

Experimental Instructions: Baseline

Facebook Experiment

Second Experiment

You have finished the first section of the survey and will receive a free movie ticket. If you complete the upcoming second section, your movie ticket will be upgraded to a **completely unrestricted one**, and you will also have the chance to earn **up to \$10 in cash**. The second section takes about **10 minutes** of your time. All cash earned is paid out as Crimson Cash, through Paypal or by check at the end of the semester.

If you stop now you can still login a second time later on and finish the second section.

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Facebook Experiment

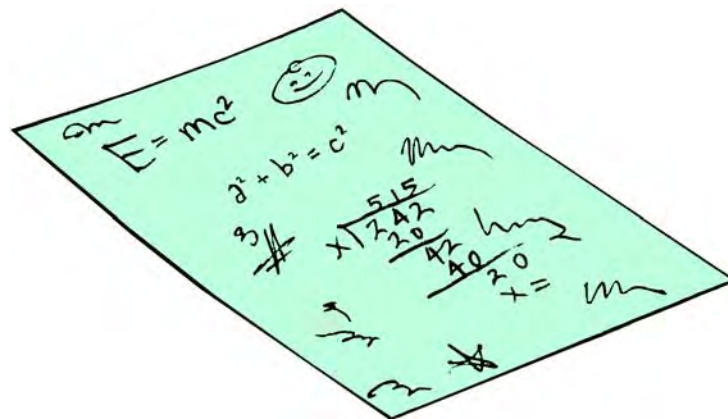
Instructions (Second Experiment)

Quiz

In a little bit, you're going to be taking a short IQ-like quiz. The quiz has 30 questions and you have 4 minutes to complete as many questions as possible.

Your score is the number of correct answers *minus* the number of incorrect answers. For each point you score, we will pay you **25 cents**.

There are 10 different versions of this quiz of varying difficulty, so you won't generally be able to compare your scores with other participants in the study.



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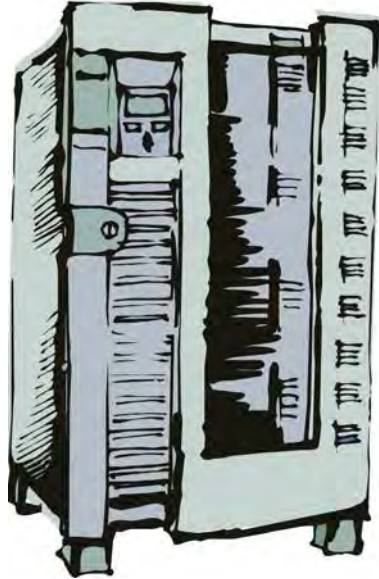
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Facebook Experiment

Instructions (Second Experiment)

Ranks



As quiz scores come in, our mainframe computer will collect all the scores from people taking the quizzes. For each version of the quiz, it will rank the scores of the people who took that quiz and calculate their percentiles. For example, if you score better than 35% of the people who take the same version of the quiz, your percentile rank would be 35.

The mainframe computer will store all the ranks and controls who is allowed to see them.

As part of this study the mainframe will be hosting two contests. The "Top Half contest" gives out prizes for scores that rank in the top half; the "Top Quarter Contest" gives out prizes for scores that rank in the top quartile (the top 25%). You will enter only **one** of these two contests - which one we cannot tell because the mainframe will randomly assign you to a contest.

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Facebook Experiment

Instructions (Second Experiment)

Meet the Robots

Imagine that you live in a world full not only of Harvard students, but also full of robots.

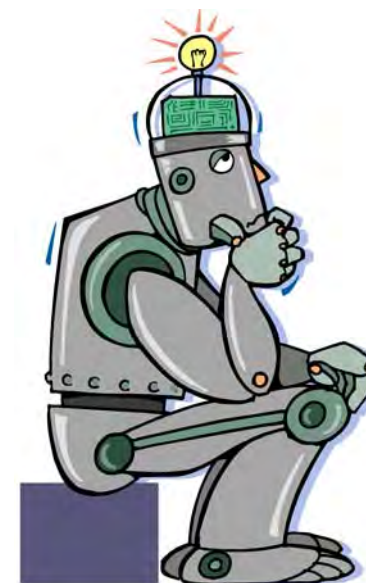
This is Bob the Robot. Bob is going to be taking the quizzes too, along with all his clones -- 100 robots in all. On average the robots are about as good at the quizzes as are Harvard students, but some are much better than others. In fact, they have been programmed so that

- Bob 1 has a 1% chance of scoring in the top half.
- Bob 2 has a 2% chance of scoring in the top half.
- ...etc...
- Bob 100 has a 100% chance of scoring in the top half.

If the mainframe enters you into the "Top Half contest" one of these robots has been assigned to be *on your team*. But we aren't going to tell you which robot it is -- it could be any of the 100 models.

If the mainframe enters you into the "Top Quarter contest" a robot from a different line will be assigned to your team - one of the new SuperBob line of robots:

- SuperBob 1 has a 1% chance of being in the top quartile (top 25% of all participants).
- SuperBob 2 has a 2% chance of being in the top quartile.
- ...etc...

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Facebook Experiment

Instructions (Second Experiment)

Payoffs

Consider the "Top Half contest". If you are entered into this contest we can use either your performance or the performance of the Bob on your team. Whichever score we use, you will earn \$3 if that score is *in the top half of all scores for your quiz*.

Similarly, in the "Top Quarter contest" we can use either your score or the score of the SuperBob on your team. Whichever score we use, you will earn \$3 if that score is *in the top quarter of all scores for your quiz*.

In both contests you have to help us decide whether to use your score or the robot's score as your team's score. We are going to ask you several times *which robot you think you are most like*. That means, *which of the 100 Bob clones is as likely as you are to score in the top half, and which of the 100 SuperBob clones is as likely as you to score in the top quartile*. We will randomly choose one of these decisions that you have made. Then, based on that decision and on the contest you are competing in, we will pick whichever member of your team is more likely to score in the top half.

For example, suppose that you say you are as good as Bob 60. If the actual robot on your team is Bob 34, then we would base your payoff in the "Top Half Contest" on your score, since you are more likely to score in the top half. But if the actual robot on your team is Bob 97, then we will use the robot's score, since the robot is more likely to score in the top half. We will do the same thing for the "Top Quarter contest" -- if you are more likely than the SuperBob on your team to score in the top quartile, we will enter your score.

