sociological science

Supplement to:

Tsvetkova, Milena, and Michael W. Macy. 2015. "The Social Contagion of Antisocial Behavior." Sociological Science 2: 36-49.

1. Game instructions

Participate in the Bonus Game

You are invited to participate in a research study on decision making called the "Bonus Game." You will receive a guaranteed $0.25 base rate if you answer a short demographic survey, read the game instructions, and complete a five-question quiz on the instructions. **If you correctly answer the quiz within three attempts, you will proceed to play the game.**

Playing the game will pay you an additional $0.50 for participation and give you the chance to earn an extra bonus of up to $0.75. The extra amount you earn depends on your own and other participants' decisions. Reading the instructions and playing the game takes about 10 minutes.

Taking part in the study is completely voluntary. If you decide to take part now, you are free to withdraw at any time.

We do not anticipate any risks to you participating in the study other than those encountered in everyday use of the Internet. Your answers will be confidential. The records of this study will be kept private; only the researchers will have access to the records. In any sort of report we make public we will not include any information that will make it possible to identify you.

If you agree to the above conditions, please accept the HIT and go to https://sdlab.soc.cornell.edu/study14/bgame/. You will need your MTurk worker ID so please copy it now (you can find it under "Your Account" tab). Once you have finished the game, you will be given a confirmation code. **In order to get paid, you need to enter the confirmation code here and then submit the HIT.**

CONFIRMATION CODE:

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If you have questions, you may contact us at mvt9@cornell.edu. If you have any questions or concerns regarding your rights as a subject in this study, you may contact the Cornell Institutional Review Board (IRB) at 607-255-5138 or access their website at http://www.irb.cornell.edu. You may also report your concerns or complaints anonymously through Ethicspoint (www.hotline.cornell.edu) or by calling toll free at 1-866-293-3077. Ethicspoint is an independent organization that serves as a liaison between the University and the person bringing the complaint so that anonymity can be ensured.

Figure A1. Recruitment HIT for the Bonus Game.

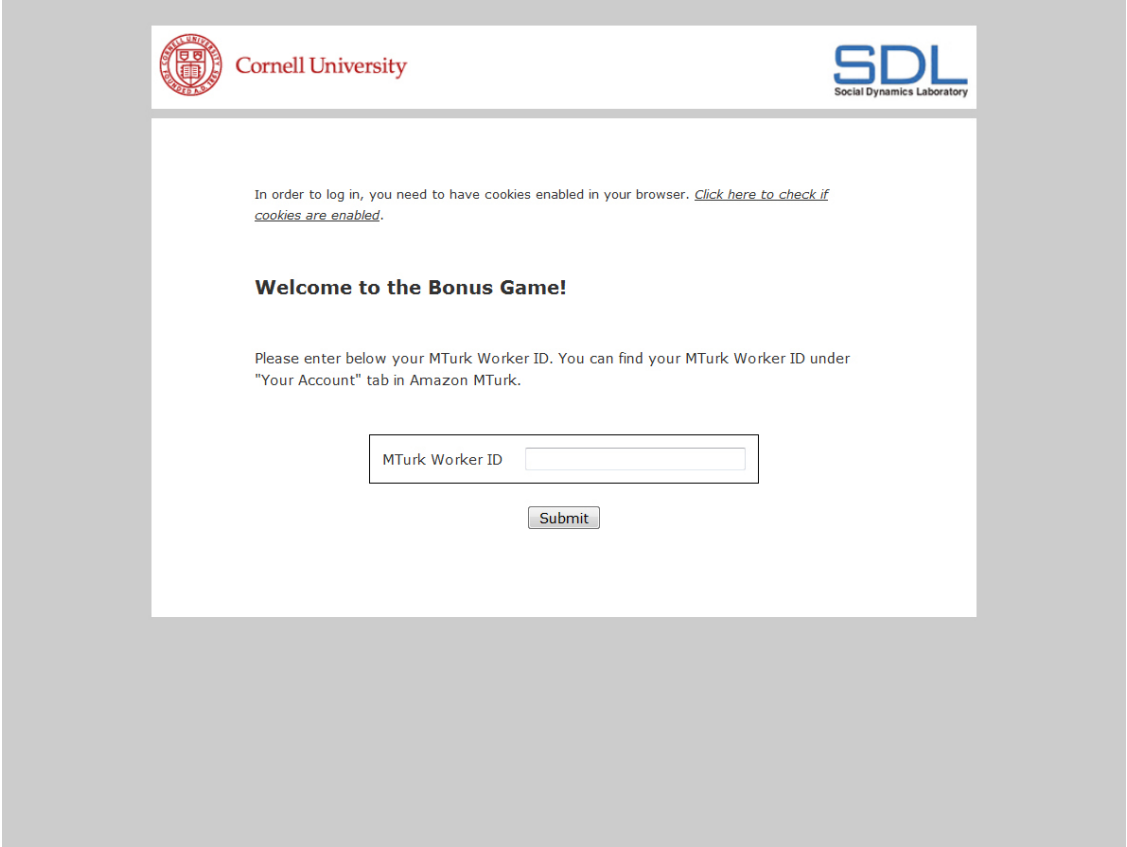

Figure A2. Login page for the Bonus Game.

