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Do Nominations Close the Gender Gap in Competition?

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ABSTRACT

Do Nominations Close the Gender Gap in Competition?*

Experiments have demonstrated that men are more willing to compete than women in stereotypically male tasks. We examine whether nominations close this gender gap. For example, are male nominators more willing than female nominators to enter nominees into competitions. Further, we consider the interaction between nominator and nominee gender. For example, do men shy away from entering women into competitions, or do they make them compete too much? We find a gender gap in neither nominators' willingness to enter nominees into competitions, nor in nominees' likelihood to be entered into competitions. Interestingly, male and female nominators willingness to enter nominees into competitions is statistically indistinguishable from women's willingness to enter themselves into competitions. We also find that men are significantly more likely to enter themselves than others into competitions; this suggests that a nominating process that excludes self-nominations could have an equalizing effect on the proportion of men and women who enter competitions. Our results also reinforce the assertion that the gender gap in competitive preferences is driven by the "thrill or fear of performing in a competitive environment (Niederle & Vesterlund, 2007)," as this motivation is absent in decision-making for others.

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1. Introduction

Laboratory experiments have demonstrated that men are significantly more willing to compete than women in stereotypically male tasks (Niederle & Vesterlund (NV), 2011).[1] A significant portion of this difference has been ascribed to gender variant competitive preferences, and is believed to have an impact on female labor market attainment, especially for highly competitive jobs in which women are underrepresented. For example, Fortune (2020) reports that the number of female CEOs at Fortune 500 companies hit an all-time high of 7.4 percent in 2020. These disparities persist even as government guarantees against gender discrimination have increased, as has female educational attainment (Goldin, Katz, & Kuziemko, 2006).

An important question is whether there are institutional changes that could encourage more women to compete (NV, 2011)? For example, it has been shown that female quotas, female handicaps, and competing in teams increase women's willingness to compete (Balafoutas & Sutter, 2012; Dargnies, 2009; Healy & Pate, 2011; Niederle, Segal, & Vesterlund, 2013). Most closely related to our paper, Baldiga & Coffman (2018) use an NV framework to investigate the effect of sponsorship on willingness to compete. A sponsor's payment depends on the payoff of his or her protégé. The authors find that male, but not female, protégés increase their willingness to compete, thereby increasing the gender gap. The effect of sponsorship is due to both the tying of the sponsor's payment to the protégé's performance and the vote of confidence the protégé experiences when chosen by the sponsor.

In this paper, we explore whether an untested mechanism—nomination—affects the gender gap in competition-entry. The use of nominations is common for roles and awards in many settings (e.g., committee appointments, boards of directors). Could a nomination process for highly competitive positions increase the relative proportion of women who compete?

This research builds on a nascent literature that attempts to understand decision-making on behalf of other, or more simply, decision-making for others (DMfO). One goal of the DMfO literature is to identify "self-other" discrepancies. The majority of this literature focuses on self-other discrepancies in risk-taking. The findings to date are inconsistent, with some studies finding greater risk-aversion in DMfO and others less (for a thorough review of this literature see Polman & Wu (2020)). A few DMfO studies consider other contexts, for example, intertemporal decisions, loss aversion, and the endowment effect. With the exception of loss

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[1] NV (2007) inspired a series of laboratory experiments to test the robustness and limits of their seminal finding. For example, researchers have: (a) manipulated subjects' beliefs by providing subjects with feedback regarding their relative performance (e.g., Cason, Masters, & Sheremeta, 2010; Wozniak, Harbaugh & Mayr, 2014); (b) used tasks that are not stereotypically male (e.g., Grosse & Riener, 2010; Kamas & Preston, 2009; Wozniak et al., 2014); (c) explicitly controlled for risk preferences (e.g., Cason et. al., 2010; Wozniak et al., 2014); and (d) employed proportional winner-take-all payments (e.g., Cason et. al., 2010). While this body of research has illustrated circumstances under which the gender gap observed in NV (2007) does not hold, the main finding (that men are significantly more willing than women to compete in stereotypically male tasks) has been replicated repeatedly (see NV (2011) for a thorough review of the literature).

aversion, which is consistently lower in DMfO than in decisions for oneself, the results are either mixed or there is no evidence of self-other discrepancies.[2]

We contribute to the literature by examining the gender gap in competition-entry in DMfO. First, we consider the gender of the nominator (i.e., the individual making a decision on behalf of someone else (the nominee)).[3] Are male nominators more willing than female nominators to enter nominees into competitions? Second, we consider the gender of the nominee. Are nominators more willing to enter male nominees into competitions than female nominees? Third, we consider the interaction effects of nominator and nominee gender. For example, do men shy away from entering women into competitions, or do they make them compete too much?

We also investigate order effects and whether having "skin in the game" impacts DMfO. For the former, we randomly assign subjects to either make decisions for themselves or others first. Ifcher & Zarghamee (2020) found that for some decisions, DMfO is more similar to decisions for oneself when DMfO follows decisions for oneself. For the latter, we randomly assign nominators to receive 10 percent of the nominee's payment or not. Lastly, we ask subjects to explain the factors they considered in DMfO.

Our results first replicate NV's main results in decision-making for oneself. In DMfO, we find a gender gap in neither nominators' willingness to enter nominees into competitions, nor in nominees' likelihood to be entered into competitions. We do find significant self-other discrepancies for men, but not women: men are significantly more willing to enter themselves than others into competitions. Interestingly, male and female nominators willingness to enter nominees into competitions is statistically indistinguishable from women's willingness to enter themselves into competitions.

2. Experimental design

We conducted a laboratory experiment with 324 participants at Columbia University (CU) and Santa Clara University (SCU) in the fall of 2019. At CU, 104 students (60 female, 1 gender non-conforming, and 43 male) were recruited using ORSEE (Online Recruitment System for Economic Experiments). At SCU, 220 students (111 female, 2 gender non-conforming, and 107 male) were recruited by sending an email to all undergraduate students and inviting them to

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[2] Reported self-other discrepancies in time preferences are mixed: some studies find lower discount rates in DMfO (Shapiro, 2010), and some higher (de Oliveira & Jacobson, 2020). Andersson, Holm, Tyran, & Wengström (2014), Füllbrunn & Luhan (2017), Pahlke, Strasser, & Vieider (2012), and Polman (2012) find that loss aversion is higher in DMfO than in decisions for oneself. Other biases for which self-other discrepancies have been examined include ambiguity aversion, anchoring bias, compound risk aversion, decoy effect, endowment effect, identifiable-victim bias, and the reflection effect; for none of these biases are self-other discrepancies identified (Ifcher & Zarghamee, 2020; König-Kersting & Trautmann, 2016; Kogut & Beyth-Marom, 2008).

[3] Note the terminology of nomination differs from day-to-day language in that nominators do not select a nominee out of a set of candidates to enter into a competition. Rather, they are randomly assigned a nominee and then select whether they want to enter him or her into a competition.

participate; the CU and SCU gender distributions are statistically indistinguishable (Pearson chi2(2) = 1.51, p = 0.47).