The bottom line is that you are most likely to win \$3 if you are as accurate as possible when you estimate your probability of scoring in the top half and your probability of scoring in the top quartile, and pick the corresponding Bob and SuperBob.


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Facebook Experiment

Second Experiment

Which Bob are you?

Before you take the quiz, please tell us for the first time which Bob you think you are most like. Remember, Bob X has an X% chance of scoring in the top half on the quiz, so you are in effect estimating the probability that you will score in the top half. You are most likely to win \$3 in the "Top Half Contest" if you are as accurate as possible.

"I am as likely to score in the top half as Bob . "

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Facebook Experiment

Second Experiment

Which Bob are you?

Before you take the quiz, please tell us for the first time which Bob you think you are most like. Remember, Bob X has an X% chance of scoring in the top half on the quiz, so you are in effect estimating the probability that you will score in the top half. You are most likely to win \$3 in the "Top Half Contest" if you are as accurate as possible.

"I am as likely to score in the top half as Bob . (who scores in the top half with probability 66%)"

Also, please tell us which SuperBob you think you are most like. Remember, SuperBob X has an X% chance of scoring in the top quartile on the quiz, so you are in effect estimating the probability that you will score in the top quartile. You are most likely to win \$3 if you are entered in the "Top Quarter contest" if you are as accurate as possible.

"I am as likely to score in the top quartile (top 25%) as SuperBob . (who scores in the top quartile with probability 53%)"

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Facebook Experiment

Second Experiment

Quiz starts now ...

When you press "Next Page" the quiz will start and you have four minutes to answer as many questions as you can. There are up to 30 questions. Your score is the number of correct answers *minus* the number of incorrect answers. We will pay you **25 cents** for each point you score, (and you cannot lose money).

If you close this browser window now you can login in and get to this page by simply following the link in the invitation email we sent.

Good luck!

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Facebook Experiment Quiz

In the following screens you will be asked up to 30 questions. Answer as many questions as possible within the next 4 minutes.

Question 1: Which one of the five choices makes the best comparison? LIVED is to DEVIL as 6323 is to:

- 2336
- 6232
- 3236
- 3326
- 6332

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Facebook Experiment

Question 2: Which one of these five is least like the other four?

Horse

Kangaroo

Cow

Deer

Donkey

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Facebook Experiment

Question 7: A fallacious argument is:

Disturbing

Valid

False

Necessary

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Facebook Experiment

Second Experiment

Reevalute your probability of being in the top half and top quarter

Now that you have taken the quiz, you may have a better idea where you are likely to rank. Please think again about which Bob you are most like. Remember, if you are most like Bob X this means that you have an X% chance of scoring in the top half. You are most likely to win \$3 in the "Top Half Contest" if you are as accurate as possible.

"I am as likely to score in the top half as Bob . "

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Facebook Experiment

Second Experiment

Reevaluate your probability of being in the top half and top quarter

Now that you have taken the quiz, you may have a better idea where you are likely to rank. Please think again about which Bob you are most like. Remember, if you are most like Bob X this means that you have an X% chance of scoring in the top half. You are most likely to win \$3 in the "Top Half Contest" if you are as accurate as possible.

"I am as likely to score in the top half as Bob . (who scores in the top half with probability 60%)"

Also, please tell us which SuperBob you think you are most like. Remember, SuperBob X has an X% chance of scoring in the top quartile on the quiz, so you are in effect estimating the probability that you will score in the top quartile. You are most likely to win \$3 if you are entered in the "Top Quarter contest" if you are as accurate as possible.

"I am as likely to score in the top quartile (top 25%) as SuperBob . (who scores in the top quartile with probability 33%)"

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Facebook Experiment

Second Experiment

Robots Gather Feedback



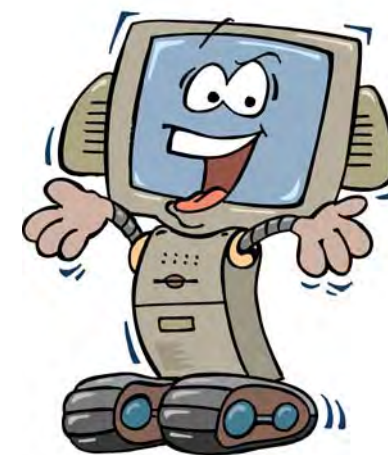
Wise Fred

Now that you have taken the quiz and given us some information about how well you think you did, we are going to give you some feedback on your performance. Specifically, we are going to give you a series of four reports that say "top" or "bottom". The reports are meant to indicate whether your performance was in the top or bottom half, but *unfortunately they are not always accurate*.

The problem is that the information about your rank is stored on the mainframe, and we had to hire two robots to retrieve the information. The robots we hired are named Joke Fred and Wise Fred. Wise Fred is completely reliable and always retrieves the right report. Unfortunately, Joke Fred is completely unreliable. If a report was retrieved by Joke Fred it is equally likely to say "top" or "bottom" no matter what your real rank was.

Each of the four reports you will get is equally likely to have been retrieved by Wise Fred or by Joke Fred. This means that there is a 75% chance that each report is accurate, but a 25% chance that it is inaccurate.

After each report we will again ask which Bob you think you are most like, i.e. what you think is the probability that you scored in the top half.



Joke Fred

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Facebook Experiment

Second Experiment

Feedback #1

Your first report says BOTTOM.

You last decided that you are most like Bob 60.

Given this feedback, which Bob do you think you are most like? Remember, there is a 50% chance that Wise Fred retrieved this report and it is accurate, but there is also a 50% chance that Joke Fred retrieved it and is completely random. Again, you are most likely to win \$3 in the "Top Half Contest" if you answer as accurately as possible.

"I am as likely to score in the top half as Bob . (who scores in the top half with probability 55%)"

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Facebook Experiment

Second Experiment

Feedback #2

Your second report says TOP.

Your first report said **BOTTOM**.

You last decided that you are most like **Bob 55**.

Given all the feedback you have received so far, which Bob do you think you are most like? Remember, for each report there is a 50% chance that Wise Fred retrieved that report and it is accurate, but there is also a 50% chance that Joke Fred retrieved it and is completely random. Again, you are most likely to win \$3 in the "Top Half Contest" if you answer as accurately as possible.

"I am as likely to score in the top half as Bob ."

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Facebook Experiment

Second Experiment

Feedback #3

Your third report says TOP.

Your first two reports said BOTTOM, TOP.

You last decided that you are most like Bob 61.

