

Online Appendix

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A. Additional figures and tables

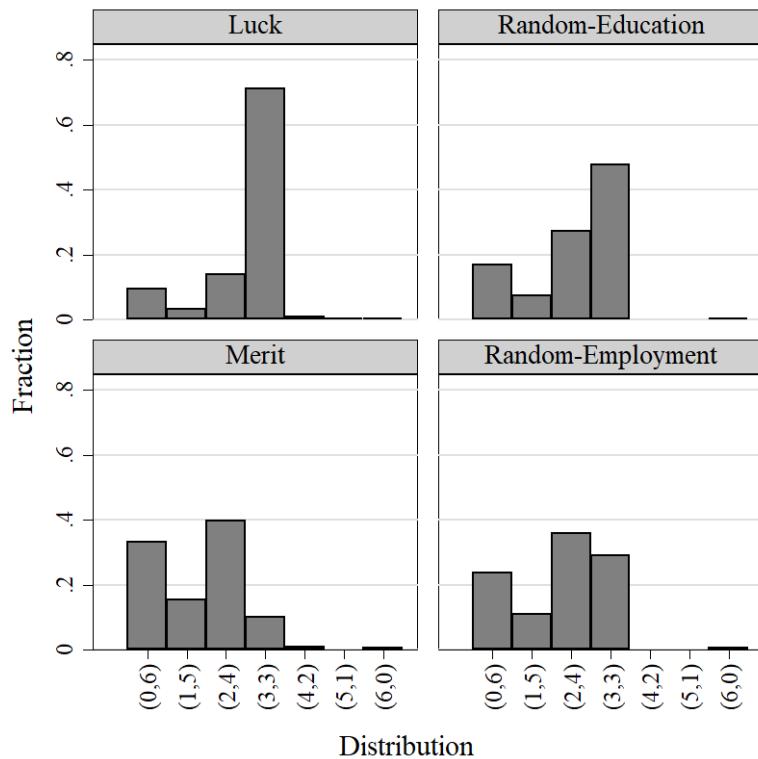


Figure A1: Distribution of the spectators' decisions

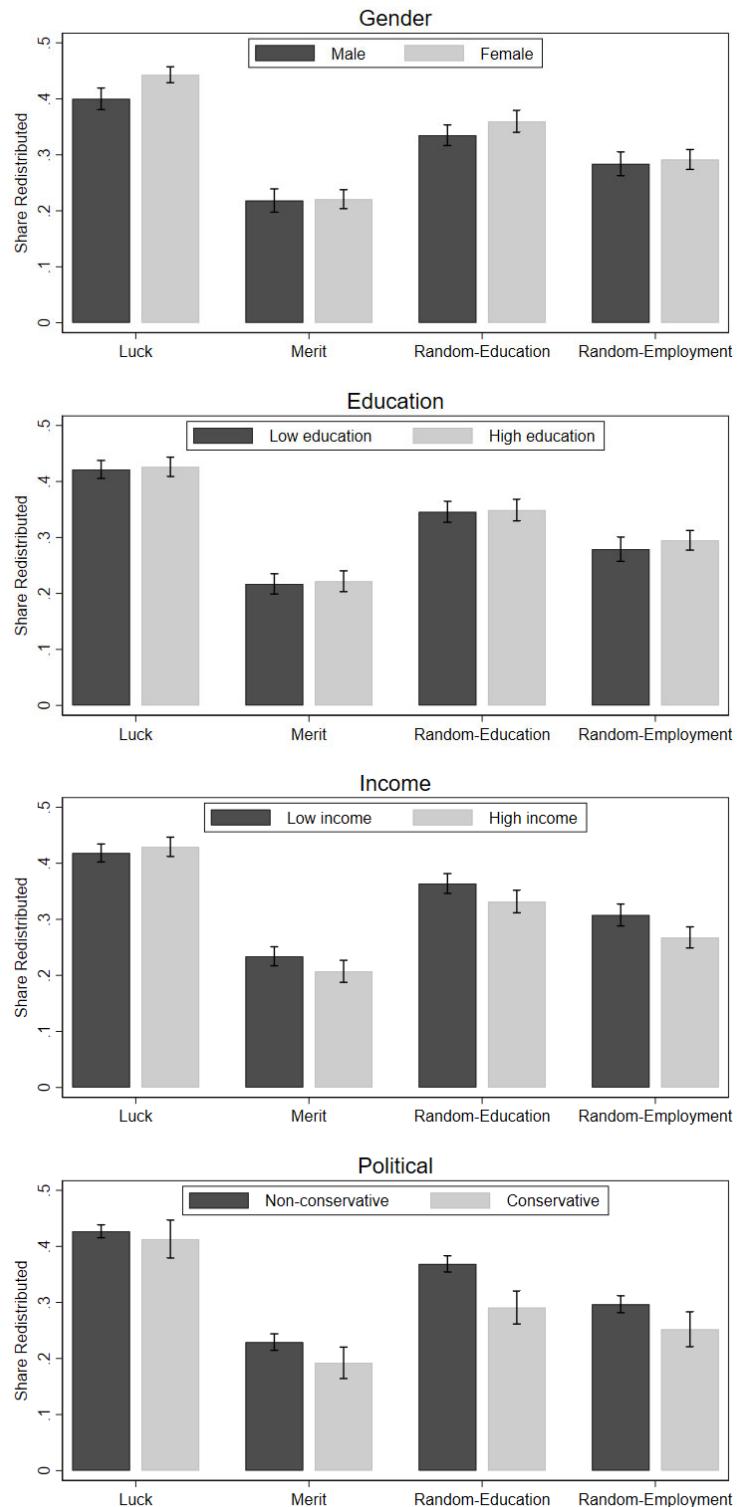


Figure A2: Share redistributed in subgroups

Note: The figure shows the average share redistributed by the spectators for each subgroup in each of the six treatments. Standard errors are indicated by the bars.

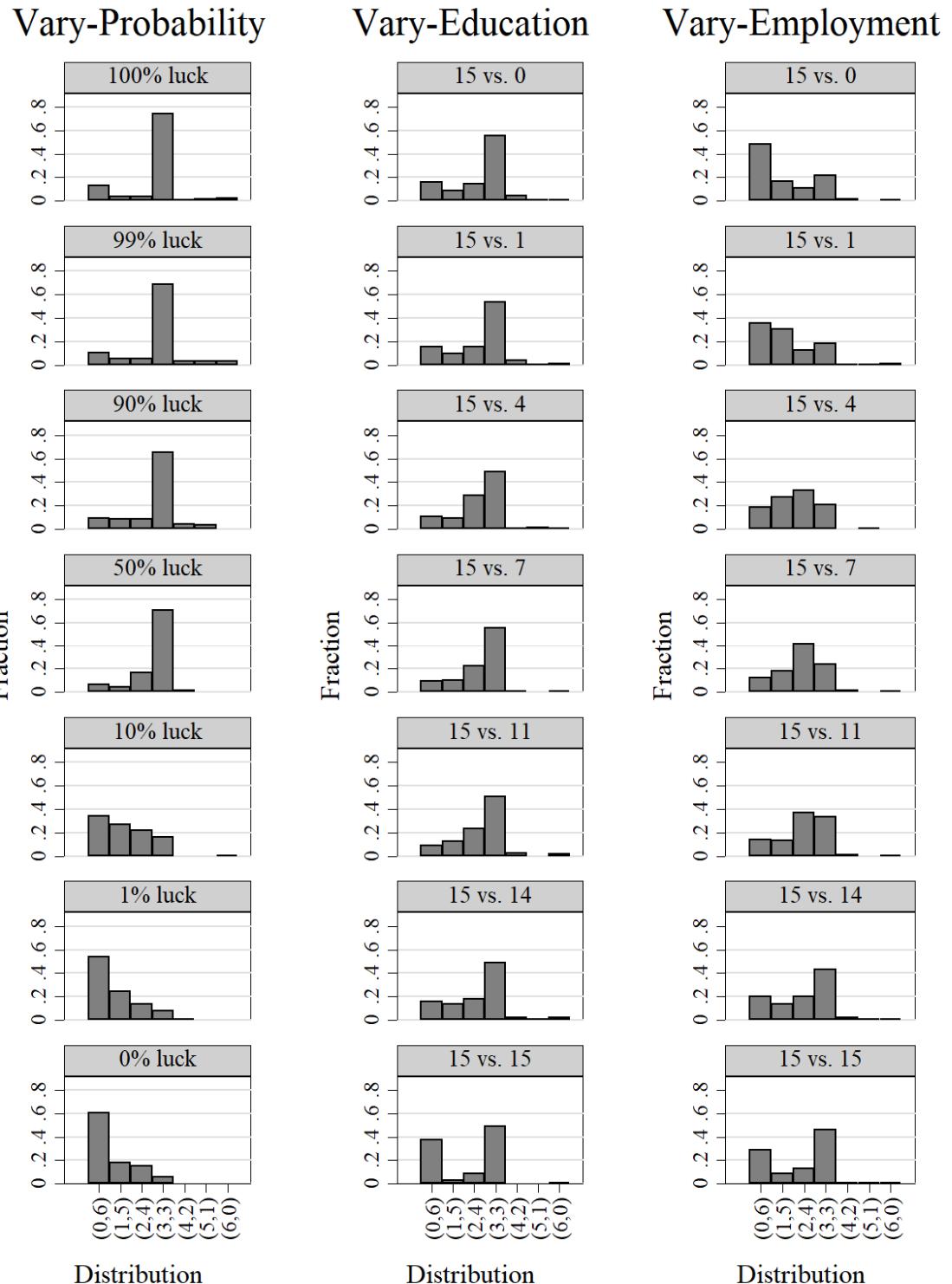


Figure A3: Distribution of the spectators' decisions in the follow-up experiment

Table A1: Regression results on share redistributed

	(1)	(3)
Merit	-0.204*** (0.018)	-0.203*** (0.018)
Random-Education	-0.076*** (0.018)	-0.073*** (0.018)
Random-Employment	-0.136*** (0.018)	-0.138*** (0.018)
Female		0.019 (0.013)
Age		0.000 (0.000)
High education		0.014 (0.014)
High income		-0.024* (0.014)
Conservative		-0.045*** (0.017)
Constant	0.424*** (0.012)	0.407*** (0.024)
Observation	806	806
H0: Merit = Random-Education	$p < 0.001$	$p < 0.001$
H0: Merit = Random-Employment	$p < 0.001$	$p < 0.001$
H0: Random-Education = Random-Employment	$p = 0.002$	$p < 0.001$

Note: The table reports OLS regression results on share redistributed by spectators. The Luck treatment serves as the reference category. “High income” is an indicator variable for having yearly income higher than \$50,000. “High education” is an indicator variable for having 4-year college education or higher. “Conservative” is an indicator variable for having selected Republican as their political party/stance most typically supported. Robust standard errors are in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table A2: Treatment effects: *p*-values with multiple hypothesis testing adjustments

	Difference	Multiple testing adjustment			
		Unadjusted <i>p</i> -values	Bonferroni <i>p</i> -values	Holm <i>p</i> -values	List et al. <i>p</i> -values
Merit vs. Luck	-0.204	0.000	0.002	0.002	0.000
Random-Education vs. Luck	-0.076	0.000	0.002	0.001	0.000
Random-Employment vs. Luck	-0.136	0.000	0.002	0.002	0.000
Random-Education vs. Merit	0.128	0.000	0.002	0.001	0.000
Random-Employment vs. Merit	0.068	0.000	0.002	0.001	0.000
Random-Education vs. Random-Employment	0.059	0.001	0.004	0.001	0.001

Note: List et al. (2019) *p*-values are produced using Stata command “mhreg”, which allows the testing procedure to be used in multivariate regressions (Steinmayr 2020). The underlying regressions are estimated using OLS with robust standard errors in which “Difference” refers to the coefficient estimate of each comparison.

Table A3: Share redistributed in subgroups: *p*-values with multiple hypothesis testing adjustments

	Difference	Multiple testing adjustment			
		Unadjusted <i>p</i> -values	Bonferroni <i>p</i> -values	Holm <i>p</i> -values	List et al. <i>p</i> -values
Female vs. Male	0.019	0.145	0.579	0.289	0.264
High vs. Low education	0.014	0.323	1.000	0.323	0.323
High vs. Low income	-0.024	0.075	0.301	0.226	0.206
Conservative vs. non-conservative	-0.045	0.007	0.028	0.028	0.026

Note: List et al. (2019) *p*-values are produced using Stata command “mhreg”, which allows the testing procedure to be used in multivariate regressions (Steinmayr 2020). The underlying regressions are estimated using OLS with robust standard errors in which “Difference” refers to the coefficient estimate of each comparison.

Table A4: Heterogeneity analysis on share redistributed

	(1) Gender (D = 1 if Female)	(2) Education (D = 1 if High)	(3) Income (D = 1 if High)	(4) Political (D = 1 if Conservative)
Merit	-0.182*** (0.028)	-0.204*** (0.024)	-0.184*** (0.023)	-0.198*** (0.019)
Random-Education	-0.065** (0.027)	-0.076*** (0.025)	-0.054** (0.024)	-0.058*** (0.018)
Random-Employment	-0.116*** (0.029)	-0.142*** (0.027)	-0.111*** (0.025)	-0.130*** (0.019)
Merit × D	-0.041 (0.036)	0.000 (0.035)	-0.038 (0.035)	-0.023 (0.048)
Random-Education × D	-0.018 (0.036)	-0.001 (0.036)	-0.043 (0.036)	-0.064 (0.048)
Random-Employment × D	-0.035 (0.037)	0.011 (0.037)	-0.051 (0.036)	-0.031 (0.050)
D	0.043* (0.024)	0.005 (0.024)	0.011 (0.024)	-0.014 (0.036)
Constant	0.400*** (0.019)	0.421*** (0.016)	0.418*** (0.016)	0.427*** (0.012)
Observation	806	806	806	806
Merit (D = 1)	-0.222*** (0.022)	-0.204*** (0.025)	-0.222*** (0.026)	-0.221*** (0.044)
Random-Education (D = 1)	-0.083*** (0.024)	-0.077*** (0.026)	-0.098*** (0.027)	-0.122*** (0.045)
Random-Employment (D = 1)	-0.151*** (0.023)	-0.131*** (0.024)	-0.162*** (0.026)	-0.161*** (0.046)

Note: The table reports OLS regression results on share redistributed by adding interactions with subgroups of spectators. The Luck treatment serves as the reference category. “High income” is an indicator variable for having yearly income higher than \$50,000. “High education” is an indicator variable for having 4-year college education or higher. “Conservative” is an indicator variable for having selected Republican as their political party/stance most typically supported. Robust standard errors are in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table A5: Treatment effects for subgroups: *p*-values with multiple hypothesis testing adjustments

