Ask and You Shall Receive? Gender Differences in Regrades in College

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NBER Education Program

Motivation

- Women are less likely than men to negotiate (Bowles et al., 2007; Leibbrandt and List, 2014; Small et al., 2007).
    - This gender difference in negotiation contributes to the gender gap in labor outcomes (Babcock and Laschever, 2003).

Research Question

- This project examines whether such gender differences have consequences *prior* to labor market entry.
    - Specifically, whether male and female students experience different rates of successful grade changes in college.
    - Why do we care? Grades serve as productivity signals to potential employers; gender differences in negotiation may put women in disadvantage in the labor market.

Research Design

- We first analyze transcripts from a large 4-yr public university—males are 18.6% more likely than females to get their grades changed to better grades.
  - Student and class characteristics hardly explain the gender gap.
  - Limitation: no information about unsuccessful regrade requests.

Research Design

- Why? Not clear whether this is because:
  1. Male students are more likely to ask.
  2. Males students are treated more favorably.
  3. Female students asked *during* the semester while male students procrastinate until the *end* of semester.
  4. etc....

- To understand what is going on, we conduct:
  - Surveys of instructors and students.
  - Incentivized-controlled laboratory experiment.

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Preview of Results

- Transcripts:
  - Males are 18.6% more likely than females to have their grade changed to a better grade (0.48% of males vs 0.40% of females).
  - Gender difference is robust to controls.
- Surveys of instructors and students:
  - Males are more likely than females to ask for regrades both *during* and at the *end* of semester.
  - Lack of evidence of preferential treatment for males.
- Experiment:
  - Males are more willing than females to pay a *positive* cost to ask for regrades.
  - Under-confidence, uncertainty, and Big Five personality traits combined explain about 1/3 of the gender gap.

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Transcripts from Colorado State University

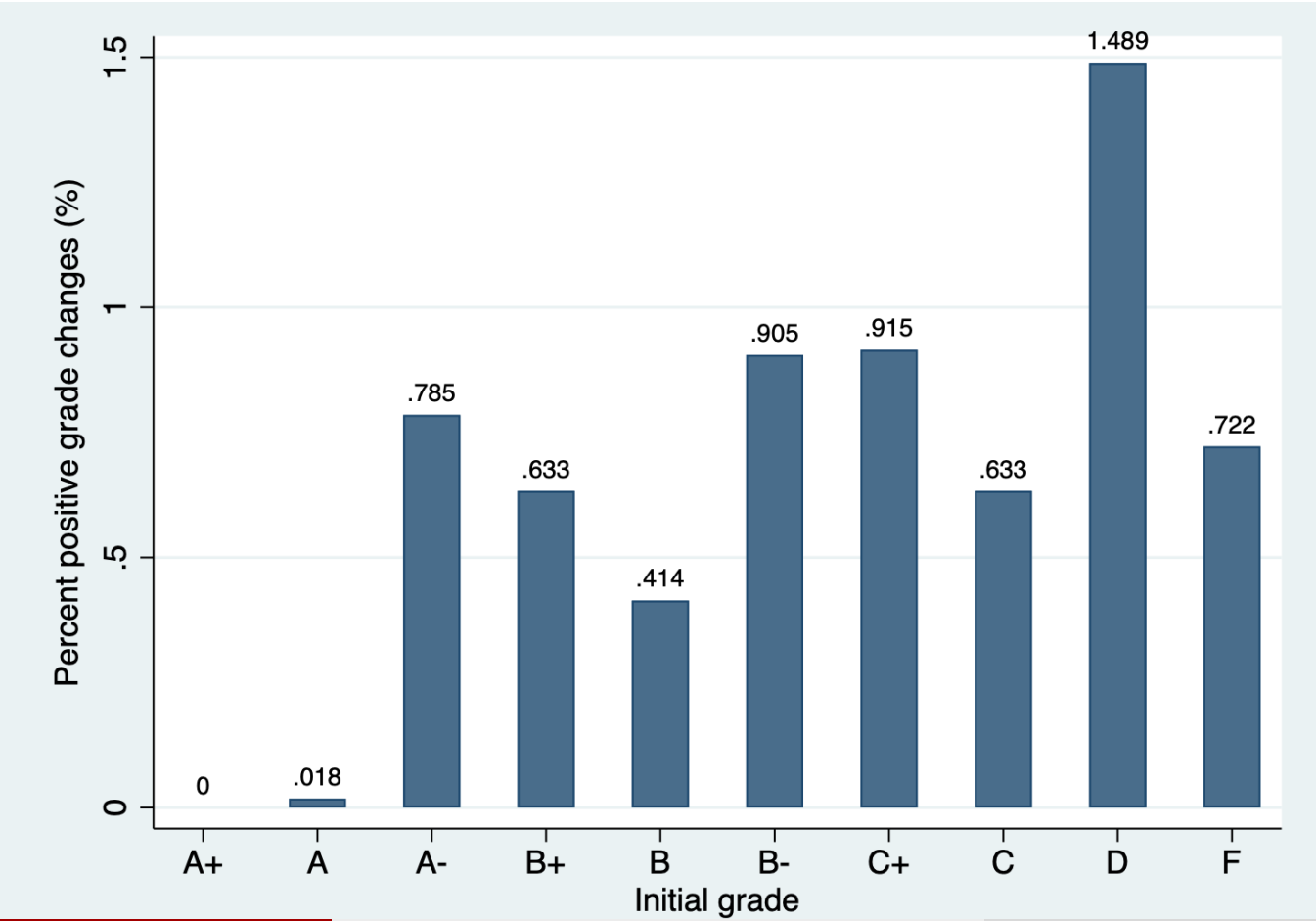
- CSU: 4-year public university w/ 23,768 undergraduate students in fall 2016.
- Class records 2010 - 2016: not only the final grades, but also any **changes** and the reason of change associated with them.
- Total 1,341,552 records from 64,857 students taught by 3,726 instructors.
- Females make up 53.4 percent of the grade records.
- Grade changes by instructors: 6,225 obs (0.46% of all records).
- Among all grade changes, 5,886 (94.6% of grade changes) are upward corrections.
- Conditional on students' gender:
  - Upward changes: male 0.479% vs female 0.404%.
  - Downward changes: male 0.03% vs female 0.02%.