Given all the feedback you have received so far, which Bob do you think you are most like? Remember, for each report there is a 50% chance that Wise Fred retrieved that report and it is accurate, but there is also a 50% chance that Joke Fred retrieved it and is completely random. Again, you are most likely to win \$3 in the "Top Half Contest" if you answer as accurately as possible.

"I am as likely to score in the top half as Bob ." "

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Facebook Experiment

Second Experiment

Feedback #4

Your fourth (and final) report says TOP.

Your first three reports said **BOTTOM, TOP, TOP.**

You last decided that you are most like **Bob 80.**

Given all the feedback you have received so far, which Bob do you think you are most like? Remember, for each report there is a 50% chance that Wise Fred retrieved that report and it is accurate, but there is also a 50% chance that Joke Fred retrieved it and is completely random. Again, you are most likely to win \$3 in the "Top Half Contest" if you answer as accurately as possible.

"I am as likely to score in the top half as Bob ."

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Facebook Experiment

Second Experiment

Buying Information

You are almost done! Before you finish, you have an opportunity to win an extra \$2.

Imagine that there is a safe deposit box with your name on it hidden deep in the basement of Littauer. There is \$2 in each box. To get the money, you need to hire a robot to go open the box and retrieve the money. But to unlock the safe deposit box, the robot will first need to visit the mainframe and find out whether you scored in the top half or bottom half; the robot needs this information to unlock your box.

The robots available for hire are all reliable and will open the box and bring you the money it contains. But the robots also differ from each other in two ways. First, some robots are more precise than others:

- **Silent Joe** only tells you if he finds the money but does not tell you what he learned from the mainframe about your rank.
- **Talking Joe** looks for the money, but also tells you if you were in the top or bottom half, regardless of whether or not he finds money.
- **Precise Joe** is a stickler for accuracy and will find out your exact rank from the mainframe. He will tell you not only whether he finds any money, but also your precise rank among all students who took the same quiz as you.

The second way in which the robots differ is how they tell you about your rank. Of course, Silent Joe never says anything. On the other hand, Talking and Precise Joe can either send an email to you alone *or* they can post the information they get about your rank to an online hall of fame and send a link to you and to your friends (the friends you named in the trivia game last fall). In this case you and your friends can all see your performance and compare it to others.

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Facebook Experiment

Second Experiment

Buying Information

To summarize, there are five possible robots:

Silent Joe

- brings you \$2
- tells you nothing about your rank.

Talking Joe

- brings you \$2
- sends **you** an email to inform you whether your score was in the *top or bottom half*

Talking "Hall of Fame" Joe

- brings you \$2
- invites you and your friends to view and compare your *top or bottom rank* in your group's hall of fame.

Precise Joe

- brings you \$2
- sends **you** an email about your *exact rank (1-100)*.

Precise "Hall of Fame" Joe

- brings you \$2
- invites you and your friends to view and compare your *exact rank* in your group's hall of fame.

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Facebook Experiment

Second Experiment

Buying Information

On the next page you can hire the services of ONE of the five robots. We don't know which one is available to help you find out about your score and your \$2 - the computer will choose one and only one of them when the time comes. The computer will also offer the robot at a price which is random and drawn between \$0 and \$4.

Please tell us - for each robot - **the highest amount you would be willing to pay to hire that robot**. This amount indicates the value of the robot to you - if the robot is worth, say, \$2 then you should be prepared to pay up to \$2 but not more than that.

For example, if you say that you willing to pay up to \$2 for Silent Bob and the computer chooses Silent Bob at a price of \$1 then you will hire Silent Bob at \$1. But if the computer draws a price of \$3 for Silent Bob then this price exceeds your value for Silent Bob and you will not hire a robot.

NOTE: If you hire a robot then the price of the robot will be subtracted from your earnings and the \$2 in the safety deposit box will be added to your earnings. If you don't ever want to hire a specific robot then simply bid \$0.

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Facebook Experiment

Second Experiment

Buying Information

Silent Joe is worth paying up to \$.

- brings you \$2
- tells you nothing about your rank.

Talking Joe is worth paying up to \$.

- brings you \$2
- sends **you** an email to inform you whether your score was in the *top or bottom half*

Talking "Hall of Fame" Joe is worth paying up to \$.

- brings you \$2
- invites you and your friends to view and compare your *top or bottom rank* in your group's hall of fame.

Precise Joe is worth paying up to \$.

- brings you \$2
- sends **you** an email about your *exact rank (1-100)*.

Precise "Hall of Fame" Joe is worth paying up to \$.

- brings you \$2
- invites you and your friends to view and compare your *exact rank* in your group's hall of fame.

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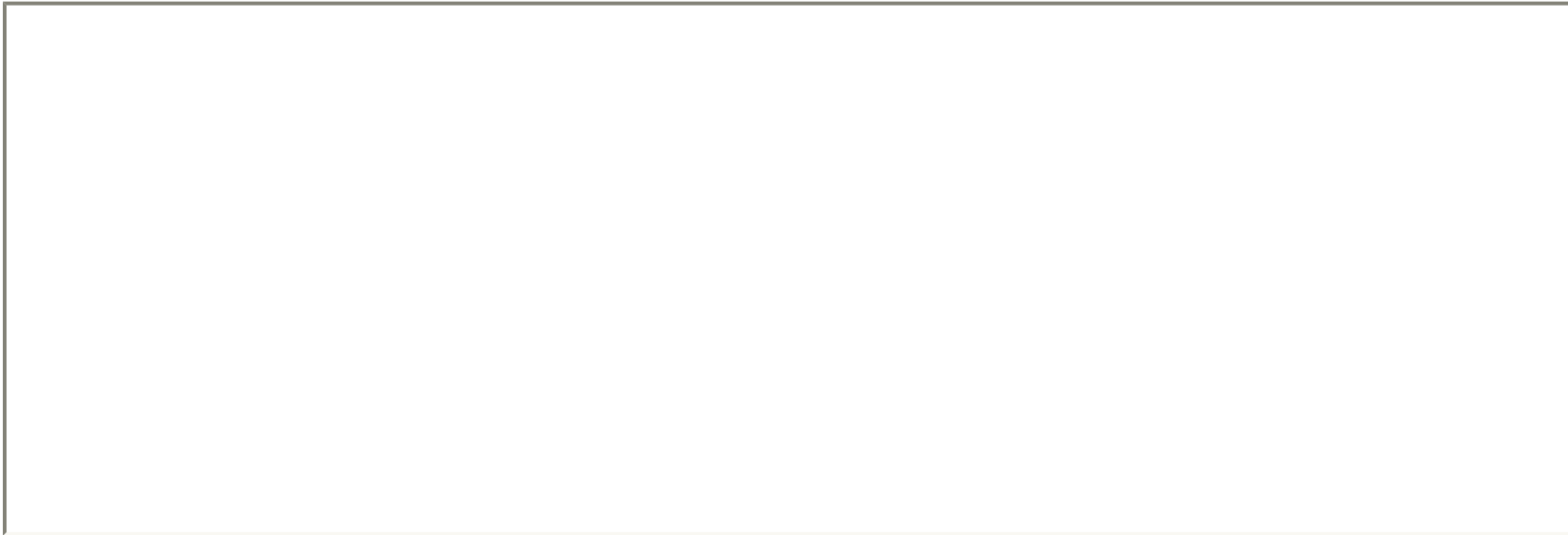
Facebook Experiment