	Difference	Multiple testing adjustment			
		Unadjusted p-values	Bonferroni p-values	Holm p-values	List et al. p-values
Female					
Merit vs. Luck	-0.222	0.000	0.016	0.009	0.000
Random-Education vs. Luck	-0.083	0.001	0.048	0.023	0.014
Random-Employment vs. Luck	-0.151	0.000	0.016	0.011	0.000
Random-Education vs. Merit	0.139	0.000	0.016	0.015	0.000
Random-Employment vs. Merit	0.071	0.006	0.272	0.096	0.070
Random-Education vs. Random-Employment	0.068	0.011	0.512	0.149	0.110
Male					
Merit vs. Luck	-0.182	0.000	0.016	0.016	0.000
Random-Education vs. Luck	-0.065	0.020	0.960	0.240	0.177
Random-Employment vs. Luck	-0.116	0.000	0.016	0.012	0.000
Random-Education vs. Merit	0.117	0.000	0.016	0.011	0.000
Random-Employment vs. Merit	0.066	0.035	1.000	0.173	0.140
Random-Education vs. Random-Employment	0.051	0.076	1.000	0.229	0.195
High education					
Merit vs. Luck	-0.204	0.000	0.016	0.013	0.000
Random-Education vs. Luck	-0.077	0.002	0.096	0.044	0.029
Random-Employment vs. Luck	-0.131	0.000	0.016	0.014	0.000
Random-Education vs. Merit	0.127	0.000	0.016	0.010	0.000
Random-Employment vs. Merit	0.073	0.009	0.416	0.130	0.098
Random-Education vs. Random-Employment	0.054	0.043	1.000	0.171	0.141
Low education					
Merit vs. Luck	-0.204	0.000	0.016	0.015	0.000
Random-Education vs. Luck	-0.076	0.009	0.144	0.060	0.043
Random-Employment vs. Luck	-0.142	0.000	0.016	0.012	0.000
Random-Education vs. Merit	0.129	0.000	0.016	0.016	0.000
Random-Employment vs. Merit	0.062	0.031	1.000	0.245	0.188
Random-Education vs. Random-Employment	0.067	0.022	1.000	0.220	0.165
High income					
Merit vs. Luck	-0.222	0.000	0.016	0.014	0.000
Random-Education vs. Luck	-0.098	0.000	0.016	0.013	0.000
Random-Employment vs. Luck	-0.162	0.000	0.016	0.009	0.000
Random-Education vs. Merit	0.125	0.000	0.016	0.009	0.000
Random-Employment vs. Merit	0.061	0.031	1.000	0.217	0.169
Random-Education vs. Random-Employment	0.064	0.022	1.000	0.238	0.177
Low income					
Merit vs. Luck	-0.184	0.000	0.016	0.014	0.000

Random-Education vs. Luck	-0.054	0.025	1.000	0.228	0.174
Random-Employment vs. Luck	-0.111	0.000	0.016	0.011	0.000
Random-Education vs. Merit	0.130	0.000	0.016	0.013	0.000
Random-Employment vs. Merit	0.074	0.004	0.208	0.078	0.059
Random-Education vs. Random-Employment	0.056	0.032	1.000	0.190	0.153
Conservative					
Merit vs. Luck	-0.217	0.000	0.016	0.010	0.000
Random-Education vs. Luck	-0.118	0.008	0.368	0.123	0.091
Random-Employment vs. Luck	-0.157	0.001	0.048	0.024	0.015
Random-Education vs. Merit	0.099	0.014	0.688	0.186	0.139
Random-Employment vs. Merit	0.060	0.136	1.000	0.271	0.234
Random-Education vs. Random-Employment	0.039	0.344	1.000	0.344	0.344
Non-conservative					
Merit vs. Luck	-0.199	0.000	0.016	0.012	0.000
Random-Education vs. Luck	-0.057	0.002	0.096	0.042	0.028
Random-Employment vs. Luck	-0.130	0.000	0.016	0.015	0.000
Random-Education vs. Merit	0.142	0.000	0.016	0.010	0.000
Random-Employment vs. Merit	0.068	0.003	0.144	0.057	0.041
Random-Education vs. Random-Employment	0.073	0.001	0.032	0.017	0.008

Note: List et al. (2019) p-values are produced using Stata command “mhtreg”, which allows the testing procedure to be used in multivariate regressions (Steinmayr 2020). The underlying regressions are estimated using OLS with robust standard errors in which “Difference” refers to the coefficient estimate of each comparison.

Table A6: Descriptive statistics about spectators' characteristics in the follow-up experiment

	Treatment			U.S.
	Vary-Probability	Vary-Education	Vary-Employment	Population (ACS, 2020)
Female (%)	42.7	41.0	39.3	50.8
Age (years)	38.1	39.9	39.0	38.2
High education (%)	56.9	64.3	54.5	32.9
Individual yearly income (USD)	59209	60714	54146	68764
Conservative (%)	17.3	22.4	19.9	27.0
Obs.	225	210	211	

Note: The table reports descriptive statistics for spectators' characteristics in the main experiment as well as the population data (from the American Community Survey (ACS) 2020 for sex, age, education and income, and Gallup for the party affiliation since 2021). A subject is categorized as “high education” if he or she has completed at least 4-year college education. Conservative is defined as having selected Republican as their political party/stance most typically supported. Individual yearly income indicates subjects' self-reported pre-tax income, while in the population data it refers to mean earnings for full-time, year-round workers in the past 12 months.

Table A7: Regression results on share redistributed in the follow-up experiment

	Vary-Probability	Vary-Education	Vary-Employment
	(1)	(2)	(3)
99% luck / 15 vs. 1	0.016 (0.013)	-0.003 (0.008)	0.015* (0.008)
90% luck / 15 vs. 4	-0.008 (0.012)	-0.007 (0.010)	0.076*** (0.014)
50% luck / 15 vs. 7	-0.010 (0.012)	0.002 (0.010)	0.122*** (0.015)
10% luck / 15 vs. 11	-0.232*** (0.017)	0.007 (0.015)	0.140*** (0.018)
1% luck / 15 vs. 14	-0.307*** (0.016)	-0.021 (0.018)	0.141*** (0.021)
0% luck / 15 vs. 15	-0.324*** (0.016)	-0.091*** (0.021)	0.126*** (0.023)
Constant	0.436*** (0.014)	0.381*** (0.014)	0.188*** (0.015)
Observation	1575	1470	1477

Note: The table reports OLS regression results on share redistributed by all spectators in each treatment. The 100% luck scenario or the 15 vs. 0 scenario serves as the reference category. Standard errors clustered at the individual level are in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table A8: Regression results on share redistributed by meritocratic spectators in the follow-up experiment

	Vary-Probability (1)	Vary-Education (2)	Vary-Employment (3)
99% luck / 15 vs. 1	0.018 (0.012)	-0.006 (0.006)	0.006 (0.010)
90% luck / 15 vs. 4	-0.006 (0.013)	-0.033*** (0.012)	0.030 (0.020)
50% luck / 15 vs. 7	-0.009 (0.013)	-0.029** (0.012)	0.048** (0.021)
10% luck / 15 vs. 11	-0.246*** (0.017)	-0.054** (0.021)	0.033 (0.025)
1% luck / 15 vs. 14	-0.326*** (0.017)	-0.132*** (0.021)	-0.016 (0.027)
0% luck / 15 vs. 15	-0.344*** (0.016)	-0.290*** (0.022)	-0.090*** (0.027)
Constant	0.430*** (0.014)	0.360*** (0.020)	0.206*** (0.022)
Observation	1477	735	749

Note: The table reports OLS regression results on share redistributed by meritocratic spectators in each treatment. The 100% luck scenario or the 15 vs. 0 scenario serves as the reference category. Standard errors clustered at the individual level are in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

B. Design and results of the information treatments

In this appendix, we report details about the information treatments. In the *Info-Education* treatment, some pairs of workers received the same set of reading materials as in the Merit treatment, while other pairs received different sets of reading materials as in the Random-Education treatment. Spectators knew that the assignment of earnings had been determined by the number of correct answers in the knowledge evaluation, but they needed to complete a real-effort number-checking task to unveil whether the two workers actually received the same reading materials, or reading material of different relevance levels. (By asking workers to complete a real-effort task, we implement a small hassle cost instead of a monetary cost, as we are uncertain about the appropriate size of the monetary charge. Since online participants are engaged in our task for money, they might be more sensitive to a monetary cost compared to an effort cost, which could decrease their willingness to reveal more information.)

Similarly, in the *Info-Employment* treatment, some pairs of workers received the same full set of the knowledge evaluation as in the Merit treatment, while other pairs received different versions of knowledge questions as in the Random-Employment treatment. Spectators needed to complete the same number-checking task to reveal whether the two workers had access to the same or different numbers of knowledge questions. Just as in the main treatments, spectators were accurately informed that the workers were unaware of their relative performances and similarly unaware that the reading materials (Info-Education) or number of knowledge questions (Info-Employment) might differ between workers.

The main outcome variable of interest is whether spectators spend effort in the real-effort task to reveal information about unequal opportunities. We observe that across both treatments, almost 50% of spectators chose not to do so. It is worth noting that spectators holding egalitarian or libertarian fairness views in principle lack incentives to seek the information since they would either completely equalise the income or not redistribute at all, regardless of the opportunity condition. The share of egalitarians can be inferred from the share of spectators dividing equally in the Merit treatment; the share of libertarians can be inferred from the share of spectators allocating everything to the lucky worker in the Luck treatment. In our data the share of each type is 10.0% and 9.5% respectively. Therefore, assuming the distribution of fairness types is constant across treatments, even if every egalitarian and libertarian selected to skip the number-checking task, the remaining 30% who did not seek information could only be meritocrats who were expected to make their merit judgments based on the true state of the opportunity condition.

Furthermore, we find that there was no significant difference between the average shares redistributed in the Random-Education and Info-Education treatments (34.7% vs. 36.9%)

respectively, $p = 0.234$) or between the Random-Employment and Info-Employment treatments (28.8% vs. 31.7% respectively, $p = 0.133$). Further regression analyses show that spectators' redistributive decisions do not depend on whether they learned about the presence of unequal opportunities or whether the information was actively or passively learned. Table B1 reports the regression results on the share redistributed conditional on whether spectators were informed of workers' opportunities obtained or not. In columns (1) and (2), we test for the information effect in the Info-Education treatment by using the Random-Education treatment as the reference category. The estimates indicate that the redistributive decisions by spectators who became either aware or unaware of unequal opportunities are not significantly different from those who directly learned about this information by experimental design. Similarly, in columns (3) and (4) we test for the information effect in the Info-Employment treatment by using the Random-Employment treatment as the reference category. The estimates suggest that spectators' redistributive decisions do not depend on whether they learned about the presence of unequal opportunities or whether the information was actively or passively learned. In Table B2, we show that these results are largely robust to multiple hypothesis testing adjustments.

Table B1: Regression results on share redistributed for informed and uninformed spectators

	Unequal education		Unequal employment	
	(1)	(2)	(3)	(4)
Info-Education	0.037*	0.037		
	(0.022)	(0.023)		
Info-Employment			0.033	0.036
			(0.024)	(0.024)
Uninformed	-0.030	-0.035	-0.008	-0.008
	(0.024)	(0.024)	(0.026)	(0.027)
Female		0.016		-0.007
		(0.018)		(0.019)
Age		0.000		0.000
		(0.001)		(0.001)
High education		0.005		0.020
		(0.019)		(0.021)
High income		-0.019		-0.034*
		(0.019)		(0.020)
Conservative		-0.067***		-0.033
		(0.023)		(0.025)
Constant	0.347***	0.359***	0.288***	0.299***
	(0.014)	(0.030)	(0.014)	(0.038)
Observation	408	408	410	410

Note: The table reports OLS regression results on share redistributed by spectators. In columns (1) and (2) the Random-Education treatment serves as the reference category. In columns (3) and (4) the Random-Employment treatment serves as the reference category. "High income" is an indicator variable for having yearly income higher than \$50,000. "High education" is an indicator variable for having 4-year college education or higher. "Conservative" is an indicator variable for having selected Republican as their political party/stance most typically supported. Robust standard errors are in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table B2: Information effects: p -values with multiple hypothesis testing adjustments

	Difference	Multiple testing adjustment			
		Unadjusted p-values	Bonferroni p-values	Holm p-values	List et al. p-values
Informed vs. Random-Education	0.037	0.099	0.396	0.396	0.326
Uninformed vs. Random-Education	0.007	0.755	1.000	0.755	0.754
Informed vs. Random-Employment	0.033	0.161	0.643	0.482	0.398
Uninformed vs. Random-Employment	0.025	0.246	0.983	0.491	0.426

Note: List et al. (2019) p-values are produced using Stata command “mhtreg”, which allows the testing procedure to be used in multivariate regressions (Steinmayr 2020). The underlying regressions are estimated using OLS with robust standard errors in which “Difference” refers to the coefficient estimate of each comparison.

C. Supporting evidence about external validity from workers' questionnaire

In this appendix we present supporting evidence about externality validity of our main experiment. To this end, we use the survey responses and data generated by workers.

Before workers started to work on their main task, they were asked to answer a question about a brief hypothetical scenario, which is designed to shed light on the external validity of our main experiment. In other words, were our findings on spectators' redistribution choices specific to our worker-spectator setup and the performance task at hand, or does the experiment successfully detect underlying perceptions and preferences about redistribution under unequal opportunity? Workers were randomly assigned to one of the six hypothetical scenarios described as follows, independently of the treatment scenario they were assigned to as workers in the main experiment. The exact text of each scenario is presented in the experimental protocol for workers in Online Appendix D. We deliberately placed the hypothetical scenarios chronologically before the performance task for the main experiment, so that workers' answers to the hypothetical scenarios would not be potentially affected by their experiences in the knowledge assessment task.

Merit-Training Scenario: Two employees in a company are requested to take a certification test after participating in the same training program. Both employees pass the test but one obtains a higher score. The company then awards a bonus of \$600 to the employee for his high score obtained on the certification test.

Random-Training Scenario: The background story is similar to the Merit-Training scenario. However, one employee is randomly selected to participate in a new and improved training program while the other is still enrolled in the ordinary training program. Both of them pass the test but the former employee obtains a higher score and is awarded a bonus of \$600 by his company.

Merit-Department Scenario: Two employees work in the same department of a company with the same working conditions and client base. One employee completes a higher number of reports than the other. The company then awards a bonus of \$600 to the employee for his superior job performance.

Random-Department Scenario: The background story is similar to the Merit-Department scenario 3. However, in their initial employment assignments, one employee is randomly placed into a department which serves a large client base. The other is randomly placed into a department which serves a moderate-sized client base. The former employee completes a higher number of reports and is awarded a bonus of \$600 by his company.

In the first four scenarios, workers were asked to indicate whether and how they would reallocate the \$600 bonus with the two employees if they were hypothetically able to do so. The Merit-Training and Random-Training scenarios are designed to provide a more realistic real-world scenario mirroring the learning opportunities in the Merit and Random-Education treatments, while the Merit-Department and Random-Department scenarios are designed to embed the feature about performance or job opportunities in the Merit and Random-Employment in a real-world scenario beyond our implemented experiment. Note that we conduct two scenarios (Merit-Training and Merit-Department) that mimic the Merit treatment in order to provide a benchmark for the Random-Training and Random-Department scenarios with unequal opportunities, respectively. This is important for comparison purposes because the background story is different in these two scenarios. However, we did not include a scenario that mimics the Luck treatment because it seems difficult to come up with a realistic scenario in which pure luck determines the initial allocation of the bonus.

We have two additional scenarios mimicking the two treatments with information-seeking in the main experiment:

Info-Training Scenario: The background story is similar to the Random-Training scenario. However, the manager who is in the position to award the \$600 bonus to higher performer on the certification test does not actually know whether one of the employees in fact attended the new and improved training program while the other attended the ordinary program.

Info-Department Scenario: The background story is similar to the Random-Department scenario. However, the manager who is in the position to award the \$600 bonus to higher performer on their job does not actually know whether one of the employees was in fact assigned to a different department than the other.

In the Info-Training and Info-Department scenarios, workers were asked to indicate their belief or opinion about what percentage of managers would check the relevant information (i.e., the training program history or department assignment) before deciding about how to award the bonus. Since we are mainly interested in subjects' perceptions about the information-seeking, we do not additionally ask them to reallocate the bonus. Also note that the question we asked in the hypothetical scenarios can be interpreted as the *perceived* social norm in information-seeking in such scenarios, while in our main experiment, spectators made an individual information-seeking decision.

