

**ONLINE APPENDIX TO ACCOMPANY  
EPISTEMIC EXPERIMENTS: UTILITIES, BELIEFS, AND IRRATIONAL PLAY**

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APPENDIX A. ADDITIONAL CENTIPEDE TREATMENTS

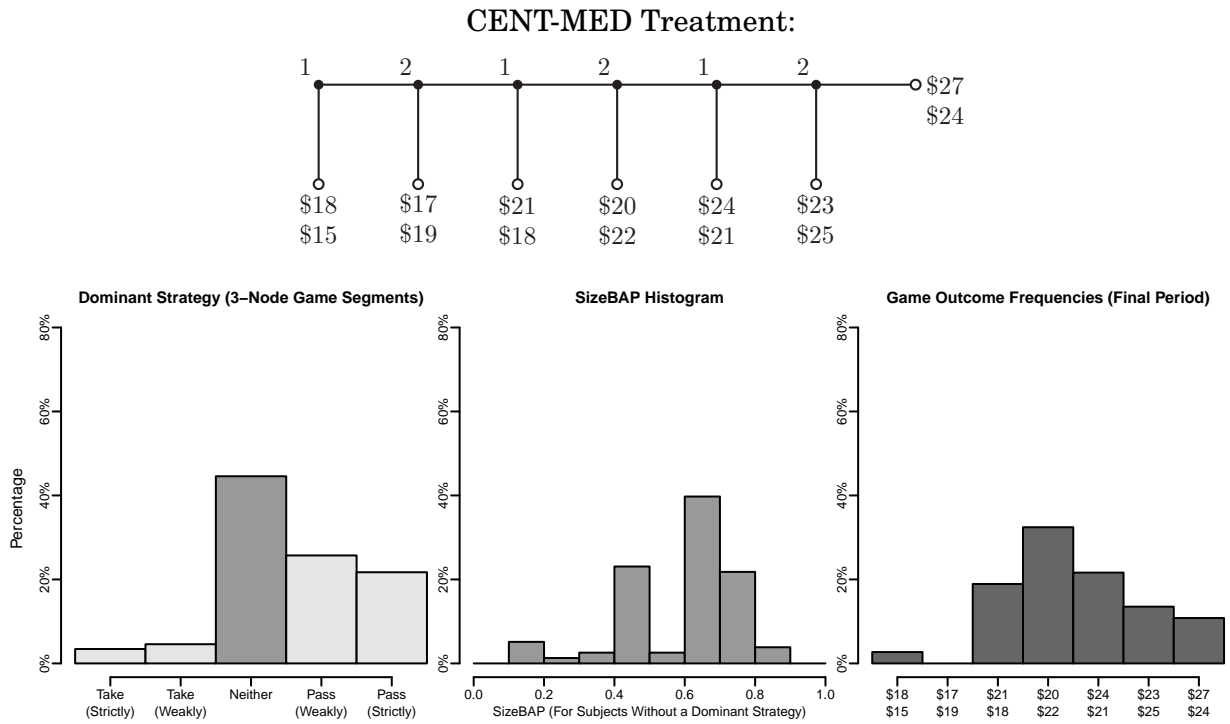


FIGURE I. The CENT-MED treatment.

Figure I shows the design and data from the CENT-MED treatment. A subject who Passes (in any 3-node segment) risks \$1 to gain \$3. The resulting *SizeBAP* for a selfish subject is  $3/4$ , which is in between that of CENT-LO ( $5/6$ ) and CENT-HI ( $1/3$ ) though much more similar to CENT-LO. Seventy-four subjects participated in this treatment, across five sessions. The results are similar to CENT-LO: Over 40% of subjects have a dominant strategy to pass. Those that don't have a dominant strategy typically have a high *SizeBAP*; certainly high enough to rationalize Passing when over 40% of opponents are expected to Pass unconditionally. And game play generally confirms this prediction. Though not quite as striking as

CENT-LO, we see almost no early play of Take, with the modal incidence of Take occurring at the fourth out of six decision nodes.

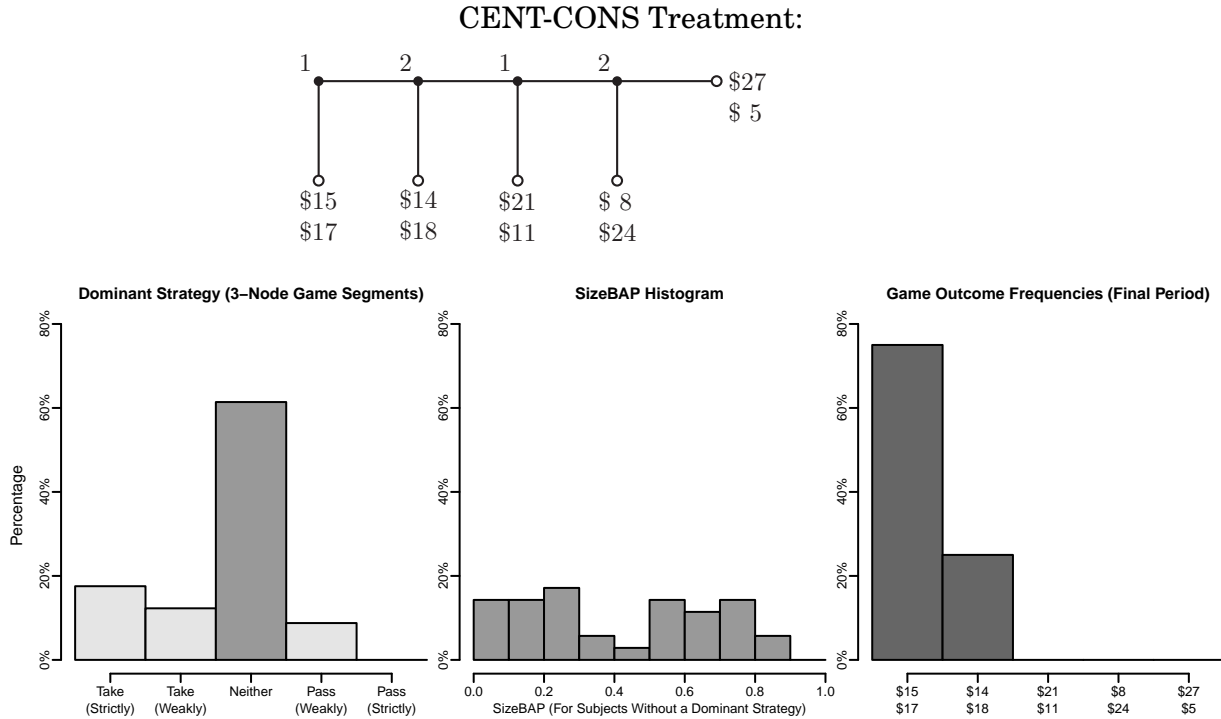


FIGURE II. The CENT-CONS treatment.

The design and data from a constant-sum version of the game—denoted CENT-CONS—is shown in Figure II. This treatment was run before the others and differs in that the game form has only four decision nodes, it is repeated five times instead of four, and we only perform elicitation in the fifth period. Because the game is constant-sum the *SizeBAP* necessarily varies. For the first mover, the *SizeBAP*s at their two decision nodes are 0.86 and 0.32. For *SizeBAP* for the second mover is 0.46. Although the first node has a fairly high *SizeBAP*, we see that the vast majority of first movers Take at the first node. This is likely because all second movers in fact choose Take, meaning the first mover would need to have a *SizeBAP* of 1.00 (a dominant strategy to Pass) for them to choose Pass.<sup>1</sup> Even in the first period 55% of games end at the first node, 35% at the second node, and the remaining 10% at the third node. In periods 2–5 the game reaches the third node only once; thus, learning does not play a large role in this treatment. Overall, we conclude that CENT-CONS is fairly similar to CENT-ALL, both being relatively close to a complete information centipede game with selfish preferences in which the backwards induction prediction performs quite well.

<sup>1</sup>We do not elicit first-order beliefs of future actions from players who are choosing Take in the current node, because they know the future nodes will not be reached. Of those who chose Pass at the first node, the average belief is that the second mover will take at the next node with probability 63%.

	L	R
U	\$15, \$15	\$ 1, \$ 1
D	\$ 2, \$ 2	\$ 5, \$ 5

FIGURE III. The Common Interest Game Form

Row's Type	$BR_1(L)$	$BR_1(R)$	% Subj.	$BR_1(p_1^{1s} u_1) = U$		$BR_1(p_1^{1s} u_1) = D$	
				$s_1 = U$	$s_1 = D$	$s_1 = U$	$s_1 = D$
Selfish	$U$	$D$	97.3%	66	2	3	1
DomStrat $U$	$U$	$U$	2.8%	2	0	–	–

Col's Type	$BR_2(U)$	$BR_2(D)$	% Subj.	$BR_2(p_2^{1s} u_2) = L$		$BR_2(p_2^{1s} u_2) = R$	
				$s_2 = L$	$s_2 = R$	$s_2 = L$	$s_2 = R$
Selfish	$L$	$R$	91.9%	68	0	0	0
DomStrat $L$	$L$	$L$	6.8%	5	0	–	–
Reverse	$R$	$L$	1.4%	0	0	0	1

TABLE I. The strategy choices of the types of row and column players observed in the Common Interest game form, broken down by the best responses to their beliefs.

APPENDIX B. OTHER GAMES IN THE SIM AN SEQ EXPERIMENTS

In the SIM, SEQ, and SIM-NoE treatments, subjects face five game forms presented in a booklet with one page per game form. In order, the game forms they play are

- (1) a dominance solvable game form,
- (2) a “common interest” game form,
- (3) a version of the Prisoner’s Dilemma,
- (4) an asymmetric matching pennies game form, and
- (5) an asymmetric coordination game.

For brevity, only the results from the dominance solvable, Prisoner’s Dilemma, and coordination game forms are described in the main body of the paper; here we describe results from the remaining two game forms.

*A Common Interest Game Form*

The second game form played by subjects in the SIM (and SEQ) treatment is shown in Figure III. We refer to it as a “common interest” game form, since both players’ payoffs are identical in every cell. Although there are two pure-strategy Nash equilibria for players with selfish preferences, the  $(U, L)$  equilibrium is both Pareto superior and risk dominant.

We expect that in the Common Interest game form all subjects will exhibit selfish preferences and play the Pareto dominant Nash equilibrium (in terms of dollar payoffs) since

	L	R
U	\$15, \$ 5	\$ 5, \$10
D	\$ 5, \$10	\$10, \$ 5

FIGURE IV. The Asymmetric Matching Pennies Game Form

Row's Type	$BR_1(L)$	$BR_1(R)$	% Subj.	$BR_1(p_1^{1s} u_1) = U$		$BR_1(p_1^{1s} u_1) = D$	
				$s_1 = U$	$s_1 = D$	$s_1 = U$	$s_1 = D$
Selfish	$U$	$D$	89.6%	45	2	10	3
DomStrat $U$	$U$	$U$	3.0%	1	1	–	–
Reverse	$D$	$U$	7.5%	2	0	2	1

Col's Type	$BR_2(U)$	$BR_2(D)$	% Subj.	$BR_2(p_2^{1s} u_2) = L$		$BR_2(p_2^{1s} u_2) = R$	
				$s_2 = L$	$s_2 = R$	$s_2 = L$	$s_2 = R$
Selfish	$L$	$R$	76.7%	3	1	20	26
DomStrat $L$	$L$	$L$	9.6%	6	1	–	–
DomStrat $R$	$R$	$R$	9.6%	–	–	0	7
Reverse	$R$	$L$	4.1%	1	2	0	0

TABLE II. The strategy choices of the types of row and column players observed in the Asymmetric Matching Pennies game form, broken down by the best responses to their beliefs.

preferences are perfectly aligned. Thus, we view this game form as a test of our methodology, measuring the noise inherent in the elicitation process.

We see that 95% of subjects report preferences consistent with selfishness (97% for row players and 92% for column players), indicating a roughly 5% lower bound on noise in utility reports. The vast majority of subjects report selfish preferences and beliefs such that  $U$  or  $L$  is a best response. Overall, 96.6% of subjects are C-EU-rational, with only five row players (choosing irrational strategies). Thus, we view 5% noise as a reasonable bound on noise in elicited reports and rationality in these game forms.

### *Asymmetric Matching Pennies*

The fourth game form in the subjects' packet is the Asymmetric Matching Pennies game form (Figure IV), which has no pure strategy equilibria in terms of dollar payoffs.

Table II identifies the frequency of each preference type and the actions they choose in this game form. Although there is heterogeneity in preferences, by far the most common is for subjects to preferences consistent with selfishness. Nash equilibrium with selfish preferences predicts that all players are indifferent, half of the row players play  $U$ , and two thirds of the column players play  $R$ . In fact, most row players have a strict preference for  $U$  (though the differences in expected utility are generally small) and indeed play  $U$ , though 17% of selfish row players play  $U$  despite  $D$  being their best response. Thus, there is a slight

tendency for row players to play  $U$  irrationally, perhaps optimistically seeking the high \$15 payoff.

Column players correctly expect that row players will favor  $U$ , with a median belief  $p_2^{1s}(U)$  of 75%. Given this, most have a best response of  $R$ . Among such selfish players, however, 43.5% choose  $L$ . This is a particularly puzzling example of irrationality. It could be driven by non-consequentialist social preferences, in which row players like the  $(U, L)$  outcome in the context of the game, even though they don't particularly like the  $(\$15, \$5)$  payoff vector. Or it could be driven by a desire to randomize.

APPENDIX C. ELICITATION TRAINING GIVEN BEFORE ALL TREATMENTS WITH  
ELICITATION

The following pages show the training document given to all subjects who face elicitation questions. The document shown here was the version used for the SIM and SEQ treatments; the version used for the CENT treatments is almost identical but had minor wording changes. It is available upon request.

# EXPERIMENT INSTRUCTIONS:

## Understanding “Elicitation Questions”

In the experiment that follows, I will use several different kinds of “elicitation questions”. These instructions will help you understand how those questions work, and how to answer them to maximize your payoff.

### Part 1: Eliciting Your Dollar Value for a Good

Suppose I want to know how much you value a cheeseburger from a local restaurant. What I want to know is, how much is it worth to you, in dollars? One way to find out would be to ask you the following series of questions:

- Would you rather have the cheeseburger, or \$20.00?
- Would you rather have the cheeseburger, or \$19.99?
- Would you rather have the cheeseburger, or \$19.98?
- ...
- Would you rather have the cheeseburger, or \$0.02?
- Would you rather have the cheeseburger, or \$0.01?

Let’s call the dollar amounts in these questions “prices”. Presumably, you would rather take the money when the price is very high, but at some point you’d switch to taking the cheeseburger. The first price at which you switch to taking the cheeseburger is therefore the maximum amount of money you’d be willing to give up for the cheeseburger. That’s your value for the cheeseburger.

You can think of your value as being the dollar amount where you’re *exactly indifferent* between getting the cheeseburger and getting the money. Equivalently, you can think of it as the absolute maximum you’d be willing to pay at a restaurant to order the cheeseburger. If they charged a penny more, you wouldn’t order it.

One problem with my procedure is that there are 2,000 questions to ask you! It could take a long time to find your value. Instead, I’ll just ask you to tell me the price where you would start answering “cheeseburger”. I’ll automatically fill in your answers to all the questions, with “the money” for all higher prices, and “cheeseburger” for your value and all lower prices. For example, if you say your value is “\$6.83”, then I’ll automatically fill in your answers like this:

- Would you rather have the cheeseburger, or \$20.00? **THE MONEY**
- Would you rather have the cheeseburger, or \$19.99? **THE MONEY**
- ...
- Would you rather have the cheeseburger, or \$6.85? **THE MONEY**
- Would you rather have the cheeseburger, or \$6.84? **THE MONEY**
- Would you rather have the cheeseburger, or \$6.83? **CHEESEBURGER**
- Would you rather have the cheeseburger, or \$6.82? **CHEESEBURGER**
- ...
- Would you rather have the cheeseburger, or \$0.02? **CHEESEBURGER**
- Would you rather have the cheeseburger, or \$0.01? **CHEESEBURGER**

Now you only have to answer one question: What is your value for the cheeseburger? But now the problem is that I can't actually pay you for all 2,000 questions! In this example, you'd be getting 683 cheeseburgers and nearly \$18,000!! So, what I'll do instead is use a computer to randomly pick *one* of the 2,000 questions and pay you based on that one question. So if you said your value is \$6.83, and the computer randomly picks the following question:

- Would you rather have the cheeseburger, or \$2.37?

then I will give you the cheeseburger, because I auto-filled your answer to this question as "**CHEESEBURGER**". If instead the computer randomly picked this question:

- Would you rather have the cheeseburger, or \$8.06?

then I will give you \$8.06, because I auto-filled your answer to this question as "**THE MONEY**". (Note: The value you announce has no impact on which question will be chosen for payment; they're each chosen with equal probability.)

Hopefully it's clear that you have *no incentive to lie* about your true value in this procedure. The following pictures help show why that's the case.

IF YOU TELL THE TRUTH:	IF YOU OVER-STATE YOUR VALUE:	
True Value = \$6.83	True Value = \$6.83	
Announce = \$6.83	Announce = \$6.88	
Random Price	Random Price	
What you get	What you get	
\$6.90 ↑ \$6.90	\$6.90 ↑ \$6.90	} Same as truth-telling
\$6.89 ↑ \$6.89	\$6.89 ↑ \$6.89	
\$6.88 ↑ \$6.88	\$6.88 — burger worth \$6.83	} Worse than truth-telling
\$6.87 ↑ \$6.87	\$6.87 ↑ burger worth \$6.83	
\$6.86 ↑ \$6.86	\$6.86 ↑ burger worth \$6.83	
\$6.85 ↑ \$6.85	\$6.85 ↑ burger worth \$6.83	
\$6.84 ↑ \$6.84	\$6.84 ↑ burger worth \$6.83	} Same as truth-telling
\$6.83 — burger worth \$6.83	\$6.83 — burger worth \$6.83	
\$6.82 ↑ burger worth \$6.83	\$6.82 ↑ burger worth \$6.83	
\$6.81 ↑ burger worth \$6.83	\$6.81 ↑ burger worth \$6.83	
\$6.80 ↓ burger worth \$6.83	\$6.80 ↓ burger worth \$6.83	

Suppose again that your true value is \$6.83. The left half of this picture shows all the things you could get if you tell the truth. Specifically, for each possible price the computer could randomly draw, it shows what you would get. For any price above \$6.83 you would get the money, and for any price \$6.83 or less you would get the cheeseburger (which is worth \$6.83 to you).

The right half of the picture shows what you get if you lied and said your value was \$6.88. If the computer randomly picks a price of \$6.86, for example, then you get a burger worth \$6.83. But if you had told the truth you'd get \$6.86. So, you're worse off by lying! In fact, you're worse off for *all* randomly-drawn prices between your true value (\$6.83) and your lie (\$6.88). If the computer's randomly-drawn price is outside that range, then the lie didn't hurt you (you get the same thing as when you told the truth), but it didn't help you either.

A similar figure on the next page shows what happens when you lie and *under-state* your value (announcing \$6.78, instead of \$6.83). The logic is the same: if the computer's randomly-drawn price is between your true value and your lie, you are worse off. In all other cases, lying doesn't make you better off.