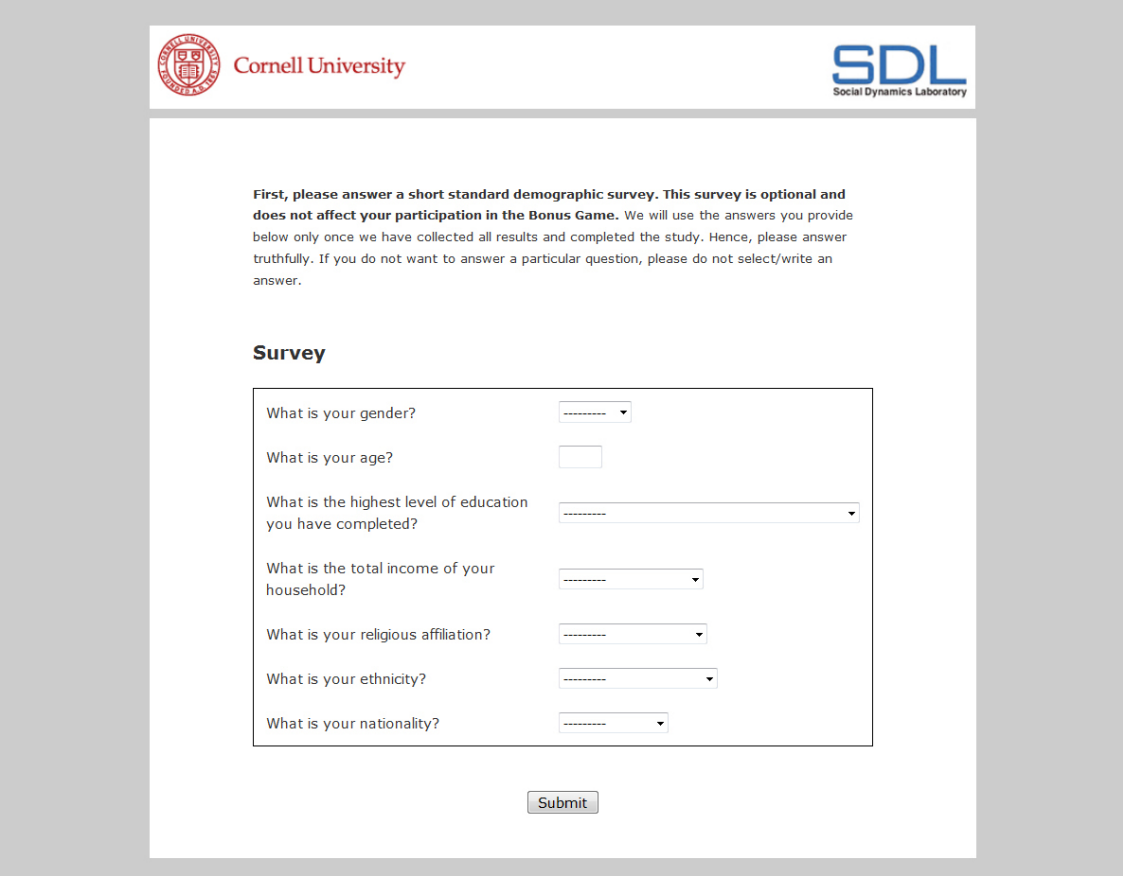

Figure A3. Survey for the Bonus Game.

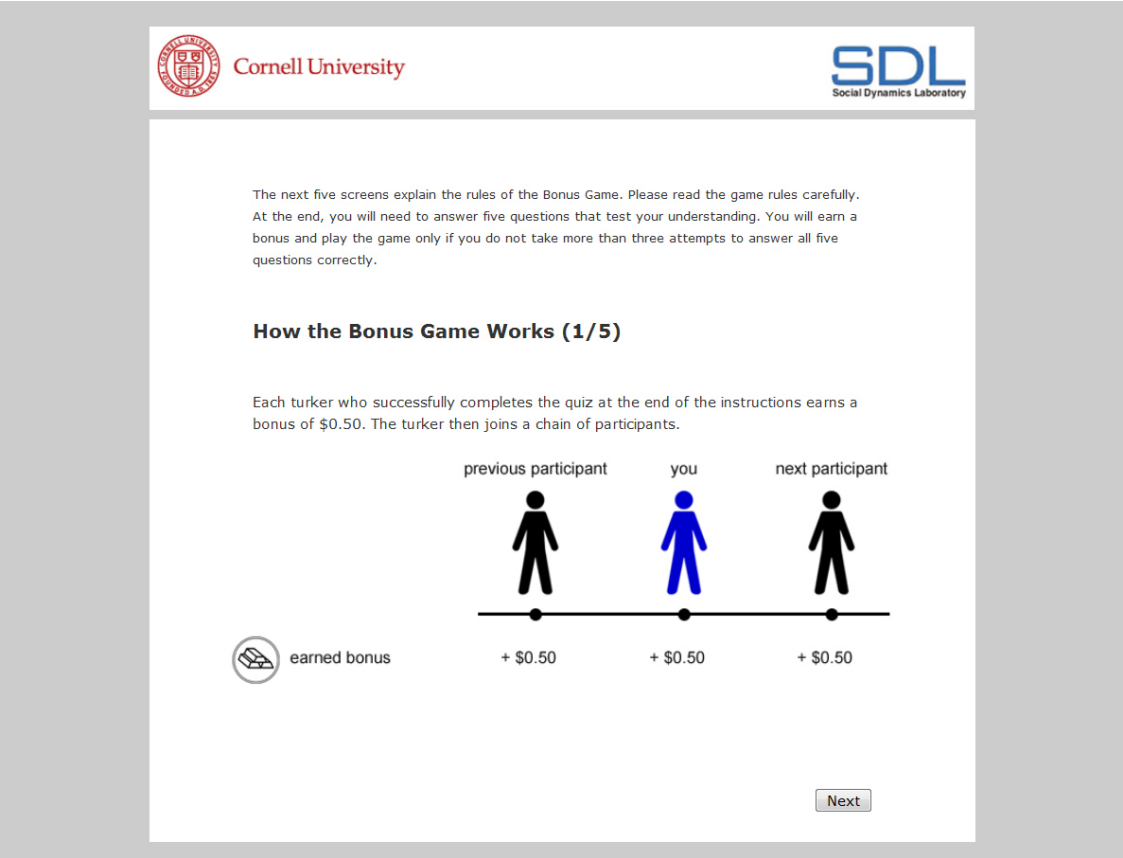

Figure A4. Page 1 of instructions for the Bonus Game.