The workers' characteristics across all six scenarios are summarized in Table C1. A balance test produces a p-value of 0.507, indicating that the overall balance is achieved.

Table C1: Descriptive statistics about workers' characteristics

	Hypothetical scenarios						U.S. Population
	Merit- Training	Random- Training	Merit- Department	Random- Department	Info- Training	Info- Department	
Female (%)	52.8	52.9	55.6	58.3	49.6	59.2	50.8
Age (years)	40.7	40.1	40.9	38.9	41.4	41.0	38.2
High education (%)	52.8	53.6	51.1	48.6	61.9	57.0	32.9
Individual yearly income (USD)	57659	50000	58825	61482	55638	49708	68764
Conservative (%)	27.5	24.3	28.9	22.2	25.2	27.5	27.0
Obs.	142	140	135	144	139	142	

Note: The table reports descriptive statistics for spectators' characteristics in the experiment as well as the population data (from the American Community Survey (ACS) 2020 for sex, age, education and income, and the Gallup for the party affiliation since 2021). A person is categorized as "high education" if he or she has completed at least 4-year college education. Individual yearly income is the pre-tax income; in the population data it refers to mean earnings for full-time, year-round workers in the past 12 months.

We first discuss the results from the first four scenarios. Figure C1 shows the average share redistributed by workers across these hypothetical scenarios. We observe remarkably quantitatively similar results compared to the actual decisions in our main experiment. In the Merit-Training and Random-Training scenarios, the average redistributed share is 20.9% and 34.9% respectively. The difference is statistically significant ($p < 0.001$, Wilcoxon rank-sum test). Figure C2 shows the distribution of the redistributed share in these four scenarios. Complete equalisation is the modal behaviour in the Random-Training scenario, representing for 47.9% of all observations. However, only 13.4% equalise the total income in the Merit-Training scenario. These numbers are remarkably similar to what we observe in the spectators' decisions. Similarly, in the Merit-Department and Random-Department scenarios, the average redistributed share is 18.8% and 35.0%, respectively ($p < 0.001$). As shown in Figure C2, complete equalisation accounts for 35.4% of all observations in the Random-Department scenario, while merely 6.7% equalise the total income in the Merit-Department scenario.

It is however worth noting that, somewhat differently from the findings in our main experiment, the redistributed shares are very close in the two scenarios with different types of unequal opportunities. One possibility is the time compensation for MTurk workers in our main experiment. Spectators may assume that the disadvantaged worker who got fewer knowledge questions to answer was able to complete the task faster, and thus needs less compensation. Presumably, this argument is less relevant in the Random-Department scenario in which a smaller client base does not necessarily imply less time or effort spent on the work.

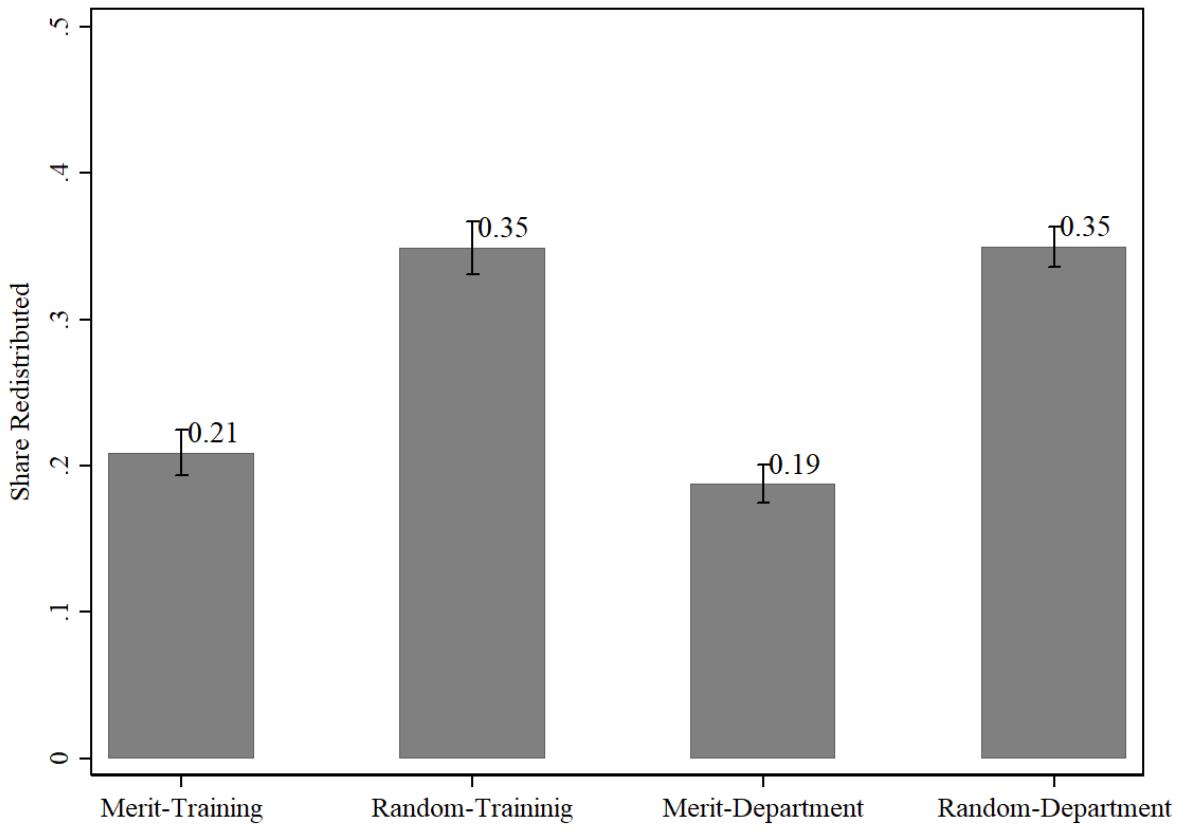


Figure C1: Share redistributed (hypothetical scenarios)

Note: The figure shows the average share redistributed by the workers in each of the four hypothetical scenarios in their questionnaire. Standard errors are indicated by the bars.

Next, we turn to the Info-Training and Info-Department scenarios to assess the perceived social norm regarding information-seeking about unequal opportunities. The workers reported that on average 61.3% and 71.5% of managers would check the information of potential unequal opportunities in the Info-Training and Info-Department scenarios, respectively. These numbers are higher than the actual rate of information-seeking in our experiment (around 50%). We can draw a few observations from the results of these two scenarios. Firstly, while the percentage of managers that workers thought would check the unequal opportunity information is quite high, workers did not generally believe that all managers would check the information. Figure C3 shows the distribution of the social norm regarding information-seeking in these two scenarios. 24.5% and 30.3% of subjects indicated that at least 80% of managers will check the information in the Info-Training and Info-Department scenarios, respectively. In addition, given that only 50% of spectators actually checked the information in the main experiment, workers' impressions about managers' due diligence may be overly optimistic. On the other hand, the discrepancy could reflect

the potential difference between real world managers and the spectators in our experiment. In any case, the relatively high percentage quoted by workers in these information seeking scenarios indicates that individuals seem to trust most supervisors to make fair and informed compensation decisions.

Overall, the workers' answers across the hypothetical scenarios help to confirm the external validity of the findings in our main experiment. Specifically, people do consider the impact of unequal opportunities when deciding upon the fair allocation of total earnings, and the allocation result lies in between that of merit and luck alone. However, in the main experiment a large proportion of our subjects do not seem to care enough about the information of unequal opportunities when the information can only be obtained at some cost. When evaluating the hypothetical scenarios, workers also do not believe everyone would choose to go through the trouble to obtain such information, while they do seem to maintain an optimistic belief about this possibility.

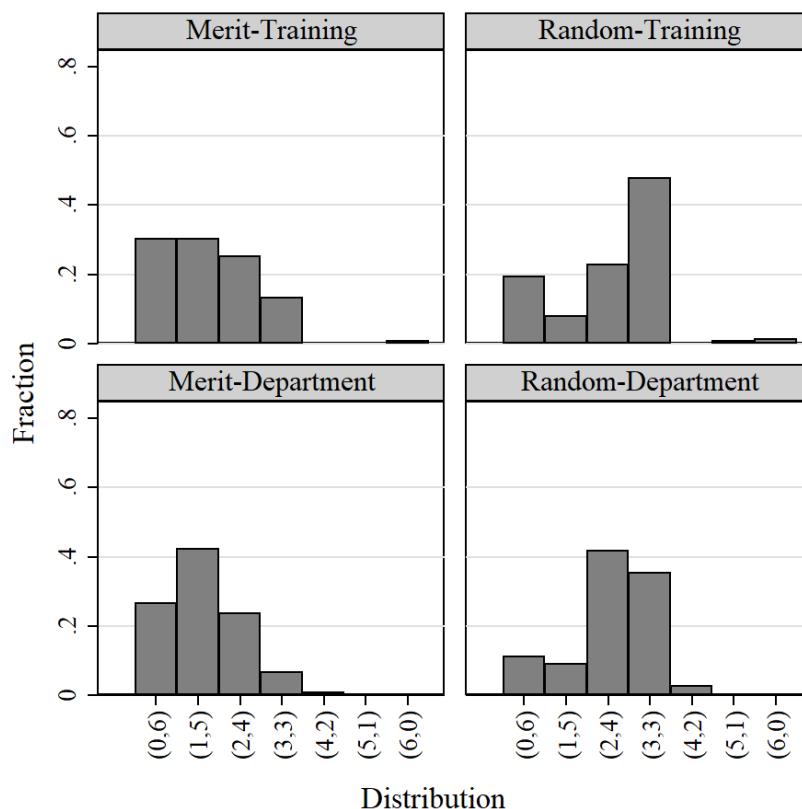


Figure C2: Distribution of the workers' redistributive decisions in the hypothetical scenarios

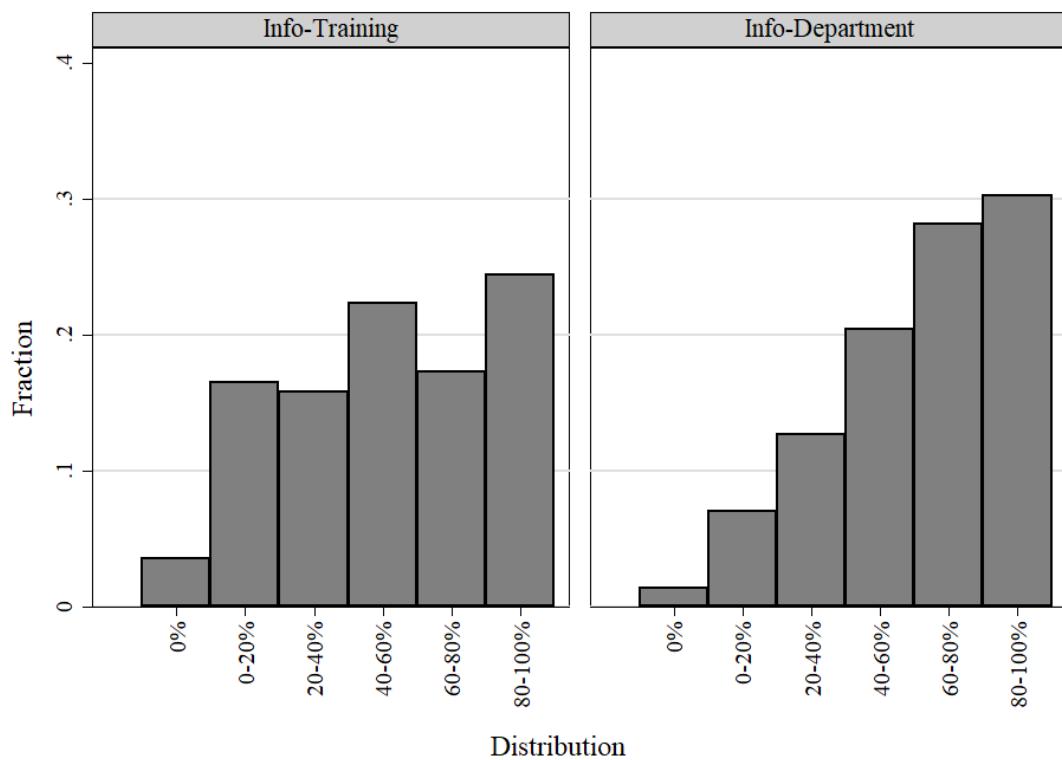


Figure C3: Distribution of the workers' perceived social norm in information seeking in the hypothetical scenarios

D. More information on the sample restriction and data quality in both experiments

Main Experiment

The participants of the main experiment were recruited via CloudResearch's MTurk Toolkit which allows researchers to use multiple demographics and data quality filters such as workers' approval ratings, duplicate IP and Geocode block, workers' country location verification, CloudResearch-approved group of participants.

In our additional effort to improve data quality, as explained in the pre-analysis plan, we excluded participants who played the role of spectators if they (1) failed the Captcha; (2) did not pass the comprehension quiz (for which they only have one chance); (3) have already participated in the study; (4) spent too little time on reading the experimental instructions, making decisions, and completing the questionnaire (i.e., participants who completed the entire task in less than 2 minutes).

Overall, 71.4% (=1220/1708) passed all the exclusion criteria and are included for data analysis for spectators. Specifically, since Qualtrics appears to automatically screen out participants (potentially bots) who failed the Captcha, actually all recorded participants (N=1708) passed the Captcha. Each participant also has a unique Worker ID, which means that it is highly unlikely one worker has participated in the study more than once. Among them,

- 25.6% (=437/1708) did not pass the comprehension quiz
- 0.6% (=10/1708) did not complete the entire experiment
- 2.4% (=41/1708) completed the experiment in less than 2 minutes

Follow-up Experiment

The participants of the follow-up experiment were recruited via Connect which is CloudResearch's in-house platform that recruits participants independently from MTurk. Similar to their MTurk Toolbit, Connect also allows researchers to use multiple demographics and data quality filters such as workers' approval ratings, duplicate IP and Geocode block, workers' country location verification, CloudResearch-approved group of participants.

As a side note, there are multiple reasons why we switched to Connect for the follow-up experiment. One major reason is due to Amazon's sudden change in their billing policies which caused the freezing of one of the coauthors' MTurk account (which is required for using CloudResearch's MTurk Toolkit). We tried to contact Amazon to resolve this issue but in the end, Amazon was not responsive to our request in time before we had decided to switch to another platform. The second major reason is that there is a number of papers (see those cited in Douglas, Ewell, and Brauer, 2023) suggesting that CloudResearch and Prolific can offer better data quality than MTurk. Given that we are already quite familiar with CloudResearch and especially its capability to filter out participants with "bad" reputation as well as to target participants from

various demographic backgrounds, we eventually decided to use CloudResearch's in-house platform.

Douglas, Ewell, and Brauer (2023) also conduct an experiment comparing data quality between MTurk, Prolific, CloudResearch, Qualtrics and SONA. They show that Prolific and CloudResearch produce generally better data quality in terms of participants' likelihood to pass attention checks, provide meaningful answers, remember previous information, etc.

In our additional effort to improve data quality, as explained in the pre-analysis plan, we excluded participants who played the role of spectators if they (1) failed the Captcha; (2) did not pass the comprehension quiz (for which they only have one chance); (3) have already participated in the study; (4) spent too little time on reading the experimental instructions, making decisions, and completing the questionnaire (i.e., participants who completed the entire task in less than 3 minutes due to the longer survey).

Overall, 65.1% (=646/992) passed all the exclusion criteria and are included for data analysis for spectators. Note that the share excluded in the follow-up experiment is slightly higher than that in the main experiment. However, this is probably not surprising given the instructions of the follow-up experiment are also more complicated.

