suppose for Round BEP, box 1, 2 and 5 have $10 according to the ball drawing. The distribution of Bonus 1 for this round would be recorded as follows:

Round	*Composition*	*Box*					
		1	*2*	*3*	*4*	*5*	*6*
...							
BEP	*3 boxes with $10; 3 boxes with $0*	*$10*	*$10*	*$0*	*$0*	*$10*	*$0*
...							

Before the start of this experiment, the experimenters recorded the distributions of Bonus 1 for all 21 rounds. After that, the experimenters printed out this table, put it in the same envelope containing a number from 1 to 21, and sealed the envelope. Envelopes have same records of Bonus 1 but different numbers. Again, please do not open the envelope during the experiment. You are supposed to seal off the envelop in front of experimenter when you collect payment.

For Bonus 2, the interface of each round has the information that which box has the $2.

Video

To make the procedure transparent and verifiable, the experimenters recorded the whole randomization process in a video. At the end of the experiment, you will be provided a link of the video, showing how the experimenters drew balls and recorded the distribution of Bonus 1 and Bonus 2 for each round.

Summary of the Procedure

Bonus 1 and Bonus 2 in each round were predetermined randomly and independently.

This is the end of Instructions. If you have any question, please raise your hand.

D.6 Dictator Game Experiment

Welcome to our study on decision making. In this study, you will be given a participation fee $10 and a potential bonus. The bonus you earn today depends partly on the decisions you make and the decisions of the other participants, and partly on chance. All information provided will be kept confidential and will be used for research purpose only. Before introducing our study, there are several things to remind you:

- Cell phones and other electronic devices are not allowed.
- Please do not communicate with others during the experiment.
- If you have any questions, please raise your hand to ask our experimenters at any time.

Part 1

There are 21 rounds in this study. We label each round with a unique string of three random uppercase letters.

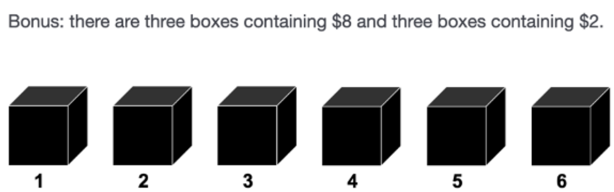
At the beginning of the experiment, all participants will be randomly assigned the role of either Person A or Person B. The numbers of Person As and Person Bs are equal. Each participant is coded with the role code and a number, e.g. A1. In each round, each Person A will be randomly matched with one Person B. Each participant has no information on the identity of the matched participant. The matching changes each round.

In each round, there are six boxes, numbered from 1 to 6. There is a Bonus among these six boxes. The amount of bonus in each box was randomly predetermined before the experiment started. The following describe the Bonus, the Sharing ratio, and what Person A and B should do in each round.

Bonus

There are some boxes containing $H (high amount of Bonus) and the rest of boxes containing $L (low amount of Bonus). You know the composition: how many boxes containing $H and how many boxes containing $L. You do NOT know the exact distribution: which boxes containing $H and which boxes containing $L.

Example:

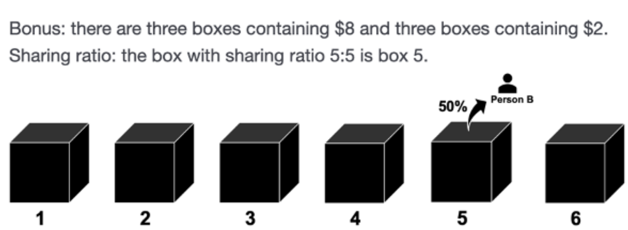


In this example, you know that this round has three boxes containing $8 and the rest of three boxes containing $2, but you do not know which boxes have $8.

Sharing ratio

There are five boxes with sharing ratio 10:0, which means that Person A gets all the bonus in the box and Person B gets nothing. There is one box with sharing ratio 5:5, which means that Person A and Person B both get 50% of the bonus in the box. You know which box has the sharing ratio 5:5.

Example:



In this example, you know that, in this round, the box with sharing ratio 5:5 is box 5. The sharing ratios in box 1, 2, 3, 4 and 6 are all 10:0.