Transcript Data: Summary Statistics

	Students		
	Female	Male	Difference
Percent (%) grades with a...			
Grade change	0.424	0.509	-0.085***
Positive grade change	0.404	0.479	-0.075***
Negative grade change	0.021	0.031	-0.010***
Female instructor	50.0	38.9	11.1***
Term GPA	3.15	2.94	0.20***

Transcript Data: Fraction Upward Changes | Initial Grades

- No clear patterns between initial grades and grade changes.
- Little changes for A+ and A: hits the upper bound.
- D: major requirements, probation, etc.



Empirical Specifications

$$Y_{ijt} = \Phi(\alpha_0 + \alpha_1 Male_i + \alpha_2 W_{ijt} + \alpha_3 X_{it} + \alpha_4 Z_{jt} + \epsilon_{ijt}), \quad (1)$$

- $Y_{ijt} \in \{0, 1\}$: binary variable of upward (or downward) grade change student i received in class j during semester t.
- $Male_i \in \{0, 1\}$: indicator if student i is male.
- W_{ijt}: time and class varying variables such as the initial grade student i received in class j during semester t.
- X_{it}: time-varying student characteristics, such as class standing, GPA.
- Z_{jt}: class-specific information, such as instructor's gender, rank, department, and college.
- ϵ_{ijt}: error term clustered at student-level.

Transcript Data: Probit Regression

	Probit Regression				
	[1]	[2]	[3]	[4]	[5]
	A. Dependent variable: Upward grade change $\in \{0, 1\}$				
Male student	0.000748***	0.000705***	0.000675***	0.000742***	0.000808***
	B. Dependent variable: Downward grade change $\in \{0, 1\}$				
Male student	0.000102***	0.000029	0.000102***	0.000098***	0.000092***
Controls	None	Colleges Departments	Instructor gender and rank	Student class standing	GPA and initial grade

Transcript Data: Sensitivity Analysis

	Sensitivity Analysis				
	Baseline	Excl. std. 2^+ changes	Excl. inst. $10\%^+$ changes	Excl. A+ and A	Excl. F
C. Dependent variable: Upward grade changes $\in \{0,1\}^a$					
Male student	0.000780***	0.000642***	0.000651***	0.001184***	0.000830***
D. Dependent variable: Downward grade changes $\in \{0,1\}^a$					
Male student	-0.000006	-0.000020	-0.000018	0.000046	-0.000006

All models control for colleges, departments, instructors' gender and rank, students' standing, GPA, and initial grade in the class.

Surveys

- Instructor Survey
  - Oct-Dec, 2018.
  - 154 participants (taught at least one undergrad course and experienced regrade requests at the end of previous semesters).
  - During semester: 11.2% regrade requests
  - End of semester: 5.94% regrade requests
- Student Survey
  - April-May, 2019.
  - 1,295 participants (completed at least three courses with letter grades).
  - During semester: 29.9% ever requested regrades
  - End of semester: 16.8% ever requested regrades
  - Overall: 40% ever requested regrades at some point

Are Men More Likely to Ask?

- Instructor survey: **Yes**.
  - 57.1%* requests made by males $>$ 52.5% males in class.
- Student survey:
  - *Intensive* margin: **Yes**.
    - Number of classes considered***: 1.3 (male) vs 1.04 (female).
    - Number of classes asked**: 1.12 (male) vs 0.97 (female).
  - *Extensive* margin: **No**.
    - Ever considered: 61% (male) vs 59% (female).
    - Ever asked: 41% (male) vs 39% (female).

Are Men Treated More Favorably?