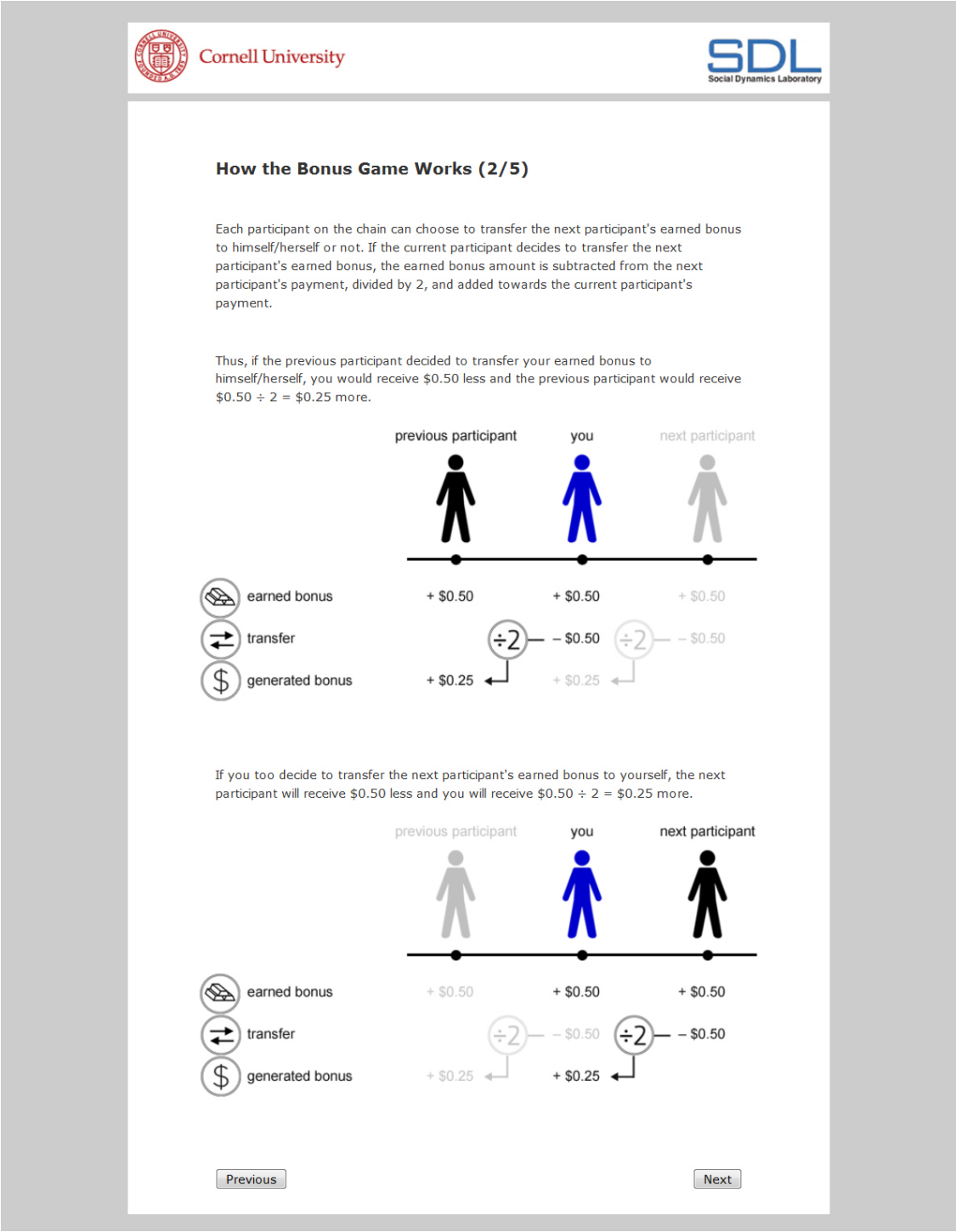

Figure A5. Page 2 of instructions for the Bonus Game.