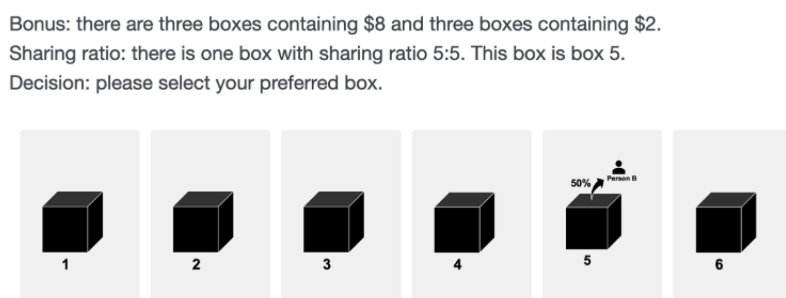
Notice

Bonus and Sharing ratio are given randomly and independently. Whether a box has \$H or \$L is NOT correlated with its chance to be attached with the sharing ratio 5:5. We will describe how we determine Bonus and Sharing ratio detailedly in Part 2.

What you should do—if you are Person A

After you are given the information related to Bonus and Sharing ratio, you need to choose a preferred box to receive in this round. That is, you will receive the bonus in this box, either \$H or \$L, and you will share the bonus with the Person B matched with you in this round, according to the sharing ratio attached to this box.

Example:



In this example, you are to select your preferred box. If you choose box 2, the sharing ratio will be 10:0. You will obtain all bonus in this box, which is either \$8 or \$2. If you choose box 5, the sharing ratio will be 5:5. If there is \$8 in box 5, both you and Person B obtain \$4. If there is \$2 in box 5, both you and Person B obtain \$1.

What you should do—if you are Person B

After you are given the information related to Bonus and Sharing ratio, you have no action need to do concerning the bonus in the box.

Summary of each round

Each round has screens as follows.

- First screen: beginning of a round.
- Second screen: composition of Bonus â how many boxes containing $H and how many boxes containing $L.
- Third screen: distribution of Sharing ratio â which box has the sharing ratio 5:5.
- Last screen: selection (for Person A).

Payment collection

After you finish the whole experiment, you will receive a completion code. You should report this code to experimenters when you collect payment. The payment includes participation fee $10 and the Bonus. Your Bonus is decided as follows.

One out of 21 rounds will be selected to implement. To select such a round and assign the pairs, the experimenters design a randomization program. The program reports implementation plan in the form of "Ax â By â Box Z", where "Ax" and "By" are codes for Person A and B, and "Z" is a number from 1 to 21. "Ax â By â Box Z" means that the choice of Person Ax in Round Z will be implemented to determine the Bonus of Ax and By. The experimenters recorded these pre-determined implementation plan in to be put into envelopes. These envelopes were distributed to all participants before the experiment. The randomization program suggests that Person A should treat each round as if it were the round to determine payment, and should also treat the Person B in each round as newly assigned.

Part 2

Part 2 explains how Bonus and Sharing ratio were predetermined using some random device before the experiment started.

Random Device

The random device in this study is an urn consisting of six balls numbered from 1 to 6.

Using the Random Device to determine Bonus

In each round, we specify the composition of Bonus, that is, how many boxes with $H and how many boxes with $L. For a given composition, the experimenters draw balls without replacement to determine which boxes have $H.

Example: for the composition "three boxes containing $8 and three boxes containing $2", before the start of the experiment, the experimenter drew three balls from the urn without replacement. Suppose the balls drawn are ball 1, 2 and 5, there will be $8 in box 1, 2 and 5, and $2 in the other three boxes. Suppose the balls drawn are ball 2, 3 and 6, there will be $8 in box 2, 3 and 6, and $2 in the other three boxes. While these numbers can be verified, you do not know these numbers when making decisions.

Using the Random Device to determine Sharing Ratio

In each round, the experimenters draw one ball from the urn to determine which box has the sharing ratio 5:5.

Example: suppose the ball drawn is ball 4, box 4 will have the sharing ratio 5:5. Suppose the ball drawn is ball 6, box 6 will have the sharing ratio 5:5.

Records of the Bonus and Sharing Ratio

For Bonus, the experimenters recorded the distribution of Bonus in a table.

Example: suppose for Round BEP, box 1, 2 and 5 have \$8 according to the ball drawing. The distribution of Bonus for this round would be recorded as follows:

Round	*Composition*	*Box*					
		1	*2*	*3*	*4*	*5*	*6*
...							
BEP	*3 boxes with \$8; 3 boxes with \$2*	*\$8*	*\$8*	*\$2*	*\$2*	*\$8*	*\$2*
...							

Before the start of this experiment, the experimenters recorded the distributions of Bonus for all 21 rounds. After that, the experimenters printed out this table, put it in the same envelope containing the implementation plan, and sealed the envelope. Envelopes have same records of Bonus but different implementation plans. Again, please do not open the envelope during the experiment. You are supposed to seal off the envelop in front of experimenter before you collect payment.

For Sharing ratio, the interface of each round has the information that which box has the sharing ratio 5:5.