The experiment was administered using oTree (Chen, Schonger, Wicken, 2016). Experimental sessions lasted approximately 60 minutes, with an average payment of $14, and a minimum (maximum) payment of $6 ($51).[4] There were 18 sessions (8 at CU and 10 at SCU), the smallest session had 8 subjects and the largest had 32.

In brief, our experimental procedure was as follows (additional details provided below).
- Check-in, informed consent, random seat-assignment, and instructions[5]
- Tasks 1 and 2: summation task under piece-rate and tournament payment schemes
- Tasks 3A and 4A: choice of piece-rate or tournament payment scheme for oneself in prospective and retrospective summation tasks
- Tasks 3B and 4B: choice of piece-rate or tournament payment scheme in DMfO in prospective and retrospective summation tasks
- Task 5: choice of fixed payment or lottery to elicit risk preferences for oneself
- Questionnaire: demographic items and items soliciting explanation of considerations in DMfO
- Cash payment for one randomly selected task and exit the session

Half of the subjects completed tasks 3B & 4B before 3A & 4A to test for order effects. Randomization occurred at the session level. For the first session at each university, we randomly chose whether subjects would complete tasks 3A & 4A or 3B & 4B first; thereafter, we alternated the order of treatment at subsequent sessions at the university.[6] We also randomized by subject whether there was skin in the game for the decision-maker in DMfO. Subjects who had skin in the game were informed before DMfO that they would receive 10 percent of their nominee's payment. Appendix A presents the complete experimental protocol with tasks 3A & 4A presented before tasks 3B & 4B. Note that we did not use the language of nomination in the experimental sessions. Rather, we referred to the other participant on whose behalf the subject was making decisions as "Participant X," a randomly assigned participant in the same session. Lastly, this study was registered in the AEA RCT registry (AEARCTR-0004731).

2.1. Information provided to subjects

It was important to control the information that was provided to subjects about their nominees in DMfO. We attempted to share enough information so that subjects could make an informed

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[4] These payment summaries are based on a subset of the experimental sessions. Paper records for the remaining sessions are inaccessible due to COVID-19 pandemic restrictions at CU and SCU. We do not expect the payment summaries to change much once we are able to access the complete paper records.

[5] If subjects showed up but could not be seated because they were late or the number of subjects was not divisible by four, then they were given a $5 show-up fee and rescheduled for a subsequent session.

[6] One exception to this procedure was made at SCU, where the order of the last two session was reversed to ensure that the start times were balanced across treatments.

decision, while attempting to avoid threats to the validity of the experiment (discussed below). To this end, before beginning task 1, subjects completed a three-item survey;[7] and before tasks 3A & 3B, subjects were shown a table that presented their and their nominee's answers to the 3-item survey, as well as how many problems they and their nominee solved correctly in tasks 1 & 2.

In designing the sharing of information, we did not want to prime subjects to think about gender. Thus, we included three items on the survey and placed the gender item in the middle of the survey. We wanted to share information about nominee performance, but did not want to provide enough information about other participants' performance that the gender gap in competitive preferences for oneself or others might be eliminated (e.g., Cason et al., 2010; Wozniak et al., 2014). Thus, subjects were only informed about nominee performance, and not, for example, informed about average session performance. We wanted to ensure that subjects had the same information when making decisions for themselves and in DMfO. Thus, subjects were shown the information table before both tasks 3A & 3B. Lastly, to discourage subjects from quickly skimming the information in the table, we encouraged subjects to transcribe the information onto scratch paper.

2.2. Initial summation tasks (tasks 1 & 2)

As in NV (2007), subjects had five minutes to perform summations; each summation was of five randomly chosen, two-digit numbers displayed horizontally across a computer screen. Subjects were given a pen and scrap paper but were not allowed to use calculators. After five minutes, subjects could no longer submit additional answers and were told how many summations they solved correctly.

Before completing each task, subjects received detailed instructions regarding the task and payment scheme. The task-1 payment scheme was a $0.50 piece-rate payment per problem solved correctly. The task-2 payment scheme was a $2.00 tournament payment. Specifically, as in Baldiga & Coffman (2016), subjects were informed that they would receive either: (i) $2.00 per problem solved correctly if they solved more problems correctly than 75 percent of the participants in the session, or (ii) $0.00 per problem solved correctly otherwise.

2.3. Willingness to compete (decisions for oneself, tasks 3A & 4A)

In task 3A, subjects chose whether they wanted to apply a $0.50 piece-rate or $2.00 tournament payment scheme to their performance on a prospective summation task. The

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[7] The three survey items were: "What year in school are you?" (possible responses include "First-Year Student," "Sophomore," "Junior," "Senior," "Graduate Student," and "Not Listed"); "What is your gender?" (possible responses include "Female," "Male," "Transgender Female," "Transgender Male," "Gender Non-Conforming," and "Not Listed"); and "In which category does your major (or intended major) fall? (If you have a double major, then indicate in which category your first major falls?)" (possible responses include "Business or Management," "Economics," "Humanities," "Life Sciences," "Math or Statistics," "Physical Sciences," "Social Sciences (excluding economics)," and "Not Listed").

instructions explicitly stated that if subjects chose the $2.00 tournament payment scheme, then their task-3A performance would be compared to the task-2 performance of other subjects in the session.

In task 4A, subjects chose retrospectively the payment scheme ($0.50 piece-rate or $2.00 tournament) they wanted to apply to their task-1 performance (as compared to the task-1 performance of other participants in the session if the tournament was chosen). Subjects were reminded how many questions they solved correctly in task 1

2.4. Beliefs regarding own relative performance in tasks 1 & 2

Subjects were asked to rate their relative performance in tasks 1 & 2 with the following response scale: "Top Quartile (Top 25%)," "Second Quartile (Between 25th and 50th percentile)," "Third Quartile (Between 50th and 75th percentile)," and "Fourth Quartile (Bottom 25%)." Subjects were informed that they would be paid $1 for correctly rating their task-1 performance and $1 for correctly rating their task-2 performance.

2.5. Willingness to enter nominee into competition (DMfO, tasks 3B & 4B)

Task 3B is similar to task 3A, except that subjects made decisions for their nominee. Specifically, subjects chose the payment scheme ($0.50 piece-rate or $2.00 tournament) they wanted to apply to their nominee's performance on the summation task. The instructions explicitly stated that if they chose the $2.00 tournament payment for their nominee, then their noninee's task-3B performance would be compared to the task-2 performance of other subjects in the session. Again, half of the subjects were informed that they were randomly assigned to receive an additional payment equivalent to 10% of their nominee's payment in tasks 3B & 4B.

In task 4B, subjects chose retrospectively the payment scheme ($0.50 piece-rate or $2.00 tournament) they wanted to apply to their nominee's task-1 performance (as compared to the task-1 performance of other participants in the session if the tournament was chosen). Subjects were reminded how many questions their nominee solved correctly in task 1.