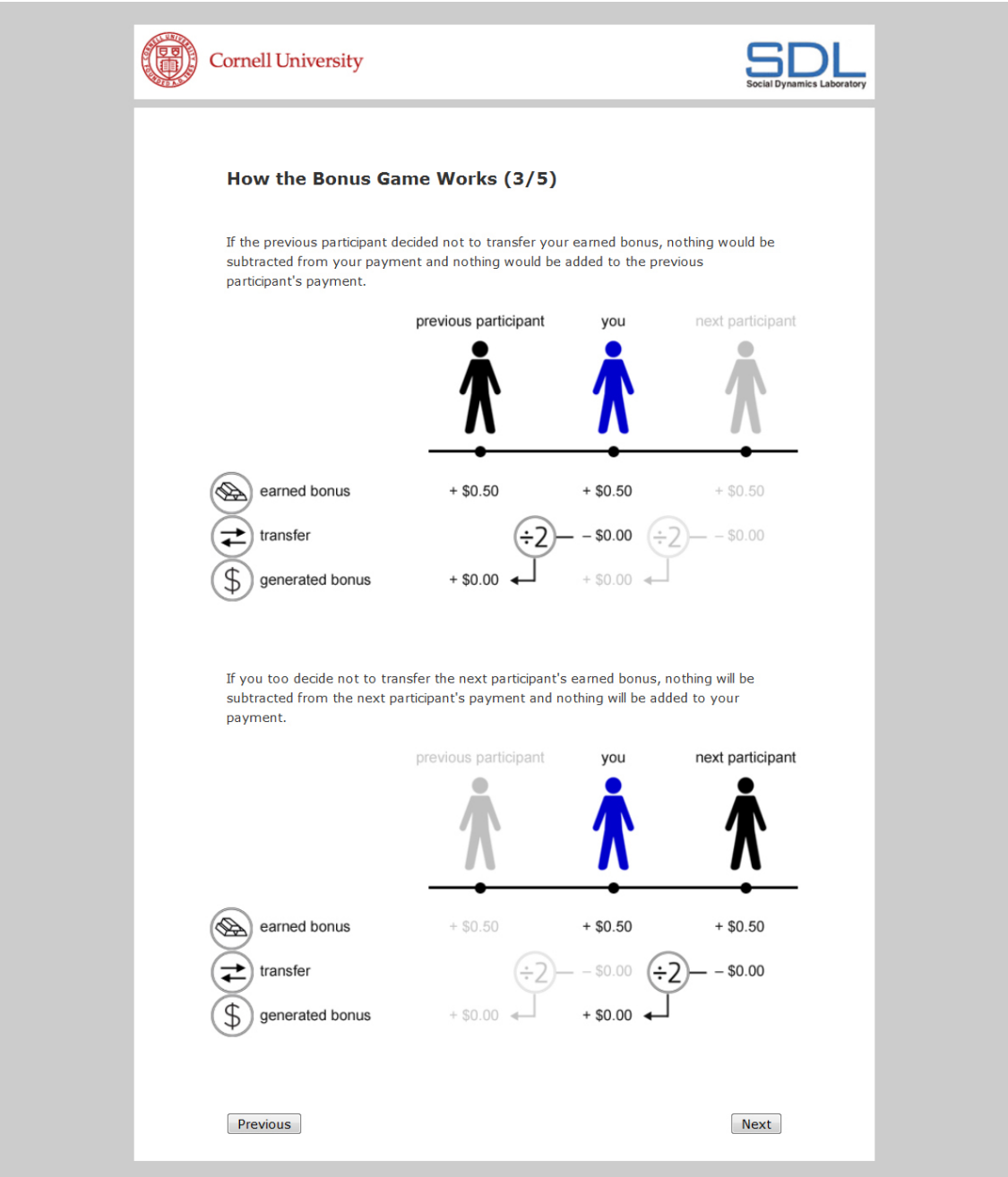

Figure A6. Page 3 of instructions for the Bonus Game.