Video

To make the procedure transparent and verifiable, the experimenters recorded the whole randomization process in a video. At the end of the experiment, you will be provided a link of the video, showing how the experimenters drew balls and recorded the distribution of Bonus and Sharing ratio for each round.

Summary of the Procedure

Bonus and Sharing ratio in each round were predetermined randomly and independently.

This is the end of Instructions. If you have any question, please raise your hand.

D.7 Second Party Information Experiment

Welcome to our study on decision making. In this study, you will be given a participation fee 20 yuan and a potential bonus. The bonus you earn today may depend on your decisions, others' decisions, and chance. All information provided will be kept confidential and will be used for research purpose only. We will first introduce the experiment. Afterward, we will provide you with the link for the experiment, which you will complete on your computer. Before introducing our study, there are several things to remind you:

- Please prepare a piece of paper and a pen
- Cell phones are not allowed
- Please do not use other apps or browse other websites
- Please do not communicate with others during the experiment
- If you have any questions, please contact our experimenters through the chat box in the online meeting room at any time

In this experiment, there are two players, A and B. Player A needs to make choices, while Player B does not need to make any choices. Therefore, in the following content, we will explain what choice you need to make if you are Player A.

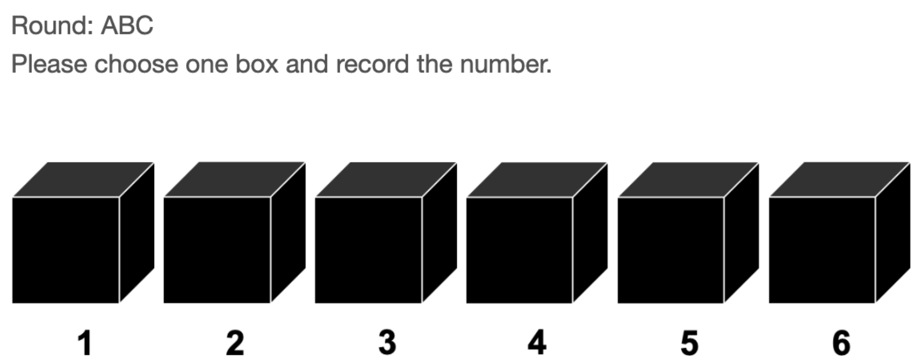
In this experiment, if you are Player A, the decision you make will affect both the bonus for you and the bonus for Player B. We will determine the specific amount of your bonuses based on the decisions you make and chance. Please note that the bonus for Player B will be paid entirely by the experimenters, not by you.

There are 27 rounds in this study. We label each round with a unique string of three random uppercase letters. In each round, there are six boxes, numbered from 1 to 6. There are two bonuses among these six boxes. Bonus 1 is for you and Bonus 2 is for Player B. The followings describe the bonus scheme and what you should do in each round.

Task 1

At the beginning of each round, you need to choose one box out of the six boxes numbered from 1 to 6, and record the number on the paper you have prepared, in the format of "round number - box number."

Example:



In this example, if you want to choose box 1, you should record "ABC - 1" on your paper; if you want to choose box 2, you should record "ABC - 2"; so on and so forth.

Bonus 1

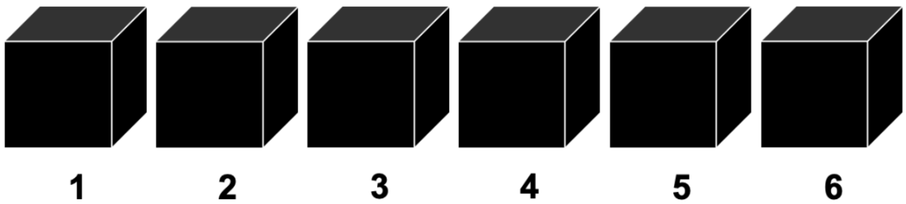
After you finish Task 1, you will know which box contains 25 yuan as Bonus 1 and the remaining five boxes contain 21 yuan as Bonus 1. Bonus 1 is for you.

Example:

Round: ABC

Please choose one box and record the number.

Bonus 1: box 4 contains 25 yuan and the remaining five boxes contain 21 yuan. Bonus 1 is for you.



In this example, you know that, in this round, box 4 contains 25 yuan and the remaining five boxes contain 21 yuan. Bonus 1 will be paid to you.