Specifically, since Qualtrics appears to automatically screen out participants (potentially bots) who failed the Captcha, actually all recorded participants (N=992) passed the Captcha. Each participant also has a unique Connect ID, which means that it is highly unlikely one worker has participated in the study more than once. Among them,

- 33.2% (=329/992) did not pass the comprehension quiz
- 1.0% (=10/992) did not complete the entire experiment
- 0.7% (=7/992) completed the experiment in less than 3 minutes

Reference

Douglas, B. D., Ewell, P. J., & Brauer, M. (2023). Data quality in online human-subjects research: Comparisons between MTurk, Prolific, CloudResearch, Qualtrics, and SONA. *PLOS ONE*, 18(3), e0279720.

E. Experimental protocol

E.1. Spectators – Main experiment

General information

Thank you for your interest in our academic study! Please read the instructions on the following pages carefully.

Participation in this study is entirely voluntary. Should you wish to stop your participation at any time, you can simply close your browser window. Your information and survey responses collected in this study are for research purposes only. We will only use your Worker ID to assign payments and check that you have not participated in this experiment before. Any identifying information associated with your responses will remain anonymous and confidential in the reporting of the study's results.

Note that we can only offer rewards to participants who successfully complete the task by providing their MTurk ID at the end of the questionnaire. You will be paid a fixed participation fee of \$3 USD for completing the entire assignment.

The assignment is expected to take about 10 minutes of your time, however you will have up to 20 minutes to finish it.

Should any question or concern arise, you can contact the investigators at espel.mturk@gmail.com. Further instructions will be provided on the next page. If you agree to participate, please select 'I agree'.

I have read and understood the above and I consent to participate in this study:

- I agree
- I do not agree

Captcha verification

Before proceeding to the task, please complete the Captcha below to help ensure you are a real participant.

I'm not a robot 
reCAPTCHA
Privacy - Terms

[Protocol for spectators in the Luck treatment]

*Please read the following information carefully. There will be a comprehension quiz on the next page, and **only participants who answer the quiz correctly can proceed to complete this task.***

Unlike traditional survey questions that are about hypothetical situations, we now ask you to make a choice that has actual consequences for a real-life situation. Out of the participants in our study who are doing the same task as you are now, 1 out of every 3 will be randomly selected to have their decision actually implemented. What this means is that you may very well be one of those selected, and so you should make your choice carefully, as though it will actually be implemented.

Two individuals, let us call them worker A and worker B, were recruited via an online marketplace to complete an assignment. They were first each paid a participation compensation of 2 USD regardless of their performance on the assignment.

In the assignment, worker A and worker B were each given 5 minutes to read the exact same learning materials. After that, they each worked on the same set of multiple-choice questions related to the learning materials.

After completing the assignment, they were told that **their earnings from the assignment would be determined by a random lottery drawing.**

The worker winning this lottery drawing would earn 6 USD for the assignment and the other worker would earn nothing for the assignment. They were not informed about the outcome of the lottery.

However, worker A and worker B were told that a third person would be informed about the assignment and the outcome of the lottery, and that the third person would be given the opportunity to redistribute the earnings and thus determine how much they were paid for the assignment.

You are the third person and we now want you to choose whether to redistribute the earnings for the assignment between worker A and worker B. Your decision is completely anonymous. The workers will receive the payment that you choose for the assignment within a few days.

Now, you learn that **worker A won the lottery procedure and earned 6 USD. Thus, worker B earned nothing for the assignment.**

- I am ready for the comprehension quiz.

Next page:

Worker A and worker B each read the same learning materials and worked on the same multiple-choice questions.

- True
 - False
-

A lottery randomly determines which worker receives \$6 USD for the assignment while the other worker receives \$0 USD for the assignment.

- False
 - True
-

The workers do not know the lottery result.

- True
 - False
-

Next page:

You have passed the comprehension quiz. For your reference, below are the same exact information you read on the first page (before the comprehension quiz), along with the opportunity to make your decision.

{Same copy of the instructions. Omitted here.}

Now, you learn that **worker A won the lottery procedure and earned 6 USD.** Thus, **worker B earned nothing for the assignment.**

Please state which of the following alternatives you choose:

I do not redistribute

- Worker A is paid 6 USD and worker B is paid 0 USD.

I do redistribute

- Worker A is paid 5 USD and worker B is paid 1 USD.
- Worker A is paid 4 USD and worker B is paid 2 USD.
- Worker A is paid 3 USD and worker B is paid 3 USD.
- Worker A is paid 2 USD and worker B is paid 4 USD.
- Worker A is paid 1 USD and worker B is paid 5 USD.
- Worker A is paid 0 USD and worker B is paid 6 USD.

[Protocol for spectators in the Merit treatment]

*Please read the following information carefully. There will be a comprehension quiz on the next page, and **only participants who answer the quiz correctly can proceed to complete this task.***

Unlike traditional survey questions that are about hypothetical situations, we now ask you to make a choice that has actual consequences for a real-life situation. Out of the participants in our study who are doing the same task as you are now, 1 out of every 3 will be randomly selected to have their decision actually implemented. What this means is that you may very well be one of those selected, and so you should make your choice carefully, as though it will actually be implemented.

Two individuals, let us call them worker A and worker B, were recruited via an online marketplace to complete an assignment. They were first each paid a participation compensation of 2 USD regardless of their performance on the assignment.

In the assignment, worker A and worker B were given 5 minutes to read the exact same learning materials. After that, they each worked on the same set of multiple-choice questions related to the learning materials.

After completing the assignment, they were told that **their earnings from the assignment would be determined by the number of questions they answered correctly**. Specifically, the worker that answered more questions correctly would earn 6 USD for the assignment, and the other worker would earn nothing for the assignment. **The workers were not informed about which of them answered more questions correctly.**

However, worker A and worker B were told that a third person would be informed about the assignment and which worker answered more questions correctly, and that the third person would be given the opportunity to redistribute the earnings and thus determine how much they were paid for the assignment.

You are the third person and we now want you to choose whether to redistribute the earnings for the assignment between worker A and worker B. Your decision is completely anonymous. The workers will receive the payment that you choose for the assignment within a few days.

Now, you learn that **worker A answered more questions correctly than worker B and earned 6 USD. Thus, worker B earned nothing for the assignment.**

- I am ready for the comprehension quiz.

Next page:

Worker A and worker B each read the same learning materials and worked on the same multiple-choice questions.

- True
 - False
-

The worker who answers more multiple-choice questions correctly receives \$6 USD for the assignment while the other worker receives \$0 USD for the assignment.

- True
 - False
-

The workers do not know whether they or the other worker answered more multiple-choice questions correctly.

- True
- False

Next page:

You have passed the comprehension quiz. For your reference, below are the same exact information you read on the first page (before the comprehension quiz), along with the opportunity to make your decision.

{Same copy of the instructions. Omitted here.}

Now, you learn that **worker A answered more questions correctly and earned 6 USD**. Thus, **worker B earned nothing for the assignment**.

Please state which of the following alternatives you choose:

- I do not redistribute
- Worker A is paid 6 USD and worker B is paid 0 USD.
- I do redistribute
- Worker A is paid 5 USD and worker B is paid 1 USD.
 - Worker A is paid 4 USD and worker B is paid 2 USD.
 - Worker A is paid 3 USD and worker B is paid 3 USD.
 - Worker A is paid 2 USD and worker B is paid 4 USD.
 - Worker A is paid 1 USD and worker B is paid 5 USD.
 - Worker A is paid 0 USD and worker B is paid 6 USD.

[Protocol for spectators in the Random-Education treatment]

*Please read the following information carefully. There will be a comprehension quiz on the next page, and **only participants who answer the quiz correctly can proceed to complete this task.***

Unlike traditional survey questions that are about hypothetical situations, we now ask you to make a choice that has actual consequences for a real-life situation. Out of the participants in our study who are doing the same task as you are now, 1 out of every 3 will be randomly selected to have their decision actually implemented. What this means is that you may very well be one of those selected, and so you should make your choice carefully, as though it will actually be implemented.

Two individuals, let us call them worker A and worker B, were recruited via an online marketplace to complete an assignment. They were first each paid a participation compensation of 2 USD regardless of their performance on the assignment.

In the assignment, worker A and worker B were given 5 minutes to read some learning materials. After that, they each worked on the same set of multiple-choice questions related to the learning materials. **The learning materials that worker A and worker B had read were randomly assigned and their contents were different.**

The learning materials that **worker A had read were highly relevant** to the multiple-choice questions that he/she later worked on, while the learning materials that **worker B had read had low relevance** to the multiple-choice questions. Worker A and B were not informed specifically about whether or not the learning materials were different for the other worker.

After completing the assignment, they were told that **their earnings from the assignment would be determined by the number of questions they answered correctly**. Specifically, the worker that answered more questions correctly would earn 6 USD for the assignment, and the other worker would earn nothing for the assignment. The workers were not informed about which of them answered more questions correctly.

However, worker A and worker B were told that a third person would be informed about the assignment and which worker answered more questions correctly, and that the third person would be given the opportunity to redistribute the earnings and thus determine how much they were paid for the assignment.

You are the third person and we now want you to choose whether to redistribute the earnings for the assignment between worker A and worker B. Your decision is completely anonymous. The workers will receive the payment that you choose for the assignment within a few days.

Now, you learn that **worker A answered more questions correctly and earned 6 USD. Thus, worker B earned nothing for the assignment.**

- I am ready for the comprehension quiz.

Next page:

One worker receives the highly relevant learning materials, while the other worker receives the less relevant learning materials. The assignment of the learning materials is random between the two workers.

- True
 - False
-

The worker who answers more multiple-choice questions correctly receives \$6 USD for the assignment while the other worker receives \$0 USD for the assignment.

- False
 - True
-

The workers do not know whether they or the other worker answered more multiple-choice questions correctly.

- True
 - False
-

Next page:

You have passed the comprehension quiz. For your reference, below are the same exact information you read on the first page (before the comprehension quiz), along with the opportunity to make your decision.

{Same copy of the instructions. Omitted here.}

Now, you learn that **worker A** answered more questions correctly and earned **6 USD**. Thus, **worker B** earned nothing for the assignment.

Please state which of the following alternatives you choose:

I do not redistribute

- Worker A is paid 6 USD and worker B is paid 0 USD.

I do redistribute

- Worker A is paid 5 USD and worker B is paid 1 USD.
- Worker A is paid 4 USD and worker B is paid 2 USD.
- Worker A is paid 3 USD and worker B is paid 3 USD.
- Worker A is paid 2 USD and worker B is paid 4 USD.
- Worker A is paid 1 USD and worker B is paid 5 USD.
- Worker A is paid 0 USD and worker B is paid 6 USD.

[Protocol for spectators in the Random- Employment treatment]

*Please read the following information carefully. There will be a comprehension quiz on the next page, and **only participants who answer the quiz correctly can proceed to complete this task.***

Unlike traditional survey questions that are about hypothetical situations, we now ask you to make a choice that has actual consequences for a real-life situation. Out of the participants in our study who are doing the same task as you are now, 1 out of every 3 will be randomly selected to have their decision actually implemented. What this means is that you may very well be one of those selected, and so you should make your choice carefully, as though it will actually be implemented.

Two individuals, let us call them worker A and worker B, were recruited via an online marketplace to complete an assignment. They were first each paid a participation compensation of 2 USD regardless of their performance on the assignment.

In the assignment, worker A and worker B were given 5 minutes to read the exact same learning materials. After that, they each worked on multiple-choice questions related to the learning materials.

The sets of multiple-choice questions that worker A and worker B worked on were different and randomly assigned. Under this situation, worker A had the opportunity to work on all the multiple-choice questions worker B had access to, plus additional multiple-choice questions. Worker A and B were not specifically informed that their set of multiple-choice questions were different.

After completing the assignment, they were told that their earnings from the assignment would be determined by the number of questions they answered correctly. Specifically, the worker that answered more questions correctly would earn 6 USD for the assignment, and the other worker would earn nothing for the assignment. The workers were not informed about which of them answered more questions correctly.

However, worker A and worker B were told that a third person would be informed about the assignment and which worker answered more questions correctly, and that the third person would be given the opportunity to redistribute the earnings and thus determine how much they were paid for the assignment.

You are the third person and we now want you to choose whether to redistribute the earnings for the assignment between worker A and worker B. Your decision is completely anonymous. The workers will receive the payment that you choose for the assignment within a few days.

Now, you learn that **worker A answered more questions correctly and earned 6 USD. Thus, worker B earned nothing for the assignment.**

- I am ready for the comprehension quiz.

Next page:

One worker has the opportunity to work on all the multiple-choice questions that the other worker has access to, plus additional multiple-choice questions. The assignment of the sets of multiple-choice questions is random between the two workers.

- True
 - False
-

The worker who answers more multiple-choice questions correctly receives \$6 USD for the assignment while the other worker receives \$0 USD for the assignment.

- False
 - True
-

The workers do not know whether they or the other worker answered more multiple-choice questions correctly.

- False
- True

Next page:

You have passed the comprehension quiz. For your reference, below are the same exact information you read on the first page (before the comprehension quiz), along with the opportunity to make your decision.

{Same copy of the instructions. Omitted here.}

Now, you learn that **worker A answered more questions correctly and earned 6 USD.** Thus, worker B earned nothing for the assignment.

Please state which of the following alternatives you choose:

- I do not redistribute
- Worker A is paid 6 USD and worker B is paid 0 USD.
- I do redistribute
- Worker A is paid 5 USD and worker B is paid 1 USD.
 - Worker A is paid 4 USD and worker B is paid 2 USD.
 - Worker A is paid 3 USD and worker B is paid 3 USD.
 - Worker A is paid 2 USD and worker B is paid 4 USD.
 - Worker A is paid 1 USD and worker B is paid 5 USD.
 - Worker A is paid 0 USD and worker B is paid 6 USD.

[Protocol for spectators in the Info-Education treatment]

Please read the following information carefully. There will be a comprehension quiz on the next page, and only participants who answer the quiz correctly can proceed to complete this task.

Unlike traditional survey questions that are about hypothetical situations, we now ask you to make a choice that has actual consequences for a real-life situation. Out of the participants in our study who are doing the same task as you are now, 1 out of every 3 will be randomly selected to have their decision actually implemented. What this means is that you may very well be one of those selected, and so you should make your choice carefully, as though it will actually be implemented.

Two individuals, let us call them worker A and worker B, were recruited via an online marketplace to complete an assignment. They were first each paid a participation compensation of 2 USD regardless of their performance on the assignment.

In the assignment, worker A and worker B were given 5 minutes to read some learning materials. After that, they each worked on the same set of multiple-choice questions related to the learning materials.

The learning materials that worker A and worker B were given to read could have been different. With some chance, the learning materials were exactly the same for the two workers.

However, with some chance, their contents were different and randomly assigned. Under this situation, the learning materials that worker A had read were highly relevant to the multiple-choice questions that he/she later worked on, while the learning materials that worker B had read had low relevance to the multiple-choice questions. Worker A and B were not informed specifically about whether or not the learning materials were different for the other worker.

After completing the assignment, they were told that their earnings from the assignment would be determined by the number of questions they answered correctly. Specifically, the worker that answered more questions correctly would earn 6 USD for the assignment, and the other worker would earn nothing for the assignment. The workers were not informed about which of them answered more questions correctly.

However, worker A and worker B were told that a third person would be informed about the assignment and which worker answered more questions correctly, and that the third person would be given the opportunity to redistribute the earnings and thus determine how much they were paid for the assignment.

You are the third person and we now want you to choose whether to redistribute the earnings for the assignment between worker A and worker B. Your decision is completely anonymous. The workers will receive the payment that you choose for the assignment within a few days.

Now, you learn that **worker A answered more questions correctly and earned 6 USD. Thus, worker B earned nothing for the assignment.**

- I am ready for the comprehension quiz.