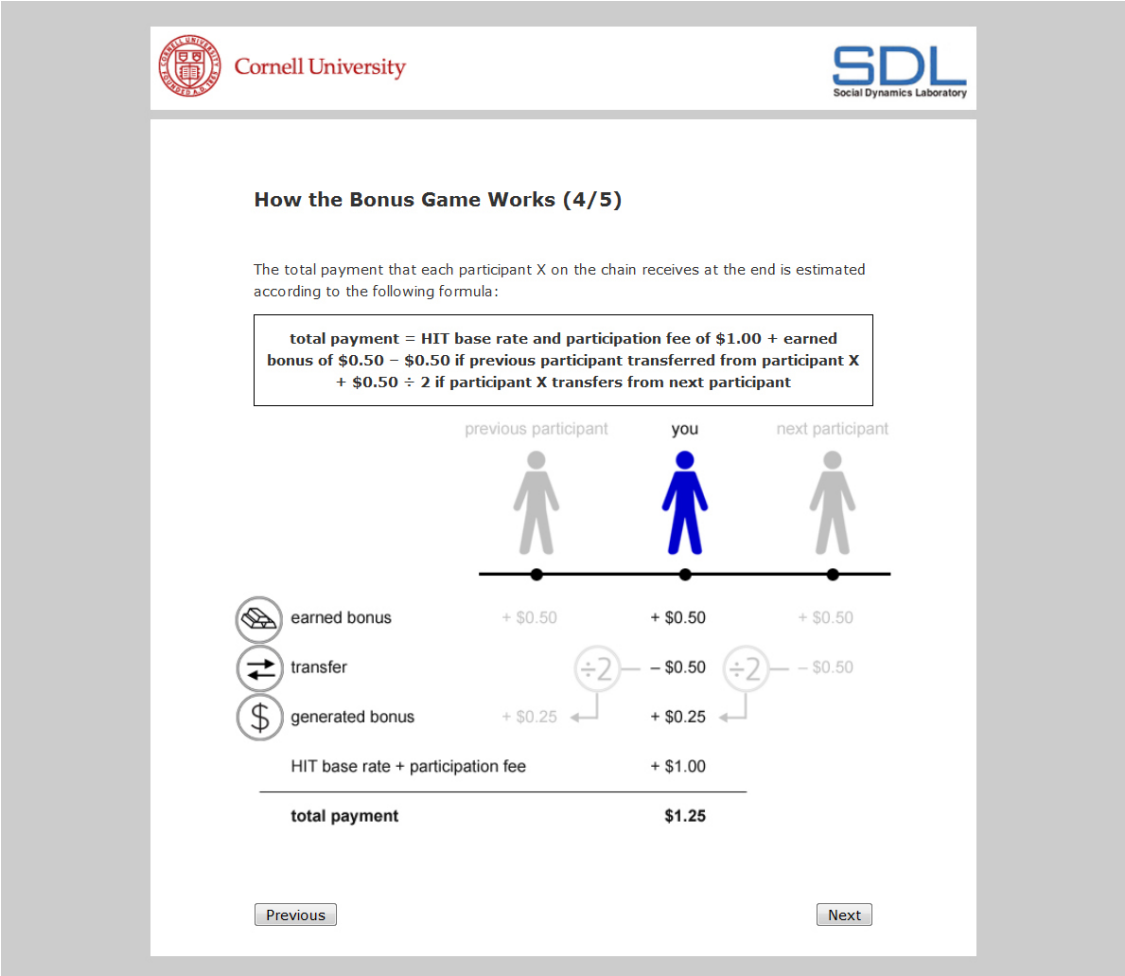

Figure A7. Page 4 of instructions for the Bonus Game.

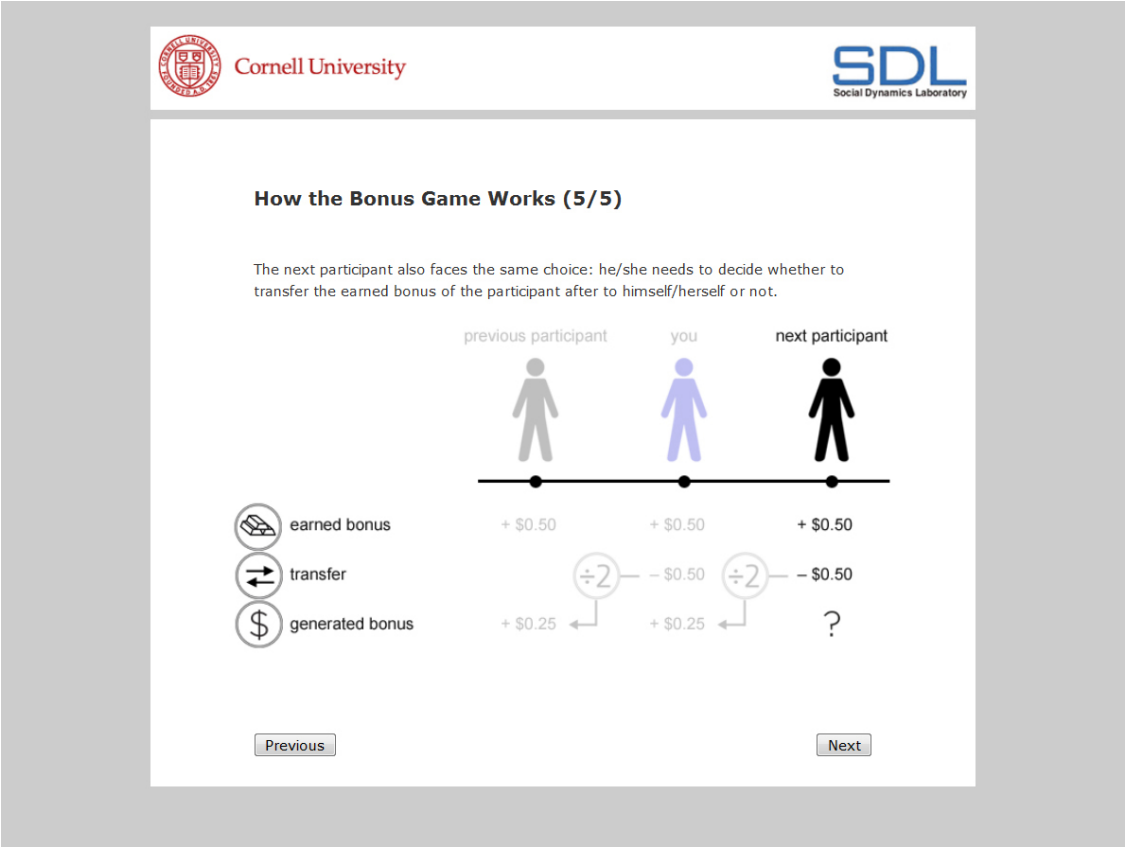

Figure A8. Page 5 of instructions for the Bonus Game.