<u>Bonus 2</u>

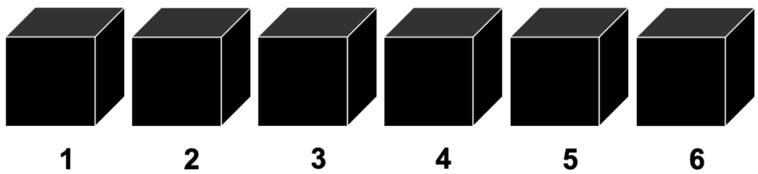
There are three boxes containing H (high amount of Bonus 1) and the rest of three boxes containing L (low amount of Bonus 1). The specific amounts of H and L will vary with each round. In the experiment, you will see the specific amounts of H and L for each round. Bonus 2 is for Player B.

We will randomly decide whether the odd-numbered boxes (boxes 135) have H and the even-numbered boxes (boxes 246) has L, or the even-numbered boxes (boxes 246) have H and the odd-numbered boxes (boxes 135) has L. There are three possibilities regarding whether you know the distribution of Bonus 2:

1. You know the distribution of Bonus 2.

Example:

Round: ABC
Please choose one box and record the number.
Bonus 1: box 4 contains 25 yuan and the remaining five boxes contain 21 yuan. Bonus 1 is for you.
Bonus 2: boxes 135 contain 20 yuan and boxes 246 contain 0 yuan. Bonus 2 is for Player B.

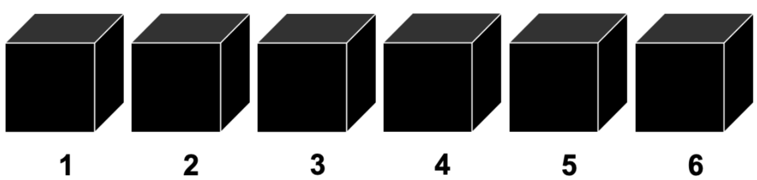


In this example, you know that in this round, the high amount is 20 yuan and the low amount is 0 yuan. And you know that there are 20 yuan in boxes 135 and 0 yuan in boxes 246.

2. You do not know the distribution of Bonus 2.

Example:

Round: ABC
Please choose one box and record the number.
Bonus 1: box 4 contains 25 yuan and the remaining five boxes contain 21 yuan. Bonus 1 is for you.
Bonus 2: boxes ??? contain 20 yuan and boxes ??? contain 0 yuan. Bonus 2 is for Player B.

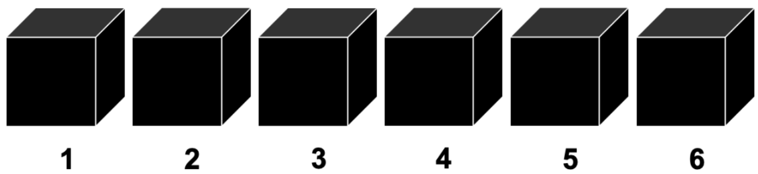


In this example, you know that in this round, the high amount is 20 yuan and the low amount is 0 yuan. But you do not know whether the odd-numbered boxes or the even-numbered boxes have 20 yuan.

3. You can choose whether to know the distribution of Bonus 2.

Example:

Round: ABC
Please choose one box and record the number.
Bonus 1: box 4 contains 25 yuan and the remaining five boxes contain 21 yuan. Bonus 1 is for you.
Bonus 2: boxes ??? contain 20 yuan and boxes ??? contain 0 yuan. Bonus 2 is for Player B.



I want to know the distribution of Bonus 2. | I do not want to know the distribution of Bonus 2.

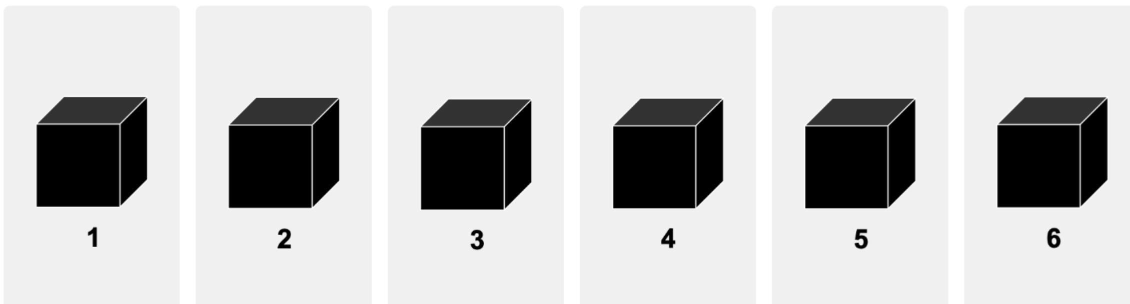
In this example, you know that in this round, the high amount is 20 yuan and the low amount is 0 yuan. You can choose whether to know the distribution of Bonus 2. If you choose "I want to know the distribution of Bonus 2", the exact information of the distribution will be displayed in the new page (? will be replaced by exact number). If you choose "I do not want to know the distribution of Bonus 2", the information will remain unchanged.