- Conditional on asking, percentage getting a better grade:
  - Instructor survey: **No**.
    - End of semester: 17% (male) vs 17.9% (female).
    - During semester**: 33% (male) vs 37% (female).
      $\rightarrow$ Female advantage!
  - Student survey: **No**.
    - End of semester: 34% (male) vs 31% (female).
    - End of semester: 67% (male) vs 61% (female).
      $\rightarrow$ Statistically indistinguishable.

Do Women Ask Early?

- Instructor survey: **No**.
  - 58%** requests made by males $>$ 52.5% males in class *during* semester.
- Student survey: **No**.
  - 32% male vs 29 % female requested
    $\rightarrow$ Statistically indistinguishable.

Most Likely Scenario

- Men are more likely to ask? Yes.
- Men are treated more favorably? No.
- Women ask early so they don't need to ask at the end? No.
- Most likely scenario: Men simply ask more often than women do.

Experiment Design

- Sketch of the laboratory setting:
  - Participants take a quiz.
  - A noisy signal of their performance is provided.
  - Participants decide whether to pay a cost for regrades.
  - If they pay the cost for regrades, the true grade is revealed.
  - If they choose not to pay the cost for regrades, the initial grade becomes final.
  - We elicit: risk preference, their beliefs (prior and posterior) about their performance, and the Big Five personality traits.
- Advantage: shutting down factors—fear of backlash, gender interaction effects, differential negotiation skills, in real life.
- Decompose effects: risk aversion, confidence, optimization, uncertainty, and Big Five Personality Traits.

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Task 1: Risk preference

- Following Eckel and Grossman (2008), we ask participants to choose their most favorable option from five lottery choices. Screenshot
- Assumption: CRRA utility function.

Task 2: Performance in a Quiz

- Participants have to take a quiz of 20 IQ questions in 45 seconds/question. Quiz Example
- Payoff: between \$0 and \$16. Payoff Screenshot
  - Piece rate of \$0.50/correct answer, and
  - Bonuses (step function of letter grades:
    - \$2: 6-10 correct answers,
    - \$4: 11-15 correct answers, or
    - \$6: 16-20 correct answers.
  - Build-in check about participants' understanding of payoff. Build-in Check
- Subjective belief: after *each* question, ask participants' best guess (0-100) of the chance they think the answer is correct. Probability Example
- Belief elicitation is incentivized. Incentivized Probability Elicitation

Task 3: Prior Beliefs

- Prior beliefs: After the quiz, students are asked for:
  - Number of questions they thought they answered correctly (X). Prior Belief 1
  - Probabilities (between 0 and 100) of the true score falling in 5 bins:
    - $X - 5$ or fewer;
    - Between $X - 4$ and $X - 2$;
    - Between $X - 1$ and $X + 1$;
    - Between $X + 2$ and $X + 5$;
    - $X + 5$ or more.
  - Probabilities in the five bins must add up to 100 Prior Belief 2
- Elicitation of beliefs is incentivized. Build-in Check

Task 4: Willingness to Ask for Regrades

- Then, initial grades are revealed. Students are informed that 3 questions are randomly graded. Grade Revelation
- Noise in grading:
  - If original answer is *correct*: $\frac{1}{3} \rightarrow$ correct (truth) and $\frac{2}{3} \rightarrow$ incorrect.
  - If original answer is *incorrect*: $\frac{2}{3} \rightarrow$ incorrect (truth) and $\frac{1}{3} \rightarrow$ correct.
  - Imitate the asymmetry in transcripts (low downside risk).
- Remind participants of the grading and probability of accuracy participants assigned to *each* answer. Grade Summary
- Participants decide whether to request regrade given 10 cost scenarios (paying \$3.50 to getting paid \$1.00 in increments of \$0.50). One of the scenarios is randomly chosen for implementation. 10 Cost Scenarios
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Experiment Sample

- Experiment coded through oTree (web-based)
- Time: April - May 2019.
- 563 students participated.
- Remove 47 obs ($\approx 8.35\%$) w/inconsistent regrade requests.
- Final sample: 516 students consisted of 283 (55%) females and 233 (45%) males, similar to the population distribution.

Key Measures

- **Risk Aversion**: CRRA risk aversion coefficient (0.2–2).
- **Over-confidence**: avg. absolute distance between beliefs and outcome (i.e. 0) over wrong answers.
- **Under-confidence**: avg. absolute distance between beliefs and outcome (i.e. 1) over correct answers.
- **Over-optimism**: prior guessed score − true score.
- **Uncertainty in beliefs**: 1 − probability assigned to the prior guessed score.
- **Downside risk**: probability assigned to scenario(s) where the actual score is below the prior guessed score.
- **Big Five Personality Traits**: extroversion, agreeableness, conscientiousness, neuroticism, and openness.