2.6. Beliefs regarding nominee's relative performance in tasks 1 & 2

Subjects were asked to rate their nominee's relative performance in tasks 1 & 2 with the following response scale: "Top Quartile (Top 25%)," "Second Quartile (Between 25th and 50th percentile)," "Third Quartile (Between 50th and 75th percentile)," and "Fourth Quartile (Bottom 25%)." Subjects were informed that they would be paid $1 for correctly rating their nominee's task-1 performance and $1 for correctly rating their nominee's task-2 performance.

2.7. Risk preference elicitation (task 5)

Task 5 was a standard risk-preference measure over own payoffs (Holt & Laury, 2002). Subjects chose between a series of fixed payments, ranging from $0.00 to $10.00, and a lottery with a 50% (50%) chance of a $10 ($0) payment. All choices were presented vertically on a single screen. The first choice was between a $0.00 fixed payment and the lottery. The next was between a $1.00 fixed payment and the lottery. Thereafter, the fixed payment increased in $1.00 increments until it reached $10.00.

2.8. Quiz & questionnaire

Subjects completed a one-item quiz to demonstrate that they knew the gender of their nominee: "Please indicate the gender of Participant X. (If you are correct, you will receive an additional payment of $1.)." Possible responses included "Female," "Male," "Transgender Female," "Transgender Male," "Gender Non-Conforming," and "Not Listed."[8] Subjects then completed a seven-item questionnaire that included the following prompt: "What factors did you consider in making your choice between the Tournament and Piece-rate payment scheme when deciding on behalf of Participant X."

2.9. Payments

After all subjects completed the questionnaire, subject payments were determined. Subject-payments included: a $5 show-up fee; up to $4 for correctly indicating their and their nominee's relative performance in tasks 1 & 2; $1 for correctly indicating the gender of their nominee, and the payment from one randomly selected payment task (tasks 1, 2, 3A, 3B, 4A, 4B, or 5). To determine the payment task, balls numbered from one to seven were placed in the bingo spinner and one ball was chosen randomly. If task 5 was chosen, one of the 11 fixed payments was chosen and the lottery was implemented, using the bingo spinner. Subjects received their cash payment as they exited the session.

3. Results

3.1. Willingness to compete and competitive preferences (decisions for oneself)

We begin by replicating NV's willingness-to-compete and competitive-preferences results. Compared to women, men are significantly more willing to compete—that is, to choose the $2.00 tournament payment over the $0.50 piece-rate payment—in task 3A (0.63 versus 0.49, $p < 0.01$).[9]

To estimate the gender gap in competitive preferences, a probit regression is estimated; standard errors are clustered by session. As in NV, the gender gap in competitive preferences is estimated as the residual gender gap in willingness to compete controlling for performance (the

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[8] Only 2 of 324 subjects answered the quiz item incorrectly; given the small number of incorrect answers we do not control for incorrect quiz answers in the analyses.

[9] Three subjects did not identify as either "Female" or "Male," and are dropped from all analyses.

number of problems solved correctly in task 2), the improvement in performance between tasks 1 & 2 (the difference between the number of problems solved correctly in task 2 minus the number solved correctly in task 1), and confidence (rating of own relative performance in task 2).

The results indicate that men have significantly greater competitive preferences than do women (marginal effect = 11.1 pp, p = 0.02, see Table 1).[10] It is also worth noting that willingness to compete increases with performance (p < 0.01), decreases with improvement in performance between tasks 1 & 2 (p = 0.02), and increases with confidence (p < 0.01).

Lastly, we estimate the residual gender gap in the willingness to compete in task 4A (retrospective choice of payment scheme for task 1) controlling for task-1 performance and task-1 confidence. The results indicate no significant gender gap (p = 0.92). NV argue that the significant residual gender gap in the willingness to compete prospectively (task 3A) and not retrospectively (task 4A) indicates that the significant residual gender gap in task 3A is explained by gender variant competitive preferences—namely, the "thrill or fear of performing in a competitive environment"—and not explained by other factors (e.g., overconfidence, feedback aversion, and risk aversion).

3.2. Willingness to enter nominee into competition and competitive preferences for others (DMfO)

We find no gender gap in tournament choice in DMfO: men and women are statistically indistinguishably likely to choose the tournament payment over the piece-rate payment for their nominee in task 3B (0.45 versus 0.41, p = 0.46).[11] Next, we estimate the residual gender gap in willingness to enter nominees into competitions controlling for nominee performance (the number of problems the nominee solved correctly in task-2), the improvement in nominee performance between tasks 1 & 2 (the difference between the number of problems the nominee solved correctly in task 2 minus the number the nominee solved correctly in task 1), and confidence in the nominee (rating of nominee relative performance in task 2). The results indicate that men's and women's competitive preferences for others are statistically indistinguishable (p = 0.61, see Table 2). It is also worth noting that the likelihood of choosing the tournament payment in DMfO decreases with improvement in nominee performance between tasks 1 & 2 (p < 0.01) and increases with confidence in the nominee (p < 0.01).[12]

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[10] As a robustness check we re-estimate the residual gender gap in willingness to compete also controlling for nominee performance in task 2 and nominee gender. The results remain the same.

[11] Three subjects whose nominee identified as neither "Female" nor "Male" are dropped from all analyses that include DMfO.

[12] We also estimate the residual gender gap in willingness to enter nominees into competitions in task 4B (retrospective choice of payment scheme in DMfO for task 1) controlling for nominee performance in task 1 and confidence in nominee in task 1. There is no significant gender gap between men and women (p = 0.58), which is not surprising given that there is no significant gender gap in willingness to enter nominees into competitions (task 3B).

Turning to the effect of nominee gender, we find nominators' choice of tournament entry to be statistically indistinguishable for male and female nominees (0.44 versus 0.42, p = 0.70). Estimating the residual gender gap in willingness to enter nominees into competitions, controlling for nominee rather than nominator gender, we find the coefficient on nominee gender to be insignificant (p = 0.89, see Table 3). It is also worth noting that competitive preferences for others decrease with improvement in nominee performance between tasks 1 & 2 (p < 0.01), and confidence in nominee in task 2 (p < 0.01).[13]

Lastly, we find no evidence that there is an interaction between the nominator's and nominee's genders. The likelihood of choosing the tournament payment is statistically indistinguishable across all combinations (men deciding for men: 0.48, men deciding for women: 0.44, women deciding for men: 0.42, and women deciding for women: 0.40; p > 0.49 for all comparisons). Estimating the residual gender gap in the willingness to enter nominees into competitions with interaction terms for the nominator's and nominee's gender, we find no statistically significant coefficients (see Table 4). Again, competitive preferences for others decrease with improvement in nominee performance between tasks 1 & 2 (p < 0.01), and increase with confidence in nominee relative performance in task 2 (p < 0.01).

In sum, in DMfO, there do not appear to be significant gender gaps in willingness to enter nominees into competitions, nor in competitive preferences for others.