IF YOU TELL THE TRUTH:		IF YOU UNDER-STATE YOUR VALUE:		
True Value = \$6.83		True Value = \$6.83		
Announce = \$6.83		Announce = \$6.78		
Random Price	What you get	Random Price	What you get	
\$6.87	\$6.87	\$6.87	\$6.87	} Same as truth-telling
\$6.86	\$6.86	\$6.86	\$6.86	
\$6.85	\$6.85	\$6.85	\$6.85	
\$6.84	\$6.84	\$6.84	\$6.84	
\$6.83	burger worth \$6.83	\$6.83	\$6.83	
\$6.82	burger worth \$6.83	\$6.82	\$6.82	} Worse than truth-telling
\$6.81	burger worth \$6.83	\$6.81	\$6.81	
\$6.80	burger worth \$6.83	\$6.80	\$6.80	
\$6.79	burger worth \$6.83	\$6.79	\$6.79	} Same as truth-telling
\$6.78	burger worth \$6.83	\$6.78	burger worth \$6.83	
\$6.77	burger worth \$6.83	\$6.77	burger worth \$6.83	

The bottom line is that lying can never help you, and sometimes it hurts you. Thus, your best strategy is to tell the truth.

In summary, the procedure works like this: I ask you your value for the cheeseburger. Then the computer randomly picks a price. If the computer's price is above your value, you get that price in cash. If the computer's price is below (or equal) to your value, then you get the cheeseburger. Under this system, you have no incentive to lie about your value.

Obviously, the cheeseburger is just an example. I could use this procedure to ask your value for practically anything. Suppose I asked your value of a \$5 bill. Presumably everyone would answer "\$5.00". But I could also use this procedure to ask: What is your value of "you get \$5, and someone else in the room gets \$10"? Some people may value that for more than \$5, and some people may value it less than \$5. In the experiment, I will ask these kinds of questions.

## Part 2: Eliciting Your "Probability Value" Of a Good

In the above procedure, I ask you your value for a cheeseburger in terms of dollar amounts. But I could also ask you your value in terms of the probability of getting \$20. In other words, I could ask you the following questions:

- Would you rather have the cheeseburger, or a 100% chance of getting \$20?
- Would you rather have the cheeseburger, or a 99% chance of getting \$20?
- Would you rather have the cheeseburger, or a 98% chance of getting \$20?
- ...
- Would you rather have the cheeseburger, or a 2% chance of getting \$20?
- Would you rather have the cheeseburger, or a 1% chance of getting \$20?
- Would you rather have the cheeseburger, or a 0% chance of getting \$20?

Presumably you'd take the gamble for the high probabilities, but at some point you'd switch to taking the cheeseburger. The first probability where you switch to taking the cheeseburger is your *probability value* for the cheeseburger. It's the point where you're exactly indifferent. Consider the question:

- Would you rather have the cheeseburger, or a 68% chance of getting \$20?

If you chose "a 68% chance of winning \$20", here's how I would pay you: I have a Bingo cage with 100 balls, numbered 1 to 100. I draw one ball. If it is 68 or less, you win \$20. If it is 69 or higher, you don't get paid anything. Since 68 out of 100 balls pay \$20, this is exactly a 68% chance of winning \$20.

If I want to pay you a 37% chance of getting \$20, then balls 1—37 would pay \$20, and the rest would pay \$0.

Now, I can ask you your probability value for the cheeseburger in exactly the same way I asked for your dollar value above. You tell me the probability of getting \$20 that makes you exactly indifferent between getting that gamble, and getting the cheeseburger. Suppose you say 68%. Then I auto-fill your answers to the questions, with "THE GAMBLE" for all probabilities above 68%, and "THE CHEESEBURGER" for 68% and lower.

- Would you rather have the cheeseburger, or a 100% chance of getting \$20? **GAMBLE**
- Would you rather have the cheeseburger, or a 99% chance of getting \$20? **GAMBLE**
- ...
- Would you rather have the cheeseburger, or a 69% chance of getting \$20? **GAMBLE**
- Would you rather have the cheeseburger, or a 68% chance of getting \$20? **CHEESEBURGER**
- Would you rather have the cheeseburger, or a 67% chance of getting \$20? **CHEESEBURGER**
- ...
- Would you rather have the cheeseburger, or a 1% chance of getting \$20? **CHEESEBURGER**
- Would you rather have the cheeseburger, or a 0% chance of getting \$20? **CHEESEBURGER**

Then the computer randomly picks one of the questions (meaning, it randomly picks one of the probabilities from 100% down to 0%), and you get paid your choice on that one question. Just as before, if you over-state or under-state your probability value, you won't make yourself better off, and could make yourself worse off. You have no incentive to lie.

In summary, the procedure works like this: I ask you your *probability value* for the cheeseburger. This is a percent chance of winning \$20 that makes you indifferent between that gamble, and getting the cheeseburger. Then the computer randomly picks a probability from 0% to 100%. Let's call that number  $P$ .

- > If  $P$  is above your probability value, then we pay you a  $P\%$  chance of \$20 using a Bingo cage:
    - > If the ball drawn is between 1 and  $P$  (inclusive), you get \$20.
    - > If the ball drawn is greater than  $P$ , you get \$0.
  - > If  $P$  is at or below your probability value, then you get the cheeseburger.
- Under this system, you have no incentive to lie about your probability value.

## Part 2.5: Eliciting Your "Probability Value" For 2-Person Payments

Again, the cheeseburger above is just an example. I could use this procedure to ask your probability value for \$5. (What would you say? There is no right answer here; it's a subjective question.) Or I could ask your probability value for "you get \$5, and someone else gets \$10". In our actual experiment, I'm going to ask questions like this, where both you and someone else will get money. So I have to make one slight change to the procedure: Instead of the Bingo cage giving some chance of *you* getting \$20, it's going to give some chance of *both of you* getting \$20. In other words, the questions I would ask would like this:

- Would you rather have "you get \$5, they get \$10", or a 100% chance of you both getting \$20?
- Would you rather have "you get \$5, they get \$10", or a 99% chance of you both getting \$20?
- Would you rather have "you get \$5, they get \$10", or a 98% chance of you both getting \$20?
- ...
- Would you rather have "you get \$5, they get \$10", or a 2% chance of you both getting \$20?
- Would you rather have "you get \$5, they get \$10", or a 1% chance of you both getting \$20?
- Would you rather have "you get \$5, they get \$10", or a 0% chance of you both getting \$20?

But everything else is just like before. You announce the probability value that makes you indifferent, I auto-fill your answers, and the computer picks one random question. Suppose it's the 32% question. If "you get \$5, they get \$10" is your answer to that question, then you will get \$5, and the other person will get \$10. If "32% chance of you both getting \$20" is your answer, then we'll use the Bingo cage and you *both* will get \$20 if the chosen ball's number is at or below 32 (and both get nothing if it's greater than 32). In other words, both your payoff and the other person's payoff will actually depend on your announced probability value.

Here's a simple way to think of all this: Your probability value is like a "score" you assign to something. The score ranges from 0 to 100. Both of you getting \$20 is the best possible outcome in the experiment, so we'll say that gets a score of 100. Both of you getting \$0 is the worst possible outcome, so we'll say that gets a score of 0. When I ask you your probability value of "you get \$5, they get \$10", you need to assign that a score from 0 to 100 based on how much you like it. In general, things you like more should receive higher scores.

### **Part 3: Eliciting Your Probability Beliefs**

Suppose I have a coin that is slightly bent. If I flip it, the probability of heads isn't exactly 50%. After showing you this coin, I'm curious what you believe the probability of heads really is.

Here is a sequence of questions I can ask to find that out:

- Would you rather get \$20 if the coin flip lands heads, or use a Bingo cage to get a 100% chance of getting \$20?
- Would you rather get \$20 if the coin flip lands heads, or use a Bingo cage to get a 99% chance of getting \$20?
- ...
- Would you rather get \$20 if the coin flip lands heads, or use a Bingo cage to get a 1% chance of getting \$20?
- Would you rather get \$20 if the coin flip lands heads, or use a Bingo cage to get a 0% chance of getting \$20?
- 

In the first question, you'd certainly prefer the Bingo cage, since it guarantees \$20. Presumably you'd also prefer the Bingo cage when it gives a 99% chance of \$20. But at some point you'll switch to betting on the coin landing heads. (By the last question, you presumably would prefer betting on the coin over a 0% chance of \$20.) Let's say that switch happens at 57%. Basically, that means you believe the coin will land heads with 57% probability. That's because you're exactly indifferent between the coin flip, and a Bingo cage where you *know* the probability is 57%. Here, I'll call 57% your *probability belief* about the bent coin landing heads.

Note that this is the same procedure as when I asked for your probability value above, except instead of asking for your probability value of a cheeseburger, I'm now asking your probability value of a coin flip. You announce your probability belief (for example, 57%), I auto-fill your

answers to all the questions, a computer randomly draws one of the questions, and you are paid for the thing you chose in that question. If you chose the Bingo cage, we use the Bingo cage to see if you get \$20. If you chose the coin flip, we flip the coin to see if you get the \$20.

Once again, you have no incentive to lie under this procedure.

And the bent coin is just an example. I could ask your probability belief for any kind of event. For example, if you're playing Rock-Paper-Scissors with another player, I could ask you: What is your probability belief that they are going to play "rock" on the next throw? Suppose you think there's a 50% chance they'll play rock. So you say "50%". Then I auto-fill the answer "Bingo cage" for every question above 50%, and auto-fill the answer "bet on rock" for every question 50% and below. If the computer randomly draws the "Bingo cage with 27%" question, for example, then your answer is "bet on rock". You would get paid \$20 if the other person in fact plays "rock", and \$0 otherwise. If the computer draws the "Bingo cage with 52%" question, then your answer is "Bingo cage", so I would draw a ball from the Bingo cage and you'd get \$20 if the ball is between 1 and 52.

#### **Part 4: Eliciting Your Most-Likely Outcomes**

Suppose you've been playing Rock-Paper-Scissors with someone for a while. Based on that experience, you now believe that Rock is their most-likely strategy in the next round. Specifically, you have the following probability beliefs:

**ROCK:** 50% chance

**PAPER:** 30% chance

**SCISSORS:** 20% chance

Suppose I ask you to tell me which strategy is most likely *and* what your probability belief is for that strategy. You would announce "ROCK" has a "50% chance". I would then pay you according to the above Bingo cage procedure.

You already know that, if you announce "ROCK", then you have no incentive to lie about your probability belief of 50%. But it's also true that you have no incentive to pick "PAPER" or "SCISSORS" instead. The picture below compares announcing "ROCK" with "50% chance" to announcing "PAPER" with "30% chance" (which is your true probability belief for PAPER). Clearly you get better outcomes when you announce the thing you think is more likely.

ANNOUNCE ROCK:			ANNOUNCE PAPER:		
True Belief = 50%			True Belief = 30%		
Announce = 50%			Announce = 30%		
Random Question	You Get	\$20 If...	Random Question	You Get	\$20 If...
100%	↑	Balls 1-100 (100%)	100%	↑	Balls 1-100 (100%)
90%	↑	Balls 1-90 (90%)	90%	↑	Balls 1-90 (90%)
80%	↑	Balls 1-80 (80%)	80%	↑	Balls 1-80 (80%)
70%	↑	Balls 1-70 (70%)	70%	↑	Balls 1-70 (70%)
60%	↑	Balls 1-60 (60%)	60%	↑	Balls 1-60 (60%)
50%	→	They Play Rock (50%)	50%	↑	Balls 1-50 (50%)
40%	↑	They Play Rock (50%)	40%	↑	Balls 1-40 (40%)
30%	↑	They Play Rock (50%)	30%	→	They Play Paper (30%)
20%	↑	They Play Rock (50%)	20%	↑	They Play Paper (30%)
10%	↑	They Play Rock (50%)	10%	↑	They Play Paper (30%)
0%	↓	They Play Rock (50%)	0%	↓	They Play Paper (30%)

} Same as ROCK

} Worse than ROCK

Finally, suppose I ask you to announce your *two* most likely things (and your probability belief for both), and I flip a coin to decide which guess gets used for actual payment. You'd prefer to say "ROCK with 50%" and "PAPER with 30%". Announcing "SCISSORS with 20%" for one of your answers would only give you worse odds of winning \$20 if that announcement does get chosen for payment.

**THE BOTTOM LINE**

All of these procedures are just different ways to figure out what something's "worth" to you. That "worth" might be in terms of dollar values, or in terms of probability values (i.e., the probability of getting some prize). But in all of them, you always have an incentive to tell the truth.

APPENDIX D. INSTRUCTIONS FOR THE CENT TREATMENTS

See the following pages for the CENT treatment instructions. The instructions for the NoElicit treatment is the same except the reference to the elicitation training is removed, as are the sections “A Weighted Value Theory” and “The Elicitation Periods”. The “Final Payment” section is then simplified to the following text:

After the last period is complete, the experimenter will roll a die to decide which of the four periods is paid. You will be paid for one—and only one—period.

At the end of the experiment you will see a table on the computer screen listing the outcomes of the four periods, and which one was chosen to be paid.

Finally, understanding questions 2, 3, and 4 are removed.

# EXPERIMENT INSTRUCTIONS

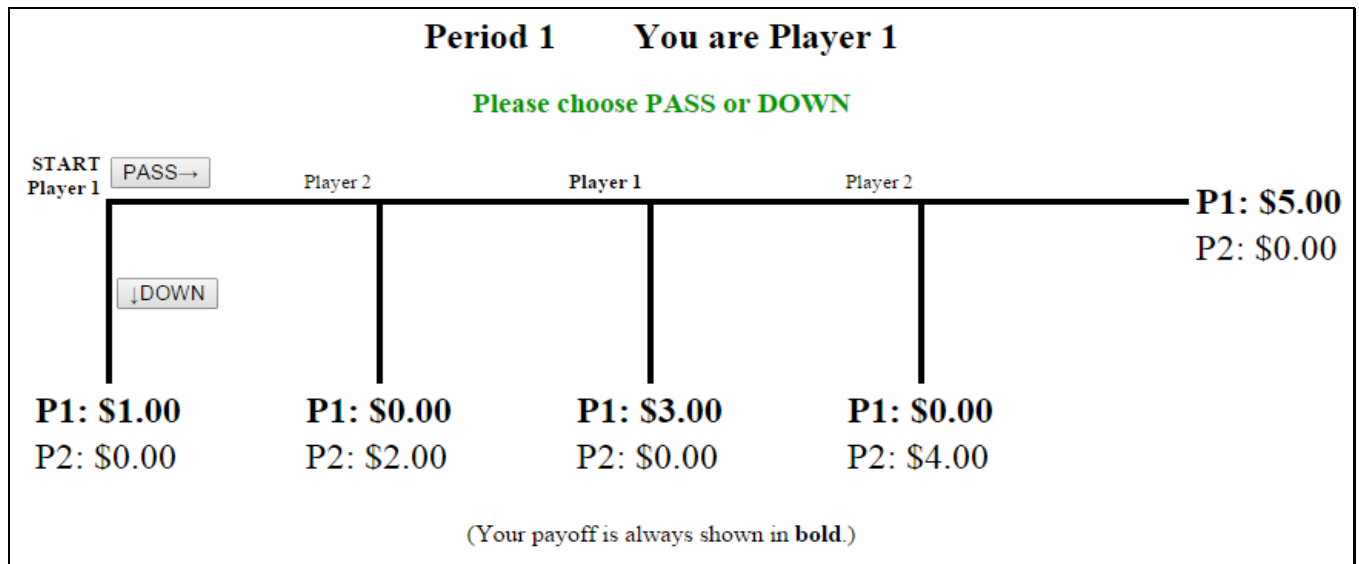
This is an experiment in the economics of decision-making. If you follow these instructions and make good decisions, you could earn a considerable amount of cash that will be paid to you at the end of the experiment.

Please silence & put away your cell phones. Please do not use other software on your computer during the experiment. Please do not communicate with anyone other than the experimenter during this experiment. If you need help or have questions, please raise your hand at any time.

By now you should have read the pre-experiment training document “Understanding Elicitation Questions”. These types of questions will be used in today’s experiment. It’s important you understand how they work, and that your best strategy is to answer them honestly.

## The Game

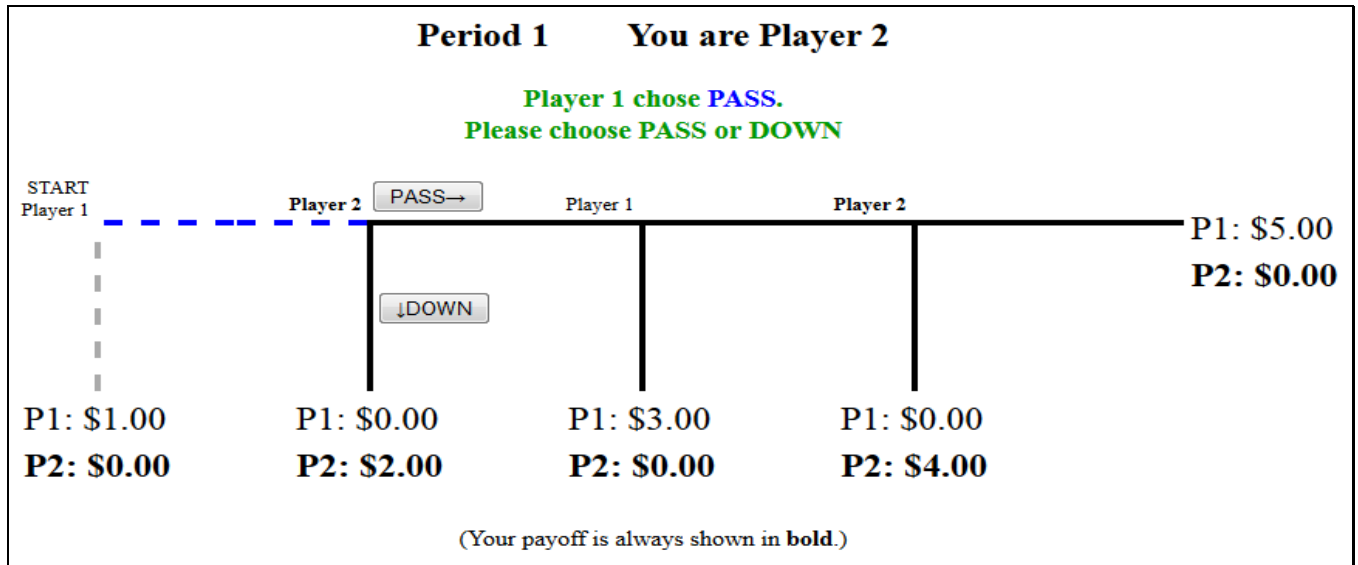
This experiment will consist of **four periods**. In each period you will be randomly matched with someone else in the room, and the two of you will play a game that will lead to real monetary payments. One of you will be Player 1, and the other will be Player 2. A screenshot of the game is shown here:



Play begins at the far left, at the step labeled “START”. Player 1 moves first. Player 1 chooses either “PASS” or “DOWN” by clicking the appropriate button.

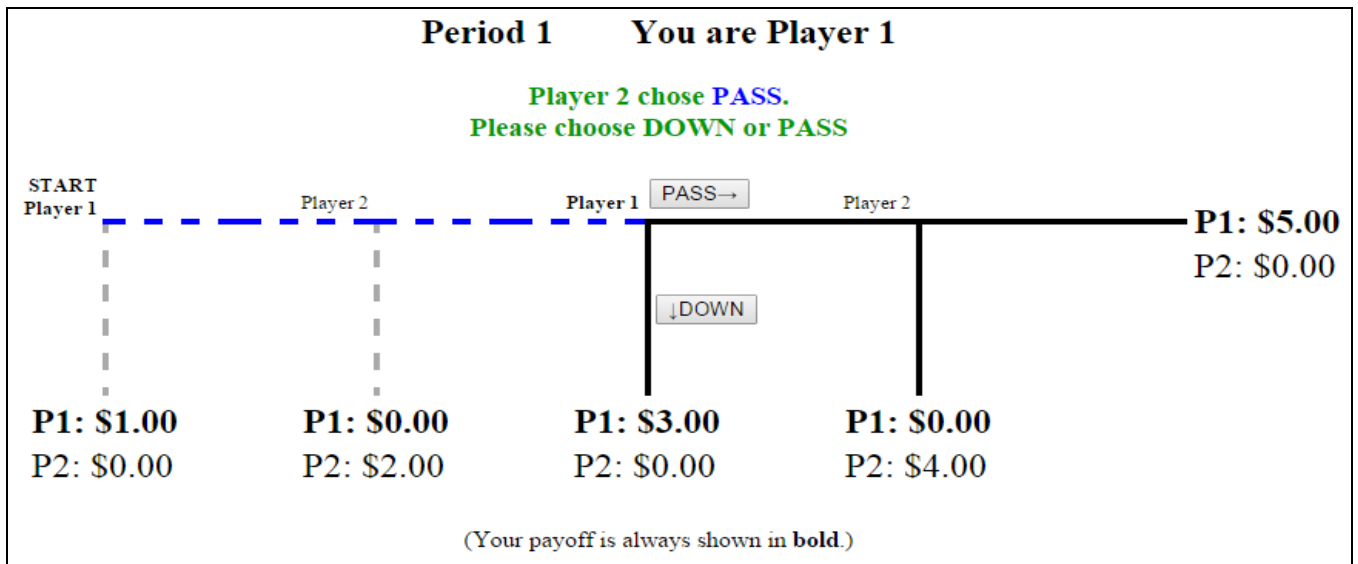
If Player 1 chooses DOWN, the game ends. Player 1 gets \$1.00 and Player 2 gets \$0.00. (On the screen, P1 stands for Player 1, and P2 stands for Player 2. And your own payoffs are always shown in bold.)