Summary Statistics of Experiment

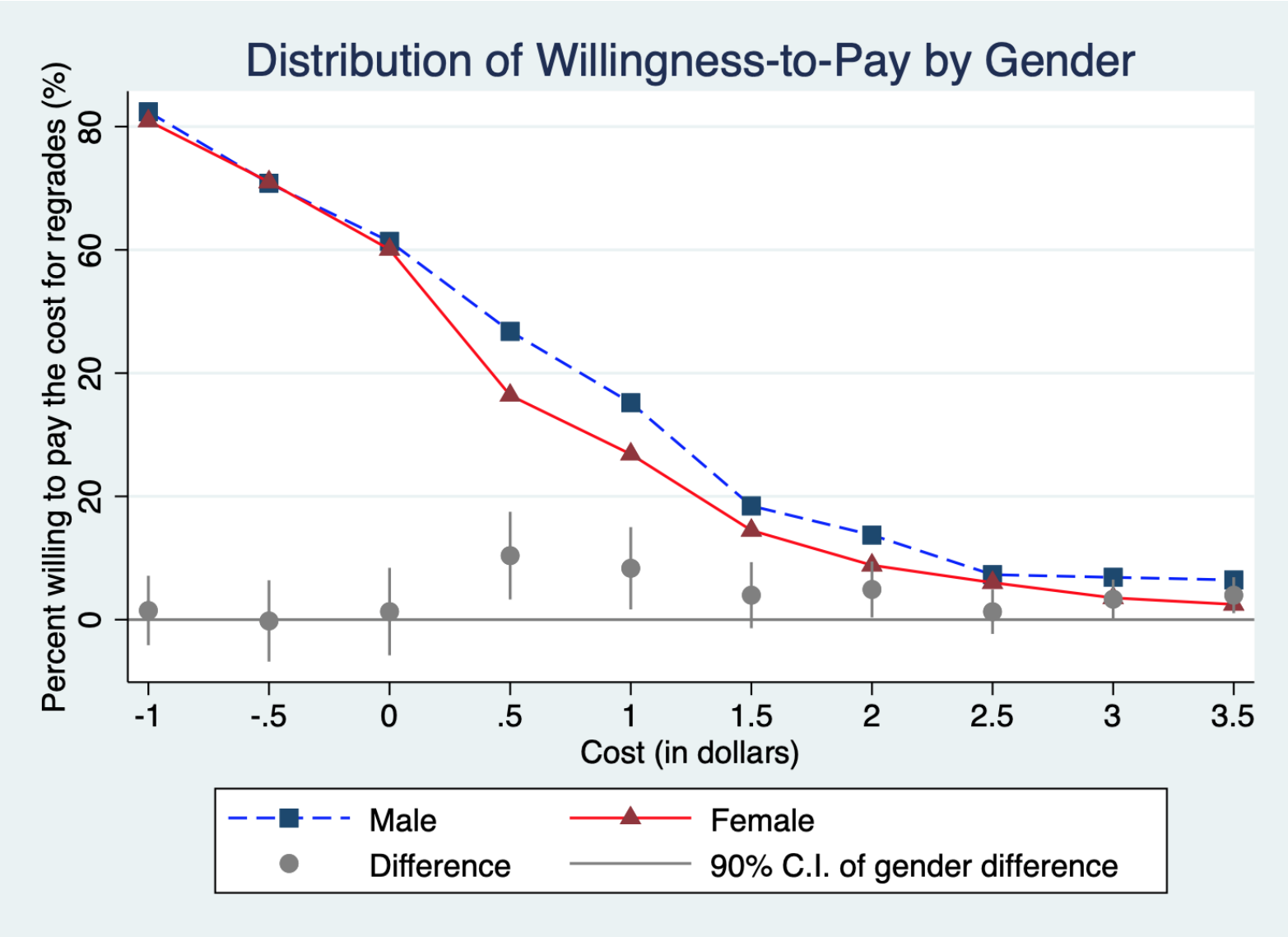
	Female	Male	Difference
Risk aversion coefficient	**1.12**	**0.86**	***
Over-confidence	0.53	0.54	
Under-confidence	**0.21**	**0.17**	***
Over-optimism	-1.64	-1.37	
Uncertainty	**0.51**	**0.47**	*
Downside risk	**0.33**	**0.29**	**
Big Five Traits:			
Extroversion	3.03	2.96	
Agreeableness	**3.62**	**3.48**	*
Conscientiousness	3.74	3.64	
Neuroticism	**3.52**	**2.89**	***
Openness	**3.71**	**3.47**	***

Summary Statistics of Experiment

	Female	Male	Difference
True score of the quiz	11.57	12.98	***
Original score of the quiz	10.84	12.08	***
Final score of the quiz	11.13	12.45	***
Willing to pay a positive cost for regrades (%)	**36.40**	**46.78**	**
WTP ($)	**0.05**	**0.25**	*

- Percent willing to pay a positive cost for regrades: $\approx \frac{1}{2}$ of males vs $\frac{1}{3}$ of females.
- WTP($): $0.25 for males vs $0.05 for females.