Next page:

The learning materials that worker A and worker B received may or may not be the same. If they are different, one worker receives the highly relevant learning material, while the other worker receives the less relevant learning material. The assignment of the learning materials is random between the two workers.

- False
 - True
-

The worker who answers more multiple-choice questions correctly receives \$6 USD for the assignment while the other worker receives \$0 USD for the assignment.

- True
 - False
-

The workers do not know whether they or the other worker answered more multiple-choice questions correctly.

- False
- True

Next page:

You have passed the comprehension quiz.

Before making your decision, you have the chance to learn whether the learning materials were different for the two workers. But you have to work on another assignment in order to obtain this information.

If you decide to work on that assignment, on the next page your task will be to find a 3-digit code correctly among a matrix (of a total of 289 numbers) of 3-digit codes in random order. The assigned code will appear multiple times in the same matrix and you will score 1 point for each correct marking. You will lose 1 point if you check off a wrong code. **If your accumulated points are 20 or higher (the maximum possible score is 33), you will learn whether the learning materials were different for the two workers.**

On the other hand, you can skip this 3-digit code task and go straight to making your redistribution decision. Now please choose one option:

- Go directly to the page about the redistribution decision
- Go to the 3-digit code task to try to learn the information

Next page (if they choose to do the number-checking task; skip this page if not):

The code you must check off is: 241. Tick the box to the left of the number.

- 407 221 622 314 883 603 574 989 205 234
- 743 365 891 410 879 241 340 954 641 241
- 602 882 180 873 965 446 876 308 172 241
- 537 347 833 674 241 566 701 354 661 268
- 144 375 173 241 678 241 966 606 527 170
- 435 917 938 508 850 241 405 695 840 654
- 265 330 926 634 674 358 843 784 637 431
- 689 602 108 187 474 540 280 882 464 884
- 617 241 537 205 749 388 495 160 258 317
- 809 723 801 273 218 241 191 372 783 702
- 350 618 459 241 602 518 545 730 241 809
- 948 943 816 395 975 711 121 389 912 583
- 408 416 241 919 891 241 477 546 925 495
- 764 572 241 809 567 380 234 334 124 777
- 220 874 241 241 533 604 241 360 900 674
- 881 806 980 743 554 589 494 527 130 926
- 149 274 843 998 674 241 290 241 796 707
- 559 818 233 241 354 881 615 596 307 235
- 538 241 524 274 334 341 859 807 543 377
- 241 979 241 337 628 590 757 233 140 241
- 914 609 585 391 778 300 393 247 968 739
- 942 858 361 924 269 197 729 265 241 842
- 146 522 997 648 144 744 241 388 494 447
- 241 265 542 456 751 213 560 210 454 549
- 795 121 932 241 630 163 759 427 749 225
- 705 340 241 623 795 303 472 942 957 355
- 763 922 550 241 241 578 653 216 775 906
- 241 219 293 216 223 241 809 510 174 605
- 303 723 661 355 874 971 555 810 703

Next page (if they succeed in passing the number-checking task, they will see the information):

Your score is 23, which is no less than 20.

Now you learn the learning materials that worker A and worker B had read were indeed different.

The learning materials that worker A had read were highly relevant to the multiple-choice questions that he/she later worked on, while the learning materials that worker B had read has low relevance to the multiple-choice questions. Worker A and B were not informed specifically about whether or not the learning materials were different for the other worker.

For your reference, below are the same exact information you read on the first page (before the comprehension quiz), along with the opportunity to make your decision.

{Same copy of the instructions. Omitted here.}

Now, you learn that **worker A** answered more questions correctly and earned **6 USD**. Thus, **worker B** earned nothing for the assignment.

Please state which of the following alternatives you choose:

I do not redistribute

Worker A is paid 6 USD and worker B is paid 0 USD.

I do redistribute

Worker A is paid 5 USD and worker B is paid 1 USD.

Worker A is paid 4 USD and worker B is paid 2 USD.

Worker A is paid 3 USD and worker B is paid 3 USD.

Worker A is paid 2 USD and worker B is paid 4 USD.

Worker A is paid 1 USD and worker B is paid 5 USD.

Worker A is paid 0 USD and worker B is paid 6 USD.

[Protocol for spectators in the Info-Employment treatment]

Please read the following information carefully. There will be a comprehension quiz on the next page, and only participants who answer the quiz correctly can proceed to complete this task.

Unlike traditional survey questions that are about hypothetical situations, we now ask you to make a choice that has actual consequences for a real-life situation. Out of the participants in our study who are doing the same task as you are now, 1 out of every 3 will be randomly selected to have their decision actually implemented. What this means is that you may very well be one of those selected, and so you should make your choice carefully, as though it will actually be implemented.

Two individuals, let us call them worker A and worker B, were recruited via an online marketplace to complete an assignment. They were first each paid a participation compensation of 2 USD regardless of their performance on the assignment.

In the assignment, worker A and worker B were given 5 minutes to read the exact same learning materials. After that, they each worked on multiple-choice questions related to the learning materials.

The sets of multiple-choice questions that worker A and worker B worked on could have been different. With some chance, the set of multiple-choice questions was exactly the same for the two workers.

However, with some chance, the sets of multiple-choice questions were different and randomly assigned. Under this situation, worker A had the opportunity to work on all the multiple-choice questions worker B had access to, plus additional multiple-choice questions. Worker A and B were not specifically informed that their sets of multiple-choice questions were different.

After completing the assignment, they were told that their earnings from the assignment would be determined by the number of questions they answered correctly. Specifically, the worker that answered more questions correctly would earn 6 USD for the assignment, and the other worker would earn nothing for the assignment. The workers were not informed about which of them answered more questions correctly.

However, worker A and worker B were told that a third person would be informed about the assignment and which worker answered more questions correctly, and that the third person would be given the opportunity to redistribute the earnings and thus determine how much they were paid for the assignment.

You are the third person and we now want you to choose whether to redistribute the earnings for the assignment between worker A and worker B. Your decision is completely anonymous. The workers will receive the payment that you choose for the assignment within a few days.

Now, you learn that **worker A answered more questions correctly and earned 6 USD. Thus, worker B earned nothing for the assignment.**

I am ready for the comprehension quiz.

Next page:

The sets of multiple-choice questions that worker A and worker B received may or may not be the same. If they are different, one worker has the opportunity to work on all the multiple-choice questions that the other worker has access to, plus additional multiple-choice questions. The assignment of the sets of multiple-choice questions is random between the two workers.

- False
 - True
-

The worker who answers more multiple-choice questions correctly receives \$6 USD for the assignment while the other worker receives \$0 USD for the assignment.

- False
 - True
-

The workers do not know whether they or the other worker answered more multiple-choice questions correctly.

- False
 - True
-

Next page:

You have passed the comprehension quiz.

Before making your decision, **you have the chance to learn whether the sets of multiple-choice questions were different for the two workers**. But you have to work on another assignment in order to obtain this information.

If you decide to work on that assignment, on the next page your task will be to find a 3-digit code correctly among a matrix (of a total of 289 numbers) of 3-digit codes in random order. The assigned code will appear multiple times in the same matrix and you will score 1 point for each correct marking. You will lose 1 point if you check off a wrong code. **If your accumulated points are 20 or higher (the maximum possible score is 33), you will learn whether the number of available multiple-choice questions were different for the two workers.**

On the other hand,..you can skip this 3-digit code task and go straight to making your redistribution decision. Now please choose one option.

- Go directly to the page about the redistribution decision
- Go to the 3-digit code task to try to learn the information

Next page (if they choose to do the number-checking task; skip this page if not):

The code you must check off is: 241. Tick the box to the left of the number.

- 407 221 622 314 883 603 574 989 205 234
- 743 365 891 410 879 241 340 954 641 241
- 602 882 180 873 965 446 876 308 172 241
- 537 347 833 674 241 566 701 354 661 268
- 144 375 173 241 678 241 966 606 527 170
- 435 917 938 508 850 241 405 695 840 654
- 265 330 926 634 674 358 843 784 637 431
- 689 602 108 187 474 540 280 882 464 884
- 617 241 537 205 749 388 495 160 258 317
- 809 723 801 273 218 241 191 372 783 702
- 350 618 459 241 602 518 545 730 241 809
- 948 943 816 395 975 711 121 389 912 583
- 408 416 241 919 891 241 477 546 925 495
- 764 572 241 809 567 380 234 334 124 777
- 220 874 241 241 533 604 241 360 900 674
- 881 806 980 743 554 589 494 527 130 926
- 149 274 843 998 674 241 290 241 796 707
- 559 818 233 241 354 881 615 596 307 235
- 538 241 524 274 334 341 859 807 543 377
- 241 979 241 337 628 590 757 233 140 241
- 914 609 585 391 778 300 393 247 968 739
- 942 858 361 924 269 197 729 265 241 842
- 146 522 997 648 144 744 241 388 494 447
- 241 265 542 456 751 213 560 210 454 549
- 795 121 932 241 630 163 759 427 749 225
- 705 340 241 623 795 303 472 942 957 355
- 763 922 550 241 241 578 653 216 775 906
- 241 219 293 216 223 241 809 510 174 605
- 303 723 661 355 874 971 555 810 703

Next page (if they succeed in passing the number-checking task, they will see the information):

Your score is 21, which is no less than 20.

Now you learn the sets of multiple-choice questions that worker A and worker B worked on **were indeed different**.

Worker A had the opportunity to work on all the multiple-choice questions worker B had access to, plus additional multiple-choice questions. Worker A and B were not specifically informed that their sets of multiple-choice questions were different.

For your reference, below are the same exact information you read on the first page (before the comprehension quiz), along with the opportunity to make your decision.

{Same copy of the instructions. Omitted here.}

Now, you learn that **worker A answered more questions correctly and earned 6 USD. Thus, worker B earned nothing for the assignment.**

Please state which of the following alternatives you choose:

I do not redistribute

- Worker A is paid 6 USD and worker B is paid 0 USD.

I do redistribute

- Worker A is paid 5 USD and worker B is paid 1 USD.
 Worker A is paid 4 USD and worker B is paid 2 USD.
 Worker A is paid 3 USD and worker B is paid 3 USD.
 Worker A is paid 2 USD and worker B is paid 4 USD.
 Worker A is paid 1 USD and worker B is paid 5 USD.
 Worker A is paid 0 USD and worker B is paid 6 USD.

E.2. Workers – Main experiment

General information

Thank you for your interest in our academic study! Please read the instructions on the following pages carefully.

Participation in this study is entirely voluntary. Should you wish to stop your participation at any time, you can simply close your browser window. Your information and survey responses collected in this study are for research purposes only. We will only use your Worker ID to assign payments and check that you have not participated in this experiment before. Any identifying information associated with your responses will remain anonymous and confidential in the reporting of the study's results.

Note that we can only offer rewards to participants who successfully complete the task by providing their MTurk ID at the end of the questionnaire. You will be paid a fixed participation fee of 2 USD, and depending on the choices made by you and other participants, you might earn additional money. You will be given detailed instructions on the screen before each part of the experiment.

The assignment is expected to take a little over 10 minutes of your time, however you will have up to 20 minutes to complete it and enter your completion code in the MTurk window. Should any question or concern arise, you can contact the investigators at espel.mturk@gmail.com

Further instructions will be provided on the next page. If you agree to participate, please select 'I agree'. I have read and understood the above and I consent to participate in this study:

- I agree
- I do not agree

Captcha verification

Before proceeding to the task, please complete the Captcha below to help ensure you are a real participant.

I'm not a robot 
reCAPTCHA
Privacy - Terms

Next page:

Before we begin our main task, on the next page you will be asked to read a short story about a potential real world scenario, and select the option which best represents your opinion about it.

Next page (each worker sees one of the following six scenarios):

{Merit-Training Scenario}

Two workers named Jim and Bill, at a company called Generic Inc., participate in the exact same training program prior to taking their certification test.

Jim obtained a high score on the test, while Bill obtained a moderately passing score. Note that both workers passed the certification test.

Generic Inc. awards a bonus of \$600 USD to Jim for his high score obtained on the certification test, while Bill does not receive any bonus.

Suppose you were in a position to potentially reallocate the \$600 bonus between the two workers.

Would you reallocate, and if so, how?

I would not reallocate:

- Jim is awarded a bonus of \$600 and Bill is awarded a bonus of \$0

I would reallocate, and my preferred reallocation can be best approximated as:

- Jim is awarded a bonus of \$500 and Bill is awarded a bonus of \$100
- Jim is awarded a bonus of \$400 and Bill is awarded a bonus of \$200
- Jim is awarded a bonus of \$300 and Bill is awarded a bonus of \$300
- Jim is awarded a bonus of \$200 and Bill is awarded a bonus of \$400
- Jim is awarded a bonus of \$100 and Bill is awarded a bonus of \$500
- Jim is awarded a bonus of \$0 and Bill is awarded a bonus of \$600

{Merit-Department Scenario}

Two workers named Jim and Bill, are of identical skill and training levels, at the same company, Generic Inc. They work in the same department, and have the exact same working conditions and client base.

Jim completed a high number of reports, while Bill completed a moderate number of reports.

Due to Jim' s high number of reports completed, Generic Inc. awarded a bonus of \$600 to Jim, while Bill did not receive any bonus.

Suppose you were in a position to potentially reallocate the \$600 bonus between the two workers.

Would you reallocate, and if so, how?

I would not reallocate:

- Jim is awarded a bonus of \$600 and Bill is awarded a bonus of \$0

I would reallocate, and my preferred reallocation can be best approximated as:

- Jim is awarded a bonus of \$500 and Bill is awarded a bonus of \$100
- Jim is awarded a bonus of \$400 and Bill is awarded a bonus of \$200
- Jim is awarded a bonus of \$300 and Bill is awarded a bonus of \$300
- Jim is awarded a bonus of \$200 and Bill is awarded a bonus of \$400
- Jim is awarded a bonus of \$100 and Bill is awarded a bonus of \$500
- Jim is awarded a bonus of \$0 and Bill is awarded a bonus of \$600

{Random-Training Scenario}

Two workers named Jim and Bill at a company called Generic Inc., participate in training programs prior to taking their certification test.

An external training company offered a small number of slots for their *new and improved* training program to several local companies, including Generic Inc.

Generic Inc. decided to give out their limited slots for the new and improved program to their own employees randomly, based on employees' birthdates.

Jim was randomly selected to attend the new and improved training program, and thus obtained a high score on the certification test. Bill was not randomly selected for the improved training program, and only attended the ordinary training program. He obtained a moderately passing score on the certification test.

Note that both workers worked equally hard in their respective training programs and both workers did pass the certification test.

Generic Inc. awards a bonus of \$600 USD to Jim for his high score obtained on the certification test, while Bill does not receive any bonus.

Suppose you were in a position to potentially reallocate the \$600 bonus between the two workers.

Would you reallocate, and if so, how?

I would not reallocate:

- Jim is awarded a bonus of \$600 and Bill is awarded a bonus of \$0

I would reallocate, and my preferred reallocation can be best approximated as:

- Jim is awarded a bonus of \$500 and Bill is awarded a bonus of \$100
- Jim is awarded a bonus of \$400 and Bill is awarded a bonus of \$200
- Jim is awarded a bonus of \$300 and Bill is awarded a bonus of \$300
- Jim is awarded a bonus of \$200 and Bill is awarded a bonus of \$400
- Jim is awarded a bonus of \$100 and Bill is awarded a bonus of \$500
- Jim is awarded a bonus of \$0 and Bill is awarded a bonus of \$600

{Random-Department Scenario}

Two workers, Jim and Bill, are of identical skill and training levels at the same company, Generic Inc.