If Player 1 chooses PASS, then the game continues to the next step, where Player 2 gets to move. Player 2 can now see that Player 1 chose PASS at the first step, because the game did not end. Now Player 2 gets to choose PASS or DOWN. They do that by clicking on either button. See the following screenshot:



If Player 2 chooses DOWN, then the game ends with Player 2 getting \$2.00 and Player 1 getting \$0.00. Notice that on Player 2's screen, Player 2's payoffs are shown in bold.

If Player 2 chooses PASS, then play passes back to Player 1, who makes a decision at the third step. This is shown in the following screenshot:



As before, if Player 1 chooses DOWN then the game ends. In this case, Player 1 gets \$3.00 and Player 2 gets \$0.00. If Player 1 chooses PASS, then play passes back to Player 2, who makes the final decision at the last step. Choosing DOWN at the last step would give Player 1 \$0.00 and Player 2 \$4.00, while choosing PASS would give Player 1 \$5.00 and Player 2 \$0.00.

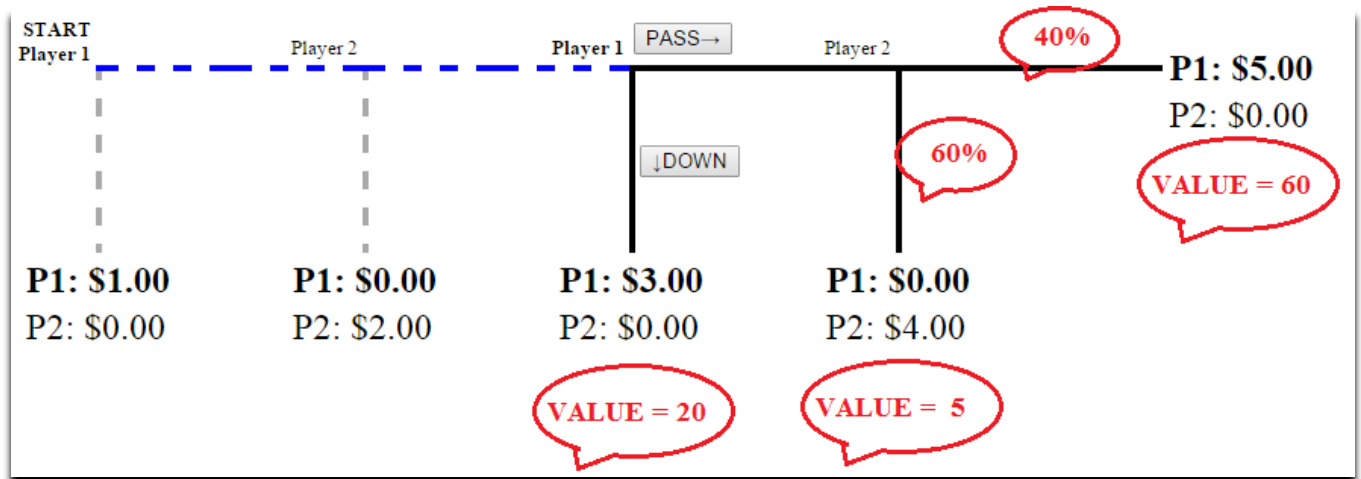
These screenshots are just an example. The game you will play may have fewer steps or more steps than what is shown here, and the dollar payoffs may be different than in this example. But the basic idea will be the same: Play alternates back and forth, and at every step the player must choose PASS (to keep the game going), or DOWN (to end the game).

There is no “right” or “wrong” way to play this game. This is not a test of intelligence, but rather an experiment to see which choices people actually prefer.

## A Weighted-Value Theory

There is a theory that tries to predict how people will play this game, which we’ll call the Weighted-Value Theory. It has 3 parts. (1) The player first assigns a *value* to each of the possible outcomes of the game, say from 0 to 100. This value represents how much they “like” that particular outcome. (2) The player has probability *beliefs* about how the other player will choose at each step. (3) When deciding what to choose, then player multiplies each outcome’s value by the probability they think that outcome will happen. Call this the “weighted value” of that choice. The player then chooses the choice with the highest weighted value.

Consider the example shown below. Player 1 is at the third step, choosing PASS or DOWN. There are 3 possible outcomes remaining in the game. Player 1 first assigns them values of 20, 5, and 60, respectively. These are shown in the “thought bubbles” in the picture. Player 1 then forms probability beliefs about how Player 2 would choose at the fourth step. Specifically, Player 1 thinks it’s 60% likely that Player 2 would choose DOWN.



Finally, Player 1 tries to maximize their weighted value. Choosing DOWN would give a value of 20 for sure (think of this a 100% chance of value = 20). Choosing PASS would yield a 60% chance of getting value = 5, and a 40% chance of getting value = 60. The “weighted value” is therefore

$$(60\% \times 5) + (40\% \times 60) = 3 + 24 = 27.$$

Choosing PASS has a weighted value of 27. Choosing DOWN has a weighted value of 20. The theory predicts that Player 1 will choose PASS because it has the higher weighted value.

There are two important things to note about this Weighted Value theory:

1. There is no claim that this is how you **should** play the game. Again, there's no right or wrong way to make choices in this game. When playing for yourself, you should not feel compelled to follow this theory if you do not want to.
2. There is no claim that this is how anyone **does** play the game in the real world. It's just a mathematical theory that makes a prediction. The prediction may be right or wrong. It may do a good job of predicting some people's choices, but not others'.

## The Elicitation Periods

In each period you will play the game with a randomly-selected person from the room. In the **last 2 periods** you play, the computer will also ask you a bunch of questions about:

1. What you would choose, not just at the current step, but all future steps.
2. Your probability values for the various outcomes of the game.
3. Your best guess of the other player's probability values for the outcomes.
4. Your belief about the other player's choices.
5. Your best guess of the other player's beliefs about your choices.
6. How likely it is you think the Weighted Value Theory will correctly predict the other person's choices.

All of these questions will be paid using the elicitation method described in the pre-experiment training instructions. Thus, it is in your best interest to answer them as truthfully as possible. When asked about your future choices, there is some chance those will be played out instead of the actual outcome of the game, so you should answer these truthfully as well.

## Final Payment

After the last period is complete, the experimenter will roll a die to generate 3 numbers. "Roll 1" will be a number from 1 to 1,000. "Roll 2" and "Roll 3" will each be from 1 to 100.

**You will be paid for one—and only one—decision** you make in the entire experiment. Roll 1 will be used to figure out which decision gets paid. At the end of the experiment you will see a large table on the computer screen listing all of your decisions. Roll 1 will determine which is chosen for payment.

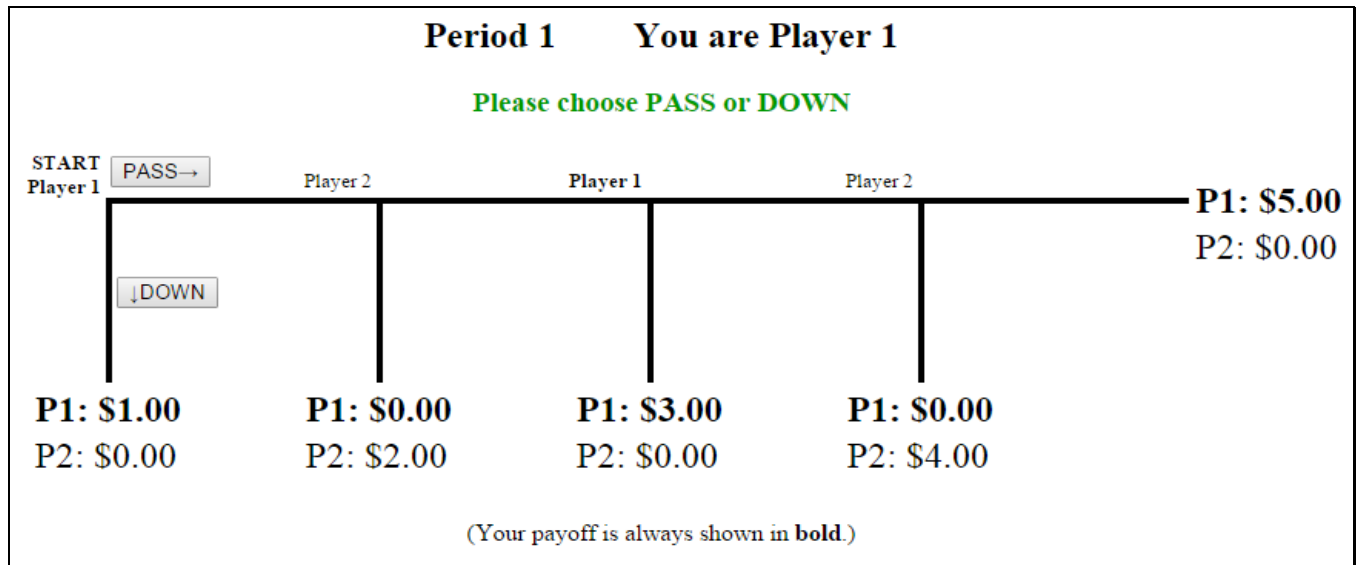
If one of the elicitation questions is drawn, then we need a randomly-drawn "price" from 1 to 100. (Recall the elicitation procedure for your probability value of a cheeseburger would actually use 100 questions, but then one is randomly chosen for payment.) Roll 2 will serve that function.

Finally, you may get paid a lottery. In the elicitation instructions I described a Bingo cage that would draw a ball from 1 to 100. Roll 3 will serve as the Bingo cage in this experiment.

At this time, answer the questions on the next page to check your understanding. If you have questions, please raise your hand and the experimenter will come to you. Do not ask questions aloud.

# Understanding Quiz

- In the game shown below, how much does Player 1 earn if Player 1 chooses PASS at the first step, Player 2 chooses PASS at the second step, and PLAYER 1 chooses DOWN at the third step?



- Suppose I'm eliciting your value for a cheeseburger. You say it's worth \$5.17 to you. If I randomly draw a price of \$5.35, what do you get paid?

\_\_\_\_\_

- Suppose the cheeseburger is *really* worth \$5.17 to you, but you lie and say it's worth \$6.00. If I randomly draw a price of \$5.35, what do you get paid?

\_\_\_\_\_

- If you have a 35% belief that OSU's football team will win the national championship next year, that means you're indifferent between a \$20 bet on OSU winning the championship, and a bet that pays \$20 with what probability?

\_\_\_\_\_

- How many decisions will you be paid for in this experiment (circle one)?

**ONE RANDOMLY CHOSEN**

**5 RANDOMLY CHOSEN**

**ALL OF THEM**

APPENDIX E. SCREENSHOTS FROM THE CENT-LO TREATMENT

Screenshots of the experimental interface from the CENT-LO treatment appear on the following pages. We show here only a period with elicitation; the periods without elicitation are identical except the elicitation screens are skipped. The interfaces for CENT-HI, CENT-ALL, and CENT-MID treatments are also identical, other than the payoffs, and therefore are not replicated here. The CENT-NoE treatment has the same interface, but the elicitation screens are skipped in every period. The CENT-CONST treatment (which was run first) had the same interface as well, though the game form has only four nodes, runs for five periods, and elicitation screens are only shown in the final period. Screenshots of these are available upon request.

# ECONOMICS EXPERIMENT

Please click "Log in" when you are told to do so.

Log In

If you need to log back in with an existing Player ID, enter it below.  
Please inform the experimenter before doing this.

Log Back In

# You are player ID: 111-662

Please write this down now.

Waiting for the session to start...

[Get a new player ID](#) (do not click this without the experimenter's permission).

[Exit the Game.](#)

### Period 3. You are Player 1.

Remember you are paired with a new person each period.

For each outcome, please answer the following question **about your own preferences**.

"I am indifferent between this outcome and a \_\_\_\_\_% chance of us both getting \$30.  
(Please answer below for each game outcome.)"

START Player 1

	Player 2	Player 1	Player 2	Player 1	
<b>P1: \$12.00</b> <b>P2: \$9.00</b>	<b>P1: \$11.00</b> <b>P2: \$15.00</b>	<b>P1: \$17.00</b> <b>P2: \$14.00</b>	<b>P1: \$16.00</b> <b>P2: \$20.00</b>	<b>P1: \$22.00</b> <b>P2: \$19.00</b>	<b>P1: \$27.00</b> <b>P2: \$24.00</b>
is the same to me as a <input type="text" value="15%"/> chance of us both getting \$30	is the same to me as a <input type="text" value="10%"/> chance of us both getting \$30	is the same to me as a <input type="text" value="25%"/> chance of us both getting \$30	is the same to me as a <input type="text" value="20%"/> chance of us both getting \$30	is the same to me as a <input type="text" value="35%"/> chance of us both getting \$30	is the same to me as a <input type="text" value="75%"/> chance of us both getting \$30
<b>Rank: 6</b>	<b>Rank: 7 (WORST)</b>	<b>Rank: 4</b>	<b>Rank: 5</b>	<b>Rank: 2</b>	<b>Rank: 3</b>

- 0%
- 5%
- 10%
- 15%
- 20%
- 25%
- 30%
- 35%
- 40%
- 45%
- 50%
- 55%
- 60%
- 65%
- 70%
- 75%

**P1: \$27.00**  
**P2: \$24.00**  
is the same to me as a  chance of us both getting \$30  
**Rank: 1 (BEST)**

(Your payoff is always shown in bold.)

Ranking:	<b>1 (Best)</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7 (Worst)</b>
Payoffs:	<b>P1: \$27.00</b> <b>P2: \$24.00</b>	<b>P1: \$22.00</b> <b>P2: \$19.00</b>	<b>P1: \$21.00</b> <b>P2: \$25.00</b>	<b>P1: \$17.00</b> <b>P2: \$14.00</b>	<b>P1: \$16.00</b> <b>P2: \$20.00</b>	<b>P1: \$12.00</b> <b>P2: \$9.00</b>	<b>P1: \$11.00</b> <b>P2: \$15.00</b>

I confirm the rankings of these outcomes (from best to worst) are as I want them:

### Period 3. You are Player 1.

For each outcome, please answer the following question **about Player 2's preferences**:

**"I think Player 2 is indifferent between this outcome and a \_\_\_\_\_% chance of us both getting \$30.  
(Please answer below for each game outcome.)"**

<p><b>START</b> Player 1</p>	Player 2	Player 1	Player 2	Player 1	Player 2	<p><b>P1: \$27.00</b> <b>P2: \$24.00</b> is the same to P2 as a <input type="text" value="35%"/> chance of us both getting \$30 <b>Rank: 2</b></p>
<p><b>P1: \$12.00</b> <b>P2: \$9.00</b> is the same to P2 as a <input type="text" value="10%"/> chance of us both getting \$30 <b>Rank: 7</b> <b>(WORST)</b></p>	<p><b>P1: \$11.00</b> <b>P2: \$15.00</b> is the same to P2 as a <input type="text" value="20%"/> chance of us both getting \$30 <b>Rank: 5</b></p>	<p><b>P1: \$17.00</b> <b>P2: \$14.00</b> is the same to P2 as a <input type="text" value="15%"/> chance of us both getting \$30 <b>Rank: 6</b></p>	<p><b>P1: \$16.00</b> <b>P2: \$20.00</b> is the same to P2 as a <input type="text" value="30%"/> chance of us both getting \$30 <b>Rank: 3</b></p>	<p><b>P1: \$22.00</b> <b>P2: \$19.00</b> is the same to P2 as a <input type="text" value="25%"/> chance of us both getting \$30 <b>Rank: 4</b></p>	<p><b>P1: \$21.00</b> <b>P2: \$25.00</b> is the same to P2 as a <input type="text" value="40%"/> chance of us both getting \$30 <b>Rank: 1</b> <b>(BEST)</b></p>	

(Your payoff is always shown in bold.)

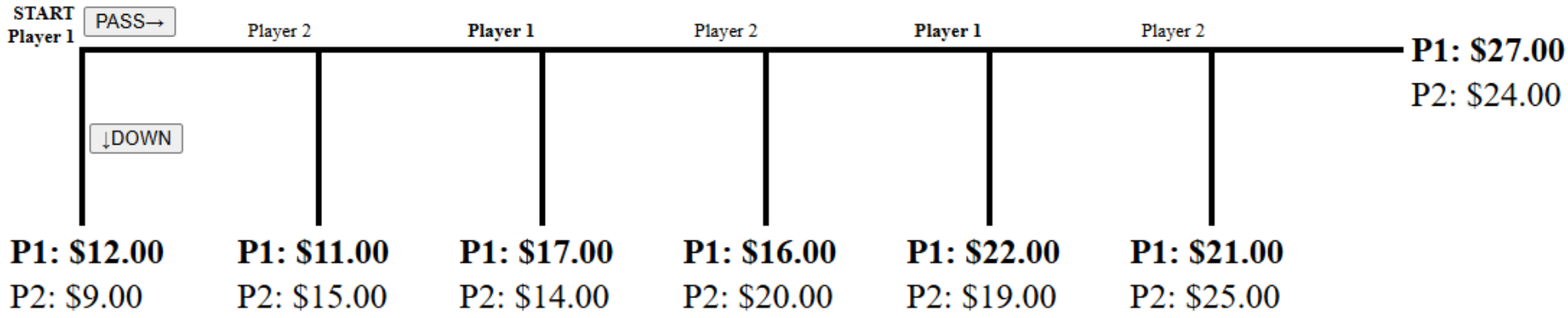
<b>Ranking:</b>	<b>1 (Best)</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7 (Worst)</b>
<b>Payoffs:</b>	<b>P1: \$21.00</b> <b>P2: \$25.00</b>	<b>P1: \$27.00</b> <b>P2: \$24.00</b>	<b>P1: \$16.00</b> <b>P2: \$20.00</b>	<b>P1: \$22.00</b> <b>P2: \$19.00</b>	<b>P1: \$11.00</b> <b>P2: \$15.00</b>	<b>P1: \$17.00</b> <b>P2: \$14.00</b>	<b>P1: \$12.00</b> <b>P2: \$9.00</b>

**How likely do you think it is that these values match the ones  
that P2 submitted for their own preferences?**

**SUBMIT** **RESET**

### Period 3 You are Player 1

Please choose **PASS** or **DOWN**

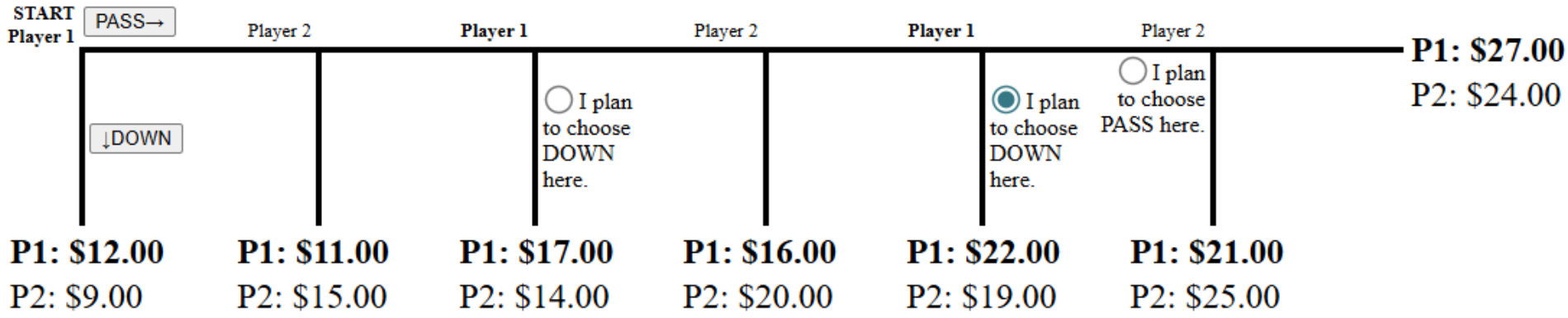


(Your payoff is always shown in bold.)