Are Men More Likely to Ask in Experiment?



Probit Regression: Experiment Results

- Probit regression

	Dependent Variable: $I_{WTP>0} \in \{0,1\}$						
	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Male student	0.103**	0.099**	0.095**	**0.084****	0.105**	**0.089****	0.090***
Risk aversion		Yes					
Over-confidence			Yes				
Under-confidence				Yes			
Over-optimism					Yes		
Uncertainty						Yes	Yes
Downside risk							Yes
Pseudo R^2	0.0078	0.0081	0.0203	0.0203	0.0099	0.0221	0.0227

- **Underconfidence** and **uncertainty** seem to explain part of the gender gap.

Probit Regression: Experiment Results

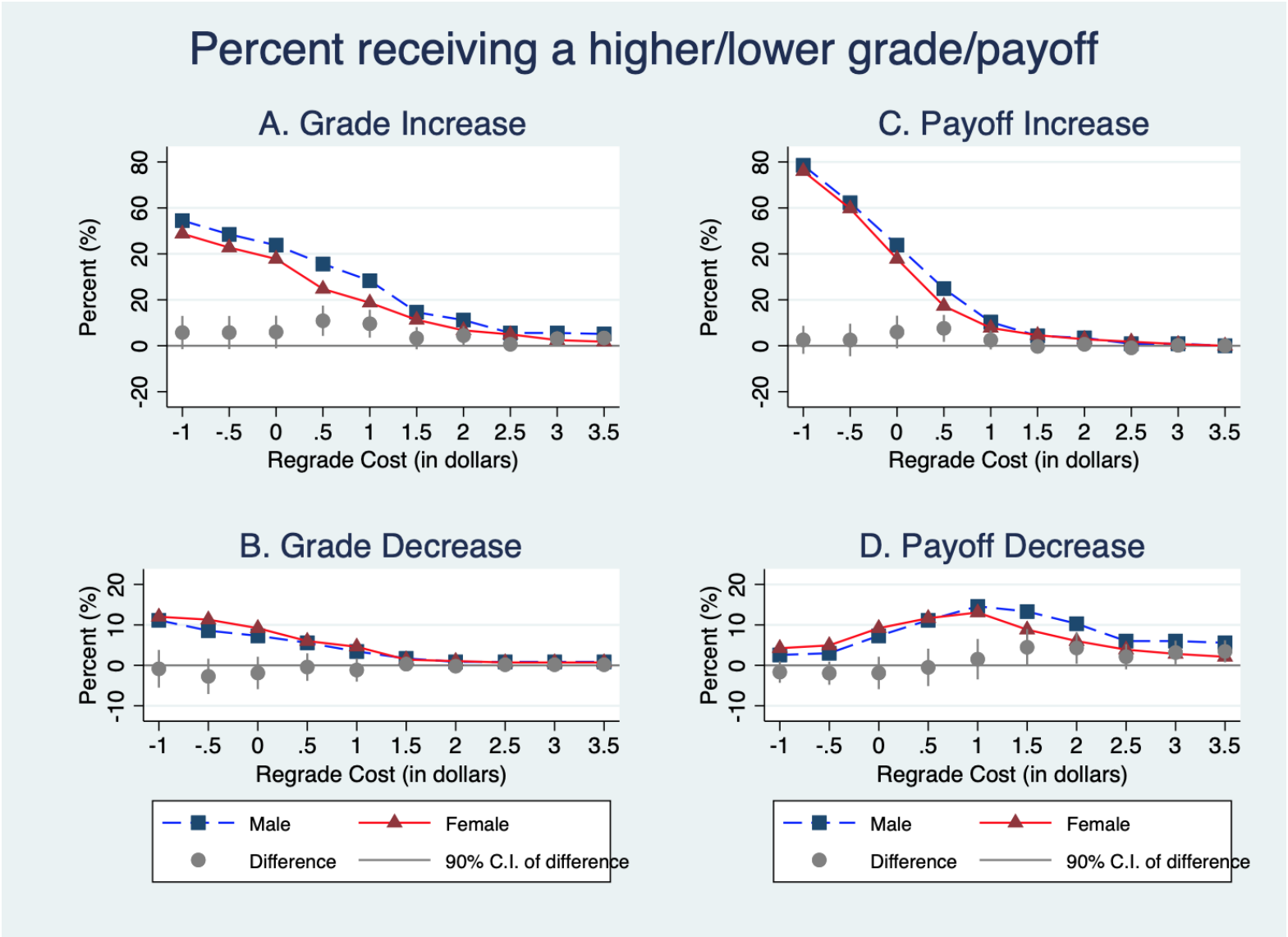
	Dependent Variable: $I_{WTP>0} \in \{0,1\}$			
	[1]	[8]	[9]	[10]
Male student	**0.103****	**0.081***	**0.083***	**0.068**
Risk aversion		-0.015		-0.015
Over-confidence		0.234		0.253*
Under-confidence		-0.089		-0.080
Over-optimism		0.005**		0.005**
Uncertainty		-0.347***		-0.335***
Downside risk		0.019		0.012
Big Five Traits	No	No	Yes	Yes
F-test (p-value)		.0013	.833	.013
Pseudo R^2	0.0078	0.0333	0.0099	0.0348

F-test hypothesis: all coefficients (other than coefficient on *Male*) are jointly zeros.