3.3. Self-other discrepancies

We find that the willingness to enter oneself into competitions to compete is greater than willingness to enter nominees into competitions (0.55 versus 0.43, p < 0.01). This self-other discrepancy is driven by men: 63% of men choose the tournament payment for themselves and 45% do so in DMfO (p < 0.01). There is no statistically significant self-other discrepancy for women: 48% of women choose the tournament payment for themselves and 41% do so in DMfO (p = 0.19).

3.4. Effects of order and skin in the game

First, we confirm that there are no order effects: we compare the likelihood of choosing the tournament payment in tasks 3A & 3B for subjects who complete DMfO first and second and find no significant differences (task 3A: 0.53 versus 0.58, p = 0.36; task 3B: 0.43 versus 0.43, p = 0.89). The results are similar when analyzed separately for men and women. Also, estimating the residual gender gap in the choice of the tournament payment scheme in tasks 3A & 3B

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[13] We test whether being nominated for competitions affects performance in task 3B. Specifically, we compare the average difference between the number of problems solved correctly in task 3B and task 2 for nominee who were entered into the competition in task 3B and those who were not. We find no significant difference; this holds in the pooled sample as well as in male and female subsamples. In a corresponding analysis for task 3A, we again find no significant difference.

separately for subjects who complete DMfO first and second yields coefficients on female that are statistically indistinguishable (task 3A: p = 0.65; task 3B: p = 0.17).[14]

Second, we confirm that DMfO is not significantly affected by the skin-in-the-game treatment. We estimate the residual gender gap in the willingness to enter nominees into competitions (task 3B) separately for subjects who were and were not in the skin-in-the-game treatment, and then compare the female coefficients. The coefficients are statistically indistinguishable (p = 0.25).

In sum, given that there is no evidence of order effects, nor effects of the skin-in-the-game treatment, our pooled-sample analyses are appropriate.

3.5. Self-reported approach to DMfO

In the questionnaire, subjects were asked: "What factors did you consider in making your choice between the Tournament and Piece-rate payment scheme when deciding on behalf of Participant X?" Each response was independently coded by two undergraduate research assistants; the codes were then merged to produce a limited set of factors that subjects reported to have considered in DMfO. The coding allowed each subject to consider multiple factors. In cases in which the independent codes did not match, the research assistants discussed the mismatch until agreement regarding the appropriate coding was achieved. Table 5 lists the factors that were considered along with the proportion of subjects who reported each factor.[15]

The most common factor considered was nominee relative performance, with approximately 60% of nominators considering this factor. The next most common factors considered include nominee absolute performance (29% of nominators), wanting to maximize nominee payment (28% of nominators), and being risk averse on behalf of the nominee (16% of nominators). The remaining three factors were considered by ≤ 10% of nominators. Lastly, there is only scant evidence of rivalry (4% of nominators).

We also test whether DMfO differs by which factors the nominator considered. Specifically, we regress the choice to enter the nominee into the tournament on the factors the nominator considered, clustering the errors by session. The only factor that is statistically significant is being risk averse on behalf of the nominee, which decreases the likelihood that the nominator chooses to enter the nominee into the tournament by 41 pp (p < 0.01); this result is robust to controls for nominator and nominee gender.

4. Conclusion

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[14] Ifcher & Zarghamee (2020) found that DMfO was more similar to decisions for oneself if decisions for oneself preceded DMfO. There is no evidence of that pattern here.
[15] Eleven subjects' responses were not codable and are dropped from this analysis.

We examine whether a nominating process could increase the proportion of women and decrease the proportion of men who enter competitions. We find that the proportion of male and female nominees who are entered into competitions are equal, and that this is true for both female and male nominators. Compared to decisions for themselves, male nominators are significantly less likely to enter nominees into competitions, while women are equally likely. Indeed, in DMfO, male and female nominators enter nominees into competitions at the same rate as women do for themselves. This suggests that a nomination process that excludes self-nominations could have an equalizing effect on the proportion of men and women who enter competitions. Our results also reinforce NV's assertion that the gender gap in competitive preferences is driven by the "thrill or fear of performing in a competitive environment," as this motivation is absent in DMfO.

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Table 1. Gender gap in competitive preferences

	Choose tournament		
Female (marginal effect)	-0.111	(0.048)	**
Performance in task 2	0.031	(0.009)	***
Performance improvement (between tasks 1 & 2)	-0.027	(0.011)	**
Confidence in task 2	0.206	(0.036)	***
Observations	321		

NOTES: Standard errors are clustered by session and are in parentheses. *, **, and *** signify that ceofficient is significantly than zero with a p-value < 0.10, 0.05, and 0.01, respectively. Three subjects who identified as gender non-conforming dropped from the analysis.

Table 2. Gender gap in competitive preferences for others by nominator gender

	Choose tournament	
Female nominator (marginal effect)	-0.029 (0.058)	
Nominee performance in task 2	0.011 (0.008)	
Nominee performance improvement (between tasks 1 & 2)	-0.029 (0.010)	***
Confidence in the nominee in task 2	0.182 (0.041)	***
Observations	318	

NOTES: Standard errors are clustered by session and in parentheses. *, **, and *** signify that ceofficient is significantly than zero with a p-value < 0.10, 0.05, and 0.01, respectively. Three subjects who identified as gender non-conforming dropped from the analysis. Three nominees who identified as gender non-conforming dropped from the analysis.

Table 3. Gender gap in competitive preferences for others by nominee gender

	Choose tournament		
Female nominee (marginal effect)	-0.007	(0.050)	
Nominee performance in task 2	0.010	(0.084)	
Nominee performance improvement (between tasks 1 & 2)	-0.030	(0.010)	***
Confidence in the nominee in task 2	0.184	(0.040)	***
Observations		318	

NOTES: Standard errors are clustered by session and in parentheses. *, **, and *** signify that ceofficient is significantly than zero with a p-value < 0.10, 0.05, and 0.01, respectively. Three subjects who identified as gender non-conforming dropped from the analysis. Three nominees who identified as gender non-conforming dropped from the analysis.

Table 4. Gender gap in competitive preferences for others by nominator and nominee gender

	Choose tournament		
Female nominator (marginal effect)	-0.075	(0.092)	
Female nominee (marginal effect)	-0.053	(0.085)	
Female nominator * female nominee (marginal effect)	0.083	(0.116)	
Nominee performance in task 2	0.011	(0.008)	
Nominee performance improvement (between tasks 1 & 2)	-0.030	(0.011)	***
Confidence in the nominee in task 2	0.182	(0.041)	***
Observations	318		

NOTES: Standard errors are clustered by session and in parentheses. *, **, and *** signify that ceofficient is significantly than zero with a p-value < 0.10, 0.05, and 0.01, respectively. Three subjects who identified as gender non-conforming dropped from the analysis. Three nominees who identified as gender non-conforming dropped from the analysis.