Player ID: 111-662  
Match ID: 1882  
[Exit the Game.](#)

### Period 3 You are Player 1

Please choose PASS or DOWN



(Your payoff is always shown in bold.)

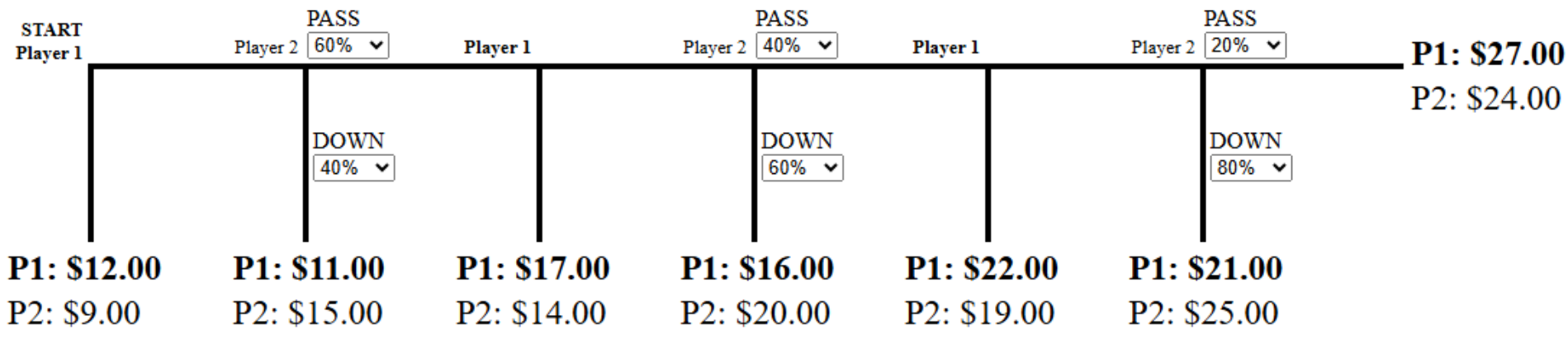
**You're about to choose PASS.**  
**(you plan to choose DOWN at step #5).**  
Play will continue, with Player 2 choosing next.

**CONFIRM & SUBMIT**

Player ID: 111-662  
Match ID: 1882  
[Exit the Game.](#)

### Period 3 You are Player 1

For each step remaining for Player 2, indicate how likely you think it is they will choose PASS or DOWN, if that step is reached.



(Your payoff is always shown in bold.)

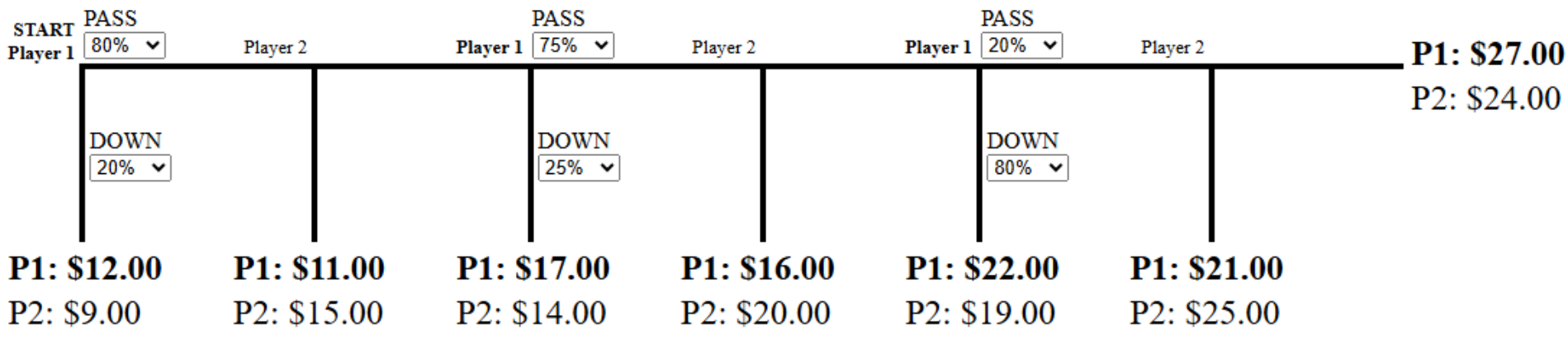
I confirm the above percentages are all as I want them:

SUBMIT RESET

Player ID: 111-662  
Match ID: 1882  
[Exit the Game.](#)

### Period 3 You are Player 1

Guess how likely **Player 2** thought it was that you would choose **PASS** or **DOWN** at each step, if that step were reached.



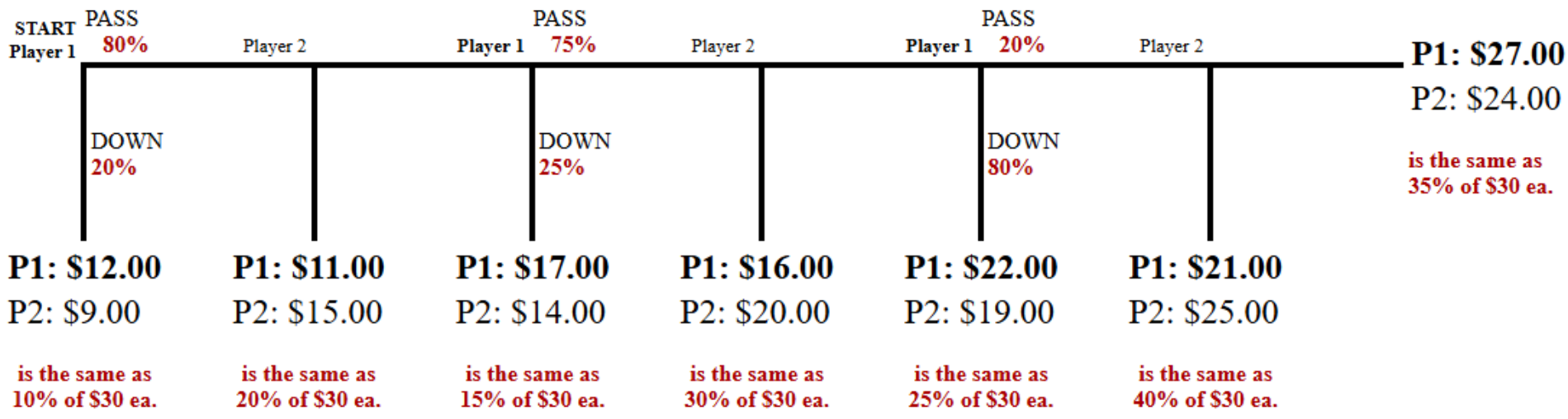
(Your payoff is always shown in bold.)

How likely do you think it is that these percentages match the percentages that **P2** actually submitted?

Player ID: 111-662  
Match ID: 1882  
[Exit the Game.](#)

### Period 3 You are Player 1

Shown below (in red) are your guesses of Player 2's preferences and likelihood of you choosing PASS or DOWN at each step.



(Your payoff is always shown in bold.)

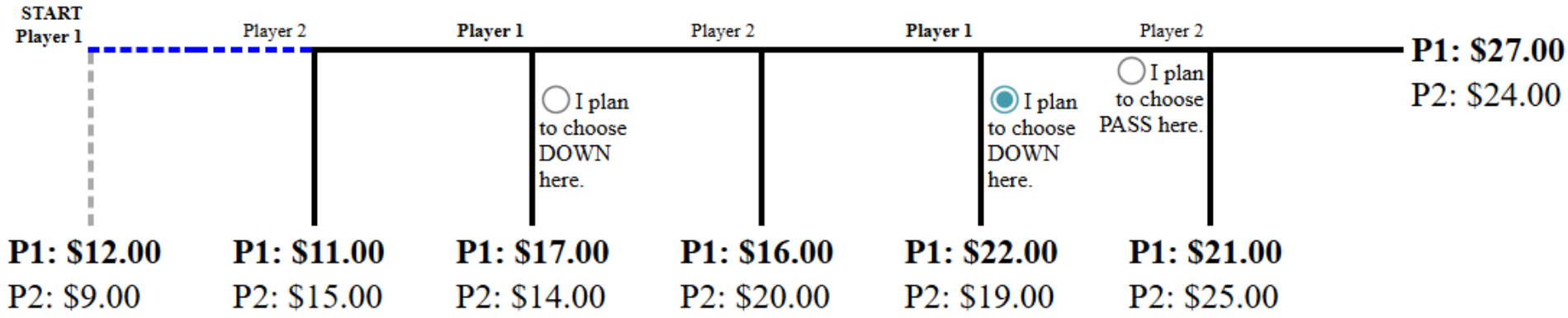
How likely do you think it is that **Weighted Value Theory** will correctly predict Player 2's choices at each remaining step?

(Your guesses of their values and beliefs appear above.)

Player ID: 111-662  
Match ID: 1882  
[Exit the Game.](#)

### Period 3 You are Player 1

Please indicate your future plans.



(Your payoff is always shown in bold.)

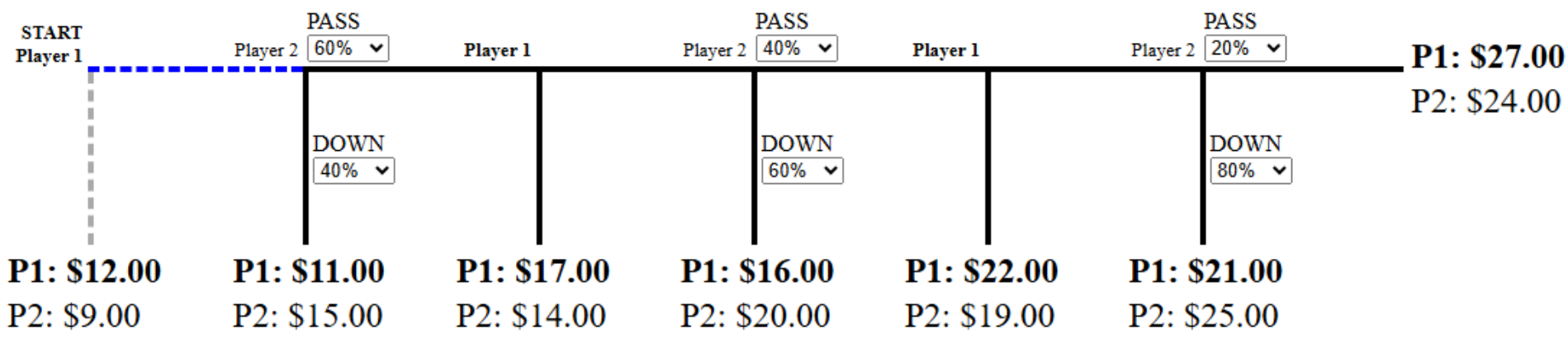
(you plan to choose DOWN at step #5).

CONFIRM & SUBMIT

Player ID: 111-662  
Match ID: 1882  
[Exit the Game.](#)

### Period 3 You are Player 1

Player 2 is now choosing **PASS** or **DOWN**.  
For each step remaining for **Player 2**, indicate how likely you think it is they will choose **PASS** or **DOWN**, if that step is reached.



(Your payoff is always shown in bold.)

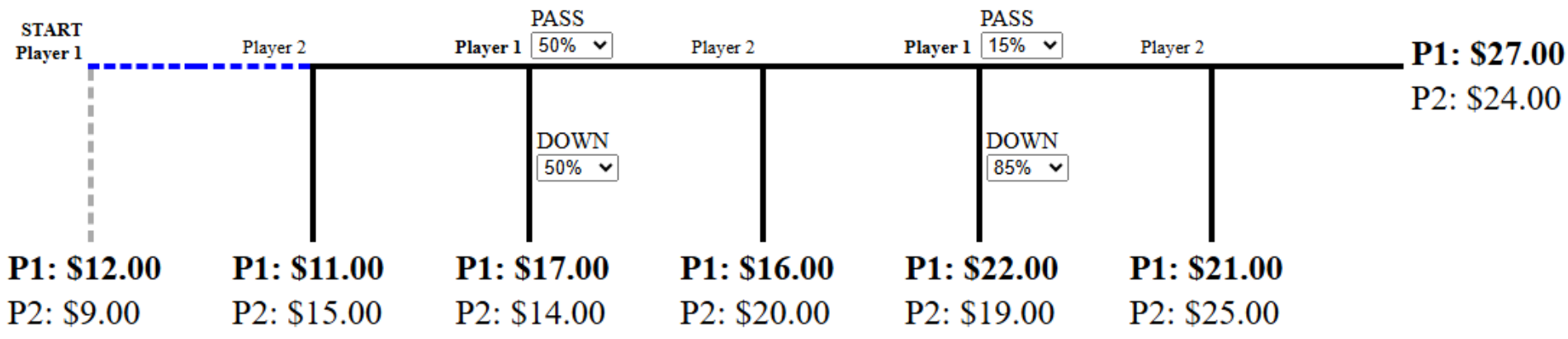
I confirm the above percentages are all as I want them:

**SUBMIT** **RESET**

Player ID: 111-662  
Match ID: 1882  
[Exit the Game.](#)

### Period 3 You are Player 1

Guess how likely **Player 2** thought it was that you would choose **PASS** or **DOWN** at each step, if that step were reached.



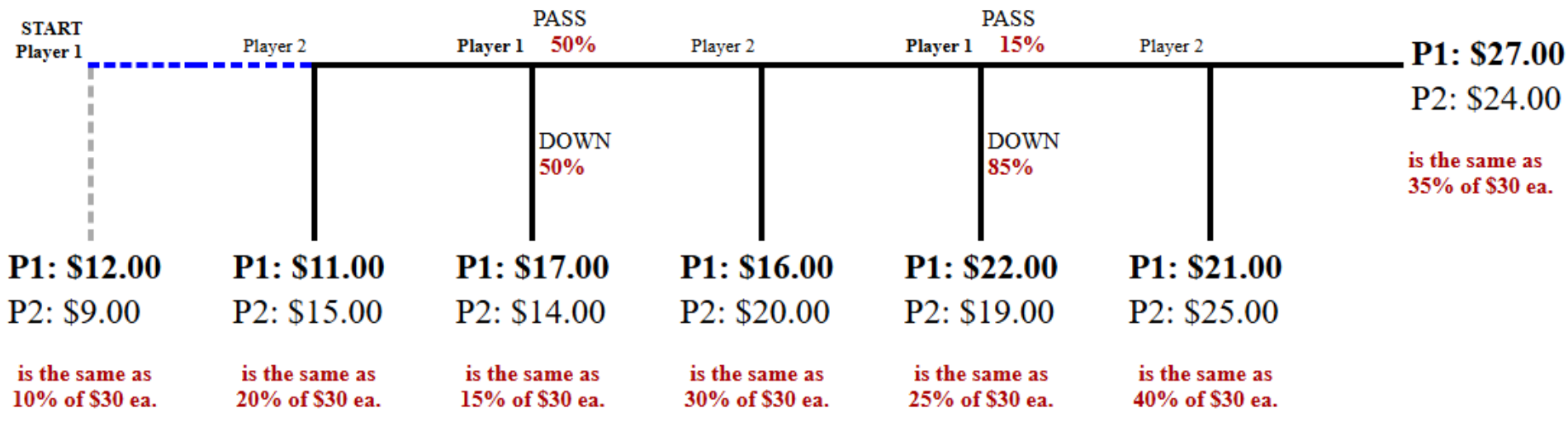
(Your payoff is always shown in bold.)

How likely do you think it is that these percentages match the percentages that **P2** actually submitted?

Player ID: 111-662  
Match ID: 1882  
[Exit the Game.](#)

### Period 3 You are Player 1

Shown below (in red) are your guesses of Player 2's preferences and likelihood of you choosing PASS or DOWN at each step.



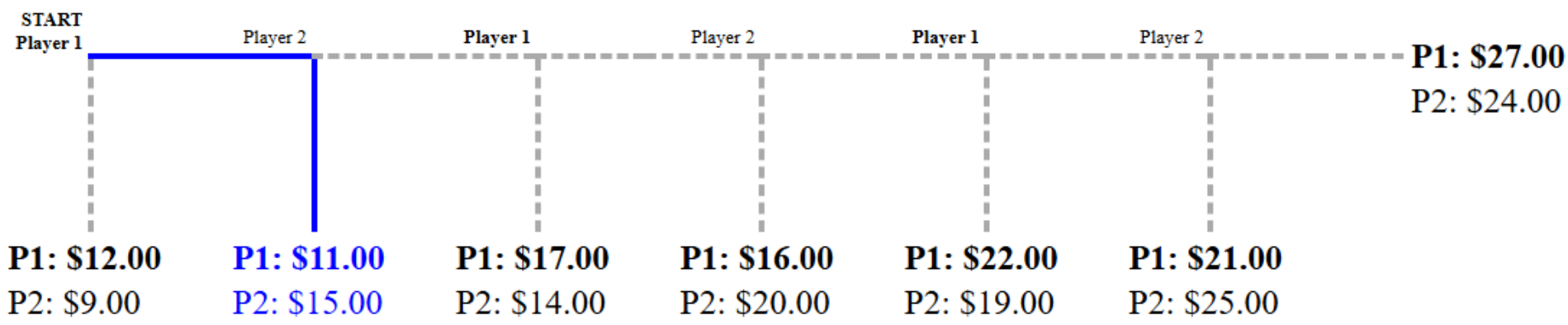
(Your payoff is always shown in bold.)

How likely do you think it is that **Weighted Value Theory** will correctly predict Player 2's choices at each remaining step?

(Your guesses of their values and beliefs appear above.)

### Period 3 You are Player 1

Player 2 chose **DOWN**.  
Period 3 is now over.  
The outcome is shown below.



(Your payoff is always shown in bold.)

Ready to proceed: [Click Here](#)

Player ID: 111-662  
Match ID: 1882  
[Exit the Game.](#)

## Please Answer These Last Additional Questions

Die Roll #4 will be one roll of a 10-sided die. In each question (Q1 through Q10) you have a choice between two different bets on that die roll. For each question, click the circle next to the option you prefer.