Experiment: Decomposing the effects

- Risk preferences, over-optimism, and downside risk hardly explain the gender differences in asking.
- Under-confidence, uncertainty, and the Big Five personality traits combined account for 35% of the gender differences in asking.
- A large portion of the gap may be due to preference-based differences.

Does Asking Make Males Better off?



Conclusion

- Male students are 18.6 percent more likely than female students to receive favorable grade changes. Result is robust to controls.
- Surveys of instructors and students show that
  - Regrades are prevalent: 40% students asked at some point; and conditional on asking, 30% receive a better score/grade.
  - Males have a higher propensity of asking (on the intensive margin).
- Experiment shows that males are indeed more likely than females to ask when costs > 0, regardless of whether it makes economics sense.
  - Under-confidence, uncertainty in beliefs, and personality traits combined explain 35% of the gender differences.
- Consistent w/surveys:
  - Instructors reported that male students were more aggressive in asking for regrades.
  - More male students than female students reported regrets for asking aggressively.

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- Why are females less willing to ask?
  - Student survey shows higher stress level for females (5.01) than for males (3.88) in asking (measured from 1 "not stressed at all" to 7 "extremely stressed").
  - Stress level explains half of the gender difference in the number of classes considered for regrades in the student survey.

- Although our experiment shuts down fear of backlash, dynamics of gender interactions, and different negotiation skills, we still observe substantial gender differences in regrade requests.

- Policy implications:
  - Making regrade policies explicit and transparent.
  - Since 1/5 of the gender gap is due to uncertainty and under-confidence$\rightarrow$ providing strong signals about ability to students

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Risk Preference

TASK 1

In the first task, we would like to ask you about your preferences for different options of lottery choices.

Suppose there are two possible events A and B. There is a **50% chance for event A** to occur and a **50% chance for event B** to occur. Among the five lottery choices listed below, which one do you prefer the most?

Based on your choice, a lottery will be *randomly* drawn to decide whether event **A** or **B** occurs. You will then be paid for this task based on this random drawing and the lottery you choose. For example, if you choose the third option below, the computer will determine whether you receive $4 or $1.

- A: 50% chance of receiving $2; B: 50% chance of receiving $2.00.
- A: 50% chance of receiving $3; B: 50% chance of receiving $1.50.
- A: 50% chance of receiving $4; B: 50% chance of receiving $1.00.
- A: 50% chance of receiving $5; B: 50% chance of receiving $0.50.
- A: 50% chance of receiving $6; B: 50% chance of receiving $0.00.

Next

Return to Task 1

Quiz Payoff

Your **payoff** will depend on your final score. You will only be informed of your score after you have answered ALL the 20 questions. The more questions you answer correctly, the higher your payoff. The payoff rate for each correct answer is $0.50. In addition to the $0.50 payoff for each correct answer, you may earn an additional bonus payment as follows: $2 if you answered 6 - 10 questions correctly, $4 if you answered 11 - 15 questions correctly, and $6 if you answered 16 - 20 questions correctly.

This is the payoff table:

Number of correct answers	Payoff	Bonus	Total Compensation
1	$0.50	$0.00	$0.50
2	$1.00	$0.00	$1.00
3	$1.50	$0.00	$1.50
4	$2.00	$0.00	$2.00
5	$2.50	$0.00	$2.50
6	$3.00	$2.00	$5.00

Return to Task 2

Quiz Payoff Build-in Check

Example: if you answer **14 questions** correctly, you will receive:

- Payoff = \$0.50 x 14 = \$7.00
- Bonus = \$4.00
- **Total Compensation** = Payoff + Bonus = \$7.00 + \$4.00 = \$11.00

To ensure you understand correctly how your compensation (payoff + bonus) will be determined, please answer the following practice question.

Practice Question: What would your total compensation (i.e. payoff + bonus) be if you answered **16 questions** correctly?

- ○ \$11.50
- ○ \$14.00
- ○ \$14.50
- ○ \$15.00

Return to Task 2

Quiz Bonus for Probability Guess

Additional payoff: For each of the 20 questions, you will be asked about your best guess of the chance that you think your answer is correct. You may earn up to an additional $1 for the guess you provide. The computer will randomly select **one** of the 20 questions to determine the additional payment. You will receive a larger proportion of this $1 additional payoff the more accurate your guess. For instance, if you think the chance your answer is correct is 100% and your answer is indeed correct, you will earn an additional $1. However, if you think the chance your answer is correct is 80% and your answer is indeed correct, you will earn $0.96. On the other hand, if you think the chance your answer is correct is 100% but your answer is actually wrong, you will earn $0. This formula was designed by economists (link). According to this formula, it is in your best interest to respond honestly.