Debriefing

What do you think?

Thank you! We would be grateful for any quick comments on the first and second part of the study. Did you feel comfortable with instructions? Were you confused? If you have suggestions on what to do better we would be very grateful! Thanks in advance!

Feedback on first experiment:



Feedback on second experiment:



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Facebook Experiment

This part of the study is finished.

Thank you for participating. You can pick up your unrestricted movie ticket at the Science Center starting the week of April 25 (signs will be posted). Cash earnings will be calculated and paid at the end of the semester as Crimson Cash, Paypal or by check.

Have a nice day!

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Experimental Instructions: Followup

Bonus Experiment

And Now For Something Completely Different ...

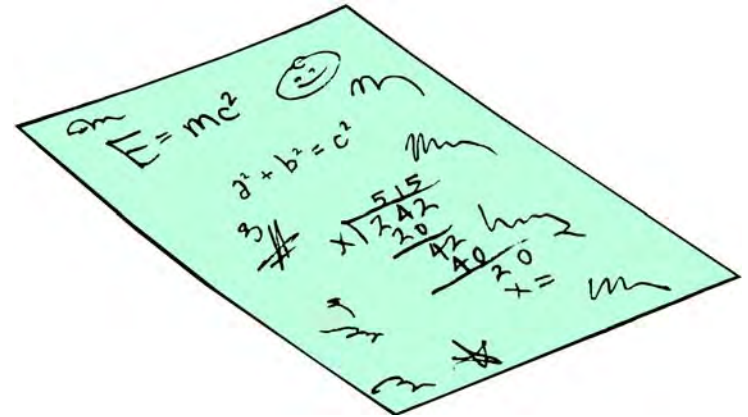
Remember that IQ Quiz you took in April?

The character games are over and the bonus experiment almost finished.

We just ask you a few more follow-up questions to the IQ-like quiz you took in April when we asked you to answer as many question as possible within a 4 minute interval. We will send your score and a summary of the earnings from that experiment in an email during the next 7 days.

You might remember that after the quiz we asked you how likely you thought it was that you scored in the top half of all participants who took the same test. We also provided some feedback on your performance and asked you to reevaluate the probability that you score amongst the top half of all students after each feedback.

Today we will give you feedback not on your own performance but instead on the performance of **Oscar** - a robot who loves quizzes just as much as you do!



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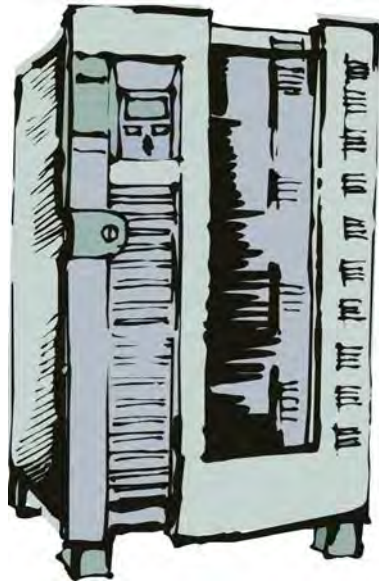
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Bonus Experiment

And Now For Something Completely Different ...

How good is Oscar?



Oscar has the following chance of being in the top half:

There is a **10 per cent** chance that Oscar scores in the top half among all participants in the quiz. This means in **10 out of 100 cases** Oscar will score in the top half.

Only our mainframe computer knows Oscar's actual score.

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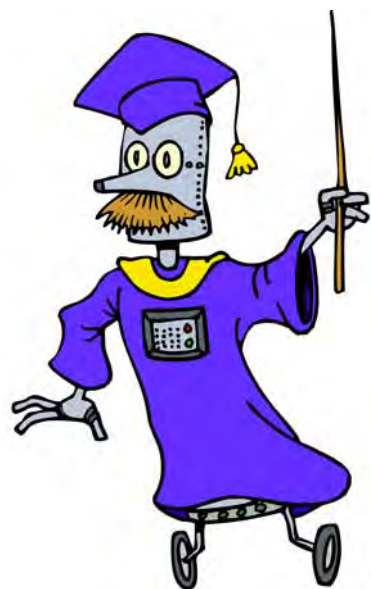
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Bonus Experiment

And Now For Something Completely Different ...

Joke Fred and Wise Fred Gather Feedback

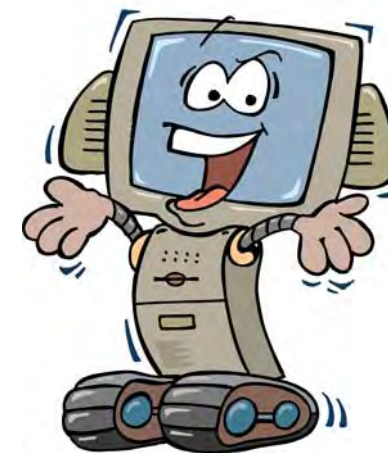


Wise Fred

Now that you know that Oscar scores in the top half with **10 percent** probability we will give you some more feedback on Oscar's performance in this particular quiz. Specifically, we are going to give you a series of four reports that say "top" or "bottom". The reports are meant to indicate whether Oscar's performance in *this quiz* was in the top or bottom half, but *unfortunately they are not always accurate*.

The problem is that the information about Oscar's performance is stored on the mainframe, and we had to hire two robots to retrieve the information. The robots we hired are named Joke Fred and Wise Fred. Wise Fred is completely reliable and always retrieves the right report. Unfortunately, Joke Fred is completely unreliable. If a report was retrieved by Joke Fred it is equally likely to say "top" or "bottom" no matter what your real rank was.