Q1	Rolls 1-5 pay \$10 (50% chance of \$10)	Rolls 6-10 pay \$5 (50% chance of \$5) <input checked="" type="radio"/>	or	Roll 1 pays \$15 (10% chance of \$15)	Rolls 2-10 pay \$0 (90% chance of \$0) <input type="radio"/>
Q2	Rolls 1-5 pay \$10 (50% chance of \$10)	Rolls 6-10 pay \$5 (50% chance of \$5) <input checked="" type="radio"/>	or	Rolls 1-2 pay \$15 (20% chance of \$15)	Rolls 3-10 pay \$0 (80% chance of \$0) <input type="radio"/>
Q3	Rolls 1-5 pay \$10 (50% chance of \$10)	Rolls 6-10 pay \$5 (50% chance of \$5) <input checked="" type="radio"/>	or	Rolls 1-3 pay \$15 (30% chance of \$15)	Rolls 4-10 pay \$0 (70% chance of \$0) <input type="radio"/>
Q4	Rolls 1-5 pay \$10 (50% chance of \$10)	Rolls 6-10 pay \$5 (50% chance of \$5) <input checked="" type="radio"/>	or	Rolls 1-4 pay \$15 (40% chance of \$15)	Rolls 5-10 pay \$0 (60% chance of \$0) <input type="radio"/>
Q5	Rolls 1-5 pay \$10 (50% chance of \$10)	Rolls 6-10 pay \$5 (50% chance of \$5) <input type="radio"/>	or	Rolls 1-5 pay \$15 (50% chance of \$15)	Rolls 6-10 pay \$0 (50% chance of \$0) <input checked="" type="radio"/>
Q6	Rolls 1-5 pay \$10 (50% chance of \$10)	Rolls 6-10 pay \$5 (50% chance of \$5) <input type="radio"/>	or	Rolls 1-6 pay \$15 (60% chance of \$15)	Rolls 7-10 pay \$0 (40% chance of \$0) <input checked="" type="radio"/>
Q7	Rolls 1-5 pay \$10 (50% chance of \$10)	Rolls 6-10 pay \$5 (50% chance of \$5) <input type="radio"/>	or	Rolls 1-7 pay \$15 (70% chance of \$15)	Rolls 8-10 pay \$0 (30% chance of \$0) <input checked="" type="radio"/>
Q8	Rolls 1-5 pay \$10 (50% chance of \$10)	Rolls 6-10 pay \$5 (50% chance of \$5) <input type="radio"/>	or	Rolls 1-8 pay \$15 (80% chance of \$15)	Rolls 9-10 pay \$0 (20% chance of \$0) <input checked="" type="radio"/>
Q9	Rolls 1-5 pay \$10 (50% chance of \$10)	Rolls 6-10 pay \$5 (50% chance of \$5) <input type="radio"/>	or	Rolls 1-9 pay \$15 (90% chance of \$15)	Roll 10 pays \$0 (10% chance of \$0) <input checked="" type="radio"/>
Q10	Rolls 1-5 pay \$10 (50% chance of \$10)	Rolls 6-10 pay \$5 (50% chance of \$5) <input type="radio"/>	or	All Rolls pay \$15 (100% chance of \$15)	(0% chance of \$0) <input checked="" type="radio"/>

	(50% chance of \$10)	(50% chance of \$5)		(80% chance of \$15)	(20% chance of \$0)		
<b>Q9</b>	Rolls 1-5 pay \$10 (50% chance of \$10)	Rolls 6-10 pay \$5 (50% chance of \$5)	<input type="radio"/>	or	Rolls 1-9 pay \$15 (90% chance of \$15)	Roll 10 pays \$0 (10% chance of \$0)	<input checked="" type="radio"/>
<b>Q10</b>	Rolls 1-5 pay \$10 (50% chance of \$10)	Rolls 6-10 pay \$5 (50% chance of \$5)	<input type="radio"/>	or	All Rolls pay \$15 (100% chance of \$15)	(0% chance of \$0)	<input checked="" type="radio"/>

The experimenter has a bag containing 20 poker chips. There are red chips and black chips in the bag, but the exact number of each is unknown to you. The number could be anywhere from 0 to 20 (as long as # red chips + # black chips = 20). The experimenter will draw one chip from this bag without looking. In following questions, you can bet on the chip draw (the left option) or on a roll of a 10-sided die (the right option). In each question, click the circle next to the one you prefer. The experimenter will draw the chip before it is known which question is chosen for payment. You can inspect the bag after the experiment is over, if you wish.

<b>Q11</b>	Red chip pays \$20	Black chip pays \$0	<input type="radio"/>	or	Rolls 1-5 pay \$20 (50% chance of \$20)	Rolls 6-10 pay \$0 (50% chance of \$0)	<input checked="" type="radio"/>
<b>Q12</b>	Red chip pays \$20	Black chip pays \$0	<input checked="" type="radio"/>	or	Rolls 1-3 pay \$20 (30% chance of \$20)	Rolls 4-10 pay \$0 (70% chance of \$0)	<input type="radio"/>
<b>Q13</b>	Red chip pays \$20	Black chip pays \$0	<input checked="" type="radio"/>	or	Rolls 1-4 pay \$20 (40% chance of \$20)	Rolls 5-10 pay \$0 (60% chance of \$0)	<input type="radio"/>

For the final 3 questions the left option is reversed: the black chip pays \$20 and the red chip pays \$0.

<b>Q14</b>	Black chip pays \$20	Red chip pays \$0	<input checked="" type="radio"/>	or	Rolls 1-4 pay \$20 (40% chance of \$20)	Rolls 5-10 pay \$0 (60% chance of \$0)	<input type="radio"/>
<b>Q15</b>	Black chip pays \$20	Red chip pays \$0	<input checked="" type="radio"/>	or	Rolls 1-3 pay \$20 (30% chance of \$20)	Rolls 4-10 pay \$0 (70% chance of \$0)	<input type="radio"/>
<b>Q16</b>	Black chip pays \$20	Red chip pays \$0	<input type="radio"/>	or	Rolls 1-5 pay \$20 (50% chance of \$20)	Rolls 6-10 pay \$0 (50% chance of \$0)	<input checked="" type="radio"/>

[Click Here When Finished](#)

### You are Player ID 111-662

The dice have been rolled and payments have been determined.  
Your payment is shown in green in the tables below.  
Please wait for the experimenter to call you up for payment.

Die rolls  
for  
payment:

<b>Die Roll</b>
215

All decisions, and how you would be paid if that decision is chosen by Die Roll:

Row #	Decision	Payment Details	Payment Amount
1	Per1 Outcome	Player 1: \$11 Player 2: \$15	\$11.00 + \$5
2	Per2 Outcome	Player 1: \$12 Player 2: \$9	\$12.00 + \$5
3	Per3 Outcome	Player 1: \$11 Player 2: \$15	\$11.00 + \$5
4	Per4 Outcome	Player 1: \$12 Player 2: \$9	\$12.00 + \$5
5	Per3 Plans @1	Ending step: 2 Player 1: \$11 Player 2: \$15	\$11.00 + \$5
6	Per3 Plans @2	Ending step: 2 Player 1: \$11 Player 2: \$15	\$11.00 + \$5
7	Per3 Plans @3	Ending step: 2 Player 1: \$11 Player 2: \$15	\$11.00 + \$5
8	Per3 Plans @4	Ending step: 2 Player 1: \$11 Player 2: \$15	\$11.00 + \$5
9	Per3 Plans @5	Ending step: 2 Player 1: \$11 Player 2: \$15	\$11.00 + \$5
10	Per3 Plans @6	Ending step: 2 Player 1: \$11 Player 2: \$15	\$11.00 + \$5

11	Per4 Plans @1	Ending step: 1	Player 1: \$12 Player 2: \$9			\$12.00 + \$5	
12	Per4 Plans @2	Ending step: 1	Player 1: \$12 Player 2: \$9			\$12.00 + \$5	
13	Per4 Plans @3	Ending step: 1	Player 1: \$12 Player 2: \$9			\$12.00 + \$5	
14	Per4 Plans @4	Ending step: 1	Player 1: \$12 Player 2: \$9			\$12.00 + \$5	
15	Per4 Plans @5	Ending step: 1	Player 1: \$12 Player 2: \$9			\$12.00 + \$5	
16	Per4 Plans @6	Ending step: 1	Player 1: \$12 Player 2: \$9			\$12.00 + \$5	
17	Per3 Pref P1 @1	P1: \$12 P2: \$9	=15% chance of \$30 each	If Roll2 ≤ 15: P1: \$12 P2: \$9	If Roll2 > 15 & Roll3 ≤ Roll2: P1: \$30 P2: \$30	If Roll2 > 15 & Roll3 > Roll2: P1: \$0 P2: \$0	\$12.00 + \$5
18	Per3 Pref P2 @1	P1: \$12 P2: \$9	=0% chance of \$30 each	If Roll2 ≤ 0: P1: \$12 P2: \$9	If Roll2 > 0 & Roll3 ≤ Roll2: P1: \$30 P2: \$30	If Roll2 > 0 & Roll3 > Roll2: P1: \$0 P2: \$0	\$30.00 + \$5
19	Per3 Pref P1 @2	P1: \$11 P2: \$15	=10% chance of \$30 each	If Roll2 ≤ 10: P1: \$11 P2: \$15	If Roll2 > 10 & Roll3 ≤ Roll2: P1: \$30 P2: \$30	If Roll2 > 10 & Roll3 > Roll2: P1: \$0 P2: \$0	\$30.00 + \$5
20	Per3 Pref P2 @2	P1: \$11 P2: \$15	=0% chance of \$30 each	If Roll2 ≤ 0: P1: \$11 P2: \$15	If Roll2 > 0 & Roll3 ≤ Roll2: P1: \$30 P2: \$30	If Roll2 > 0 & Roll3 > Roll2: P1: \$0 P2: \$0	\$30.00 + \$5
21	Per3 Pref P1 @3	P1: \$17 P2: \$14	=25% chance of \$30 each	If Roll2 ≤ 25: P1: \$17 P2: \$14	If Roll2 > 25 & Roll3 ≤ Roll2: P1: \$30 P2: \$30	If Roll2 > 25 & Roll3 > Roll2: P1: \$0 P2: \$0	\$17.00 + \$5
22	Per3 Pref P2 @3	P1: \$17 P2: \$14	=0% chance of \$30 each	If Roll2 ≤ 0: P1: \$17 P2: \$14	If Roll2 > 0 & Roll3 ≤ Roll2: P1: \$30 P2: \$30	If Roll2 > 0 & Roll3 > Roll2: P1: \$0 P2: \$0	\$30.00 + \$5
23	Per3 Pref P1 @4	P1: \$16 P2: \$20	=20% chance of \$30 each	If Roll2 ≤ 20: P1: \$16 P2: \$20	If Roll2 > 20 & Roll3 ≤ Roll2: P1: \$30 P2: \$30	If Roll2 > 20 & Roll3 > Roll2: P1: \$0 P2: \$0	\$16.00 + \$5
24	Per3 Pref P2 @4	P1: \$16 P2: \$20	=0% chance of \$30 each	If Roll2 ≤ 0: P1: \$16 P2: \$20	If Roll2 > 0 & Roll3 ≤ Roll2: P1: \$30 P2: \$30	If Roll2 > 0 & Roll3 > Roll2: P1: \$0 P2: \$0	\$30.00 + \$5
25	Per3 Pref P1 @5	P1: \$22 P2: \$19	=35% chance of \$30 each	If Roll2 ≤ 35: P1: \$22 P2: \$19	If Roll2 > 35 & Roll3 ≤ Roll2: P1: \$30 P2: \$30	If Roll2 > 35 & Roll3 > Roll2: P1: \$0 P2: \$0	\$22.00 + \$5
26	Per3 Pref P2 @5	P1: \$22 P2: \$19	=0% chance of \$30 each	If Roll2 ≤ 0: P1: \$22 P2: \$19	If Roll2 > 0 & Roll3 ≤ Roll2: P1: \$30 P2: \$30	If Roll2 > 0 & Roll3 > Roll2: P1: \$0 P2: \$0	\$30.00 + \$5
27	Per3 Pref P1 @6	P1: \$21 P2: \$25	=30% chance of \$30 each	If Roll2 ≤ 30: P1: \$21 P2: \$25	If Roll2 > 30 & Roll3 ≤ Roll2: P1: \$30 P2: \$30	If Roll2 > 30 & Roll3 > Roll2: P1: \$0 P2: \$0	\$21.00 + \$5

Which row will be paid, depending on Die Roll

Row #	Paid if Die Roll is:	Earnings	Show-Up Fee	Total Payment
1	1-50	\$11.00	\$5.00	\$16.00
2	51-100	\$12.00	\$5.00	\$17.00
3	101-150	\$11.00	\$5.00	\$16.00
4	151-200	\$12.00	\$5.00	\$17.00
5	201,265,329,393,457,5 21,585,....,905,969	\$11.00	\$5.00	\$16.00
6	202,266,330,394,458,5 22,586,....,906,970	\$11.00	\$5.00	\$16.00
7	203,267,331,395,459,5 23,587,....,907,971	\$11.00	\$5.00	\$16.00
8	204,268,332,396,460,5 24,588,....,908,972	\$11.00	\$5.00	\$16.00
9	205,269,333,397,461,5 25,589,....,909,973	\$11.00	\$5.00	\$16.00
10	206,270,334,398,462,5 26,590,....,910,974	\$11.00	\$5.00	\$16.00
11	207,271,335,399,463,5 27,591,....,911,975	\$12.00	\$5.00	\$17.00
12	208,272,336,400,464,5 28,592,....,912,976	\$12.00	\$5.00	\$17.00
13	209,273,337,401,465,5 29,593,....,913,977	\$12.00	\$5.00	\$17.00
14	210,274,338,402,466,5 30,594,....,914,978	\$12.00	\$5.00	\$17.00
15	211,275,339,403,467,5 31,595,....,915,979	\$12.00	\$5.00	\$17.00
16	212,276,340,404,468,5 32,596,....,916,980	\$12.00	\$5.00	\$17.00
17	213,277,341,405,469,5 33,597,....,917,981	\$12.00	\$5.00	\$17.00
18	214,278,342,406,470,5 34,598,....,918,982	\$30.00	\$5.00	\$35.00
19	<b>215,279,343,40 7,471,535,599, ...,919,983</b>	<b>\$30.00</b>	<b>\$5.00</b>	<b>\$35.00</b>
	216,280,344,408,472,5			

APPENDIX F. INSTRUCTIONS & BOOKLET FOR THE SIM TREATMENT: ROW PLAYERS

The instructions and decision booklet given to row players in the SIM treatment appears below.

## EXPERIMENT INSTRUCTIONS: OVERVIEW

This is an experiment in the economics of decision-making. If you follow these instructions and make good decisions, you could earn a considerable amount of cash that will be paid to you at the end of the experiment.

Please silence & put away your cell phones. Please do not communicate with anyone other than the experimenter during this experiment. If you need help or have questions, please raise your hand at any time.

YOU ARE A ROW PLAYER WITH ID# \_\_\_\_\_

You are matched with the COLUMN player who has the same ID number. You will not see which person that is until the end of the experiment.

Following the instructions, there are 6 parts in this booklet. On each of the first 5 pages you are shown a game and asked several questions about that game. The sixth part asks you to choose between several gambles. At the end of the experiment, I will randomly pick one part, and randomly pick one question from that part. You will be paid based on what you chose in that *one* question. Exactly what the questions are will be explained shortly.

Every participant will receive a \$5 'show-up' fee for completing their booklet, in addition to their earnings from the one chosen question.

Please do not talk or try to communicate with anyone else during this experiment. If you have any questions, please raise your hand and the experimenter will assist you. If anything is confusing, please ask for clarification!

Turn the page now for detailed instructions, and then proceed at your own pace. When you are finished with your booklet, please turn it in to the experimenter. You can then return to your seat and wait patiently until all participants are finished.

## EXPERIMENT INSTRUCTIONS: GAMES & QUESTIONS

Turn two pages. You will see an example of one game and the 13 questions you will be asked about that game. This is exactly what you will be filling out in this experiment. This example page is already filled out, just to show you how to fill out the real pages for yourself. Obviously your answers may differ from those given in the example.

At the top of the page is the game itself. You are always the **ROW** player, which means you will choose one of the two **ROWS** (Up or Down) in the game. The person you're matched with is the **COLUMN** player, meaning they will pick one of the two **COLUMNS** (Left or Right) in the game. The four cells show the payoffs to each of you if that row and column are chosen. For example, if you choose **Up** and the other person chooses **Right**, you get \$10 and they get \$5. If you choose **Down** and they choose **Right**, then you get \$1 and they get \$1. And so on.

The first question (Q1) is: which row do you choose? For our example player, she picked Up. If this question were randomly selected for payment, then we would look at what the Column player chose. If he chose Left, then the outcome is Up-Left, so Row gets \$10 and Column gets \$10. If he chose Right, then the outcome is Up-Right, so Row gets \$10 and Column gets \$5. In other words, we actually pay you both based on the game's outcome.

Q2-Q5 ask for your probability values for the payments in each of the four cells. For Q2 (the Up-Left cell), our example player feels that Row getting \$10 and Column getting \$10 is worth the same to her as a 50% chance of them both getting \$20. For Q3 (the Up-Right cell), our example player feels that Row getting \$10 and Column getting \$5 is worth the same to her as a 40% chance of them both getting \$20. Q4 and Q5 ask the same question for the Down-Left and Down-Right cells. Our example player answered "25%" and "5%", respectively, but of course your answers might be different. If one of these questions is chosen for payment, we'll randomly pick one of you, and use the method described in Part 2.5 of the "elicitation instructions" to determine your payments based on that person's answers.

Q6 and Q7 ask you to guess which cell the *other person* ranked the highest, 2<sup>nd</sup> highest, 3<sup>rd</sup> highest, and 4<sup>th</sup> highest, according to the probability values they gave. Our example player thinks it's most likely that the Column player put his highest value on the UL cell, his 2<sup>nd</sup>-highest value on the DL cell, his 3<sup>rd</sup>-highest value on the UR cell, and his lowest value on the DR cell. She is 90% sure that her guess is correct. For Q7, her next-best guess is that UL is highest, UR is 2<sup>nd</sup>-highest, DL is 3<sup>rd</sup> highest, and DR is lowest for the Column player. She's pretty sure her Q6 guess is right, so she only thinks her Q7 guess has a 5% chance of being correct. If one of these questions is chosen for payment, we'll use the method described in Part 4 of the "elicitation instructions" to determine your payment.

Q8 and Q9 ask you to guess the actual probability values that the Column player put in the four cells in Q2-Q5. Our example player's best guesses for the Column player's values are shown in Q8 (they are 50%, 30%, 45%, and 5%), and she thinks there's a 20% chance her guess is correct. Her second-best guess appears in Q9 (50%, 25%, 50%, 5%), and she's only 5% sure that guess is correct. If one of these

questions is chosen for payment, we'll use the method described in Part 4 of the "elicitation instructions" to determine your payment.

In Q10, our example player reports that she is 95% sure the Column player will actually choose Left. If this question is chosen for payment, we'll look at what the Column player actually did, and use the method described in Part 3 of the "elicitation instructions" to determine your payment.

In Q11 and Q12, you are asked to give your 2 best guesses of the other person's answer to Q10. Our example player's best guess is that he said 100%, and she's 90% sure that's what he said. Her second-best guess is that he said 95%, but she's only 5% sure that's right (because she's pretty sure he said 100%). If this question is chosen for payment, we'll use the method described in Part 4 of the "elicitation instructions" to determine your payment

Finally, Q13 asks you your belief that the other player's answers are *consistent*. We say a player is consistent if the row or column they chose maximizes their expected probability values from Q2-Q5, given their belief about the other person's row or column choice in Q10.

To see how this works, let's see if our example player is consistent. From Q2-Q5, you can see the probability values she assigns to each cell. From Q10, she's 95% sure the Column player will play Left. So her expected probability value from choosing Up is given by

$$95\% \times 50 + 5\% \times 40 = \mathbf{49.5}$$

and her expected probability value for choosing Down is given by

$$95\% \times 25 + 5\% \times 5 = \mathbf{24.0}.$$

Thus, she gets a higher expected probability value from choosing Up. Since she actually did choose Up in Q1, she is consistent.