In their employment assignments, Jim and Bill have been randomly placed into different departments based on their employee ID numbers. Jim was placed into the Acquisitions Department, which serves an especially large client base. Jim was placed into the Regional Department, which serves only a moderate-sized client base.

Due to the large client base in his department, Jim was able to complete a high number of reports. Given the moderate-sized client base in his department, Bill was able to complete a moderate number of reports. However, both Jim and Bill were equally willing to do the work of completing reports.

Due to Jim' s high number of reports completed, the company awarded a bonus of \$600 to Jim, while Bill did not receive any bonus.

Suppose you were in a position to potentially reallocate the \$600 bonus between the two workers.

Would you reallocate, and if so, how?

I would not reallocate:

- Jim is awarded a bonus of \$600 and Bill is awarded a bonus of \$0

I would reallocate, and my preferred reallocation can be best approximated as:

- Jim is awarded a bonus of \$500 and Bill is awarded a bonus of \$100
- Jim is awarded a bonus of \$400 and Bill is awarded a bonus of \$200
- Jim is awarded a bonus of \$300 and Bill is awarded a bonus of \$300
- Jim is awarded a bonus of \$200 and Bill is awarded a bonus of \$400
- Jim is awarded a bonus of \$100 and Bill is awarded a bonus of \$500
- Jim is awarded a bonus of \$0 and Bill is awarded a bonus of \$600

{Info-Training Scenario}

Two workers named Jim and Bill, at a company Generic Inc., participate in a training program prior to taking their certification test.

An external training company offered a small number of slots for their *new and improved* training program to several local companies, including Generic Inc.

Generic Inc. decided to give out their limited slots for the new and improved program to their own employees randomly, based on employees' birthdates.

There is a possibility that Jim and Bill attended different training programs.
In particular, it is possible that one of them attended the new and improved training program, while the other could only attend the ordinary training program.

It turns out that Jim obtained a high score on the test, while Bill obtained a moderately passing score. Note that both workers did pass the certification test.

However, their manager does not actually know whether one of the workers in fact attended the new and improved training program.

The company has a fund available to award a bonus of \$600 USD to workers who score high on the certification test, such as Jim. However, the decision about whether and how much bonus to award to workers is up to the manager.

When you think about this scenario as applied to most workplaces, what percent of managers do you think will check the training program history of the workers before deciding about how to award the bonus?

- 0 percent of managers
- Above 0 percent but below 20% of managers
- At least 20% but below 40% of managers
- At least 40% but below 60% of managers
- At least 60% but below 80% of managers
- At least 80% of managers

{Info-Department Scenario}

Two workers named Jim and Bill, at a company Generic Inc., are of identical skill and training levels at the same company.

In their employment assignment, they have been randomly placed into departments within the company based on their employee ID numbers. It turns out that Jim has completed a large number of reports, while Bill has completed a moderate number of reports.

There is a possibility that Jim and Bill were assigned to different departments, which have different sized client bases.

The size of a department' s client base has the potential to affect each worker' s number of reports that they have the opportunity to complete, even if Jim and Bill are both equally willing to do the work.

The company has a fund available to award a bonus of \$600 USD to workers who complete a high number of reports, such as Jim. However, the decision about whether and how much bonus to award to workers is up to the manager.

When you think about this scenario as applied to most workplaces, what percent of managers do you think will check the department assignments of the workers before deciding about how to award the bonus?

- 0 percent of managers
- Above 0 percent but below 20% of managers
- At least 20% but below 40% of managers
- At least 40% but below 60% of managers
- At least 60% but below 80% of managers
- At least 80% of managers

Next page:

Instructions - Part 1

On the next page, you will be asked to read a short passage about earthworms, for up to 5 minutes.

You will then be asked to answer a series of multiple-choice questions, followed by a short survey. You will be informed about the number of questions you answered correctly before the end of the task.

[Protocol for workers in the Luck treatment]

Next page (all workers received highly-relevant learning materials):

Please read the following passage carefully. You have up to 5 minutes.

Earthworms are night creatures that eat dirt and build tunnels in the soil. In one night, an earthworm can eat up to 1/3 of its own body weight. Earthworms deposit nutrients to the soil from their waste, called castings, which are effective fertilizer.

Earthworms are invertebrates and can live up to 6 years. An earthworm's body is made up of more than 100 ring shaped parts that bend and stretch as they move. Their bodies have small bristles to help them grip the ground. As earthworms move or dig, they leave a mucus trail behind them which hardens, serving as the walls of the tunnels they dig.

Earthworms breathe directly through their skin. They cannot survive fully underwater, or in overly dry conditions. Earthworms do not have ears or eyes, but can sense movements in the ground and light via their skin.

Baby worms stay in their cocoon for weeks to months, and come out when the soil is warm and wet enough for survival. Moles, rats, fish and toads are among the animals that eat earthworms.

Next page (all workers received the full set of test questions):

QUIZ: Please choose the answer to each multiple choice question to the best of your ability based on the earlier passage you have read. You will have 5 minutes to complete the multiple choice questions.

1. Which of the following are activities of earthworms?

- Building tunnels in the soil
- Trapping their prey
- Slithering in the rain
- Underwater swimming

2. What purpose do the bristles attached to earthworms' bodies serve?

- Help them sense danger
- Help them grip the ground
- Help them seek mates
- Help them digest food

3. What can earthworm waste be used for?

- Birdfeed
- Insect repellent
- Fertilizer
- A type of traditional medicine

4. What are earthworms' bodies made of?

- Ring shaped parts that bend and stretch
- Tiny scales similar to those of a snake
- Elastic stripes
- A rubber-like substance

5. Earthworms mainly eat:

- Dirt
- Small insects
- Moss or other plants
- Micro-organisms

6. Approximately how many ring-shaped parts is an earthworm's body made of?

- More than 20
- More than 50
- More than 100
- More than 1000

7. An earthworm can live up to

- 60 days
- 9 months
- 2 years
- 6 years

8. The mucus trail that earthworms leave behind when they move serves which purpose?

- To mark their territory
 - To attract a mate
 - To create walls for the tunnels they dig
 - To confuse their predators
-

9. How long do baby worms stay in their cocoons?

- A few days at most
 - Weeks to months
 - The better part of a year
 - Over one year
-

10. How do earthworms breathe?

- Through their skin
 - Through their nose
 - Through their mouth
 - Through their bristles
-

11. Which of the following are conditions in which earthworms can survive best?

- Warm and wet
 - Cool and dry
 - Underwater
 - Warm and dry
-

12. How do earthworms typically sense light?

- Through their bristles
 - Through their skin
 - Via infrared
 - Earthworms do not sense light but rely on sonar
-

13. What is earthworm waste typically called?

- Earthworm feces
 - Castings
 - Casings
 - Pellets
-

14. Which of the following are earthworm predators?

- Moles, rats, fish and toads
 - Rats, fish, hawks and spiders
 - Rats, toads, humans and gophers
 - Toads, gophers, spiders and humans
-

15. How much can an earthworm eat in one night?

- Twice its own body weight
- 1/3 its own body weight
- 1/10 its own body weight
- A quarter of a pound

Next page (instructions on a third party's role in redistribution):

Instructions - Part 2

We will now explain how you will get paid for your work completed in Part 1. We will pair you with another participant who has completed our task. The payment to you and your paired participant is determined by a two-stage procedure as follows:

First step:

Your temporary bonus earnings are determined by a lottery. One of you will be randomly selected to have temporary earnings of 6 USD while the other will have zero temporary earnings.

Second step:

- A randomly selected third person (also a participant in this study) will be given an opportunity to redistribute the temporary earnings between you and your paired participant. This third person will not know the identity of either you or the other participant, but they will be informed about the nature of the work and your **First step** temporary earnings for this work.
 - If the third person chooses not to redistribute, each of you will be paid your final earnings according to the **First step** temporary earnings.
 - If the third person chooses to redistribute, they can readjust your temporary earnings and that of your paired participant, with 1 USD as the smallest unit of adjustment. Your final earnings will be determined by their readjustment.

You will receive your fixed participation fee of 2 USD within three days, as well as any additional payment you gained based on the above described procedure within seven days.

[Protocol for workers in the Merit treatment]

Next page (all workers received highly-relevant learning materials):

Same one on page 48.

Next page (all workers received the full set of test questions):

Same one on pages 49-50.

Next page (instructions on a third party's role in redistribution):

Instructions - Part 2

We will now explain how you will get paid for your work completed in Part 1. We will pair you with another participant who has completed our task. The payment to you and your paired participant is determined by a two-stage procedure:

First step:

Your bonus earnings are determined by how many questions you answered correctly compared to your paired participant. The participant who has answered more questions correctly earns 6 USD while the other earns 0 USD. If both of you have answered the same number of questions correctly, you will be matched with another participant who has answered either a greater number or lesser number of questions.

Second step:

- A randomly selected third person (also a participant in this study) will be given an opportunity to redistribute the temporary earnings between you and your paired participant. This third person will not know the identity of either you or the other participant, but they will be informed about the nature of the work and your **First step** temporary earnings for this work.
 - If the third person chooses not to redistribute, each of you will be paid your final earnings according to the **First step** temporary earnings.
 - If the third person chooses to redistribute, they can readjust your temporary earnings and that of your paired participant, with 1 USD as the smallest unit of adjustment. Your final earnings will be determined by their readjustment.

You will receive your fixed participation fee of 2 USD within three days, as well as any additional payment you gained based on the above described procedure within seven days.

[Protocol for workers in the Random-Education treatment]

Next page (50% workers received highly-relevant learning materials):

Same one on page 48.

Next page (50% workers received lowly-relevant learning materials):

Please read the following passages carefully. You have up to 5 minutes.

Earthworms are creatures that build tunnels in the soil. These small creatures are a whole lot more interesting than they appear. Their bodies are made of ring shaped parts that bend and stretch as they move. This is why earthworms seem to be so flexible.

Earthworms are invertebrates, and have small bristles attached to their bodies that help them grip the ground. As they move, they leave a mucus trail behind them. This is why many people may have the impression that earthworms are slimy, as we watch them wriggle on the ground.

Earthworms cannot survive in overly dry conditions, or their bodies will tend to dry out. Although they do not have eyes or ears, they can sense movement in the ground, which is important for their survival. The waste of earthworms are effective fertilizer for soil. So we can give thanks to earthworms for helping farmers to grow the vegetables we eat each day.

Earthworms do have predators, which include rats and toads. These animals will consider earthworms to be a very satisfying and tasty meal.

Next page (all workers received the full set of test questions):

Same on pages 49-50.

Next page (instructions on a third party's role in redistribution):

Same one on page 52.

[Protocol for workers in the Random-Employment treatment]

Next page (all workers received highly-relevant learning materials):

Same one on page 48.

Next page (50% workers received the full set of test questions):

Same one on pages 49-50.

Next page (50% workers received the truncated set of test questions):

QUIZ: Please choose the answer to each multiple choice question to the best of your ability based on the earlier passage you have read. You will have 5 minutes to complete the multiple choice questions.

1. Which of the following are activities of earthworms?

- Building tunnels in the soil
 - Trapping their prey
 - Slithering in the rain
 - Underwater swimming
-

2. What purpose do the bristles attached to earthworms' bodies serve?

- Help them sense danger
 - Help them grip the ground
 - Help them seek mates
 - Help them digest food
-

3. What can earthworm waste be used for?

- Birdfeed
 - Insect repellent
 - Fertilizer
 - A type of traditional medicine
-

4. What are earthworms' bodies made of?

- Ring shaped parts that bend and stretch
- Tiny scales similar to those of a snake
- Elastic stripes
- A rubber-like substance

Next page (instructions on a third party's role in redistribution):

Same one on page 52.

[Protocol for workers in the Info-Education treatment]

80% of workers followed the same protocol as the Random-Education treatment; 20% of workers followed the same protocol as the Merit treatment. So details are omitted here.

[Protocol for workers in the Info-Employment treatment]

80% of workers followed the same protocol as the Random-Employment treatment; 20% of workers followed the same protocol as the Merit treatment. So details are omitted here.

E.3. Spectators – Follow-up experiment

General information

Thank you for your interest in our academic study! Please read the instructions on the following pages carefully.

Participation in this study is entirely voluntary. Should you wish to stop your participation at any time, you can simply close your browser window. Your information and survey responses collected in this study are for research purposes only. We will only use your Connect ID to assign payments and check that you have not participated in this experiment before. Any identifying information associated with your responses will remain anonymous and confidential in the reporting of the study's results.

Note that we can only offer rewards to participants who successfully complete the task by providing their Connect ID at the end of the questionnaire. You will be paid a fixed participation fee of \$3 USD for completing the entire assignment.

The assignment is expected to take about is expected to take between 10 to 15 minutes of your time, and due to technical reasons you must finish it in 30 minutes.

Should any question or concern arise, you can contact the investigators at sducreate@gmail.com Further instructions will be provided on the next page. If you agree to participate, please select 'I agree'.

I have read and understood the above and I consent to participate in this study:

- I agree
- I do not agree

Captcha verification

Before proceeding to the task, please complete the Captcha below to help ensure you are a real participant.

I'm not a robot


reCAPTCHA
Privacy - Terms

[Protocol for spectators in the Vary-Probability treatment]

Please read the following information carefully. There will be a comprehension quiz on the next page, and only participants who answer the quiz correctly can proceed to complete this task.

Unlike traditional survey questions that are about hypothetical situations, we now ask you to make choices that have actual consequences for real-life situations.

Two individuals, let us call them Worker A and Worker B, were recruited via an online marketplace to complete an assignment. They were first each paid a participation compensation of \$2 USD regardless of their performance on the assignment.

In the assignment, Worker A and Worker B were given 5 minutes to read the exact same learning materials of non-fictional facts about earthworms. After that, they each worked on the same set of multiple-choice questions related to the learning materials.

After completing the assignment, they were informed that their initial assignment earnings would be determined by one of the following ways:

1) By a computerized coin toss. The worker winning this coin toss would earn \$6 USD for the assignment and the other worker would earn nothing for the assignment. The workers would not be informed about which of them won the coin toss.

2) By performance. The worker that answers more questions correctly would earn \$6 USD for the assignment, and the other worker would earn nothing for the assignment. The workers would not be informed about which of them answered more questions correctly.

However, Worker A and Worker B were also informed that a third person would be told about their assignment as well as which worker answered more questions correctly. This third person would furthermore be given the opportunity to redistribute the earnings between the two workers, and thus determine how much they were finally paid for the assignment.

You are the third person and we now want you to choose whether and how to redistribute the earnings for the assignment between Worker A and Worker B.

You will make this decision for seven different pairs of workers (generically referred to as Worker A and Worker B) in seven different scenarios. One of the worker pairs described in the scenarios will be randomly selected to have your decision actually implemented. What this means is that one of your decisions will actually be implemented, and therefore you should make all of your choices carefully.

In each scenario, you may not know for sure whether it was luck or performance that caused a worker to earn \$6 USD or nothing. However, you will be told the probability (in other words, the chance or likelihood) that it was workers' performances that determined the initial earnings.

Your decisions are completely anonymous. Within a few days, Worker A and Worker B will receive the payments that you decide upon in this task.

I am ready for the comprehension quiz.

Next page:

Worker A and Worker B each read the same learning materials and worked on the same multiple-choice questions.

- True
 - False
-

Before a third person makes any redistribution decision, if the initial earnings assignment is determined by computerized coin toss, the worker who wins the coin toss receives \$6 USD while the other worker receives \$0 USD for the assignment. Likewise, if the initial earnings assignment is determined by performance, the worker who answers more multiple-choice questions correctly receives \$6 USD while the other worker receives \$0 USD for the assignment.