Each of the four reports you will get is equally likely to have been retrieved by Wise Fred or by Joke Fred. This means that there is a 75% chance that each report is accurate, but a 25% chance that it is inaccurate.



Joke Fred

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Bonus Experiment

And Now For Something Completely Different ...

Compare Oscar to Trusty Bob



After each feedback we ask you to reevaluate the chance that Oscar is among the top half. We simply ask you to compare Oscar's chance of being in the top half with your trusty Bob's chance of scoring in the top half. As usual, Bob is programmed to be in the top half with a probability between 1 and 100 percent.

We will select one of your decisions and add **\$3** to your earnings if the robot you think is the better robot (trusty Bob or Oscar) actually scores in the top half.

The bottom line is that you are most likely to win \$3 if you always estimate as accurately as possible Oscar's chance of scoring in the top half. That means, you should compare Oscar to the 'Bob' who has the same chance as Oscar to score in the top half.

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Bonus Experiment

And Now For Something Completely Different ...

Feedback #1

Your first report says BOTTOM.

We told you that Oscar's score is in the top half with probability **10 per cent**.

Given this feedback how likely is it that Oscar is actually in the top half? Remember, there is a 50% chance that Wise Fred retrieved this report and it is accurate, but there is also a 50% chance that Joke Fred retrieved it and is completely random. Again, you are most likely to win \$3 if you answer as accurately as possible.

"Oscar is as likely to score in the top half as Bob .(who scores in the top half with probability 4%)"

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Bonus Experiment

And Now For Something Completely Different ...

Feedback #2

Your second report says BOTTOM.

Your first report said BOTTOM.

You last decided that Oscar is most like Bob 4.

Given all the feedback you have received so far, how likely is it that Oscar is actually in the top half? Remember, for each report there is a 50% chance that Wise Fred retrieved that report and it is accurate, but there is also a 50% chance that Joke Fred retrieved it and is completely random. Again, you are most likely to win \$3 if you answer as accurately as possible.

"Oscar is as likely to score in the top half as Bob 10 . (who scores in the top half with probability 10%)"

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Bonus Experiment

And Now For Something Completely Different ...

Feedback #3

Your third report says BOTTOM.

Your first two reports said BOTTOM, BOTTOM.

You last decided that Oscar is most like Bob 10.

Given all the feedback you have received so far, how likely is it that Oscar is actually in the top half? Remember, for each report there is a 50% chance that Wise Fred retrieved that report and it is accurate, but there is also a 50% chance that Joke Fred retrieved it and is completely random. Again, you are most likely to win \$3 if you answer as accurately as possible.

"Oscar is as likely to score in the top half as Bob 12 .(who scores in the top half with probability 12%)"

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Bonus Experiment

And Now For Something Completely Different ...

Feedback #4

Your fourth (and final) report says BOTTOM.

Your first three reports said BOTTOM, BOTTOM, BOTTOM.

You last decided that Oscar is most like Bob 12.

Given all the feedback you have received so far, how likely is it that Oscar is actually in the top half? Remember, for each report there is a 50% chance that Wise Fred retrieved that report and it is accurate, but there is also a 50% chance that Joke Fred retrieved it and is completely random. Again, you are most likely to win \$3 if you answer as accurately as possible.

"Oscar is as likely to score in the top half as Bob 17 .(who scores in the top half with probability 17%)"

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Bonus Experiment

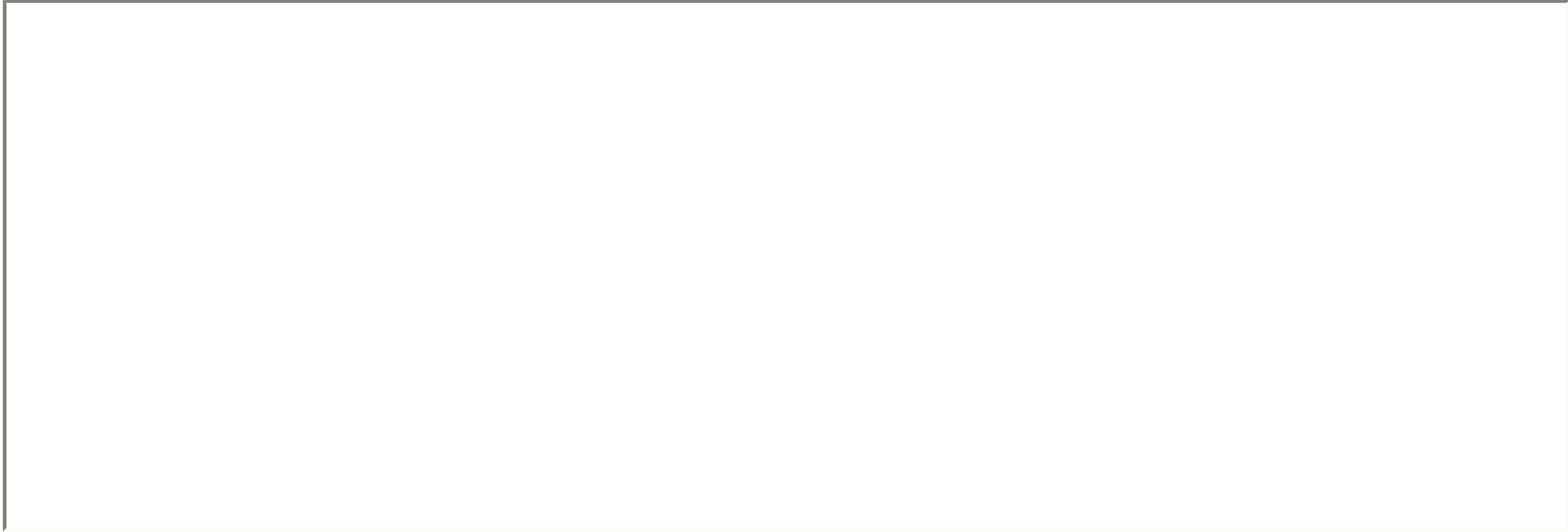
Mailing Address

Paypal or Check

Thank you!

Please write the mailing address where we should send your earnings from this study. You can also specify a PayPal account.

We would be grateful for any quick comments on this study. Thanks in advance! Did you feel comfortable with instructions? Were you confused? Do you have suggestions of how to say something more clearly? We are particularly interested if you understood clearly when you would be paid according to piece rate and when you would be paid according to tournament rate.