Now, when asked whether the *Column* player would be consistent, she said she's 70% sure he will be. If this question is chosen for payment, we'll use the method described in Part 3 of the "elicitation instructions" to determine your payment. Note that you need not be "consistent" yourself; your choice of Rows may not be based on this sort of calculation, and that's fine. You should answer however you want.

The last part of the booklet (Part 6) simply asks you to choose between several gambles. If that page is chosen, one of your choices will be randomly selected and you will receive the outcome of that gamble.

Once you are done with all the pages of the booklet, please turn it in to the experimenter. Once everyone is finished, we will choose which page and which question is actually chosen for payment. We will then call you up in pairs to determine your actual payoffs. Remember you will get a \$5 show-up fee in addition to your earnings from the experiment.

# EXAMPLE GAME – ALREADY FILLED OUT

	Left	Right
Up	ROW: \$10 COL: \$10	ROW: \$10 COL: \$5
Down	ROW: \$5 COL: \$10	ROW: \$1 COL: \$1

Q1. Which row do you choose (circle one)?

Up

Down

For each of the cells, what is your *probability value* of those payments (from 0-100)?

	L	R
U	Q2. 50 %	Q3. 40 %
D	Q4. 25 %	Q5. 5 %

(Please use multiples of 5%

e.g. 0%, 5%, 10%,..., 95%, 100%)

*Remember: A higher value means more preferred.*

*\$20-\$20 gets 100%, \$0-\$0 gets 0%.*

What are your 2 best guesses of the Column player's *ranking* of the 4 cells? 1=Best,4=Worst

Q6.	1. <u>UL</u> 2. <u>DL</u> 3. <u>UR</u> 4. <u>DR</u>	Prob. Correct <u>90</u> %	Q7.	1. <u>UL</u> 2. <u>UR</u> 3. <u>DL</u> 4. <u>DR</u>	Prob. Correct <u>5</u> %
-----	---	------------------------------	-----	---	-----------------------------

(Based on their probability values. Write "UL", "UR", "DL", and "DR" in the blanks. UL = Up-Left, UR = Up-Right, DL = Down-Left, DR = Down-Right.)

What are your *two* most likely guesses for the Column player's probability values of the four cells? And what are your probabilities that each guess is correct?

Q8.	L	R	Prob. Correct <u>20</u> %	Q9.	L	R	Prob. Correct <u>5</u> %
U	50 %	30 %		U	50 %	25 %	
D	45 %	5 %		D	50 %	5 %	

(Use multiples of 5% for your guesses, from 0% to 100%. The two guesses must be different in at least one of the cells.)

Q10. What is your probability belief that the Column player will play Left? 95 %

(Please a multiple of 5%)

What are your *two* most likely guesses about the Column player's belief that *you* will play Up? And what are your probabilities that each guess is correct?

Q11.	<u>Guess #1</u>	Prob. Correct	Q12.	<u>Guess #2</u>	Prob. Correct
	<u>100</u> %	<u>90</u> %		<u>95</u> %	<u>5</u> %

(Use multiples of 5% for your guesses. The two guesses must be different.)

Q13. What is your probability belief that the Column player will be *consistent*? 70 %

(*Consistent* means their column choice maximizes their probability value, given their belief about your row choice.)

# GAME #1

	<b>Left</b>	<b>Right</b>
<b>Up</b>	ROW: \$10 COL: \$5	ROW: \$15 COL: \$15
<b>Down</b>	ROW: \$5 COL: \$10	ROW: \$1 COL: \$1

Q1. Which row do you choose (circle one)?                      **Up**                      **Down**

For each of the cells, what is your *probability value* of those payments (from 0-100)?

	<b>L</b>	<b>R</b>	
<b>U</b>	Q2.                      %	Q3.                      %	<i>(Please use multiples of 5% e.g. 0%, 5%, 10%,..., 95%, 100%) Remember: A higher value means more preferred. \$20-\$20 gets 100%, \$0-\$0 gets 0%.</i>
<b>D</b>	Q4.                      %	Q5.                      %	

What are your 2 best guesses of the Column player's *ranking* of the 4 cells? 1=Best,4=Worst

Q6. 1. _____ 2. _____ 3. _____ 4. _____	<u>Prob. Correct</u> _____ %	Q7. 1. _____ 2. _____ 3. _____ 4. _____	<u>Prob. Correct</u> _____ %
---	---------------------------------	---	---------------------------------

(Based on their probability values. Write "UL", "UR", "DL", and "DR" in the blanks. UL = Up-Left, UR = Up-Right, DL = Down-Left, DR = Down-Right.)

What are your *two* most likely guesses for the Column player's probability values of the four cells? And what are your probabilities that each guess is correct?

Q8. <b>L</b> <b>R</b> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 5px;"><b>U</b></td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> </tr> <tr> <td style="border: 1px solid black; padding: 5px;"><b>D</b></td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> </tr> </table> <u>Prob. Correct</u> _____ %	<b>U</b>	%	%	<b>D</b>	%	%	Q9. <b>L</b> <b>R</b> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 5px;"><b>U</b></td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> </tr> <tr> <td style="border: 1px solid black; padding: 5px;"><b>D</b></td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> </tr> </table> <u>Prob. Correct</u> _____ %	<b>U</b>	%	%	<b>D</b>	%	%
<b>U</b>	%	%											
<b>D</b>	%	%											
<b>U</b>	%	%											
<b>D</b>	%	%											

(Use multiples of 5% for your guesses, from 0% to 100%. The two guesses must be different in at least one of the cells.)

Q10. What is your probability belief that the Column player will play **Left**? \_\_\_\_\_ %  
(Please a multiple of 5%)

What are your *two* most likely guesses about the Column player's belief that *you* will play **Up**? And what are your probabilities that each guess is correct?

Q11. <u>Guess #1</u> _____ %	<u>Prob. Correct</u> _____ %	Q12. <u>Guess #2</u> _____ %	<u>Prob. Correct</u> _____ %
---------------------------------	---------------------------------	---------------------------------	---------------------------------

(Use multiples of 5% for your guesses. The two guesses must be different.)

Q13. What is your probability belief that the Column player will be *consistent*? \_\_\_\_\_ %  
(Consistent means their column choice maximizes their probability value, given their belief about your row choice.)

# GAME #2

	<b>Left</b>	<b>Right</b>
<b>Up</b>	ROW: \$15 COL: \$15	ROW: \$1 COL: \$1
<b>Down</b>	ROW: \$2 COL: \$2	ROW: \$5 COL: \$5

Q1. Which row do you choose (circle one)?                      **Up**                      **Down**

For each of the cells, what is your *probability value* of those payments (from 0-100)?

	<b>L</b>	<b>R</b>	
<b>U</b>	Q2.                      %	Q3.                      %	<i>(Please use multiples of 5% e.g. 0%, 5%, 10%,..., 95%, 100%) Remember: A higher value means more preferred. \$20-\$20 gets 100%, \$0-\$0 gets 0%.</i>
<b>D</b>	Q4.                      %	Q5.                      %	

What are your 2 best guesses of the Column player's *ranking* of the 4 cells? 1=Best,4=Worst

Q6. 1. _____ 2. _____ 3. _____ 4. _____	<u>Prob. Correct</u> _____ %	Q7. 1. _____ 2. _____ 3. _____ 4. _____	<u>Prob. Correct</u> _____ %
--	---------------------------------	--	---------------------------------

(Based on their probability values. Write "UL", "UR", "DL", and "DR" in the blanks. UL = Up-Left, UR = Up-Right, DL = Down-Left, DR = Down-Right.)

What are your *two* most likely guesses for the Column player's probability values of the four cells? And what are your probabilities that each guess is correct?

Q8.	<b>L</b>	<b>R</b>	
<b>U</b>	%	%	<u>Prob. Correct</u>
<b>D</b>	%	%	_____ %

Q9.	<b>L</b>	<b>R</b>	
<b>U</b>	%	%	<u>Prob. Correct</u>
<b>D</b>	%	%	_____ %

(Use multiples of 5% for your guesses, from 0% to 100%. The two guesses must be different in at least one of the cells.)

Q10. What is your probability belief that the Column player will play **Left**? \_\_\_\_\_ %  
(Please a multiple of 5%)

What are your *two* most likely guesses about the Column player's belief that *you* will play **Up**? And what are your probabilities that each guess is correct?

Q11. <u>Guess #1</u>	<u>Prob. Correct</u>	Q12. <u>Guess #2</u>	<u>Prob. Correct</u>
_____ %	_____ %	_____ %	_____ %

(Use multiples of 5% for your guesses. The two guesses must be different.)

Q13. What is your probability belief that the Column player will be *consistent*? \_\_\_\_\_ %  
(Consistent means their column choice maximizes their probability value, given their belief about your row choice.)

# GAME #3

	<b>Left</b>	<b>Right</b>
<b>Up</b>	ROW: \$10 COL: \$10	ROW: \$1 COL: \$15
<b>Down</b>	ROW: \$15 COL: \$1	ROW: \$5 COL: \$5

Q1. Which row do you choose (circle one)?                      **Up**                      **Down**

For each of the cells, what is your *probability value* of those payments (from 0-100)?

	<b>L</b>	<b>R</b>	
<b>U</b>	Q2.                      %	Q3.                      %	<i>(Please use multiples of 5% e.g. 0%, 5%, 10%,..., 95%, 100%) Remember: A higher value means more preferred. \$20-\$20 gets 100%, \$0-\$0 gets 0%.</i>
<b>D</b>	Q4.                      %	Q5.                      %	

What are your 2 best guesses of the Column player's *ranking* of the 4 cells? 1=Best,4=Worst

Q6.	<u>Prob. Correct</u>	Q7.	<u>Prob. Correct</u>
1. _____ 2. _____ 3. _____ 4. _____	_____ %	1. _____ 2. _____ 3. _____ 4. _____	_____ %

(Based on their probability values. Write "UL", "UR", "DL", and "DR" in the blanks. UL = Up-Left, UR = Up-Right, DL = Down-Left, DR = Down-Right.)

What are your *two* most likely guesses for the Column player's probability values of the four cells? And what are your probabilities that each guess is correct?

Q8.	<b>L</b>	<b>R</b>	<u>Prob. Correct</u>	Q9.	<b>L</b>	<b>R</b>	<u>Prob. Correct</u>
<b>U</b>	%	%	_____ %	<b>U</b>	%	%	_____ %
<b>D</b>	%	%		<b>D</b>	%	%	

(Use multiples of 5% for your guesses, from 0% to 100%. The two guesses must be different in at least one of the cells.)

Q10. What is your probability belief that the Column player will play **Left**? \_\_\_\_\_ %  
(Please a multiple of 5%)

What are your *two* most likely guesses about the Column player's belief that *you* will play **Up**? And what are your probabilities that each guess is correct?

Q11. <u>Guess #1</u>	<u>Prob. Correct</u>	Q12. <u>Guess #2</u>	<u>Prob. Correct</u>
_____ %	_____ %	_____ %	_____ %

(Use multiples of 5% for your guesses. The two guesses must be different.)

Q13. What is your probability belief that the Column player will be *consistent*? \_\_\_\_\_ %

(Consistent means their column choice maximizes their probability value, given their belief about your row choice.)

# GAME #4

	<b>Left</b>	<b>Right</b>
<b>Up</b>	ROW: \$15 COL: \$5	ROW: \$5 COL: \$10
<b>Down</b>	ROW: \$5 COL: \$10	ROW: \$10 COL: \$5

Q1. Which row do you choose (circle one)?                      **Up**                      **Down**

For each of the cells, what is your *probability value* of those payments (from 0-100)?

	<b>L</b>	<b>R</b>	
<b>U</b>	Q2. _____ %	Q3. _____ %	<i>(Please use multiples of 5% e.g. 0%, 5%, 10%,..., 95%, 100%) Remember: A higher value means more preferred. \$20-\$20 gets 100%, \$0-\$0 gets 0%.</i>
<b>D</b>	Q4. _____ %	Q5. _____ %	

What are your 2 best guesses of the Column player's *ranking* of the 4 cells? 1=Best,4=Worst

Q6. 1. _____ 2. _____ 3. _____ 4. _____	<u>Prob. Correct</u>	Q7. 1. _____ 2. _____ 3. _____ 4. _____	<u>Prob. Correct</u>
	_____ %		_____ %

(Based on their probability values. Write "UL", "UR", "DL", and "DR" in the blanks. UL = Up-Left, UR = Up-Right, DL = Down-Left, DR = Down-Right.)

What are your *two* most likely guesses for the Column player's probability values of the four cells? And what are your probabilities that each guess is correct?

Q8. <b>L</b> <b>R</b>	Q9. <b>L</b> <b>R</b>																
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center; padding: 5px;"><b>U</b></td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="padding: 5px;"><u>Prob. Correct</u></td> </tr> <tr> <td style="text-align: center; padding: 5px;"><b>D</b></td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="padding: 5px;">_____ %</td> </tr> </table>	<b>U</b>	%	%	<u>Prob. Correct</u>	<b>D</b>	%	%	_____ %	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center; padding: 5px;"><b>U</b></td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="padding: 5px;"><u>Prob. Correct</u></td> </tr> <tr> <td style="text-align: center; padding: 5px;"><b>D</b></td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="padding: 5px;">_____ %</td> </tr> </table>	<b>U</b>	%	%	<u>Prob. Correct</u>	<b>D</b>	%	%	_____ %
<b>U</b>	%	%	<u>Prob. Correct</u>														
<b>D</b>	%	%	_____ %														
<b>U</b>	%	%	<u>Prob. Correct</u>														
<b>D</b>	%	%	_____ %														

(Use multiples of 5% for your guesses, from 0% to 100%. The two guesses must be different in at least one of the cells.)

Q10. What is your probability belief that the Column player will play **Left**? \_\_\_\_\_ %  
(Please a multiple of 5%)

What are your *two* most likely guesses about the Column player's belief that *you* will play **Up**? And what are your probabilities that each guess is correct?

Q11. <u>Guess #1</u> <u>Prob. Correct</u>	Q12. <u>Guess #2</u> <u>Prob. Correct</u>
_____ %            _____ %	_____ %            _____ %

(Use multiples of 5% for your guesses. The two guesses must be different.)

Q13. What is your probability belief that the Column player will be *consistent*? \_\_\_\_\_ %  
(Consistent means their column choice maximizes their probability value, given their belief about your row choice.)

# GAME #5

	<b>Left</b>	<b>Right</b>
<b>Up</b>	ROW: <b>\$15</b> COL: <b>\$5</b>	ROW: <b>\$2</b> COL: <b>\$1</b>
<b>Down</b>	ROW: <b>\$1</b> COL: <b>\$2</b>	ROW: <b>\$5</b> COL: <b>\$10</b>

Q1. Which row do you choose (circle one)?                      **Up**                      **Down**

For each of the cells, what is your *probability value* of those payments (from 0-100)?

	<b>L</b>	<b>R</b>	
<b>U</b>	Q2. _____ %	Q3. _____ %	<i>(Please use multiples of 5% e.g. 0%, 5%, 10%,..., 95%, 100%) Remember: A higher value means more preferred. \$20-\$20 gets 100%, \$0-\$0 gets 0%.</i>
<b>D</b>	Q4. _____ %	Q5. _____ %	

What are your 2 best guesses of the Column player's *ranking* of the 4 cells? 1=Best,4=Worst

Q6. 1. _____ 2. _____ 3. _____ 4. _____	<u>Prob. Correct</u>	Q7. 1. _____ 2. _____ 3. _____ 4. _____	<u>Prob. Correct</u>
	_____ %		_____ %

(Based on their probability values. Write "UL", "UR", "DL", and "DR" in the blanks. UL = Up-Left, UR = Up-Right, DL = Down-Left, DR = Down-Right.)

What are your *two* most likely guesses for the Column player's probability values of the four cells? And what are your probabilities that each guess is correct?

Q8. <b>L</b> <b>R</b> <table style="border: 1px solid black; width: 100%; height: 100%; text-align: center;"> <tr> <td style="padding: 5px;"><b>U</b></td> <td style="padding: 5px;">%</td> <td style="padding: 5px;">%</td> </tr> <tr> <td style="padding: 5px;"><b>D</b></td> <td style="padding: 5px;">%</td> <td style="padding: 5px;">%</td> </tr> </table> <u>Prob. Correct</u> _____ %	<b>U</b>	%	%	<b>D</b>	%	%	Q9. <b>L</b> <b>R</b> <table style="border: 1px solid black; width: 100%; height: 100%; text-align: center;"> <tr> <td style="padding: 5px;"><b>U</b></td> <td style="padding: 5px;">%</td> <td style="padding: 5px;">%</td> </tr> <tr> <td style="padding: 5px;"><b>D</b></td> <td style="padding: 5px;">%</td> <td style="padding: 5px;">%</td> </tr> </table> <u>Prob. Correct</u> _____ %	<b>U</b>	%	%	<b>D</b>	%	%
<b>U</b>	%	%											
<b>D</b>	%	%											
<b>U</b>	%	%											
<b>D</b>	%	%											

(Use multiples of 5% for your guesses, from 0% to 100%. The two guesses must be different in at least one of the cells.)

Q10. What is your probability belief that the Column player will play **Left**? \_\_\_\_\_ %  
(Please a multiple of 5%)

What are your *two* most likely guesses about the Column player's belief that *you* will play **Up**? And what are your probabilities that each guess is correct?

Q11. <u>Guess #1</u> <u>Prob. Correct</u> _____ %            _____ %	Q12. <u>Guess #2</u> <u>Prob. Correct</u> _____ %            _____ %
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(Use multiples of 5% for your guesses. The two guesses must be different.)

Q13. What is your probability belief that the Column player will be *consistent*? \_\_\_\_\_ %  
(Consistent means their column choice maximizes their probability value, given their belief about your row choice.)

## Part #6

The experimenter will roll a 20-sided die. In each question (Q1 through Q10) you have a choice between two different bets on that die roll. For each question, check the box next to the option you prefer.

<b>Q1.</b>	Roll 1-10 pays \$10	Roll 11-20 pays \$5	<input type="checkbox"/>	or	Roll 1 pays \$15	Roll 2-20 pays \$1	<input type="checkbox"/>
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<b>Q2.</b>	Roll 1-10 pays \$10	Roll 11-20 pays \$5	<input type="checkbox"/>	or	Roll 1-3 pays \$15	Roll 4-20 pays \$1	<input type="checkbox"/>
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<b>Q3.</b>	Roll 1-10 pays \$10	Roll 11-20 pays \$5	<input type="checkbox"/>	or	Roll 1-5 pays \$15	Roll 6-20 pays \$1	<input type="checkbox"/>
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<b>Q4.</b>	Roll 1-10 pays \$10	Roll 11-20 pays \$5	<input type="checkbox"/>	or	Roll 1-7 pays \$15	Roll 8-20 pays \$1	<input type="checkbox"/>
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<b>Q5.</b>	Roll 1-10 pays \$10	Roll 11-20 pays \$5	<input type="checkbox"/>	or	Roll 1-9 pays \$15	Roll 10-20 pays \$1	<input type="checkbox"/>
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<b>Q6.</b>	Roll 1-10 pays \$10	Roll 11-20 pays \$5	<input type="checkbox"/>	or	Roll 1-11 pays \$15	Roll 12-20 pays \$1	<input type="checkbox"/>
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<b>Q7.</b>	Roll 1-10 pays \$10	Roll 11-20 pays \$5	<input type="checkbox"/>	or	Roll 1-13 pays \$15	Roll 14-20 pays \$1	<input type="checkbox"/>
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<b>Q8.</b>	Roll 1-10 pays \$10	Roll 11-20 pays \$5	<input type="checkbox"/>	or	Roll 1-15 pays \$15	Roll 16-20 pays \$1	<input type="checkbox"/>
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<b>Q9.</b>	Roll 1-10 pays \$10	Roll 11-20 pays \$5	<input type="checkbox"/>	or	Roll 1-17 pays \$15	Roll 18-20 pays \$1	<input type="checkbox"/>
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<b>Q10.</b>	Roll 1-10 pays \$10	Roll 11-20 pays \$5	<input type="checkbox"/>	or	Roll 1-19 pays \$15	Roll 20 pays \$1	<input type="checkbox"/>
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## Part #6 (Continued)

The experimenter has a bag containing 20 poker chips. There are red chips and black chips in the bag, but the exact number of each is unknown to you. The number could be anywhere from 0 to 20 (as long as # red chips + # black chips = 20). The experimenter will draw one chip from this bag without looking.