Return to Task 2

Example of Quiz Question

Task 2. Question 2 of 20

Time left to complete this page: **0:45**

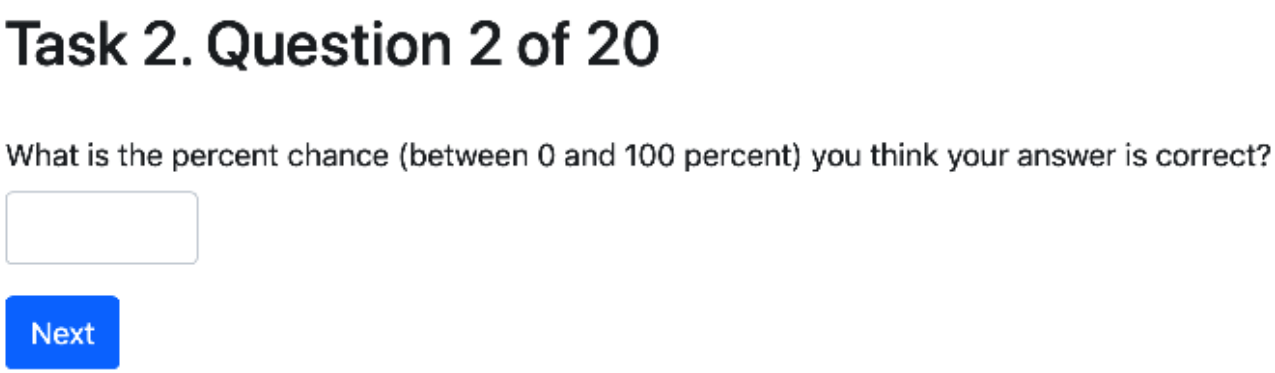
The positions of the first and the third digits in the number 5174 are interchanged. The positions of the second and the fourth digits are interchanged. Which of the following will be the third digit from the right-end after the re-arrangement?

- 5
- 1
- 7
- 4

Next

Return to Task 2

Example of Subjective Probability for Individual Question



Return to Task 2

Prior Belief 1

Guess: Before you are informed about the number of questions you answered correctly, you will be asked for your **guess** of the number of questions you answered correctly.

Payoff: You will be rewarded for the accuracy of your guess. The closer your guess is to the number of questions you answered correctly, the higher your payoff. This formula was designed by economists (link). According to the formula, it is in your best interest to respond honestly. You will be able to earn as much as $5 for the accuracy of your guess as follows:

Accuracy of your guess	**Payoff**
Completely accurate	$5.00
Your guess is off by 1 question	$4.50
Your guess is off by 2 questions	$3.00
Your guess is off by 3 questions	$0.50
Your guess is off by 4 or more questions	$0.00

Recall at the end of the session, **ONE** of Tasks 3, 4, 6, or 7 will be picked by the computer at random to determine your payoff from these tasks.

Question: How many questions do you think you answered **correctly**?

Return to Task 3

Prior Belief 2

In the previous question, your guess of how many questions you think you answered correctly was **13**. This question is designed to assess how confident you feel about your guess.

Payoff: As before, you will be able to earn as much as $5 for the accuracy of your guess. The more accurate your guess is, the higher your payoff. This formula was designed by economists (link). According to the formula, it is in your best interest to respond honestly.

Recall at the end of the session, **ONE** of Tasks 3, 4, 6, or 7 will be picked by the computer at random to determine your payoff from these tasks.

Question What do you think is the percent chance (or chances out of 100) that the number of questions you answered correctly falls in each of the following bins. Please assign a number between 0 and 100 for each row. Your answers must **sum up to 100**.

Number of questions answered correctly	Probabilities (between 0 and 100%)
8 question(s) or less	0
Between 9 and 11 question(s)	0
Between 12 and 14 question(s)	0
Between 15 and 17 question(s)	0
18 question(s) or more	0

Return to Task 3

Build-in Check for Prior Bonus

Example: Suppose you *guess* that you answered **15** questions correctly, but you *actually* answered **16** questions correctly. Since your guess is one question short, you will receive **$4.5** as the payoff for your guess.

Practice Question: What would be your guess payoff if you guessed that you answered 14 questions correctly, but you actually only answered 11 questions correctly?

- ○ $5.00
- ○ $4.50
- ○ $3.00
- ○ $0.50
- ○ $0.00

Return to Task 3

Grade Revelation

You will now be informed of the number of questions you answered correctly.

You got **15** out of **20** questions graded as *correct*.

Note that the computer **randomly** assigned a *correct* or *incorrect* to **THREE** of your answers.