Bonus Experiment

This part of the study is finished.

Thank you for participating. We'll add your earnings to the earnings from the previous games and use the payment method you specified. You can expect a check from us within the next 7-10 days.

Have a nice day!

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Experimental Instructions: Competition

Bonus Experiment

Instructions

Five Tasks



We are going to ask you to perform five tasks during the course of this experiment. At the end, the results from one of these five tasks will be used to determine your earnings.

In some of the tasks, your potential earnings will depend only on how well you perform. In others, they will depend on how well you perform relative to a group of three other randomly chosen Harvard undergraduate students. Each group of four students is chosen to have exactly two men and two women, but other than that they are completely random.

Every student within your group performs the same task as you but different groups might perform slightly different tasks. Therefore you won't generally be able to compare your scores with other participants in the study.

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Bonus Experiment

Instructions

Character Game

The first task you and the other three members of your group will perform is to solve as many "character games" as possible. Each character game looks like the one below. The two panels are identical except for two letters. Your job is to find those two letters and mark them by clicking them on the right-hand panel. (They should get a yellow box around them.) You will not be allowed to move on to the next character game until you have solved the current one.

Please solve this practice game just to get the hang of it:

V	S	X	I	S	M
W	F	D	A	E	E
P	C	X	F	R	B
A	N	M	T	V	E
W	N	M	F	H	X
U	X	F	E	Q	O
P	L	W	H	D	J

V	S	X	I	S	M
W	F	D	A	E	E
P	C	X	F	R	B
A	N	M	T	V	E
W	N	M	F	H	X
T	X	H	E	Q	O
P	L	W	H	D	J

Click on the two distinct letters on the RIGHT panel and then click 'Next Page'.

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Bonus Experiment

Instructions

Character Game - Second Practice Game

Here is second practice "character game" out of three.

U	Q	O	Y	W	P
E	R	G	P	I	W
E	M	S	T	D	V
E	L	B	W	L	H
V	L	A	B	W	D
H	E	A	G	X	R
Z	G	W	F	F	P

U	Q	O	U	W	P
E	R	G	P	I	W
E	M	S	T	D	V
E	L	B	W	L	H
V	L	A	P	W	D
H	E	A	G	X	R
Z	G	W	F	F	P

Click on the two distinct letters on the RIGHT panel and then click 'Next Page'.

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Bonus Experiment

Instructions

Character Game - Third Practice Game

Almost done! Here is third and last practice "character game".

E	C	W	T	D	G
K	L	E	E	C	O
M	S	V	P	Z	F
A	K	R	V	L	K
G	D	U	G	J	A
H	T	V	M	T	P
C	D	J	L	J	N

E	C	W	T	D	G
K	L	E	E	C	I
Z	S	V	P	Z	F
A	K	R	V	L	K
G	D	U	G	J	A
H	T	V	M	T	P
C	D	J	L	J	N

Click on the two distinct letters on the RIGHT panel and then click 'Next Page'.

Bonus Experiment

First Task

Payment for First Task



For the first task, you will have 3 minutes to solve as many character games as you can.

If this task is the one chosen for payment, your earnings will depend on how well you do relative to your group of 2 women and 2 men (including you). Specifically, if you are the highest performer in your group, you will receive **100 cents** for every correctly solved problem. If you are not the highest performer in your group, you will receive no payment. You will not immediately learn whether you were the highest performer but we will tell you in an email in the next few days.

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Bonus Experiment

First Task

Starting ...



When you are ready click next to start the first task: solve as many character games as possible in 3 minutes. There is a clock ticking which will tell you how many seconds you have left.

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Bonus Experiment

Second Task

Payment for Second Task

Now we'll begin the second task, which is identical to the first: 3 minutes to solve as many character games as you can.

Remember, only one of the five tasks will be selected for determining your earnings. If this second task is the one selected for payment, then your earnings will be determined in one of two ways:



Piece Rate

Under the piece rate method, you receive **25 cents** for every correctly solved problem for sure.

Tournament

Under the tournament method, we will compare your performance on the second task to the tournament performance of the other three participants in your group **in the first task**. If you solve more puzzles than the rest of your group in the first task, you will receive **100 cents** for every correctly solved problem. If you are not the highest performer in your group, you receive no payment. Again, you will find out by email whether you won the tournament or not.

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Bonus Experiment

Second Task

Choose Piece Rate or Tournament

We're going to draw a ball out of an urn with 1 blue ball and 9 red balls. If the ball is red (90 percent chance), you will get to choose which payment scheme you prefer. If this happens, which scheme do you like better?

Piece Rate

25 cents for every correctly solved problem for sure

Tournament

100 cents for every correctly solved problem if your performance is higher than the performance of the other three players in task 1 and otherwise no payment. You will find out by email whether you won or not.

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Bonus Experiment

Second Task

Choose Tournament Rate

If we draw a red ball (90 percent chance), your choice on the previous screen will be used. If instead we draw the blue ball (10 percent chance) we will use a slightly different method to decide whether to use the piece rate or tournament method.

Suppose that the piece rate is still **25 cents**, but that the earnings for each solved game in the tournament are no longer fixed at **100 cents**. Instead the tournament rate is a random number anywhere from **25 cents to 200 cents**.

We want to know what size tournament rate you would prefer over the piece rate of 25 cents. If the computer selects a random number which is below your answer we will pay you by piece rate and if the computer selects a number equal to or above your answer you will be entered in the tournament. This makes it in your interest to tell us the lowest tournament rate at which you would prefer the tournament.

You prefer the tournament over the piece rate of **25 cents** if the randomly drawn tournament rate is at least _____ cents.

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Bonus Experiment

Second Task

How likely are you to win?

No matter which payment option you chose, we would like to know what you think your chances of winning in the tournament would be. That is, what do you think is the probability that your performance on the upcoming second task will be better than the performances of the other three players in your group on the first task?



To make it worth your while to think a bit about this question we place our trusty helper robot Bob - or one of his 99 clones - at your side. You may remember the Bob's from earlier experiments. Each Bob clone is programmed to win the tournament with a certain probability: Bob 1 wins with 1 percent probability, Bob 10 with 10 percent probability ... and Bob 100 wins with 100 percent probability. One of these Bobs has been randomly assigned to be your partner.