Table 5. Factors that were considered in DMfO

Absolute performance evaluation of nominee	29%
Benefit nominator	10%
Golde rule	6%
Maximize payment for nomimee	28%
Relative performance evaluation of nominee	60%
Risk averse on behalf of nominee	16%
Rivarlry	4%
Observations	321

Welcome!

Thank you for your willingness to participate.

Please wait quietly for the session to begin.

Please raise your hand if you have any questions.

Please DO NOT click the "Instructed to Proceed" button until instructed to do so.

Instructed to Proceed

Note: Subject will have signed the inform consent form prior to being seated.

Instructions

Welcome! Thank you for your willingness to participate.

Please read these instructions carefully and do not communicate with any other participants during this session. If you have a question, please raise your hand, and the experimenter will go where you are to answer your question privately. If you have a question after you leave today, please use the information provided on your copy of the consent form to contact the experimenters.

All cell phones should be turned off and put away for the entire length of the session. This session should take about an hour.

In this study you will be asked to complete 7 tasks. None of the tasks will take more than 5 minutes. At the end of the study, you will receive $5 for having completed the 7 tasks.

In addition, after completing the 7 tasks, we will randomly select one task and pay you based on that task. Thus, you should complete each task as if your payment depends on it. The task randomly selected for payment will be referred to as the "PAYMENT TASK." We will determine the payment task by drawing one ball from this spinner. The spinner contains 7 balls numbered from 1 to 7.

The method used to determine payments in each task varies. Before each task, we will describe how your payment for that task would be determined.

Please note that in economic studies deception is not permitted, as it would be considered fraud for us to mislead you when your decisions may impact your payment.

The payment will be made in cash at the end of this session. All payments will be distributed in a manner that ensures your anonymity.

Finally, please do not talk to other students about the study until after 12/6/19, as we will be conducting additional sessions through this date and the person you are talking to may participate in a future session.

PLEASE RAISE YOUR HAND NOW IF YOU HAVE ANY QUESTIONS BEFORE WE BEGIN.

Please DO NOT click the "Instructed to Proceed" button until instructed to do so.

[Instructed to Proceed]

Note: The instruction will be read out loud by the experimenter.

Please answer the three questions below

The answers that you provide to the following questions will not affect your payment.

Question 1: What year in school are you?
- ○ **First-Year Student**
- ○ **Sophomore**
- ○ **Junior**
- ○ **Senior**
- ○ **Graduate Student**
- ○ **Not Listed**

Question 2: What is your gender?
- ○ **Female**
- ○ **Male**
- ○ **Transgender Female**
- ○ **Transgender Male**
- ○ **Gender Non-Conforming**
- ○ **Not Listed**

Question 3: In which category does your major (or intended major) fall? (If you have a double major, then indicate in which category your first major falls?) :
- ○ **Business or Management**
- ○ **Economics**
- ○ **Humanities**
- ○ **Life Sciences**
- ○ **Math or Statistics**
- ○ **Physical Sciences**
- ○ **Social Sciences (excluding economics)**
- ○ **Not Listed**

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue.

[OK]

Task 1 Instructions

For Task 1 you will be given 5 minutes to solve up to 30 problems. Each problem consists of adding 5 randomly-chosen, two-digit numbers. You cannot use a calculator; however, you are welcome to use the provided scratch paper and pen.

Each problem will be presented as below with the five numbers appearing in a row. You then enter the sum in the box to the right of the numbers.

64	45	80	21	34	

At the end of the 5 minutes, your answers will automatically be recorded, and you will be informed how many problems you solved correctly.

Task 1 Payment Information

If Task 1 is chosen as the payment task, then you will receive $0.50 per problem you solve correctly in this task. Your payment does not decrease if you provide an incorrect answer to a problem.

We refer to this payment scheme as "Piece-Rate" payment.

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

OK

Task 1

Please enter your answers in the boxes to the right of the numbers.

At the end of the 5 minutes, your answers will automatically be recorded, and you will be informed how many problems you solved correctly.

41	22	91	68	34	
81	89	17	35	13	
81	77	24	76	90	
69	17	42	90	30	
10	15	58	96	13	
12	16	38	44	20	
80	20	74	24	87	
47	95	36	64	60	
28	70	66	45	87	
37	61	19	69	17	
70	86	20	24	16	

Note: In the experiment there will be 30 problems listed. To reduce the length of this document, we are only showing the first 11 problems.

Task 1 Results

You solved 0 problems correctly in Task 1.

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

OK

Task 2 Instructions

For Task 2 you will be given 5 minutes to solve up to 30 problems. Each problem consists of adding 5 randomly-chosen, two-digit numbers. You cannot use a calculator; however, you are welcome to use the provided scratch paper and pen.

Each problem will be presented as below with the five numbers appearing in a row. You then enter the sum in the box to the right of the numbers.

64	45	80	21	34	

At the end of the 5 minutes, your answers will automatically be recorded, and you will be informed how many problems you solved correctly.

Task 2 Payment Information

If Task 2 is chosen as the payment task, then you will receive either:

- $2.00 per problem you solve correctly in this task if you answer more problems correctly than 75 percent of the participants in this session in this task.
- $0.00 per problem you solve correctly in this task if you do not answer more problems correctly than 75 percent of the participants in this session in this task.

Your payment does not decrease if you provide an incorrect answer to a problem.

We refer to this payment scheme as "Tournament" payment.

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

OK

Task 2

Please enter your answers in the boxes to the right of the numbers.

At the end of the 5 minutes, your answers will automatically be recorded, and you will be informed how many problems you solved correctly.

12	76	30	62	97	
38	31	50	32	91	
47	81	34	98	85	
26	77	69	29	17	
93	81	74	67	61	
63	36	43	16	88	
31	52	97	56	91	
88	27	40	91	39	
27	98	14	61	45	
73	84	11	54	62	
22	75	69	42	20	

Note: In the experiment there will be 30 problems listed. To reduce the length of this document, we are only showing the first 11 problems.

Task 2 Results

You solved 0 problems correctly in Task 2.

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

OK

Information about you and Participant X

Below is some information about you and one other randomly-selected participant in this session (hereafter referred to as "Participant X").

Please copy this information onto your scratch paper for later reference. Feel free to use abbreviations or shorthand. This information is for your reference only.

	You	Participant X
Year in school	First-Year Student	None
Gender	Female	None
Major	Business or Management	None
Problems solved correctly in Task 1	0	None
Problems solved correctly in Task 2	0	None

Please note that each participant in this session will be shown information about one other randomly-selected participant in this session. This includes Participant X. However, you and Participant X are NOT a "pair." That is, Participant X will be shown information about themselves and one randomly-selected participant other than you in this session.

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

OK

Task 3A Instructions

For Task 3A you will be given 5 minutes to solve up to 30 problems. Each problem consists of adding 5 randomly-chosen, two-digit numbers. You cannot use a calculator; however, you are welcome to use the provided scratch paper and pen.