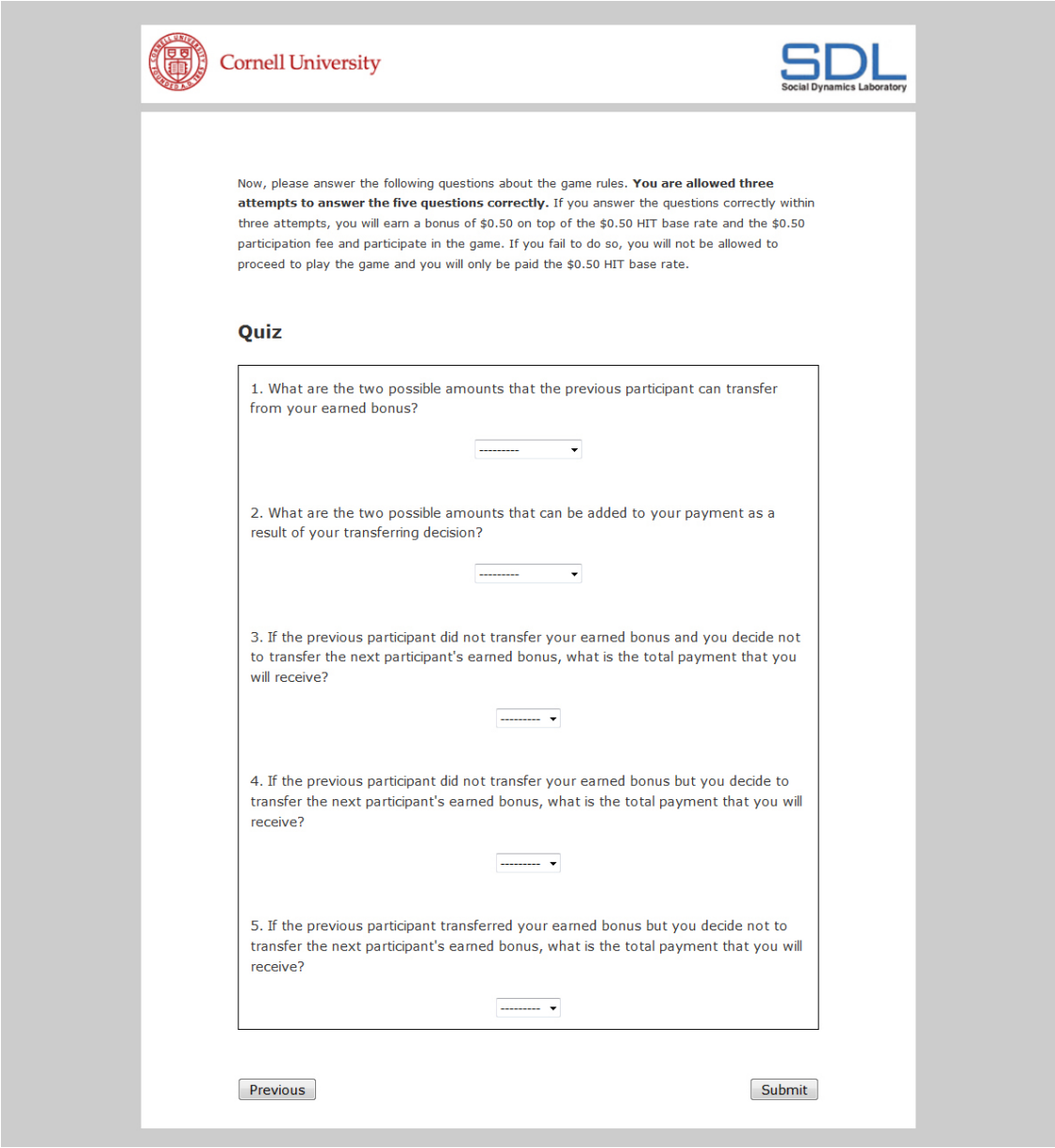

Figure A9. Quiz for the Bonus Game.

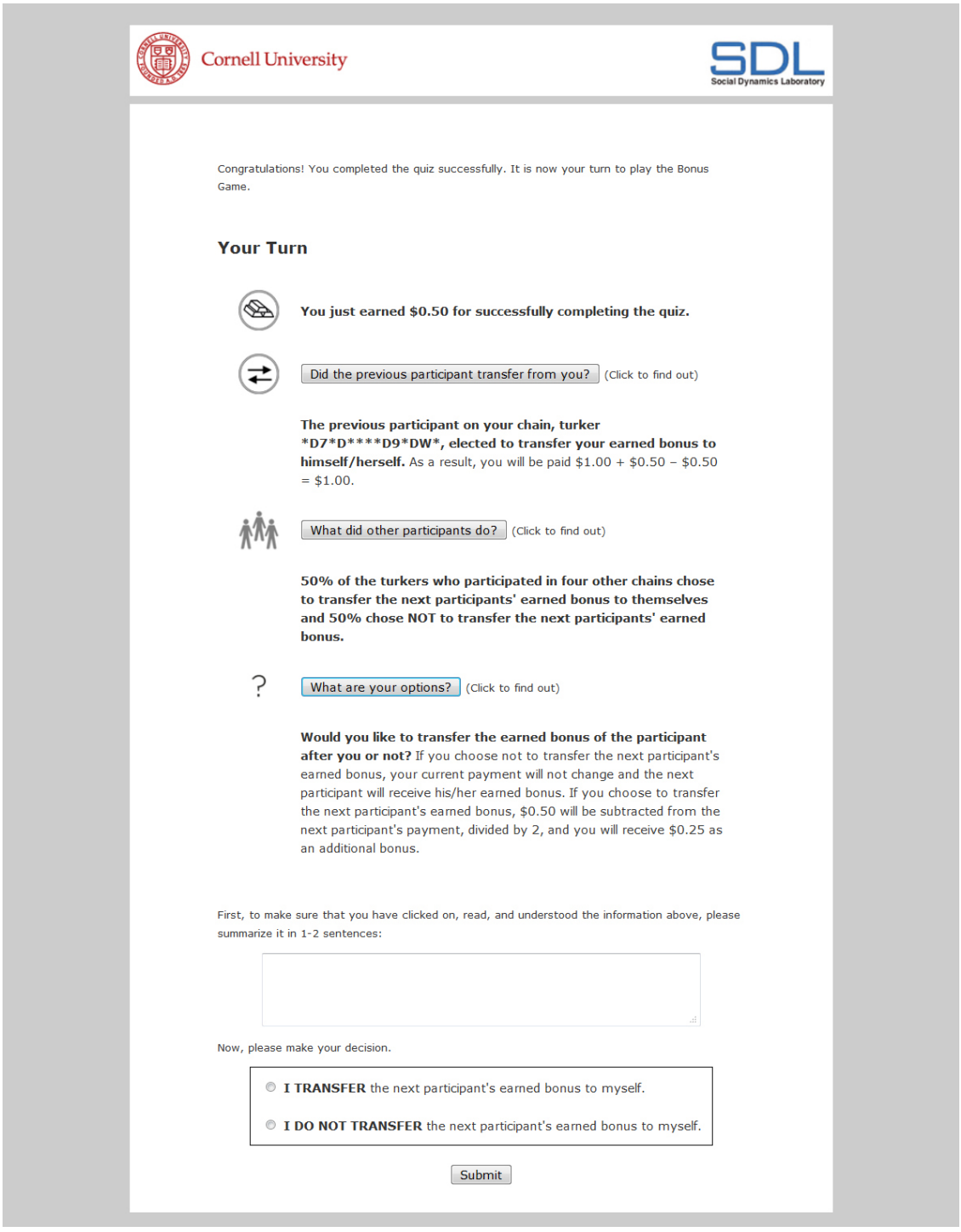

Figure A10. Decision page for a link in the observation condition in the Bonus Game.