We will pay you an **extra 25 cents** on top of your earnings from the second task if either you or your helper Bob have the top performance. However, you have to tell us when we should use your performance and when we should use your Bob's performance. Simply tell us your best estimate of the probability that your performance in the second task will be better than those of the three other players in your group. If your Bob has a better chance of winning a tournament against the other three players we will use your Bob's performance instead of yours. You are most likely to earn the additional 25 cents if you report your true belief:

Your performance in the second task will exceed the performance of the other three players in the first task with probability per cent

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Bonus Experiment

Second Task

Starting ...



The computer has drawn a red ball from the urn and therefore your first choice counts: you will be paid a piece rate of **25 cents** for every solved problem.

When you are ready click next to start the second task: solve as many character games as possible in 3 minutes. There is again a clock ticking which will tell you how many seconds you have left.

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Bonus Experiment

Second Task

Find the two letters that are different between the set of letters on the right and on the left. When you found the two letters on the right panel, mark them (they get a yellow box around them), and go to the next screen.

Game: 1 Seconds left: 172

E	Q	I	U	C	I
E	R	P	N	O	O
B	P	H	R	K	G
V	N	H	Y	D	P
C	G	K	A	J	U
T	F	Q	M	N	T
D	R	F	A	H	Q

E	Q	I	U	F	I
E	R	P	N	O	O
B	P	H	R	K	G
V	N	H	Y	D	P
C	G	K	A	J	U
T	F	Q	M	N	B
D	R	F	A	H	Q

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Bonus Experiment

Second Task

Find the two letters that are different between the set of letters on the right and on the left. When you found the two letters on the right panel, mark them (they get a yellow box around them), and go to the next screen.

Game: 2 Seconds left: 111

R	P	P	X	Q	S
U	M	Q	H	L	W
P	G	K	F	T	F
H	L	B	X	Z	E
T	N	D	W	J	R
M	F	R	P	X	X
J	I	Y	B	N	H

R	P	P	X	Q	L
U	M	Q	H	L	W
P	G	K	F	T	F
H	L	B	X	Z	E
T	N	D	W	J	R
M	A	R	P	X	X
J	I	Y	B	N	H

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Bonus Experiment

Second Task

Find the two letters that are different between the set of letters on the right and on the left. When you found the two letters on the right panel, mark them (they get a yellow box around them), and go to the next screen.

Game: 2 Seconds left: 0

R	P	P	X	O	S	R	P	P	X	Q	L
U	M	Q	H	Q	H	L	W				
P	G	K	F	K	F	T	F				
H	L	B	X	Z	E	H	L	B	X	Z	E
T	N	D	W	J	R	T	N	D	W	J	R
M	F	R	P	X	X	M	A	R	P	X	X
J	I	Y	B	N	H	J	I	Y	B	N	H

http://econws1.fas.harvard.edu

Your 3 minutes are over.

OK

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Bonus Experiment

Second Task

Followup - How likely are you to win?



Now that you have finished the second task, what do you think your chances of winning in the tournament would be? That is, what do you think is the probability that your performance on the second task you just finished will be better than the performances of the other three players in your group on the first task?

Before performing the second task you estimated that this probability was **17 percent**; you can restate the same probability or revise your choice.

As before we will use your answer to enter either your score or your Bob's score against the others, and pay you an additional 25 cents if this score wins the tournament. Therefore, you are again most likely to earn the additional 25 cents if you are as accurate as possible:

Your performance in the second task will exceed the performance of the other three players in the first task with probability per cent

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Bonus Experiment

Third Task

Enter Your Robot Bob in Tournament or Piece Rate



For the third task you can relax: your trusty robot Bob is going to perform for you and solve character games. You just have to tell us whether you want him to perform in a tournament or under a piece rate. Recall that your Bob's chance of winning a tournament against the performance of the other three players from the first task is anywhere from 1 percent to 100 percent. As Bob's owner you'll get all his earnings.

Remember, only one of the five tasks will be selected for determining your earnings. If this third task is the one selected for payment, then your earnings will be determined in one of two ways:

Piece Rate

Your Bob earns the same amount of money which you will earn for the (just completed) second task. Since you solved 5 games your Bob will earn **\$1.25**.

Tournament

Your Bob earns the same amount of money which you would earn if you are the top performer in the (just completed) second task and had chosen tournament instead of piece rate. Since you solved 5 games your Bob will earn **\$5** if he wins and **\$0** otherwise.

I choose tournament for my Bob (and earn **\$5** in case he wins) if he is at least a Bob and wins with probability percent. Otherwise I choose to enter him for the piece rate and get **\$1.25** for sure.

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Bonus Experiment

Fourth Task

Choose Piece Rate or Tournament

The fourth task is to enter your performance from the second task one more time into either a tournament or a piece rate. However, for this task and this task only we will compare your performance with a different group of three Harvard seniors. Specifically, we will compare it to one of the four groups listed below.

Remember, only one of the five tasks will be selected for determining your earnings. If this fourth task is the one selected for payment, then we will compare your performance to the performance of four groups of students and pay you either according to tournament or a piece rate. The tournament rate could be anywhere from **25 cents to 200 cents**. If you enter a tournament you will not immediately learn whether you were the highest performer but we will tell you in an email in the next few days. If you enter a piece rate we will only email you whether this fourth task was selected for payment but not how you did relative to other participants in any of the groups below.

We want to know what size tournament you would prefer over the piece rate of **25 cents** for each group of students below. If the computer selects a random number which is below your answer we will enter you into the piece rate and if the computer selects a number equal to or above your answer you will be entered in the tournament.

You prefer the tournament over the piece rate of **25 cents** if ...

Group A	YOU Christopher Schleicher (Lowell House) Heather Shahian (Adams House) Abigail Bridges (Leverett House)	... the randomly drawn tournament rate for group A is at least ___ <input type="text"/> cents.
Group B	YOU Liora Halperin (Adams House) Meredith Coogan (Cabot House) Laura Arandes (Leverett House)	... the randomly drawn tournament rate for group B is at least ___ <input type="text"/> cents.
Group C	YOU Matthew Hartzell (Currier House)	... the randomly drawn tournament rate for group C is at least ___ <input type="text"/> cents.

Scott Itano (Lowell House)
Yulia Ryzhik (Lowell House)

Group D

YOU
James Levine (Eliot House)
Joshua Rosenbloom (Lowell House)
Matthew Salvatierra (Kirkland House)

... the randomly drawn tournament rate for group D is at least _____ cents.

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Bonus Experiment

Fourth Task

How likely are you to win?