Each problem will be presented as below with the five numbers appearing in a row. You then enter the sum in the box to the right of the numbers.

| 64 | 45 | 80 | 21 | 34 | |

At the end of the 5 minutes, your answers will automatically be recorded, and you will be informed how many problems you solved correctly.

Task 3A Payment Information

In Task 3A you will choose which of the two payment schemes—Piece-Rate or Tournament—you prefer to apply to your performance in Task 3A.

If Task 3A is chosen as the payment task, then what you receive will be determined as follows:

- If you choose the Piece-Rate payment scheme, then you will receive $0.50 per problem you solve correctly in this task.
- If you choose the Tournament payment scheme, then you will receive either:
  - $2.00 per problem you solve correctly in this task if you answer more problems correctly than 75 percent of the participants in this session in Task 2. (That is, your performance in this task will be compared to other participants' performance in Task 2.)
  - $0.00 per problem you solve correctly in this task if you do not answer more problems correctly than 75 percent of the participants in this session in Task 2. (That is, your performance in this task will be compared to other participants' performance in Task 2.)

Your payment does not decrease if you provide an incorrect answer to a problem.

Please indicate which payment scheme you would like to apply to your Task 3A performance :

○ **Piece-Rate**
○ **Tournament**

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

OK

Task 3A Payment Information (Continued)

You have chosen to apply the Piece-Rate payment scheme to your performance in Task 3A.

If Task 3A is chosen as the payment task, then you will receive $0.50 per problem you solve correctly in this task.

Your payment does not decrease if you provide an incorrect answer to a problem.

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

OK

Task 3A Payment Information (Continued)

You have chosen to apply the Tournament payment scheme to your performance in Task 3A.

If Task 3A is chosen as the payment task, then you will receive:

- $2.00 per problem you solve correctly in this task if you answer more problems correctly than 75 percent of the participants in this session in Task 2. (That is, your performance in this task will be compared to other participants' performance in Task 2.)
- $0.00 per problem you solve correctly in this task if you do not answer more problems correctly than 75 percent of the participants in this session in Task 2. (That is, your performance in this task will be compared to other participants' performance in Task 2.)

Your payment does not decrease if you provide an incorrect answer to a problem.

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

OK

Note: The subject will only see one of the two above screens depending on which payment scheme the subject chose.

Task 3A

Please enter your answers in the boxes to the right of the numbers.

At the end of the 5 minutes, your answers will automatically be recorded, and you will be informed how many problems you solved correctly.

17	79	40	30	62	
87	86	46	75	77	
18	38	11	89	18	
14	34	65	43	25	
18	75	82	36	86	
69	77	73	83	75	
71	87	83	66	31	
45	96	85	89	93	
15	32	83	10	55	
28	31	83	67	54	
48	92	98	16	89	

Note: In the experiment there will be 30 problems listed. To reduce the length of this document, we are only showing the first 11 problems.

Task 3A Results

You solved 0 problems correctly in Task 3A.

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

OK

Task 4A Instructions

For Task 4A you do not have to add any numbers.

Task 4A Payment Information

In Task 4A you will choose which of the two payment schemes—Piece-Rate or Tournament—you prefer to apply to your performance in Task 1.

Recall, the number of problems you correctly solved in Task 1 was 0.

If Task 4A is chosen as the payment task, then what you receive will be determined as follows:

- If you choose the Piece-Rate payment scheme, then you will receive $0.50 per problem you solved correctly in Task 1.
- If you choose the Tournament payment scheme, then you will receive either:
    - $2.00 per problem you solved correctly in Task 1 if you answered more problems correctly than 75 percent of the participants in this session in Task 1. (That is, your performance in Task 1 will be compared to other participants' performance in Task 1.)
    - $0.00 per problem you solved correctly in Task 1 if you did not answer more problems correctly than 75 percent of the participants in this session in Task 1. (That is, your performance in Task 1 will be compared to other participants' performance in Task 1.)

Please indicate which payment scheme you would like to apply to your Task 1 performance :
- ○ **Piece-Rate**
- ○ **Tournament**

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

[OK]

15

Task 4A Payment Information (Continued)

You have chosen to apply the Tournament payment scheme to your performance in Task 1.

If Task 4A is chosen as the payment task, then you will receive:

- $2.00 per problem you solved correctly in Task 1 if you answered more problems correctly than 75 percent of the participants in this session in Task 1. (That is, your performance in Task 1 will be compared to other participants' performance in Task 1.)
- $0.00 per problem you solved correctly in Task 1 if you did not answer more problems correctly than 75 percent of the participants in this session in Task 1. (That is, your performance in Task 1 will be compared to other participants' performance in Task 1.)

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

OK

Task 4A Payment Information (Continued)

You have chosen to apply the Piece-Rate payment scheme to your performance in Task 1.

If Task 4A is chosen as the payment task, then you will receive $0.50 per problem you solved correctly in Task 1.

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

OK

Note: The subject will only see one of the two above screens depending on which payment scheme the subject chose.

Your Relative Performance in Tasks 1 and 2

In Task 1, in which category below would you place your performance—in terms of the number of problems solved correctly—relative to other participants in this session? (If you are correct, you will receive an additional payment of $1.)

- ◯ **Top Quartile (Top 25%)**
- ◯ **Second Quartile (Between 25th and 50th percentile)**
- ◯ **Third Quartile (Between 50th and 75th percentile)**
- ◯ **Bottom Quartile (Bottom 25%)**

In Task 2, in which category below would you place your performance—in terms of the number of problems solved correctly—relative to other participants in this session? (If you are correct, you will receive an additional payment of $1.)

- ◯ **Top Quartile (Top 25%)**
- ◯ **Second Quartile (Between 25th and 50th percentile)**
- ◯ **Third Quartile (Between 50th and 75th percentile)**
- ◯ **Bottom Quartile (Bottom 25%)**

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue.

OK

Information about you and Participant X

Below is the same information about you and one other randomly-selected participant in this session that was displayed previously.

	You	Participant X
Year in school	Senior	First-Year Student
Gender	Transgender Male	Female
Major	Life Sciences	Business or Management
Problems solved correctly in Task 1	0	0
Problems solved correctly in Task 2	0	0

Recall, Participant X is a randomly-selected participant in this session. Further, recall that you and Participant X are NOT a "pair." That is, Participant X will be shown information about themselves and one randomly-selected participant other than you in this session.

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

OK

Task 3B Instructions

For Task 3B you will be given 5 minutes to solve up to 30 problems. Each problem consists of adding 5 randomly-chosen, two-digit numbers. You cannot use a calculator; however, you are welcome to use the provided scratch paper and pen.

Each problem will be presented as below with the five numbers appearing in a row. You then enter the sum in the box to the right of the numbers.

64	45	80	21	34	

At the end of the 5 minutes, your answers will automatically be recorded, and you will be informed how many problems you solved correctly.

Task 3B Payment Information

In Task 3B you will choose on behalf of Participant X which of the two payment schemes—Piece-Rate or Tournament—you prefer to apply to Participant X's performance in Task 3B.