In following questions, you can bet on the chip draw (the left option) or on a roll of a 20-sided die (the right option). In each question, check the box next to the one you prefer. The experimenter will draw the chip *before* it is known which question is chosen for payment. You can inspect the bag after the experiment is over, if you wish.

<b>Q11.</b>	Red chip pays \$20	Black chip pays \$0	<input type="checkbox"/>	or	Roll 1-9 pays \$20	Roll 10-20 pays \$0	<input type="checkbox"/>
-------------	--------------------	---------------------	--------------------------	----	--------------------	---------------------	--------------------------

<b>Q12.</b>	Black chip pays \$20	Red chip pays \$0	<input type="checkbox"/>	or	Roll 1-5 pays \$20	Roll 6-20 pays \$0	<input type="checkbox"/>
-------------	----------------------	-------------------	--------------------------	----	--------------------	--------------------	--------------------------

<b>Q13.</b>	Red chip pays \$20	Black chip pays \$0	<input type="checkbox"/>	or	Roll 1-7 pays \$20	Roll 8-20 pays \$0	<input type="checkbox"/>
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## Part #6 (Continued)

The last three questions offer more bets on the same bag with 20 red and black chips, compared to bets on a 20-sided die roll. Again, pick the option you prefer for each question.

<b>Q14.</b>	Black chip pays \$20	Red chip pays \$0	<input type="checkbox"/>	or	Roll 1-7 pays \$20	Roll 8-20 pays \$0	<input type="checkbox"/>
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<b>Q15.</b>	Red chip pays \$20	Black chip pays \$0	<input type="checkbox"/>	or	Roll 1-5 pays \$20	Roll 6-20 pays \$0	<input type="checkbox"/>
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<b>Q16.</b>	Black chip pays \$20	Red chip pays \$0	<input type="checkbox"/>	or	Roll 1-9 pays \$20	Roll 10-20 pays \$0	<input type="checkbox"/>
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APPENDIX G. INSTRUCTIONS & BOOKLET FOR THE SIM TREATMENT: COLUMN  
PLAYERS

The instructions and decision booklet given to column players in the SIM treatment appears below.

## EXPERIMENT INSTRUCTIONS: OVERVIEW

This is an experiment in the economics of decision-making. If you follow these instructions and make good decisions, you could earn a considerable amount of cash that will be paid to you at the end of the experiment.

Please silence & put away your cell phones. Please do not communicate with anyone other than the experimenter during this experiment. If you need help or have questions, please raise your hand at any time.

YOU ARE A COLUMN PLAYER WITH ID# \_\_\_\_\_

You are matched with the ROW player who has the same ID number. You will not see which person that is until the end of the experiment.

Following the instructions, there are 6 parts in this booklet. On each of the first 5 pages you are shown a game and asked several questions about that game. The sixth part asks you to choose between several gambles. At the end of the experiment, I will randomly pick one part, and randomly pick one question from that part. You will be paid based on what you chose in that *one* question. Exactly what the questions are will be explained shortly.

Every participant will receive a \$5 'show-up' fee for completing their booklet, in addition to their earnings from the one chosen question.

Please do not talk or try to communicate with anyone else during this experiment. If you have any questions, please raise your hand and the experimenter will assist you. If anything is confusing, please ask for clarification!

Turn the page now for detailed instructions, and then proceed at your own pace. When you are finished with your booklet, please turn it in to the experimenter. You can then return to your seat and wait patiently until all participants are finished.

## EXPERIMENT INSTRUCTIONS: GAMES & QUESTIONS

Turn two pages. You will see an example of one game and the 13 questions you will be asked about that game. This is exactly what you will be filling out in this experiment. This example page is already filled out, just to show you how to fill out the real pages for yourself. Obviously your answers may differ from those given in the example.

At the top of the page is the game itself. You are always the **COLUMN** player, which means you will choose one of the two **COLUMNS** (**Left** or **Right**) in the game. The person you're matched with is the **ROW** player, meaning they will pick one of the two **ROWS** (**Up** or **Down**) in the game. The four cells show the payoffs to each of you if that row and column are chosen. For example, if you choose **Right** and the other person chooses **Up**, you get \$5 and they get \$10. If you choose **Left** and they choose **Down**, then you get \$10 and they get \$5. And so on.

The first question (Q1) is: which column do you choose? For our example player, she picked Left. If this question were randomly selected for payment, then we would look at what the Row player chose. If he chose Up, then the outcome is Up-Left, so Row gets \$10 and Column (you) gets \$10. If he chose Down, then the outcome is Down-Left, so Row gets \$5 and Column (you) gets \$10. In other words, we actually pay you both based on the game's outcome.

Q2-Q5 ask for your probability values for the payments in each of the four cells. For Q2 (the Up-Left cell), our example player feels that Row getting \$10 and Column getting \$10 is worth the same to her as a 50% chance of them both getting \$20. For Q3 (the Up-Right cell), our example player feels that Row getting \$10 and Column getting \$5 is worth the same to her as a 25% chance of them both getting \$20. Q4 and Q5 ask the same question for the Down-Left and Down-Right cells. Our example player answered "40%" and "5%", respectively, but of course your answers might be different. If one of these questions is chosen for payment, we'll randomly pick one of you, and use the method described in Part 2.5 of the "elicitation instructions" to determine your payments based on that person's answers.

Q6 and Q7 ask you to guess which cell the *other person* ranked the highest, 2<sup>nd</sup> highest, 3<sup>rd</sup> highest, and 4<sup>th</sup> highest, according to the probability values they gave. Our example player thinks it's most likely that the Row player put his highest value on the UL cell, his 2<sup>nd</sup>-highest value on the UR cell, his 3<sup>rd</sup>-highest value on the DL cell, and his lowest value on the DR cell. She is 90% sure that her guess is correct. For Q7, her next-best guess is that UL is highest, DL is 2<sup>nd</sup>-highest, UR is 3<sup>rd</sup> highest, and DR is lowest for the Row player. She's pretty sure her Q6 guess is right, so she only thinks her Q7 guess has a 5% chance of being correct. If one of these questions is chosen for payment, we'll use the method described in Part 4 of the "elicitation instructions" to determine your payment.

Q8 and Q9 ask you to guess the actual probability values that the Row player put in the four cells in Q2-Q5. Our example player's best guesses for the Row player's values are shown in Q8 (they are 50%, 45%, 30%, and 5%), and she thinks there's a 20% chance her guess is correct. Her second-best guess appears in Q9 (50%, 50%, 25%, 5%), and she's only 5% sure that guess is correct. If one of these

questions is chosen for payment, we'll use the method described in Part 4 of the "elicitation instructions" to determine your payment.

In Q10, our example player reports that she is 95% sure the Row player will actually choose Up. If this question is chosen for payment, we'll look at what the Row player actually did, and use the method described in Part 3 of the "elicitation instructions" to determine your payment.

In Q11 and Q12, you are asked to give your 2 best guesses of the other person's answer to Q10. Our example player's best guess is that he said 100%, and she's 90% sure that's what he said. Her second-best guess is that he said 95%, but she's only 5% sure that's right (because she's pretty sure he said 100%). If this question is chosen for payment, we'll use the method described in Part 4 of the "elicitation instructions" to determine your payment

Finally, Q13 asks you your belief that the other player's answers are *consistent*. We say a player is consistent if the row or column they chose maximizes their expected probability values from Q2-Q5, given their belief about the other person's row or column choice in Q10.

To see how this works, let's see if our example player is consistent. From Q2-Q5, you can see the probability values she assigns to each cell. From Q10, she's 95% sure the Row player will play Up. So her expected probability value from choosing Left is given by

$$95\% \times 50 + 5\% \times 40 = \mathbf{49.5}$$

and her expected probability value for choosing Right is given by

$$95\% \times 25 + 5\% \times 5 = \mathbf{24.0}.$$

Thus, she gets a higher expected probability value from choosing Left. Since she actually did choose Left in Q1, she is consistent.

Now, when asked whether the *Row* player would be consistent, she said she's 70% sure he will be. If this question is chosen for payment, we'll use the method described in Part 3 of the "elicitation instructions" to determine your payment. Note that you need not be "consistent" yourself; your choice of Columns may not be based on this sort of calculation, and that's fine. You should answer however you want.

The last part of the booklet (Part 6) simply asks you to choose between several gambles. If that page is chosen, one of your choices will be randomly selected and you will receive the outcome of that gamble.

Once you are done with all the pages of the booklet, please turn it in to the experimenter. Once everyone is finished, we will choose which page and which question is actually chosen for payment. We will then call you up in pairs to determine your actual payoffs. Remember you will get a \$5 show-up fee in addition to your earnings from the experiment.

# EXAMPLE GAME – ALREADY FILLED OUT

	Left	Right
Up	ROW: \$10 COL: \$10	ROW: \$10 COL: \$5
Down	ROW: \$5 COL: \$10	ROW: \$1 COL: \$1

Q1. Which column do you choose (circle one)?

Left

Right

For each of the cells, what is your *probability value* of those payments (from 0-100)?

	L	R
U	Q2. 50 %	Q3. 25 %
D	Q4. 40 %	Q5. 5 %

(Please use multiples of 5%  
e.g. 0%, 5%, 10%,..., 95%, 100%)  
*Remember: A higher value means more preferred.*  
\$20-\$20 gets 100%, \$0-\$0 gets 0%.

What are your 2 best guesses of the Row player's *ranking* of the 4 cells? 1=Best,4=Worst

Q6.	1. <u>UL</u> 2. <u>UR</u> 3. <u>DL</u> 4. <u>DR</u>	Prob. Correct <u>90 %</u>	Q7.	1. <u>UL</u> 2. <u>DL</u> 3. <u>UR</u> 4. <u>DR</u>	Prob. Correct <u>5 %</u>
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(Based on their probability values. Write "UL", "UR", "DL", and "DR" in the blanks. UL = Up-Left, UR = Up-Right, DL = Down-Left, DR = Down-Right.)

What are your *two* most likely guesses for the Row player's probability values of the four cells? And what are your probabilities that each guess is correct?

Q8.	L	R	Prob. Correct	Q9.	L	R	Prob. Correct
U	50 %	45 %	<u>20 %</u>	U	50 %	50 %	<u>5 %</u>
D	30 %	5 %		D	25 %	5 %	

(Use multiples of 5% for your guesses, from 0% to 100%. The two guesses must be different in at least one of the cells.)

Q10. What is your probability belief that the Row player will play **Up**? 95 %

(Please a multiple of 5%)

What are your *two* most likely guesses about the Row player's belief that *you* will play **Left**? And what are your probabilities that each guess is correct?

Q11.	<u>Guess #1</u>	Prob. Correct	Q12.	<u>Guess #2</u>	Prob. Correct
	<u>100 %</u>	<u>90 %</u>		<u>95 %</u>	<u>5 %</u>

(Use multiples of 5% for your guesses. The two guesses must be different.)

Q13. What is your probability belief that the Row player will be *consistent*? 70 %

(*Consistent* means their row choice maximizes their expected probability value, given their belief about your column choice.)

# GAME #1

	<b>Left</b>	<b>Right</b>
<b>Up</b>	ROW: <b>\$10</b> COL: <b>\$5</b>	ROW: <b>\$15</b> COL: <b>\$15</b>
<b>Down</b>	ROW: <b>\$5</b> COL: <b>\$10</b>	ROW: <b>\$1</b> COL: <b>\$1</b>

Q1. Which column do you choose (circle one)?                      **Left**                      **Right**

For each of the cells, what is your *probability value* of those payments (from 0-100)?

	<b>L</b>	<b>R</b>	
<b>U</b>	Q2.                      %	Q3.                      %	<i>(Please use multiples of 5% e.g. 0%, 5%, 10%,..., 95%, 100%) Remember: A higher value means more preferred. \$20-\$20 gets 100%, \$0-\$0 gets 0%.</i>
<b>D</b>	Q4.                      %	Q5.                      %	

What are your 2 best guesses of the Row player's *ranking* of the 4 cells? 1=Best,4=Worst

Q6. 1. _____ 2. _____ 3. _____ 4. _____	<u>Prob. Correct</u> _____ %	Q7. 1. _____ 2. _____ 3. _____ 4. _____	<u>Prob. Correct</u> _____ %
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(Based on their probability values. Write "UL", "UR", "DL", and "DR" in the blanks. UL = Up-Left, UR = Up-Right, DL = Down-Left, DR = Down-Right.)

What are your *two* most likely guesses for the Row player's probability values of the four cells? And what are your probabilities that each guess is correct?

Q8. <b>L</b> <b>R</b> <table border="1" style="width: 100%; border-collapse: collapse; margin: 5px 0;"> <tr> <td style="width: 10%;"></td> <td style="width: 40%; text-align: center;">%</td> <td style="width: 40%; text-align: center;">%</td> </tr> <tr> <td style="text-align: center;"><b>U</b></td> <td style="text-align: center;">%</td> <td style="text-align: center;">%</td> </tr> <tr> <td style="text-align: center;"><b>D</b></td> <td style="text-align: center;">%</td> <td style="text-align: center;">%</td> </tr> </table> <u>Prob. Correct</u> _____ %		%	%	<b>U</b>	%	%	<b>D</b>	%	%	Q9. <b>L</b> <b>R</b> <table border="1" style="width: 100%; border-collapse: collapse; margin: 5px 0;"> <tr> <td style="width: 10%;"></td> <td style="width: 40%; text-align: center;">%</td> <td style="width: 40%; text-align: center;">%</td> </tr> <tr> <td style="text-align: center;"><b>U</b></td> <td style="text-align: center;">%</td> <td style="text-align: center;">%</td> </tr> <tr> <td style="text-align: center;"><b>D</b></td> <td style="text-align: center;">%</td> <td style="text-align: center;">%</td> </tr> </table> <u>Prob. Correct</u> _____ %		%	%	<b>U</b>	%	%	<b>D</b>	%	%
	%	%																	
<b>U</b>	%	%																	
<b>D</b>	%	%																	
	%	%																	
<b>U</b>	%	%																	
<b>D</b>	%	%																	

(Use multiples of 5% for your guesses, from 0% to 100%. The two guesses must be different in at least one of the cells.)

Q10. What is your probability belief that the Row player will play **Up**? \_\_\_\_\_ %  
(Please a multiple of 5%)

What are your *two* most likely guesses about the Row player's belief that *you* will play **Left**? And what are your probabilities that each guess is correct?

Q11. <u>Guess #1</u> _____ %	<u>Prob. Correct</u> _____ %	Q12. <u>Guess #2</u> _____ %	<u>Prob. Correct</u> _____ %
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(Use multiples of 5% for your guesses. The two guesses must be different.)

Q13. What is your probability belief that the Row player will be *consistent*? \_\_\_\_\_ %

(Consistent means their row choice maximizes their expected probability value, given their belief about your column choice.)

# GAME #2

	<b>Left</b>	<b>Right</b>
<b>Up</b>	ROW: \$15 COL: \$15	ROW: \$1 COL: \$1
<b>Down</b>	ROW: \$2 COL: \$2	ROW: \$5 COL: \$5

Q1. Which column do you choose (circle one)?                      **Left**                      **Right**

For each of the cells, what is your *probability value* of those payments (from 0-100)?

	<b>L</b>	<b>R</b>	
<b>U</b>	Q2. _____ %	Q3. _____ %	<i>(Please use multiples of 5% e.g. 0%, 5%, 10%,..., 95%, 100%) Remember: A higher value means more preferred. \$20-\$20 gets 100%, \$0-\$0 gets 0%.</i>
<b>D</b>	Q4. _____ %	Q5. _____ %	

What are your 2 best guesses of the Row player's *ranking* of the 4 cells? 1=Best,4=Worst

Q6. 1. _____ 2. _____ 3. _____ 4. _____	<u>Prob. Correct</u> _____ %	Q7. 1. _____ 2. _____ 3. _____ 4. _____	<u>Prob. Correct</u> _____ %
--	---------------------------------	--	---------------------------------

(Based on their probability values. Write "UL", "UR", "DL", and "DR" in the blanks. UL = Up-Left, UR = Up-Right, DL = Down-Left, DR = Down-Right.)

What are your *two* most likely guesses for the Row player's probability values of the four cells? And what are your probabilities that each guess is correct?

Q8. <b>L</b> <b>R</b> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">U</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> </tr> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">D</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> </tr> </table> <u>Prob. Correct</u> _____ %	U	%	%	D	%	%	Q9. <b>L</b> <b>R</b> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">U</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> </tr> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">D</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> </tr> </table> <u>Prob. Correct</u> _____ %	U	%	%	D	%	%
U	%	%											
D	%	%											
U	%	%											
D	%	%											

(Use multiples of 5% for your guesses, from 0% to 100%. The two guesses must be different in at least one of the cells.)

Q10. What is your probability belief that the Row player will play **Up**? \_\_\_\_\_ %  
 (Please a multiple of 5%)

What are your *two* most likely guesses about the Row player's belief that *you* will play **Left**? And what are your probabilities that each guess is correct?

Q11. <u>Guess #1</u> _____ %	<u>Prob. Correct</u> _____ %	Q12. <u>Guess #2</u> _____ %	<u>Prob. Correct</u> _____ %
---------------------------------	---------------------------------	---------------------------------	---------------------------------

(Use multiples of 5% for your guesses. The two guesses must be different.)

Q13. What is your probability belief that the Row player will be *consistent*? \_\_\_\_\_ %  
 (*Consistent* means their row choice maximizes their expected probability value, given their belief about your column choice.)

# GAME #3

	<b>Left</b>	<b>Right</b>
<b>Up</b>	ROW: \$10 COL: \$10	ROW: \$1 COL: \$15
<b>Down</b>	ROW: \$15 COL: \$1	ROW: \$5 COL: \$5

Q1. Which column do you choose (circle one)?                      **Left**                      **Right**

For each of the cells, what is your *probability value* of those payments (from 0-100)?

	<b>L</b>	<b>R</b>	
<b>U</b>	Q2. _____ %	Q3. _____ %	<i>(Please use multiples of 5% e.g. 0%, 5%, 10%,..., 95%, 100%) Remember: A higher value means more preferred. \$20-\$20 gets 100%, \$0-\$0 gets 0%.</i>
<b>D</b>	Q4. _____ %	Q5. _____ %	

What are your 2 best guesses of the Row player's *ranking* of the 4 cells? 1=Best,4=Worst

Q6. 1. _____ 2. _____ 3. _____ 4. _____	<u>Prob. Correct</u> _____ %	Q7. 1. _____ 2. _____ 3. _____ 4. _____	<u>Prob. Correct</u> _____ %
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(Based on their probability values. Write "UL", "UR", "DL", and "DR" in the blanks. UL = Up-Left, UR = Up-Right, DL = Down-Left, DR = Down-Right.)

What are your *two* most likely guesses for the Row player's probability values of the four cells? And what are your probabilities that each guess is correct?