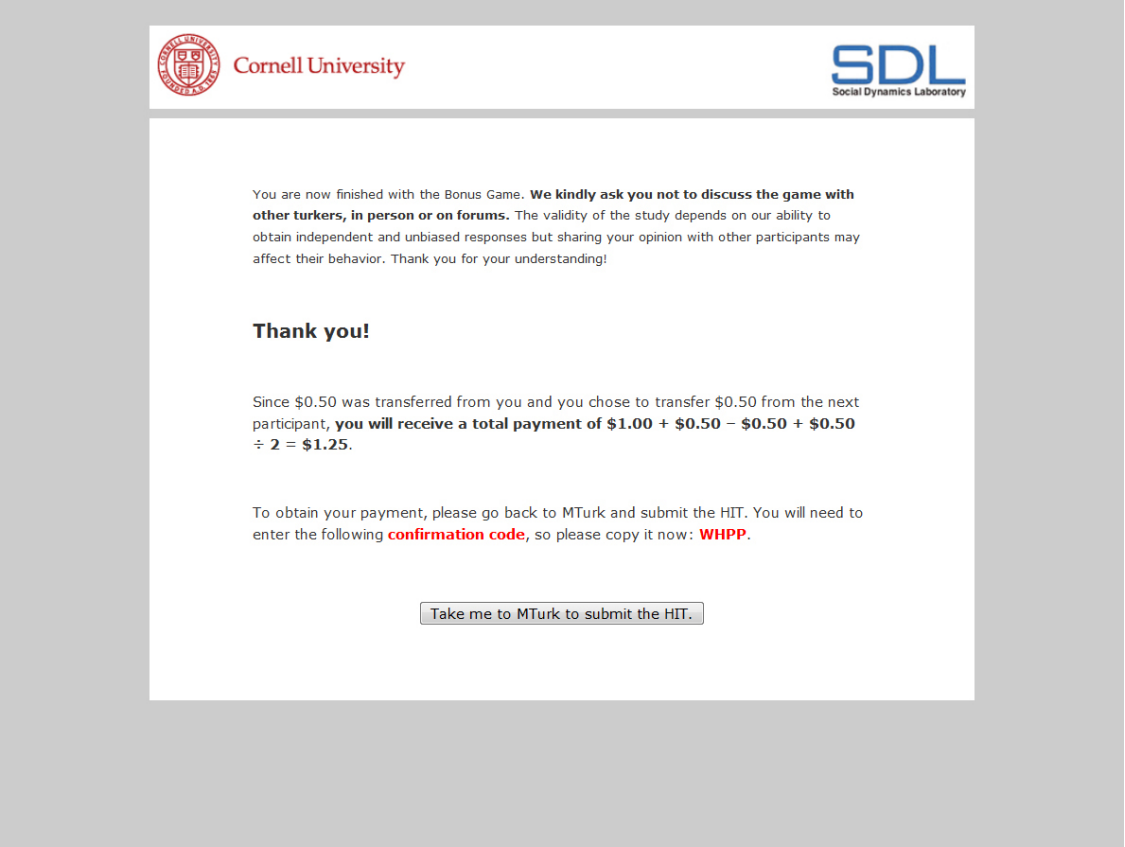

Figure A11. Final page in the Bonus Game.

2. Additional information and analyses

To improve the internal validity of the study, we required participants to answer correctly five multiple-choice questions that tested their comprehension of the game rules. Participants were allowed three attempts (two mistakes) to answer the quiz in order to be able to participate. The quiz required simple mathematical operations and was thus also intended to convince participants that they had earned their payment, rather than received it as a gift, with the ultimate goal of strengthening the incentives. 1,198 AMT users attempted to answer the quiz and 438 did not manage to do so within the allowed number of attempts (failure rate of 36.6 percent).

Figure A1 shows the power analysis used to determine the number of seeds (and hence, chains) in the game. The total sample size from the test represents the desired number of seeds in the no-observation condition and half of the desired number of seeds in the observation condition (since we wanted to test the effects of both low and high observation). The test suggested about 150 chains for a power level of around 0.9, assuming a transfer level of 50 percent in the no-observation condition and a relatively large effect size from observation.

Table A2 shows the distribution of participants in the observation/no-observation and seed/link treatments.

Table A3 tests for a difference in the effect of experiencing a loss between seeds and links. The difference is not statistically significant ($\chi^2 = 0.88$, $p = 0.349$).

Table A4 shows detailed demographics for the participant sample. Participants had a mean age of 30.4 (ranging from 18 to 67), were 37.3 percent female, and had a median household income of $40,000–$49,999. The sample consisted of 72.3 percent U.S. citizens and 24.2 percent Indian citizens, with the remaining participants being from other countries. The most common ethnicities were white (60.9 percent) and Asian (25.1 percent). 22.8 percent reported being non-religious and 19.3 percent atheists, while Christianity was the most common religion. 7.1 percent reported educational attainment of high school or less, 32.8 percent some college or an associate's degree, and 60.2 percent a bachelor's or graduate degree.