(Recall, Participant X is a randomly-selected participant in this session. Further, recall that you and Participant X are NOT a "pair." That is, Participant X will not make a decision on your behalf.)

If Task 3B is chosen as the payment task, then what Participant X receives will be determined as follows:

- If you choose the Piece-Rate payment scheme on behalf of Participant X, then Participant X will receive $0.50 per problem Participant X solves correctly in this task.
- If you choose the Tournament payment scheme on behalf of Participant X, then Participant X will receive either:
  - $2.00 per problem Participant X solves correctly in this task if Participant X answers more problems correctly than 75 percent of the participants in this session in Task 2. (That is, Participant X's performance in this task will be compared to other participants' performance in Task 2.)
  - $0.00 per problem Participant X solves correctly in this task if Participant X does not answer more problems correctly than 75 percent of the participants in this session in Task 2. (That is, Participant X's performance in this task will be compared to other participants' performance in Task 2.)

Participant X's payment does not decrease if Participant X provides an incorrect answer to a problem.

Please indicate which payment scheme you would like to apply to Participant X's Task 3B performance :

○ **Piece-Rate**
○ **Tournament**

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

OK

Task 3B Payment Information (Continued)

The randomly-selected participant in this session who chose your payment scheme on your behalf (not Participant X) has chosen to apply the Piece-Rate payment scheme to your performance in Task 3B.

If Task 3B is chosen as the payment task, then you will receive $0.50 per problem you solve correctly in this task plus 10 percent of what Participant X receives for this task.

Your payment does not decrease if you provide an incorrect answer to a problem.

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

OK

Task 3B Payment Information (Continued)

The randomly-selected participant in this session who chose your payment scheme on your behalf (not Participant X) has chosen to apply the Tournament payment scheme to your performance in Task 3B.

If Task 3B is chosen as the payment task, then you will receive:

- $2.00 per problem you solve correctly in this task if you answer more problems correctly than 75 percent of the participants in this session in Task 2. (That is, your performance in this task will be compared to other participants' performance in Task 2.)
- $0.00 per problem you solve correctly in this task if you do not answer more problems correctly than 75 percent of the participants in this session in Task 2. (That is, your performance in this task will be compared to other participants' performance in Task 2.)

Your payment does not decrease if you provide an incorrect answer to a problem.

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

OK

Note: The subject will only see one of the two above screens depending on which payment scheme the subject chose.

Task 3B

Please enter your answers in the boxes to the right of the numbers.

At the end of the 5 minutes, your answers will automatically be recorded, and you will be informed how many problems you solved correctly.

58	31	66	76	88	
95	31	95	42	99	
55	10	53	34	56	
93	72	98	63	31	
42	30	67	58	27	
52	96	22	90	51	
82	12	29	59	46	
63	74	79	29	65	
47	66	57	43	35	
93	61	67	89	19	
53	26	95	84	34	

Note: In the experiment there will be 30 problems listed. To reduce the length of this document, we are only showing the first 11 problems.

Task 3B Results

You solved 0 problems correctly in Task 3B.

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

OK

Task 4B Instructions

For Task 4B you do not have to add any numbers.

Task 4B Payment Information

In Task 4B you will choose on behalf of Participant X which of the two payment schemes—Piece-Rate or Tournament—you prefer to apply to Participant X's performance in Task 1.

(Recall, Participant X is a randomly-selected participant in this session. Further, recall that you and Participant X are NOT a "pair." That is, Participant X will not make a decision on your behalf.)

Recall, the number of problems Participant X correctly solved in Task 1 was 0.

If Task 4B is chosen as the payment task, then what Participant X will receive for this task will be determined as follows:

- If you choose the Piece-Rate payment scheme on behalf of Participant X, then Participant X will receive $0.50 per problem Participant X solved correctly in Task 1.
- If you choose the Tournament payment scheme on behalf of Participant X, then Participant X will receive either:
  - $2.00 per problem Participant X solved correctly in Task 1 if Participant X answered more problems correctly than 75 percent of the participants in this session in Task 1. (That is, Participant X's performance in Task 1 will be compared to other participants' performance in Task 1.)
  - $0.00 per problem Participant X solved correctly in Task 1 if Participant X did not answer more problems correctly than 75 percent of the participants in this session in Task 1. (That is, Participant X's performance in Task 1 will be compared to other participants' performance in Task 1.)

Further, if Task 4B is chosen as the payment task, then you will receive an additional payment that is equal to 10 percent of what Participant X receives for this task.

Please indicate which payment scheme you would like to apply to Participant X's Task 1 performance :

○ **Piece-Rate**
○ **Tournament**

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

[OK]

Task 4B Payment Information (Continued

The randomly-selected participant in this session who chose your payment scheme on your behalf (not Participant X) has chosen to apply the Piece-Rate payment scheme to your performance in Task 1.

If Task 4B is chosen as the payment task, then you will receive $0.50 per problem you solved correctly in Task 1.

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

OK

Task 4B Payment Information (Continued

The randomly-selected participant in this session who chose your payment scheme on your behalf (not Participant X) has chosen to apply the Tournament payment scheme to your performance in Task 1.

If Task 4B is chosen as the payment task, then you will receive:

- $2.00 per problem you solved correctly in Task 1 if you answered more problems correctly than 75 percent of the participants in this session in Task 1. (That is, your performance in Task 1 will be compared to other participants' performance in Task 1.)
- $0.00 per problem you solved correctly in Task 1 if you did not answer more problems correctly than 75 percent of the participants in this session in Task 1. (That is, your performance in Task 1 will be compared to other participants' performance in Task 1.)
- Plus 10 percent of what Participant X receives for this task.

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

OK

Note: The subject will only see one of the two above screens depending on which payment scheme the subject chose.

Note: Approximately half of the subjects will see Tasks 3B & 4B first and Tasks 3A & 4A second. The order of these tasks was randomized so that we can examine order effects.

Participant X's Relative Performance in Tasks 1 and 2

In Task 1, in which category below would you place Participant X's performance—in terms of the number of problems solved correctly—relative to other participants in this session? (If you are correct, you will receive an additional payment of $1.)

○ **Top Quartile (Top 25%)**
○ **Second Quartile (Between 25th and 50th percentile)**
○ **Third Quartile (Between 50th and 75th percentile)**
○ **Bottom Quartile (Bottom 25%)**

In Task 2, in which category below would you place Participant X's performance—in terms of the number of problems solved correctly—relative to other participants in this session? (If you are correct, you will receive an additional payment of $1.)

○ **Top Quartile (Top 25%)**
○ **Second Quartile (Between 25th and 50th percentile)**
○ **Third Quartile (Between 50th and 75th percentile)**
○ **Bottom Quartile (Bottom 25%)**

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue.

[OK]

Task 5 Instructions

In 11 items, you will choose between a lottery and a fixed payment. For each item, the lottery is a 50% chance of earning $10 and a 50% chance of earning $0, while the amount of the fixed payment varies.