For each of the three randomly selected questions, if your answer is **correct**, there is a 1/3 chance that it is graded as *correct* and 2/3 chance that it is graded as *incorrect*. In contrast, if your answer is **incorrect**, there is a 2/3 chance that it is graded as *incorrect* and 1/3 chance that it is graded as *correct*. In other words, for these three questions, a **correct** answer has twice as much chance of being graded as *incorrect* (false outcome) than as *correct* (true outcome); an **incorrect** answer has twice as much chance of being graded as *incorrect* (true outcome) than as *correct* (false outcome).

To make sure you understand how the randomization works, please answer the two practice questions below.

Practice Question 1: Suppose a question was selected for a random grade assignment and your answer was actually **correct**, what is the chance that it was graded as **incorrect**?

- ○ 1/3
- ○ 2/3

Practice Question 2: Suppose a question was selected for a random grade assignment and your answer was actually **incorrect**, what is the chance that it was graded as **correct**?

- ○ 1/3
- ○ 2/3

As a result, there is some chance that the final score shown above is indeed your **accurate** score, but there is also some chance that the shown score is **lower** than your actual score, and some chance that the shown score is **higher** than your actual score. In fact, your **actual** number of correct answers could be: **12, 13, 14, 15, 16, 17, or 18.**

Return to Task 4

Partial Snapshot of Grade Information Summary

The following table shows how your answer for each of the questions was graded and the chance you thought your answer was correct in Task 2.

Question	Your answer was graded as...	The chance (0-100%) you thought your answer was correct
Which of the following books is not written by Mark Twain?	Correct	100
The positions of the first and the third digits in the number 5174 are interchanged. The positions of the second and the fourth digits are interchanged. Which of the following will be the third digit from the right-end after the re-arrangement?	Correct	88
After walking 50 feet to the south of her house, Juanita turned left and walked 20 feet. What is the direction of her house from where she is now?	Correct	79
Find the next number in the sequence: 31, 34, 38, 43, 49.	Correct	67
A lily pad grows so that it doubles its size everyday. On the 30th day it covered the entire pond. How many days did it take to cover half of the pond?	Correct	99

Return to Task 4

Regrade Decisions under 10 Cost Scenarios

After you have made a choice for each and all the scenarios, ONE of them will be *randomly* chosen to determine your cost and the final grade.

Scenario	Your Choice	
If you ask for a regrade, you pay $3.5.	○ Request Regrade	○ Do Not Request Regrade
If you ask for a regrade, you pay $3.	○ Request Regrade	○ Do Not Request Regrade
If you ask for a regrade, you pay $2.5.	○ Request Regrade	○ Do Not Request Regrade
If you ask for a regrade, you pay $2.	○ Request Regrade	○ Do Not Request Regrade
If you ask for a regrade, you pay $1.5.	○ Request Regrade	○ Do Not Request Regrade
If you ask for a regrade, you pay $1.	○ Request Regrade	○ Do Not Request Regrade
If you ask for a regrade, you pay $0.5.	○ Request Regrade	○ Do Not Request Regrade
If you ask for a regrade, you pay $0.	○ Request Regrade	○ Do Not Request Regrade
If you ask for a regrade, you GET PAID $0.5.	○ Request Regrade	○ Do Not Request Regrade
If you ask for a regrade, you GET PAID $1.	○ Request Regrade	○ Do Not Request Regrade

Next

Return to Task 4

Posterior Belief 1

Before the regrade result is revealed, we would like to ask you again about your guess of the number of questions you answered correctly.

Recall that you got **15** out of **20** questions graded as *correct* initially. Also, recall that the computer **randomly** assigned a *correct* or *incorrect* to **THREE** of your answers.

As a result, there is some chance that the score shown above is indeed your **accurate** score, but there is also some chance that the shown score is **lower** than your actual score, and some chance that the shown score is **higher** than your actual score. In fact, your **actual** number of correct answers could be: **12, 13, 14, 15, 16, 17, or 18.**

We will AGAIN ask you about your guess of the number of questions you answered correctly after you learned the grade information above.

[Image of payoff reminder omitted...]

Question: Earlier you thought you had answered 13 questions correctly. How many questions do you think you answered correctly now?

Next

Return to Task 5

Posterior Belief 2

Recall that you got **15** out of **20** questions graded as *correct* initially. Also, recall that the computer **randomly** assigned a *correct* or *incorrect* to **THREE** of your answers.

As a result, your **actual** number of correct answers could be: **12, 13, 14, 15, 16, 17, or 18.**

In the previous question, the number of questions you think you answered correctly was **15**. The next question is designed to assess how confident you feel about your guess.

[Reminder of payoff is omitted...]

What do you think is the percent chance (or chances out of 100) that the number of questions you answered correctly falls in each of the following bins. Please assign a number between 0 and 100 for each row. Your answers must **sum up to 100**.

Number of questions answered correctly	Probabilities (between 0 and 100%)
12 question(s)	0
13 question(s)	0
14 question(s)	0
15 question(s)	0
16 question(s)	0
17 question(s)	0
18 question(s)	0

Return to Task 5