- True
 - False
-

If the initial earnings assignment is determined by a computerized coin toss, the workers are not informed about the outcome of the coin toss. Likewise, if the initial earnings assignment is determined by performance, the workers do not know whether they or the other worker answered more multiple-choice questions correctly.

- True
- False

Next page:

You have passed the comprehension quiz. For your reference, below are the same exact information you read on the first page (before the comprehension quiz), along with the opportunity to make your decision.

{Same copy of the instructions. Omitted here.}

Scenario 1:

The probability (ie. chance) that the initial earnings assignment was determined by luck was 10%. The probability that the initial earnings assignment was determined by performance was 90%.

In this scenario, the actual outcome for a pair of workers was: **Worker A earned \$6 USD. Thus, Worker B earned nothing for the assignment.** This could happen (with 90% probability) because Worker A answered more questions correctly than Worker B, or (with 10% probability) due to the computerized coin toss.

Please state which of the following alternatives you choose:

I do not redistribute

- Worker A is paid \$6 USD and Worker B is paid \$0 USD.

I do redistribute

- Worker A is paid \$5 USD and Worker B is paid \$1 USD.
 Worker A is paid \$4 USD and Worker B is paid \$2 USD.
 Worker A is paid \$3 USD and Worker B is paid \$3 USD.
 Worker A is paid \$2 USD and Worker B is paid \$4 USD.
 Worker A is paid \$1 USD and Worker B is paid \$5 USD.
 Worker A is paid \$0 USD and Worker B is paid \$6 USD.

Next page:

On this page you will answer **6 more questions** that are analogous to the one that you just answered on the previous page. However, in the following questions, the probabilities that the initial earnings assignment was determined by luck versus performance differ, compared to the question you answered on the previous page. Please read each scenario carefully and make your choice for each scenario.

Scenario 2:

The probability (ie. chance) that the initial earnings assignment was determined by luck was 0%. The probability that the initial earnings assignment was determined by performance was 100%.

In this scenario, the actual outcome for a pair of workers was: **Worker A earned \$6 USD. Thus, Worker B earned nothing for the assignment.** This could happen (with 100% probability) because Worker A answered more questions correctly than Worker B.

Please state which of the following alternatives you choose:

I do not redistribute

- Worker A is paid \$6 USD and Worker B is paid \$0 USD.

I do redistribute

- Worker A is paid \$5 USD and Worker B is paid \$1 USD.

- Worker A is paid \$4 USD and Worker B is paid \$2 USD.

- Worker A is paid \$3 USD and Worker B is paid \$3 USD.

- Worker A is paid \$2 USD and Worker B is paid \$4 USD.

- Worker A is paid \$1 USD and Worker B is paid \$5 USD.

- Worker A is paid \$0 USD and Worker B is paid \$6 USD.

Continued on the same page:

Scenario 3:

The probability (ie. chance) that the initial earnings assignment was determined by luck was 1%. The probability that the initial earnings assignment was determined by performance was 99%.

In this scenario, the actual outcome for a pair of workers was: **Worker A earned \$6 USD. Thus, Worker B earned nothing for the assignment.** This could happen (with 99% probability) because Worker A answered more questions correctly than Worker B, or (with 1% probability) due to the computerized coin toss.

Please state which of the following alternatives you choose:

I do not redistribute

- Worker A is paid \$6 USD and Worker B is paid \$0 USD.

I do redistribute

- Worker A is paid \$5 USD and Worker B is paid \$1 USD.
 Worker A is paid \$4 USD and Worker B is paid \$2 USD.
 Worker A is paid \$3 USD and Worker B is paid \$3 USD.
 Worker A is paid \$2 USD and Worker B is paid \$4 USD.
 Worker A is paid \$1 USD and Worker B is paid \$5 USD.
 Worker A is paid \$0 USD and Worker B is paid \$6 USD.

Continued on the same page:

Scenario 4:

The probability (ie. chance) that the initial earnings assignment was determined by luck was 50%. The probability that the initial earnings assignment was determined by performance was 50%.

In this scenario, the actual outcome for a pair of workers was: **Worker A earned \$6 USD. Thus, Worker B earned nothing for the assignment.** This could happen (with 50% probability) because Worker A answered more questions correctly than Worker B, or (with 50% probability) due to the computerized coin toss.

Please state which of the following alternatives you choose:

I do not redistribute

- Worker A is paid \$6 USD and Worker B is paid \$0 USD.

I do redistribute

- Worker A is paid \$5 USD and Worker B is paid \$1 USD.
 Worker A is paid \$4 USD and Worker B is paid \$2 USD.
 Worker A is paid \$3 USD and Worker B is paid \$3 USD.
 Worker A is paid \$2 USD and Worker B is paid \$4 USD.
 Worker A is paid \$1 USD and Worker B is paid \$5 USD.
 Worker A is paid \$0 USD and Worker B is paid \$6 USD.

Continued on the same page:

Scenario 5:

The probability (ie. chance) that the initial earnings assignment was determined by luck was 90%. The probability that the initial earnings assignment was determined by performance was 10%.

In this scenario, the actual outcome for a pair of workers was: **Worker A earned \$6 USD. Thus, Worker B earned nothing for the assignment.** This could happen (with 10% probability) because Worker A answered more questions correctly than Worker B, or (with 90% probability) due to the computerized coin toss.

Please state which of the following alternatives you choose:

I do not redistribute

- Worker A is paid \$6 USD and Worker B is paid \$0 USD.

I do redistribute

- Worker A is paid \$5 USD and Worker B is paid \$1 USD.
 Worker A is paid \$4 USD and Worker B is paid \$2 USD.
 Worker A is paid \$3 USD and Worker B is paid \$3 USD.
 Worker A is paid \$2 USD and Worker B is paid \$4 USD.
 Worker A is paid \$1 USD and Worker B is paid \$5 USD.
 Worker A is paid \$0 USD and Worker B is paid \$6 USD.

Continued on the same page:

Scenario 6:

The probability (ie. chance) that the initial earnings assignment was determined by luck was 99%. The probability that the initial earnings assignment was determined by performance was 1%.

In this scenario, the actual outcome for a pair of workers was: **Worker A earned \$6 USD. Thus, Worker B earned nothing for the assignment.** This could happen (with 1% probability) because Worker A answered more questions correctly than Worker B, or (with 99% probability) due to the computerized coin toss.

Please state which of the following alternatives you choose:

I do not redistribute

- Worker A is paid \$6 USD and Worker B is paid \$0 USD.

I do redistribute

- Worker A is paid \$5 USD and Worker B is paid \$1 USD.
 Worker A is paid \$4 USD and Worker B is paid \$2 USD.
 Worker A is paid \$3 USD and Worker B is paid \$3 USD.
 Worker A is paid \$2 USD and Worker B is paid \$4 USD.
 Worker A is paid \$1 USD and Worker B is paid \$5 USD.
 Worker A is paid \$0 USD and Worker B is paid \$6 USD.

Continued on the same page:

Scenario 7:

The probability (ie. chance) that the initial earnings assignment was determined by luck was 100%. The probability that the initial earnings assignment was determined by performance was 0%.

In this scenario, the actual outcome for a pair of workers was: **Worker A earned \$6 USD. Thus, Worker B earned nothing for the assignment.** This could happen (with 100% probability) due to the computerized coin toss.

Please state which of the following alternatives you choose:

I do not redistribute

- Worker A is paid \$6 USD and Worker B is paid \$0 USD.

I do redistribute

- Worker A is paid \$5 USD and Worker B is paid \$1 USD.
 Worker A is paid \$4 USD and Worker B is paid \$2 USD.
 Worker A is paid \$3 USD and Worker B is paid \$3 USD.
 Worker A is paid \$2 USD and Worker B is paid \$4 USD.
 Worker A is paid \$1 USD and Worker B is paid \$5 USD.
 Worker A is paid \$0 USD and Worker B is paid \$6 USD.

[Protocol for spectators in the Vary-Education treatment]

*Please read the following information carefully. There will be a comprehension quiz on the next page, and **only participants who answer the quiz correctly can proceed to complete this task.***

Unlike traditional survey questions that are about hypothetical situations, we now ask you to make choices that have actual consequences for real-life situations.

Two individuals, let us call them Worker A and Worker B, were recruited via an online marketplace to complete an assignment. They were first each paid a participation compensation of \$2 USD regardless of their performance on the assignment.

In the assignment, Worker A and Worker B were given 5 minutes to read some learning materials of non-fictional facts about earthworms. After that, they each worked on the same set of multiple-choice questions related to the learning materials. **The learning materials that Worker A and Worker B had read were randomly assigned and the contents of the learning materials might be different from one another (but with the same length).**

The learning materials that **Worker A had read contain all the relevant information** to answer all the multiple-choice questions correctly that he/she later worked on, while the learning materials that **Worker B had read may only contain a limited set of information relevant** to the multiple-choice questions. Worker A and B were not informed specifically about whether or not the learning materials were different for the other worker.

After completing the assignment, they were informed that **their initial earnings from the assignment would be determined by the number of questions they answered correctly**. Specifically, the worker that answered more questions correctly would earn \$6 USD for the assignment, and the other worker would earn nothing for the assignment. The workers were not informed about which of them answered more questions correctly.

However, Worker A and Worker B were informed that a third person would be told about the assignment and which worker answered more questions correctly. This third person would furthermore be given the opportunity to redistribute the earnings and thus determine how much each of the two workers were finally paid for the assignment.

You are the third person and we now want you to choose whether and how to redistribute the earnings for the assignment between Worker A and Worker B.

You will make this decision for seven different pairs of workers (generically referred to as Worker A and Worker B) in seven different scenarios. One of the worker pairs described in the scenarios will be randomly selected to have your decision actually implemented. What this means is that one of your decisions will actually be implemented, and therefore you should make all of your choices carefully.

Your decision is completely anonymous. Within a few days, Worker A and Worker B will receive the payments that you decide upon in this task.

- I am ready for the comprehension quiz.

Next page:

One worker receives the highly relevant learning materials, while the other worker may receive the less relevant learning materials. The assignment of the learning materials is random between the two workers.

- False
 - True
-

Before a third person makes any redistribution decision, the worker who answers more multiple-choice questions correctly receives \$6 USD for the assignment while the other worker receives \$0 USD for the assignment.

- True
 - False
-

The workers do not know whether they or the other worker answered more multiple-choice questions correctly.

- True
- False

Next page:

You have passed the comprehension quiz. For your reference, below are the same exact information you read on the first page (before the comprehension quiz), along with the opportunity to make your decision.

{Same copy of the instructions. Omitted here.}

Scenario 1:

Worker A's reading materials contain all of the relevant information to answer the 15 questions correctly. Worker B's reading materials only contain information to answer 4 out of the 15 questions correctly.

Please use the slider to answer the following question: Suppose there are 100 such pairs of workers as described above. In how many pairs (out of the 100) do you think that Worker B actually performs better than Worker A?

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

Your guess for the number of pairs (out of 100) in which Worker B outperforms Worker A



In this scenario, the actual outcome for a pair of workers was: **Worker A answered more questions correctly and earned \$6 USD. Thus, Worker B earned nothing for the assignment.**

Please state which of the following alternatives you choose:

I do not redistribute

- Worker A is paid \$6 USD and Worker B is paid \$0 USD.

I do redistribute

- Worker A is paid \$5 USD and Worker B is paid \$1 USD.
 Worker A is paid \$4 USD and Worker B is paid \$2 USD.
 Worker A is paid \$3 USD and Worker B is paid \$3 USD.
 Worker A is paid \$2 USD and Worker B is paid \$4 USD.
 Worker A is paid \$1 USD and Worker B is paid \$5 USD.
 Worker A is paid \$0 USD and Worker B is paid \$6 USD.

Next page:

On this page you will answer 6 more questions that are analogous to the one that you just answered on the previous page. However, in the following questions, the number of questions that Worker A and Worker B can answer correctly based on the reading materials that they were assigned differ, compared to the question you answered on the previous page. Please read each scenario carefully and make your choice for each scenario.

Scenario 2:

Worker A's reading materials contain all of the relevant information to answer the 15 questions correctly. Worker B's reading materials do not contain any information to answer any of the 15 questions correctly.

Please use the slider to answer the following question: Suppose there are 100 such pairs of workers as described above. In how many pairs (out of the 100) do you think that Worker B actually performs better than Worker A?

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

Your guess for the number of pairs (out of 100) in which Worker B outperforms Worker A



In this scenario, the actual outcome for a pair of workers was: **Worker A** answered more questions correctly and earned \$6 USD. Thus, **Worker B** earned nothing for the assignment.

Please state which of the following alternatives you choose:

I do not redistribute

- Worker A is paid \$6 USD and Worker B is paid \$0 USD.

I do redistribute

- Worker A is paid \$5 USD and Worker B is paid \$1 USD.
 Worker A is paid \$4 USD and Worker B is paid \$2 USD.
 Worker A is paid \$3 USD and Worker B is paid \$3 USD.
 Worker A is paid \$2 USD and Worker B is paid \$4 USD.
 Worker A is paid \$1 USD and Worker B is paid \$5 USD.
 Worker A is paid \$0 USD and Worker B is paid \$6 USD.

Continued on the same page:

Scenario 3:

Worker A's reading materials contain all of the relevant information to answer the 15 questions correctly. Worker B's reading materials only contain information to answer 1 out of the 15 questions correctly.

Please use the slider to answer the following question: Suppose there are 100 such pairs of workers as described above. In how many pairs (out of the 100) do you think that Worker B actually performs better than Worker A?

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

Your guess for the number of pairs (out of 100) in which Worker B outperforms Worker A



In this scenario, the actual outcome for a pair of workers was: **Worker A answered more questions correctly and earned \$6 USD. Thus, Worker B earned nothing for the assignment.**

Please state which of the following alternatives you choose:

I do not redistribute

- Worker A is paid \$6 USD and Worker B is paid \$0 USD.

I do redistribute

- Worker A is paid \$5 USD and Worker B is paid \$1 USD.
 Worker A is paid \$4 USD and Worker B is paid \$2 USD.
 Worker A is paid \$3 USD and Worker B is paid \$3 USD.
 Worker A is paid \$2 USD and Worker B is paid \$4 USD.
 Worker A is paid \$1 USD and Worker B is paid \$5 USD.
 Worker A is paid \$0 USD and Worker B is paid \$6 USD.

Continued on the same page:

Scenario 4:

Worker A's reading materials contain all of the relevant information to answer the 15 questions correctly. Worker B's reading materials only contain information to answer 7 out of the 15 questions correctly.

Please use the slider to answer the following question: Suppose there are 100 such pairs of workers as described above. In how many pairs (out of the 100) do you think that Worker B actually performs better than Worker A?

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

Your guess for the number of pairs (out of 100) in which Worker B outperforms Worker A



In this scenario, the actual outcome for a pair of workers was: **Worker A answered more questions correctly and earned \$6 USD. Thus, Worker B earned nothing for the assignment.**

Please state which of the following alternatives you choose:

I do not redistribute

- Worker A is paid \$6 USD and Worker B is paid \$0 USD.

I do redistribute

- Worker A is paid \$5 USD and Worker B is paid \$1 USD.
 Worker A is paid \$4 USD and Worker B is paid \$2 USD.
 Worker A is paid \$3 USD and Worker B is paid \$3 USD.
 Worker A is paid \$2 USD and Worker B is paid \$4 USD.
 Worker A is paid \$1 USD and Worker B is paid \$5 USD.
 Worker A is paid \$0 USD and Worker B is paid \$6 USD.

Continued on the same page:

Scenario 5:

Worker A's reading materials contain all of the relevant information to answer the 15 questions correctly. Worker B's reading materials only contain information to answer 11 out of the 15 questions correctly.