Task 5 Payment Information

If Task 5 is chosen as the payment task, then what you receive for this task will be determined as follows:

- One of the 11 items in this task will be selected randomly.
  - If you choose the fixed payment over the lottery for that item, then you will receive the fixed payment.
  - If you choose the lottery over the fixed payment for that item, then your payment will depend on the outcome of the lottery. Specifically, we will put 10 numbered balls in the spinner, ranging from 1 to 10. One ball will be chosen randomly from the spinner. If the chosen ball is numbered between 1 and 5, then the lottery payment will be $0. If the chosen ball is numbered between 6 and 10, then the lottery payment will be $10.

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

[OK]

Task 5

For each choice below, the lottery is a 50% chance of earning $10 and a 50% chance of earning $0.

For each choice below, please indicate whether you prefer the fixed payment or the lottery.

Choose:	○ $0 Fixed Payment	○ Lottery
Choose:	○ $1 Fixed Payment	○ Lottery
Choose:	○ $2 Fixed Payment	○ Lottery
Choose:	○ $3 Fixed Payment	○ Lottery
Choose:	○ $4 Fixed Payment	○ Lottery
Choose:	○ $5 Fixed Payment	○ Lottery
Choose:	○ $6 Fixed Payment	○ Lottery
Choose:	○ $7 Fixed Payment	○ Lottery
Choose:	○ $8 Fixed Payment	○ Lottery
Choose:	○ $9 Fixed Payment	○ Lottery
Choose:	○ $10 Fixed Payment	○ Lottery

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue

OK

Please answer the question below

Question 1: Please indicate the gender of Participant X. (If you are correct, you will receive an additional payment of $1.)

- ○ **Female**
- ○ **Male**
- ○ **Transgender Female**
- ○ **Transgender Male**
- ○ **Gender Non-Conforming**
- ○ **Not Listed**

Click OK to continue.

[OK]

Please answer the questions below

The answers that you provide to the following questions will not affect your payment.

Question 1: Are you on a college varsity team?

◯ Yes

◯ No

If yes, what team are you on?

[   ]

Question 2: How old are you in years?

[   ]

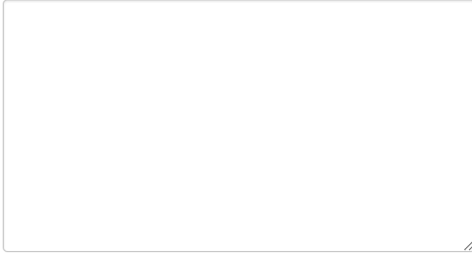**Question 3: What race/ethnicity do you identify yourself as (check all that apply):**

☐ American Indian or Alaska Native

☐ Asian

☐ Black or African American

☐ Hispanic (having origins in Mexico, Central, or South America)

☐ Native Hawaiian or Other Pacific Islander

☐ White

☐ Not listed

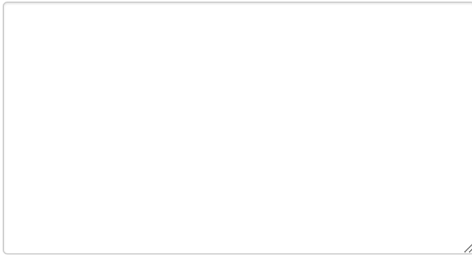**Question 4: How would you characterize your political views:**

◯ Conservative

◯ Moderate

◯ Progressive

Note: This page and the next page will appear on one page in the program. We broke it into two pages here to improve readability.
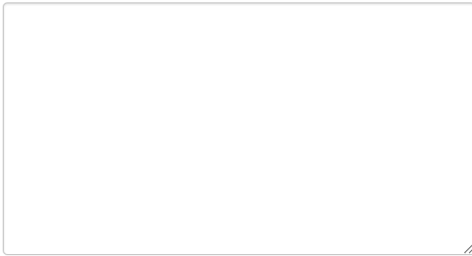
Question 5: What factors did you consider in making your choice between the Tournament and Piece-rate payment scheme when deciding on behalf of yourself?

Question 6: What factors did you consider in making your choice between the Tournament and Piece-rate payment scheme when deciding on behalf of Participant X?

Question 7: Finally, in the space provided below, please try to describe what you believe to be the purpose of the study:

Please do not talk with one another. If you have a question please raise your hand, and the experimenter will go where you are to answer your question privately.

Click OK to continue.

OK

Payment Task Determination

Now we will determine the payment task. Please focus your attention on the experimenters at the front of the classroom.

Please raise your hand if you have any questions.

Please DO NOT click the "Instructed to Proceed" button until instructed to do so.

Instructed to Proceed

Your payment

Again, thank you for your willingness to participate.

Your payment will be calculated as follows:

1. You will receive a $5 payment for completing the 7 tasks.

2. You will be paid for the payment task. Table 1 below indicates your payment for tasks 1-4B if one of those tasks is the payment task. Table 2 below indicates the choices you made in task 5; if task 5 is the payment task, then the experimenters will explain how to determine your payment from Table 2.

3. There were 5 questions for which you could earn an additional $1 for each you answered correctly. Table 3 below indicates which questions you answered correctly.

4. Finally, you will receive 10 percent of Participant X's payment if the payment task was 3B or 4B.

Please remain seated until we call you by your seat number. Once your number is called please come to the front of the classroom to collect your payment.

Please raise your hand if you have any questions.

Again, thank you for your willingness to participate.

Table 1: Payment for tasks 1-4B

Task	Payment scheme	Problems solved correctly	Performance quartile	Payment if payment task
Task 1	Piece-Rate	0	1	0.00
Task 2	Tournament	0	1	0.00
Task 3A	Piece-Rate	0	1	0.00
Task 4A	Tournament	0	1	0.00
Task 3B[a]	Piece-Rate	0	1	0.00
Task 4B[a]	Tournament	0	1	0.00

[a] A randomly-selected participant--other than Participant X--in this session chose to apply the payment scheme on your behalf in Tasks 3B & 4B.

Note: This page and the next page will appear on one page in the program. We broke it into two pages here to improve readability.

Table 2: Payment for task 5 (recall you made 11 choices between a fixed payment and a lottery. The lottery is a 50% chance of earning $10 and a 50% chance of earning $0.)

Fixed payment	Your choice
$0	Lottery
$1	Lottery
$2	Lottery
$3	Lottery
$4	Lottery
$5	Lottery
$6	Lottery
$7	Lottery
$8	Lottery
$9	Lottery
$10	Lottery

Table 3: Answers to 7 questions

Question	You answered	Correct?[b]
Your Task 1 quartile: 1	4	False
Your Task 2 quartile: 1	4	False
Participant X's Task 1 quartile: 1	4	False
Participant X's Task 2 quartile: 1	4	False
Participant X's gender: Female	Not Listed	False

[b] True indicates that your answer was correct and false indicates your answer was incorrect. For each correct answer you will earn an additional $1.

Please DO NOT click the "Instructed to Proceed" button until instructed to do so.

Instructed to Proceed