Table A5 uses the demographic data to predict the log-odds that the participant transfers.

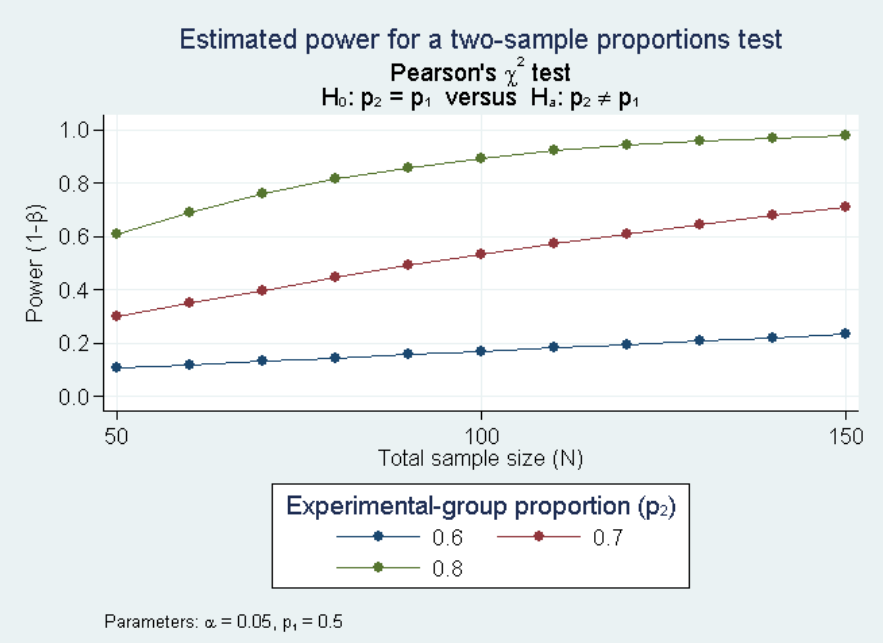

Figure A1. Power analysis for the number of seeds in the Bonus Game. The analysis is for a two-sample proportions test assuming a transfer proportion of 0.5 in the no-observation condition, and a significance level of 0.05.

Table A2. Number of participants by experimental treatment.

		Seeds	Links	Total
No observation		50	200	250
Observation	Low observation	50	200	250
	High observation	50	200	250
Total		150	600	750

Table A3. Differences between links and seeds in the log odds of transfer from the next participant.

	Coefficient (s.e.)
Loss	1.542 (0.837)
Link	– 0.518 (0.470)
Link * Loss	– 0.060 (0.909)
Constant	0.598 (0.375)
Number of observations	250
LR χ^2	3 df, 21.58**

Two-sided tests: *p<0.05, **p<0.01

The table reports coefficients and standard errors (in parentheses) from logistic regression for participants in the no-observation treatment. Results do not show a statistically significant difference in the effect of experiencing a loss between seeds and links.

Table A4. Detailed demographics for the participant sample.

Characteristic	Mean/ Percent
Female …..…….	37.33
Age…….	30.42 (SD=8.80)
Income	
Less than $10,000……..	16.69
$10,000–$19,999…….	12.89
$20,000–$29,999…….	13.84
$30,000–$39,999…….	13.70
$40,000–$49,999…….	10.31
$50,000–$59,999…….	6.65
$60,000–$69,999…….	6.65
$70,000–$79,999…….	4.48
$80,000–$89,999…….	3.53
$90,000–$99,999…….	3.93
$100,000–$149,999…….	5.29
$150,000 or More……..	2.04
Education	
Less than High School……..	0.27
High School or GED……..	6.82
Some College……	25.80
Associate's Degree……	6.95
Bachelor's Degree…….	43.18
Graduate Degree (Master's, Doctorate, etc.)	16.98
Nationality	
United States……	72.29
India…….	24.23
Other…….	3.48
Ethnicity	
White, non-Hispanic……	60.86
Asian/Pacific Islander……..	25.07
African-American……	3.89
Hispanic…….....	3.08
Native American……...	0.67
Other…….	6.43
Religion	
Non-religious……...	22.82
Atheist…….....	19.33
Hindu…….....	19.06
Protestant…….....	10.87
Roman Catholic……..	10.47
Other Christian……	10.74
Muslim…….....	2.28
Jewish…….....	1.48
Buddhist…….....	1.21
Other non-Christian……	1.74

Table A5. Demographic differences in log odds of transfer.

	Coefficient (s.e.)
Age	– 0.009 (0.009)
Female	– 0.617** (0.167)
Income	0.000 (0.000)
Education: Associate's or some college	0.157 (0.330)
Education: Bachelor's or graduate degree	0.292 (0.321)
Religion: Hindu	0.934* (0.407)
Religion: other non-Christian	0.153 (0.356)
Religion: non-religious	– 0.280 (0.222)
Religion: atheist	– 0.267 (0.234)
Nationality: India	– 0.662 (0.442)
Nationality: other	0.222 (0.464)
Ethnicity: Asian or Pacific Islander	0.219 (0.310)
Ethnicity: other non-white	– 0.076 (0.260)
Constant	0.893** (0.327)
Number of observations	745
LR χ^2	13 df, 29.65**

Two-sided tests: *$p<0.05$, **$p<0.01$

The table reports coefficients and standard errors (in parentheses) from logistic regression with a baseline of a thirty-year-old white, U.S., Christian male with a high school education or less and household income of less than $10,000. Results show that females are less prone to antisocial behavior.