Please use the slider to answer the following question: Suppose there are 100 such pairs of workers as described above. In how many pairs (out of the 100) do you think that Worker B actually performs better than Worker A?

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

Your guess for the number of pairs (out of 100) in which Worker B outperforms Worker A



In this scenario, the actual outcome for a pair of workers was: **Worker A answered more questions correctly and earned \$6 USD. Thus, Worker B earned nothing for the assignment.**

Please state which of the following alternatives you choose:

I do not redistribute

- Worker A is paid \$6 USD and Worker B is paid \$0 USD.

I do redistribute

- Worker A is paid \$5 USD and Worker B is paid \$1 USD.
 Worker A is paid \$4 USD and Worker B is paid \$2 USD.
 Worker A is paid \$3 USD and Worker B is paid \$3 USD.
 Worker A is paid \$2 USD and Worker B is paid \$4 USD.
 Worker A is paid \$1 USD and Worker B is paid \$5 USD.
 Worker A is paid \$0 USD and Worker B is paid \$6 USD.

Continued on the same page:

Scenario 6:

Worker A's reading materials contain all of the relevant information to answer the 15 questions correctly. Worker B's reading materials only contain information to answer 14 out of the 15 questions correctly.

Please use the slider to answer the following question: Suppose there are 100 such pairs of workers as described above. In how many pairs (out of the 100) do you think that Worker B actually performs better than Worker A?

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

Your guess for the number of pairs (out of 100) in which Worker B outperforms Worker A



In this scenario, the actual outcome for a pair of workers was: **Worker A answered more questions correctly and earned \$6 USD. Thus, Worker B earned nothing for the assignment.**

Please state which of the following alternatives you choose:

I do not redistribute

- Worker A is paid \$6 USD and Worker B is paid \$0 USD.

I do redistribute

- Worker A is paid \$5 USD and Worker B is paid \$1 USD.
 Worker A is paid \$4 USD and Worker B is paid \$2 USD.
 Worker A is paid \$3 USD and Worker B is paid \$3 USD.
 Worker A is paid \$2 USD and Worker B is paid \$4 USD.
 Worker A is paid \$1 USD and Worker B is paid \$5 USD.
 Worker A is paid \$0 USD and Worker B is paid \$6 USD.

Continued on the same page:

Scenario 7:

Worker A's reading materials contain all of the relevant information to answer the 15 questions correctly. Worker B's reading materials also contain all of the relevant information to answer the 15 questions correctly.

Please use the slider to answer the following question: Suppose there are 100 such pairs of workers as described above. In how many pairs (out of the 100) do you think that Worker B actually performs better than Worker A?

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

Your guess for the number of pairs (out of 100) in which Worker B outperforms Worker A



In this scenario, the actual outcome for a pair of workers was: **Worker A answered more questions correctly and earned \$6 USD. Thus, Worker B earned nothing for the assignment.**

Please state which of the following alternatives you choose:

I do not redistribute

- Worker A is paid \$6 USD and Worker B is paid \$0 USD.

I do redistribute

- Worker A is paid \$5 USD and Worker B is paid \$1 USD.
 Worker A is paid \$4 USD and Worker B is paid \$2 USD.
 Worker A is paid \$3 USD and Worker B is paid \$3 USD.
 Worker A is paid \$2 USD and Worker B is paid \$4 USD.
 Worker A is paid \$1 USD and Worker B is paid \$5 USD.
 Worker A is paid \$0 USD and Worker B is paid \$6 USD.

[Protocol for spectators in the Vary-Employment treatment]

*Please read the following information carefully. There will be a comprehension quiz on the next page, and **only participants who answer the quiz correctly can proceed to complete this task.***

Unlike traditional survey questions that are about hypothetical situations, we now ask you to make choices that have actual consequences for a real-life situation.

Two individuals, let us call them Worker A and Worker B, were recruited via an online marketplace to complete an assignment. They were first each paid a participation compensation of \$2 USD regardless of their performance on the assignment.

In the assignment, Worker A and Worker B were given 5 minutes to read the exact same learning materials of non-fictional facts about earthworms. After that, they each worked on multiple-choice questions related to the learning materials for up to another 5 minutes.

The sets of multiple-choice questions that Worker A and Worker B worked on might be different and randomly assigned. Under this situation, Worker A had the opportunity to work on all the multiple-choice questions Worker B had access to, plus additional multiple-choice questions. Worker A and B were not specifically informed that their set of multiple-choice questions were different.

After completing the assignment, they were told that their earnings from the assignment would be determined by the number of questions they answered correctly. Specifically, the worker that answered more questions correctly would earn \$6 USD for the assignment, and the other worker would earn nothing for the assignment. The workers were not informed about which of them answered more questions correctly.

However, Worker A and Worker B were informed that a third person would be told about the assignment and which worker answered more questions correctly. This third person would be given the opportunity to redistribute the earnings and thus determine how much they were paid for the assignment.

You are the third person and we now want you to choose whether and how to redistribute the earnings for the assignment between Worker A and Worker B.

You will make this decision for seven different pairs of workers in seven different scenarios. One of the worker pairs described in the scenarios will be randomly selected to have your decision actually implemented. What this means is that one of your decisions will actually be implemented and therefore you should make all of your choices carefully.

Your decision is completely anonymous. Within a few days, Worker A and Worker B will receive the payments that you decide upon in this task.

- I am ready for the comprehension quiz.

Next page:

One worker has the opportunity to work on all the multiple-choice questions that the other worker has access to, plus additional multiple-choice questions. The assignment of the sets of multiple-choice questions is random between the two workers.

- True
 - False
-

Before a third person makes any redistribution decision, the worker who answers more multiple-choice questions correctly receives \$6 USD for the assignment while the other worker receives \$0 USD for the assignment.

- True
 - False
-

The workers do not know whether they or the other worker answered more multiple-choice questions correctly.

- False
- True

Next page:

You have passed the comprehension quiz. For your reference, below are the same exact information you read on the first page (before the comprehension quiz), along with the opportunity to make your decision.

{Same copy of the instructions. Omitted here.}

Scenario 1:

Worker A has the opportunity to work on all 15 of the multiple-choice questions. Worker B only has the opportunity to work on 4 of the multiple-choice questions.

Please use the slider to answer the following question: Suppose there are 100 such pairs of workers as described above. In how many pairs (out of the 100) do you think that Worker B actually performs better than Worker A?

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

Your guess for the number of pairs (out of 100) in which Worker B outperforms Worker A



In this scenario, the actual outcome for a pair of workers was: **Worker A answered more questions correctly and earned \$6 USD. Thus, Worker B earned nothing for the assignment.**

Please state which of the following alternatives you choose:

I do not redistribute
 Worker A is paid \$6 USD and Worker B is paid \$0 USD.

I do redistribute
 Worker A is paid \$5 USD and Worker B is paid \$1 USD.
 Worker A is paid \$4 USD and Worker B is paid \$2 USD.
 Worker A is paid \$3 USD and Worker B is paid \$3 USD.
 Worker A is paid \$2 USD and Worker B is paid \$4 USD.
 Worker A is paid \$1 USD and Worker B is paid \$5 USD.
 Worker A is paid \$0 USD and Worker B is paid \$6 USD.

Next page:

On this page you will answer **6 more questions** that are analogous to the one that you just answered on the previous page. However, in the following questions, the number of questions that Worker A and Worker B have the opportunity to work on differ, compared to the question you answered on the previous page. Please read each scenario carefully and make your choice for each scenario.

Scenario 2:

Worker A has the opportunity to work on all 15 of the multiple-choice questions. Worker B does not have the opportunity to work on any multiple-choice questions.

Please use the slider to answer the following question: Suppose there are 100 such pairs of workers as described above. In how many pairs (out of the 100) do you think that Worker B actually performs better than Worker A?

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

Your guess for the number of pairs (out of 100) in which Worker B outperforms Worker A

In this scenario, the actual outcome for a pair of workers was: **Worker A answered more questions correctly and earned \$6 USD. Thus, Worker B earned nothing for the assignment.**

Please state which of the following alternatives you choose:

I do not redistribute

- Worker A is paid \$6 USD and Worker B is paid \$0 USD.

I do redistribute

- Worker A is paid \$5 USD and Worker B is paid \$1 USD.
 Worker A is paid \$4 USD and Worker B is paid \$2 USD.
 Worker A is paid \$3 USD and Worker B is paid \$3 USD.
 Worker A is paid \$2 USD and Worker B is paid \$4 USD.
 Worker A is paid \$1 USD and Worker B is paid \$5 USD.
 Worker A is paid \$0 USD and Worker B is paid \$6 USD.

Continued on the same page:

Scenario 3:

Worker A has the opportunity to work on all 15 of the multiple-choice questions. Worker B has the opportunity to work on only 1 multiple-choice question.

Please use the slider to answer the following question: Suppose there are 100 such pairs of workers as described above. In how many pairs (out of the 100) do you think that Worker B actually performs better than Worker A?

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

Your guess for the number of pairs (out of 100) in which Worker B outperforms Worker A



In this scenario, the actual outcome for a pair of workers was: **Worker A answered more questions correctly and earned \$6 USD. Thus, Worker B earned nothing for the assignment.**

Please state which of the following alternatives you choose:

I do not redistribute

- Worker A is paid \$6 USD and Worker B is paid \$0 USD.

I do redistribute

- Worker A is paid \$5 USD and Worker B is paid \$1 USD.
 Worker A is paid \$4 USD and Worker B is paid \$2 USD.
 Worker A is paid \$3 USD and Worker B is paid \$3 USD.
 Worker A is paid \$2 USD and Worker B is paid \$4 USD.
 Worker A is paid \$1 USD and Worker B is paid \$5 USD.
 Worker A is paid \$0 USD and Worker B is paid \$6 USD.

Continued on the same page:

Scenario 4:

Worker A has the opportunity to work on all 15 of the multiple-choice questions. Worker B has the opportunity to work on only 7 of the multiple-choice questions.

Please use the slider to answer the following question: Suppose there are 100 such pairs of workers as described above. In how many pairs (out of the 100) do you think that Worker B actually performs better than Worker A?

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

Your guess for the number of pairs (out of 100) in which Worker B outperforms Worker A



In this scenario, the actual outcome for a pair of workers was: **Worker A answered more questions correctly and earned \$6 USD. Thus, Worker B earned nothing for the assignment.**

Please state which of the following alternatives you choose:

I do not redistribute

- Worker A is paid \$6 USD and Worker B is paid \$0 USD.

I do redistribute

- Worker A is paid \$5 USD and Worker B is paid \$1 USD.
 Worker A is paid \$4 USD and Worker B is paid \$2 USD.
 Worker A is paid \$3 USD and Worker B is paid \$3 USD.
 Worker A is paid \$2 USD and Worker B is paid \$4 USD.
 Worker A is paid \$1 USD and Worker B is paid \$5 USD.
 Worker A is paid \$0 USD and Worker B is paid \$6 USD.

Continued on the same page:

Scenario 5:

Worker A has the opportunity to work on all 15 of the multiple-choice questions. Worker B has the opportunity to work on only 11 of the multiple-choice questions.

Please use the slider to answer the following question: Suppose there are 100 such pairs of workers as described above. In how many pairs (out of the 100) do you think that Worker B actually performs better than Worker A?

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

Your guess for the number of pairs (out of 100) in which Worker B outperforms Worker A



In this scenario, the actual outcome for a pair of workers was: **Worker A answered more questions correctly and earned \$6 USD. Thus, Worker B earned nothing for the assignment.**

Please state which of the following alternatives you choose:

I do not redistribute

Worker A is paid \$6 USD and Worker B is paid \$0 USD.

I do redistribute

Worker A is paid \$5 USD and Worker B is paid \$1 USD.

Worker A is paid \$4 USD and Worker B is paid \$2 USD.

Worker A is paid \$3 USD and Worker B is paid \$3 USD.

Worker A is paid \$2 USD and Worker B is paid \$4 USD.

Worker A is paid \$1 USD and Worker B is paid \$5 USD.

Worker A is paid \$0 USD and Worker B is paid \$6 USD.

Continued on the same page:

Scenario 6:

Worker A has the opportunity to work on all 15 of the multiple-choice questions. Worker B has the opportunity to work on only 14 of the multiple-choice questions.

Please use the slider to answer the following question: Suppose there are 100 such pairs of workers as described above. In how many pairs (out of the 100) do you think that Worker B actually performs better than Worker A?

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

Your guess for the number of pairs (out of 100) in which Worker B outperforms Worker A



In this scenario, the actual outcome for a pair of workers was: **Worker A answered more questions correctly and earned \$6 USD. Thus, Worker B earned nothing for the assignment.**

Please state which of the following alternatives you choose:

I do not redistribute
 Worker A is paid \$6 USD and Worker B is paid \$0 USD.

I do redistribute
 Worker A is paid \$5 USD and Worker B is paid \$1 USD.
 Worker A is paid \$4 USD and Worker B is paid \$2 USD.
 Worker A is paid \$3 USD and Worker B is paid \$3 USD.
 Worker A is paid \$2 USD and Worker B is paid \$4 USD.
 Worker A is paid \$1 USD and Worker B is paid \$5 USD.
 Worker A is paid \$0 USD and Worker B is paid \$6 USD.

Continued on the same page:

Scenario 7:

Worker A has the opportunity to work on all 15 of the multiple-choice questions. Worker B also has the opportunity to work on all 15 of the multiple-choice questions.

Please use the slider to answer the following question: Suppose there are 100 such pairs of workers as described above. In how many pairs (out of the 100) do you think that Worker B actually performs better than Worker A?

0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

Your guess for the number of pairs (out of 100) in which Worker B outperforms Worker A



In this scenario, the actual outcome for a pair of workers was: **Worker A answered more questions correctly and earned \$6 USD. Thus, Worker B earned nothing for the assignment.**

Please state which of the following alternatives you choose:

I do not redistribute

- Worker A is paid \$6 USD and Worker B is paid \$0 USD.

I do redistribute

- Worker A is paid \$5 USD and Worker B is paid \$1 USD.
 Worker A is paid \$4 USD and Worker B is paid \$2 USD.
 Worker A is paid \$3 USD and Worker B is paid \$3 USD.
 Worker A is paid \$2 USD and Worker B is paid \$4 USD.
 Worker A is paid \$1 USD and Worker B is paid \$5 USD.
 Worker A is paid \$0 USD and Worker B is paid \$6 USD.

E.4. Workers – Follow-up experiment

The experimental protocol for workers in the follow-up experiment is similar to that in the main experiment. There are two main differences:

- 1) We create seven different versions of reading materials in which the number of pieces of information relevant to the multiple-choice questions is 0, 1, 4, 7, 11, 14 and 15 respectively. In particular, the version with 4 pieces of relevant information is the same one used in the Random-Education treatment of the main experiment.
- 2) We create seven different versions of multiple-choice questions in which the total number of questions is 0, 1, 4, 7, 11, 14 and 15, respectively. In particular, the version with 4 multiple-choice questions is the same one used in the Random-Employment treatment of the main experiment.

Each worker was randomly placed into one of the three treatments:

In the Vary-Probability treatments, both workers were first presented with the reading materials of maximum relevance and then requested to complete the multiple-choice questions of maximum length.

In the Vary-Education treatments, there were seven types of worker pairs. In each pair, one worker received the reading materials of maximum relevance and the other worker received one of the seven versions of reading materials. Both workers then completed the multiple-choice questions of maximum length.

In the Vary-Employment treatments, there were also seven types of worker pairs. Both workers were first presented with the reading materials of maximum relevance. Then, in each pair, one worker completed the multiple-choice questions of maximum length and the other worker completed one of the seven versions of multiple-choice questions.

Screenshots are omitted here since they are largely repetitive.