Task 2

After you receive the information about Bonus 1 and Bonus 2, you need to report the box you selected in Task 1 by clicking. You will receive Bonus 1 in the selected box and Player B will receive Bonus 2 in the selected box. Please note that your choice in Task 1 is known only to you. Other people, including experimenters, cannot see the choice you recorded. At any time during or after the experiment, you do not need to upload or show the record of your choice in Task 1.

Example:

Round: ABC
Please choose one box and record the number.
Bonus 1: box 4 contains 25 yuan and the remaining five boxes contain 21 yuan. Bonus 1 is for you.
Bonus 2: boxes 135 contain 20 yuan and boxes 246 contain 0 yuan. Bonus 2 is for Player B.
Please select the box according to your previous record.



In this example, you need to click on the choice you recorded in Task 1. In Task 1, if you recorded "ABC - 1", you need to click on box 1; if you recorded "ABC - 2", you need to click on box 2; so on and so forth.

Summary

Each round has five screens as follows.

- First screen: the beginning of a round.
- Second screen: Task 1—choose a box and record your choice.
- Third screen: the distribution of Bonus 1—which box contains 25 yuan and the remaining boxes contain 21 yuan.
- Forth screen: Bonus 2—the specific amounts of H and L; there are three possible situations about the distribution of Bonus 2: (1) you know; (2) you do not know; (3) you can choose whether to know.
- Fifth screen: Task 2—click on the box you selected based on the record from Task 1.

Using the Random Device to determine Bonus 1 and Bonus 2

Bonus 1 and Bonus 2 are given randomly and independently. Whether a box has 25 or 21 yuan as Bonus 1 is NOT correlated with whether it has H or L as Bonus 2. The random device in this study is the RANDBETWEEN function provided by Excel.

Bonus 1: In each round, we specify the distribution of Bonus 1. Before we start the experiment, we used the RANDBETWEEN(1,6) function to generate one integer between 1 and 6 to determine which box has 25 yuan as Bonus 1. In each round, you will know which box has 25 yuan.

Example: If the number drawn is 4, box 4 will have 25 yuan. If the number drawn is 6, box 6 will have 25 yuan.

Bonus 2: In each round, we specify the composition of Bonus 2. Before we start the experiment, we used the RANDBETWEEN(1,2) function to generate a random number to determine which boxes have H and the remaining boxes have L. Specifically, if the random number is 1, the odd-numbered boxes have H and the even-numbered boxes have L. If the random number is 2, the even-numbered boxes have H and the odd-numbered boxes have L. Regarding whether you have information about the distribution of Bonus 2, there are three possible situations.

Example: For the composition "three boxes containing 20 yuan and three boxes containing 0 yuan", if the random number is 1, boxes 135 have 20 yuan and boxes 246 have 0 yuan. If the random number is 2, boxes 246 have 20 yuan and boxes 135 have 0 yuan.

Payment Collection

After completing the entire experiment, you need to fill in the mobile phone number you used when registering your account on Weikeyan, so that we can match the data to transfer the payment. We will pay you the reward within 48 hours through the Weikeyan platform, which can be directly withdrawn to your WeChat wallet.

We will determine your rewards through the following process:

- All participants will be randomly divided into two groups, A and B. If the numbers are not equal, we will randomly select participants to balance the groups.
- Each participant in group A will be matched with a participant in group B to form several pairs of A and B.
- You will receive a participation fee of 20 yuan in addition to your bonus.
  - If you are Player A, your bonus will be determined by your choices and chance.
  - If you are Player B, your bonus will be determined by the choices of the paired Player A and chance.
  - Specifically, we will use the function RANDBETWEEN(1,27) to randomly select an integer between 1 and 27 to determine which round will decide bonuses for the pair. Player A will receive Bonus 1 from the selected box, and Player B will receive Bonus 2 from the selected box.

Please note that before the experiment started, we randomly determined the distribution of Bonus 1 and 2 for each round, and recorded the video of the draw. Interested students can email us to obtain the video link. In addition, after the experiment is over, we will use screen sharing to determine the roles of each participant and the rounds for each pair to receive bonuses in real-time. This experiment uses a random selection of one round to determine the reward. Player A should consider each round as a result of re-matching with Player B, and should take each round seriously as a round that will ultimately determine their own and Player B's reward.

The experiment instructions are now complete. If you have any questions, please ask questions in the chat box. Thank you!

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