No matter which payment option you chose, we would like to know for each of the four groups what you think your chances of winning a tournament would be.

As before, we will pay you an **extra 25 cents** on top of your earnings from the fourth task if either you or your helper Bob have the top performance. Simply tell us your best estimate of the probability that your performance in the second task will be better than those of the three other players in your group. If your Bob has a better chance of winning a tournament against the other three players we will use your Bob's performance instead of yours. You are most likely to earn the additional 25 cents if you report your true belief:

Your performance in the second task exceeds the performance of the other three players in the first task with probability ...

Group A

YOU

Christopher Schleicher (Lowell House)

Heather Shahian (Adams House)

Abigail Bridges (Leverett House)

— per cent.

Group B

YOU

Liora Halperin (Adams House)

Meredith Coogan (Cabot House)

Laura Arandes (Leverett House)

— per cent.

Group C


YOU

Matthew Hartzell (Currier House)

Scott Itano (Lowell House)

Yulia Ryzhik (Lowell House)

— per cent.

Group D	YOU James Levine (Eliot House) Joshua Rosenbloom (Lowell House) Matthew Salvatierra (Kirkland House)	_____  per cent.
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Bonus Experiment

Fourth Task

Compare Participants

We would also like to know for each of the following six pairs of players your best guess of who has performed more highly in our first task - the tournament of character games. The computer will select one of these six pairs and add **100 cents** to your earnings if your guess is correct.

- | | | |
|--------------|--|---|
| First Pair: | Laura Arandes (Leverett House) <input type="radio"/> | <input type="radio"/> Scott Itano (Lowell House) |
| Second Pair: | James Levine (Eliot House) <input type="radio"/> | <input type="radio"/> Liora Halperin (Adams House) |
| Third Pair: | Matthew Salvatierra (Kirkland House) <input type="radio"/> | <input type="radio"/> Matthew Hartzell (Currier House) |
| Fourth Pair: | Abigail Bridges (Leverett House) <input type="radio"/> | <input type="radio"/> Christopher Schleicher (Lowell House) |
| Fifth Pair: | Meredith Coogan (Cabot House) <input type="radio"/> | <input type="radio"/> Heather Shahian (Adams House) |
| Sixth Pair: | Joshua Rosenbloom (Lowell House) <input type="radio"/> | <input type="radio"/> Yulia Ryzhik (Lowell House) |

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Bonus Experiment

Fourth Task

Compare Participants

We would also like to know for each of the following six pairs of players your best guess of who has performed more highly in our first task - the tournament of character games. The computer will select one of these six pairs and add **100 cents** to your earnings if your guess is correct.

- | | | |
|--------------|---|--|
| First Pair: | Laura Arandes (Leverett House) <input checked="" type="radio"/> | <input type="radio"/> Scott Itano (Lowell House) |
| Second Pair: | James Levine (Eliot House) <input type="radio"/> | <input checked="" type="radio"/> Liora Halperin (Adams House) |
| Third Pair: | Matthew Salvatierra (Kirkland House) <input checked="" type="radio"/> | <input type="radio"/> Matthew Hartzell (Currier House) |
| Fourth Pair: | Abigail Bridges (Leverett House) <input type="radio"/> | <input checked="" type="radio"/> Christopher Schleicher (Lowell House) |
| Fifth Pair: | Meredith Coogan (Cabot House) <input checked="" type="radio"/> | <input type="radio"/> Heather Shahian (Adams House) |
| Sixth Pair: | Joshua Rosenbloom (Lowell House) <input checked="" type="radio"/> | <input type="radio"/> Yulia Ryzhik (Lowell House) |

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Bonus Experiment

Fifth Task

Choose Piece Rate or Tournament



We're going to ask you to perform the same task one last time: solve as many character games as you can in 3 minutes. You can again choose whether you want to be paid by piece rate or in a tournament. But first we will provide you with some feedback.

Based on your performance in the *second task*, if we were to randomly group you with three other Harvard students (for a total of two men and two women), you would win with probability **0 percent**.

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Bonus Experiment

Fifth Task

Choose Piece Rate or Tournament

Remember, only one of the five tasks will be selected for determining your earnings. We're going to draw a ball out of an urn with 1 blue ball and 9 red balls. If the ball is red (90 percent chance), you will get to choose which payment scheme you prefer. If this happens, which scheme do you like better?

Piece Rate

25 cents for every correctly solved problem

Tournament

100 cents for every correctly solved problem if your performance is higher than the performance of the other three players in task 1 and otherwise no payment. As before, you will find out via email whether or not you win this tournament.

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Bonus Experiment

Fifth Task

Choose Tournament Rate

If we draw a red ball (90 percent chance), your choice on the previous screen will be used. If instead we draw the blue ball (10 percent chance) we will use a slightly different method to decide whether to use the piece rate or tournament method.

Suppose that the piece rate is still **25 cents**, but that the earnings for each solved game in the tournament condition are no longer fixed at **100 cents**. Instead the tournament rate is a random number anywhere from **25 cents to 200 cents**.

We want to know how what size tournament you would prefer over the piece rate of **25 cents**. If the computer selects a random number which is below your answer we will enter you into the piece rate and if the computer selects a number equal to or above your answer you will be entered in the tournament.

You prefer the tournament over the piece rate of **25 cents** if the randomly drawn tournament rate is at least
— cents.

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Bonus Experiment

Fifth Task

Starting ...



The computer has drawn a blue ball from the urn and therefore your second choice counts. The randomly drawn tournament rate is **94 cents** which is greater than the minimum rate at which you preferred the tournament. Therefore, you will be paid **94 cents** for every solved problem if your performance is higher than the performance of the other three players in task 1.

When you are ready click next to start the fifth task: solve as many character games as possible in 3 minutes. There is again a clock ticking which will tell you how many seconds you have left.

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Bonus Experiment

Fifth Task

Find the two letters that are different between the set of letters on the right and on the left. When you found the two letters on the right panel, mark them (they get a yellow box around them), and go to the next screen.

Game: 2 Seconds left: 0

H	I	F	P	Q	C	H	I	F	P	Q	C
D	Y	K	T	W	D	D	Y	I	T	W	D
J	P	L	E			L	E	S	I		
Q	S	H	V			H	V	L	M		
U	O	F	X			F	X	F	O		
T	C	V	S	G	P	T	C	V	S	G	N
Y	E	Z	A	C	A	Y	E	Z	A	C	A

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 Your 3 minutes are over.

OK