Q8. <b>L</b> <b>R</b> <table border="1" style="width: 100%; text-align: center; border-collapse: collapse;"> <tr> <td style="width: 15%;"><b>U</b></td> <td>_____ %</td> <td>_____ %</td> </tr> <tr> <td><b>D</b></td> <td>_____ %</td> <td>_____ %</td> </tr> </table> <u>Prob. Correct</u> _____ %	<b>U</b>	_____ %	_____ %	<b>D</b>	_____ %	_____ %	Q9. <b>L</b> <b>R</b> <table border="1" style="width: 100%; text-align: center; border-collapse: collapse;"> <tr> <td style="width: 15%;"><b>U</b></td> <td>_____ %</td> <td>_____ %</td> </tr> <tr> <td><b>D</b></td> <td>_____ %</td> <td>_____ %</td> </tr> </table> <u>Prob. Correct</u> _____ %	<b>U</b>	_____ %	_____ %	<b>D</b>	_____ %	_____ %
<b>U</b>	_____ %	_____ %											
<b>D</b>	_____ %	_____ %											
<b>U</b>	_____ %	_____ %											
<b>D</b>	_____ %	_____ %											

(Use multiples of 5% for your guesses, from 0% to 100%. The two guesses must be different in at least one of the cells.)

Q10. What is your probability belief that the Row player will play **Up**? \_\_\_\_\_ %  
(Please a multiple of 5%)

What are your *two* most likely guesses about the Row player's belief that *you* will play **Left**? And what are your probabilities that each guess is correct?

Q11. <u>Guess #1</u> _____ %	<u>Prob. Correct</u> _____ %	Q12. <u>Guess #2</u> _____ %	<u>Prob. Correct</u> _____ %
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(Use multiples of 5% for your guesses. The two guesses must be different.)

Q13. What is your probability belief that the Row player will be *consistent*? \_\_\_\_\_ %  
(Consistent means their row choice maximizes their expected probability value, given their belief about your column choice.)

# GAME #4

	<b>Left</b>	<b>Right</b>
<b>Up</b>	ROW: \$15 COL: \$5	ROW: \$5 COL: \$10
<b>Down</b>	ROW: \$5 COL: \$10	ROW: \$10 COL: \$5

Q1. Which column do you choose (circle one)?                      **Left**                      **Right**

For each of the cells, what is your *probability value* of those payments (from 0-100)?

	<b>L</b>	<b>R</b>	
<b>U</b>	Q2.                      %	Q3.                      %	<i>(Please use multiples of 5% e.g. 0%, 5%, 10%,..., 95%, 100%) Remember: A higher value means more preferred. \$20-\$20 gets 100%, \$0-\$0 gets 0%.</i>
<b>D</b>	Q4.                      %	Q5.                      %	

What are your 2 best guesses of the Row player's *ranking* of the 4 cells? 1=Best,4=Worst

Q6. 1. _____ 2. _____ 3. _____ 4. _____	<u>Prob. Correct</u> _____ %	Q7. 1. _____ 2. _____ 3. _____ 4. _____	<u>Prob. Correct</u> _____ %
--	---------------------------------	--	---------------------------------

(Based on their probability values. Write "UL", "UR", "DL", and "DR" in the blanks. UL = Up-Left, UR = Up-Right, DL = Down-Left, DR = Down-Right.)

What are your *two* most likely guesses for the Row player's probability values of the four cells? And what are your probabilities that each guess is correct?

Q8. <b>L</b> <b>R</b> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> </tr> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> </tr> </table> <u>Prob. Correct</u> _____ %	%	%	%	%	Q9. <b>L</b> <b>R</b> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> </tr> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> </tr> </table> <u>Prob. Correct</u> _____ %	%	%	%	%
%	%								
%	%								
%	%								
%	%								

(Use multiples of 5% for your guesses, from 0% to 100%. The two guesses must be different in at least one of the cells.)

Q10. What is your probability belief that the Row player will play **Up**? \_\_\_\_\_ %  
(Please a multiple of 5%)

What are your *two* most likely guesses about the Row player's belief that *you* will play **Left**? And what are your probabilities that each guess is correct?

Q11. <u>Guess #1</u>	<u>Prob. Correct</u>	Q12. <u>Guess #2</u>	<u>Prob. Correct</u>
_____ %	_____ %	_____ %	_____ %

(Use multiples of 5% for your guesses. The two guesses must be different.)

Q13. What is your probability belief that the Row player will be *consistent*? \_\_\_\_\_ %  
(Consistent means their row choice maximizes their expected probability value, given their belief about your column choice.)

# GAME #5

	<b>Left</b>	<b>Right</b>
<b>Up</b>	ROW: <b>\$15</b> COL: <b>\$5</b>	ROW: <b>\$2</b> COL: <b>\$1</b>
<b>Down</b>	ROW: <b>\$1</b> COL: <b>\$2</b>	ROW: <b>\$5</b> COL: <b>\$10</b>

Q1. Which column do you choose (circle one)?                      **Left**                      **Right**

For each of the cells, what is your *probability value* of those payments (from 0-100)?

	<b>L</b>	<b>R</b>	
<b>U</b>	Q2. _____ %	Q3. _____ %	<i>(Please use multiples of 5% e.g. 0%, 5%, 10%,..., 95%, 100%) Remember: A higher value means more preferred. \$20-\$20 gets 100%, \$0-\$0 gets 0%.</i>
<b>D</b>	Q4. _____ %	Q5. _____ %	

What are your 2 best guesses of the Row player's *ranking* of the 4 cells? 1=Best,4=Worst

Q6. 1. _____ 2. _____ 3. _____ 4. _____	<u>Prob. Correct</u> _____ %	Q7. 1. _____ 2. _____ 3. _____ 4. _____	<u>Prob. Correct</u> _____ %
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(Based on their probability values. Write "UL", "UR", "DL", and "DR" in the blanks. UL = Up-Left, UR = Up-Right, DL = Down-Left, DR = Down-Right.)

What are your *two* most likely guesses for the Row player's probability values of the four cells? And what are your probabilities that each guess is correct?

Q8.	<b>L</b>	<b>R</b>		Q9.	<b>L</b>	<b>R</b>	
<b>U</b>	%	%	<u>Prob. Correct</u>	<b>U</b>	%	%	<u>Prob. Correct</u>
<b>D</b>	%	%	_____ %	<b>D</b>	%	%	_____ %

(Use multiples of 5% for your guesses, from 0% to 100%. The two guesses must be different in at least one of the cells.)

Q10. What is your probability belief that the Row player will play **Up**? \_\_\_\_\_ %  
(Please a multiple of 5%)

What are your *two* most likely guesses about the Row player's belief that *you* will play **Left**? And what are your probabilities that each guess is correct?

Q11. <u>Guess #1</u>	<u>Prob. Correct</u>	Q12. <u>Guess #2</u>	<u>Prob. Correct</u>
_____ %	_____ %	_____ %	_____ %

(Use multiples of 5% for your guesses. The two guesses must be different.)

Q13. What is your probability belief that the Row player will be *consistent*? \_\_\_\_\_ %

(Consistent means their row choice maximizes their expected probability value, given their belief about your column choice.)

## Part #6

The experimenter will roll a 20-sided die. In each question (Q1 through Q10) you have a choice between two different bets on that die roll. For each question, check the box next to the option you prefer.

<b>Q1.</b>	Roll 1-10 pays \$10	Roll 11-20 pays \$5	<input type="checkbox"/>	or	Roll 1 pays \$15	Roll 2-20 pays \$1	<input type="checkbox"/>
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<b>Q2.</b>	Roll 1-10 pays \$10	Roll 11-20 pays \$5	<input type="checkbox"/>	or	Roll 1-3 pays \$15	Roll 4-20 pays \$1	<input type="checkbox"/>
------------	---------------------	---------------------	--------------------------	----	--------------------	--------------------	--------------------------

<b>Q3.</b>	Roll 1-10 pays \$10	Roll 11-20 pays \$5	<input type="checkbox"/>	or	Roll 1-5 pays \$15	Roll 6-20 pays \$1	<input type="checkbox"/>
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<b>Q4.</b>	Roll 1-10 pays \$10	Roll 11-20 pays \$5	<input type="checkbox"/>	or	Roll 1-7 pays \$15	Roll 8-20 pays \$1	<input type="checkbox"/>
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<b>Q5.</b>	Roll 1-10 pays \$10	Roll 11-20 pays \$5	<input type="checkbox"/>	or	Roll 1-9 pays \$15	Roll 10-20 pays \$1	<input type="checkbox"/>
------------	---------------------	---------------------	--------------------------	----	--------------------	---------------------	--------------------------

<b>Q6.</b>	Roll 1-10 pays \$10	Roll 11-20 pays \$5	<input type="checkbox"/>	or	Roll 1-11 pays \$15	Roll 12-20 pays \$1	<input type="checkbox"/>
------------	---------------------	---------------------	--------------------------	----	---------------------	---------------------	--------------------------

<b>Q7.</b>	Roll 1-10 pays \$10	Roll 11-20 pays \$5	<input type="checkbox"/>	or	Roll 1-13 pays \$15	Roll 14-20 pays \$1	<input type="checkbox"/>
------------	---------------------	---------------------	--------------------------	----	---------------------	---------------------	--------------------------

<b>Q8.</b>	Roll 1-10 pays \$10	Roll 11-20 pays \$5	<input type="checkbox"/>	or	Roll 1-15 pays \$15	Roll 16-20 pays \$1	<input type="checkbox"/>
------------	---------------------	---------------------	--------------------------	----	---------------------	---------------------	--------------------------

<b>Q9.</b>	Roll 1-10 pays \$10	Roll 11-20 pays \$5	<input type="checkbox"/>	or	Roll 1-17 pays \$15	Roll 18-20 pays \$1	<input type="checkbox"/>
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<b>Q10.</b>	Roll 1-10 pays \$10	Roll 11-20 pays \$5	<input type="checkbox"/>	or	Roll 1-19 pays \$15	Roll 20 pays \$1	<input type="checkbox"/>
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## Part #6 (Continued)

The experimenter has a bag containing 20 poker chips. There are red chips and black chips in the bag, but the exact number of each is unknown to you. The number could be anywhere from 0 to 20 (as long as # red chips + # black chips = 20). The experimenter will draw one chip from this bag without looking.

In following questions, you can bet on the chip draw (the left option) or on a roll of a 20-sided die (the right option). In each question, check the box next to the one you prefer. The experimenter will draw the chip *before* it is known which question is chosen for payment. You can inspect the bag after the experiment is over, if you wish.

<b>Q11.</b>	Red chip pays \$20	Black chip pays \$0	<input type="checkbox"/>	or	Roll 1-9 pays \$20	Roll 10-20 pays \$0	<input type="checkbox"/>
-------------	--------------------	---------------------	--------------------------	----	--------------------	---------------------	--------------------------

<b>Q12.</b>	Black chip pays \$20	Red chip pays \$0	<input type="checkbox"/>	or	Roll 1-5 pays \$20	Roll 6-20 pays \$0	<input type="checkbox"/>
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<b>Q13.</b>	Red chip pays \$20	Black chip pays \$0	<input type="checkbox"/>	or	Roll 1-7 pays \$20	Roll 8-20 pays \$0	<input type="checkbox"/>
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## Part #6 (Continued)

The last three questions offer more bets on the same bag with 20 red and black chips, compared to bets on a 20-sided die roll. Again, pick the option you prefer for each question.

<b>Q14.</b>	Black chip pays \$20	Red chip pays \$0	<input type="checkbox"/>	or	Roll 1-7 pays \$20	Roll 8-20 pays \$0	<input type="checkbox"/>
-------------	----------------------	-------------------	--------------------------	----	--------------------	--------------------	--------------------------

<b>Q15.</b>	Red chip pays \$20	Black chip pays \$0	<input type="checkbox"/>	or	Roll 1-5 pays \$20	Roll 6-20 pays \$0	<input type="checkbox"/>
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<b>Q16.</b>	Black chip pays \$20	Red chip pays \$0	<input type="checkbox"/>	or	Roll 1-9 pays \$20	Roll 10-20 pays \$0	<input type="checkbox"/>
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APPENDIX H. INSTRUCTIONS & BOOKLET FOR THE SEQ TREATMENT: ROW PLAYERS

The instructions and decision booklet given to row players in the SEQ treatment appears below.

## (TO BE READ ALOUD AFTER ELICITATION INSTRUCTIONS)

We are now ready to proceed with the actual experiment.

Here is a quick summary of the experiment. You will be playing 5 games with another person in the room. One of you will be called the Row Player, and the other person will be called the Column Player. In each game, the Row Player makes their choice first. They will use a website to tell the Column Player what they chose. Then the Column player makes their choice second. Again, the Row Player goes first, and the Column player goes second in each game.

You have been given two sets of instructions. One is titled "Experiment Instructions" and the other is titled "Computer Instructions". Start with the Experiment Instructions. Read these on your own. At some point it will ask you to log into the website. You can use the "Computer Instructions" to figure out how to log in.

At any time if you have any questions or are confused, please raise your hand.

Go ahead and begin the experiment and proceed at your own pace.

## COMPUTER INSTRUCTIONS: Sending Row Choices to the Column Player

In this experiment **you need to tell the Column player which row you've chosen** in each game. You do that through a computer interface.

Now open either Google Chrome or Mozilla Firefox (Internet browser), and go to:

<http://healy.econ.ohio-state.edu/exp/ab95/row>

Once there, login with your ID# (from your instruction booklet) and the following code:

**CODE:** \_\_\_\_\_

As you make your row choices in the experiment, **please let the Column player know immediately** by selecting which row you chose and clicking the button labeled "Submit My Latest Choice".

Things to note:

1. You can send your row choice for each game separately. As soon as you know your row choice for Game #1, go ahead and send it. You can send your choice for Game #2 later.
2. The Column player is waiting for you. Please send your row choice for each game as soon as you know it.
3. Once you've sent a row choice for a particular game, it cannot be changed!

## EXPERIMENT INSTRUCTIONS: OVERVIEW

This is an experiment in the economics of decision-making. If you follow these instructions and make good decisions, you could earn a considerable amount of cash that will be paid to you at the end of the experiment.

Please silence & put away your cell phones. Please do not communicate with anyone other than the experimenter during this experiment. If you need help or have questions, please raise your hand at any time.

YOU ARE A ROW PLAYER WITH ID# \_\_\_\_\_

You are matched with the COLUMN player who has the same ID number. You will not see which person that is until the end of the experiment.

Following the instructions, there are 6 parts in this booklet. On each of the first 5 pages you are shown a game and asked several questions about that game. The sixth part asks you to choose between several gambles. At the end of the experiment, I will randomly pick one part, and randomly pick one question from that part. You will be paid based on what you chose in that *one* question. Exactly what the questions are will be explained shortly.

Every participant will receive a \$5 'show-up' fee for completing their booklet, in addition to their earnings from the one chosen question.

Please do not talk or try to communicate with anyone else during this experiment. If you have any questions, please raise your hand and the experimenter will assist you. If anything is confusing, please ask for clarification!

Turn the page now for detailed instructions, and then proceed at your own pace. When you are finished with your booklet, please turn it in to the experimenter. You can then return to your seat and wait patiently until all participants are finished.

## EXPERIMENT INSTRUCTIONS: GAMES & QUESTIONS

Turn two pages. You will see an example of one game and the 13 questions you will be asked about that game. This is exactly what you will be filling out in this experiment. This example page is already filled out, just to show you how to fill out the real pages for yourself. Obviously your answers may differ from those given in the example.

At the top of the page is the game itself. You are always the **ROW** player, which means you will choose one of the two **ROWS** (Up or Down) in the game. As the row player, you always choose **FIRST**. The person you're matched with is the **COLUMN** player, meaning they will pick one of the two **COLUMNS** (Left or Right) in the game. They move **SECOND**, meaning they will see your row choice before they pick a column. The four cells show the payoffs to each of you if that row and column are chosen. For example, if you choose Up and the other person chooses Right, you get \$10 and they get \$5. If you choose Down and they choose Right, then you get \$1 and they get \$1. And so on.

After you make your row choice in each game, **you must let the Column player know which row you chose**. This is done through an interactive website. A separate page of instructions describes how to access that website.

The first question (Q1) is: which row do you choose? For our example player, she picked Up. If this question were randomly selected for payment, then we would look at what the Column player chose. If he chose Left, then the outcome is Up-Left, so Row (you) gets \$10 and Column gets \$10. If he chose Right, then the outcome is Up-Right, so Row gets \$10 and Column gets \$5. In other words, if this choice is chosen for payment then you will be paid the actual game outcome. ***Don't forget: the Column player gets to see which row you chose before making their decision.***

Q2-Q5 ask for your probability values for the payments in each of the four cells. For Q2 (the Up-Left cell), our example player feels that Row getting \$10 and Column getting \$10 is worth the same to her as a 50% chance of them both getting \$20. For Q3 (the Up-Right cell), our example player feels that Row getting \$10 and Column getting \$5 is worth the same to her as a 40% chance of them both getting \$20. Q4 and Q5 ask the same question for the Down-Left and Down-Right cells. Our example player answered "25%" and "5%", respectively, but of course your answers might be different. If one of these questions is chosen for payment, we'll randomly pick one of you, and use the method described in Part 2.5 of the "elicitation instructions" to determine your payments based on that person's answers.

Q6 and Q7 ask you to guess which cell the *other person* ranked the highest, 2<sup>nd</sup> highest, 3<sup>rd</sup> highest, and 4<sup>th</sup> highest, according to the probability values they gave. Our example player thinks it's most likely that the Column player put his highest value on the UL cell, his 2<sup>nd</sup>-highest value on the DL cell, his 3<sup>rd</sup>-highest value on the UR cell, and his lowest value on the DR cell. She is 90% sure that her guess is correct. For Q7, her next-best guess is that UL is highest, UR is 2<sup>nd</sup>-highest, DL is 3<sup>rd</sup> highest, and DR is lowest for the Column player. She's pretty sure her Q6 guess is right, so she only thinks her Q7 guess has a 5% chance of being correct. If one of these questions is chosen for payment, we'll use the method described in Part 4 of the "elicitation instructions" to determine your payment.

Q8 and Q9 ask you to guess the actual probability values that the Column player put in the four cells in Q2-Q5. Our example player's best guesses for the Column player's values are shown in Q8 (they are 50%, 30%, 45%, and 5%), and she thinks there's a 20% chance her guess is correct. Her second-best guess appears in Q9 (50%, 25%, 50%, 5%), and she's only 5% sure that guess is correct. If one of these questions is chosen for payment, we'll use the method described in Part 4 of the "elicitation instructions" to determine your payment.

In Q10, our example player reports that she is 95% sure the Column player will actually choose Left. If this question is chosen for payment, we'll look at what the Column player actually did, and use the method described in Part 3 of the "elicitation instructions" to determine your payment.

Q11 and Q12 you can skip. These are for the Column player only. If either of these is chosen for payment you will receive \$10.

Finally, Q13 asks you your belief that the other player's answers are *consistent*. We say a column player is consistent if the column they chose is the one that they gave the higher probability value to in Q2-Q5.

When asked whether the *Column* player would be consistent, our example player said she's 70% sure he will be. If this question is chosen for payment, we'll use the method described in Part 3 of the "elicitation instructions" to determine your payment. Note that you need not be "consistent" yourself; your choice of Rows may not be based on this sort of calculation, and that's fine. You should answer however you want.

The last part of the booklet (Part 6) simply asks you to choose between several gambles. If that page is chosen, one of your choices will be randomly selected and you will receive the outcome of that gamble.

Once you are done with all the pages of the booklet, please turn it in to the experimenter. Once everyone is finished, we will choose which page and which question is actually chosen for payment. We will then call you up in pairs to determine your actual payoffs. Remember you will get a \$5 show-up fee in addition to your earnings from the experiment.

# EXAMPLE GAME – ALREADY FILLED OUT

	Left	Right
Up	ROW: \$10 COL: \$10	ROW: \$10 COL: \$5
Down	ROW: \$5 COL: \$10	ROW: \$1 COL: \$1

Q1. Which row do you choose (circle one)?

Remember: The Column player sees this choice before making their choice.

Up

Down

For each of the cells, what is your *probability value* of those payments (from 0-100)?

	L	R
U	Q2. 50 %	Q3. 40 %
D	Q4. 25 %	Q5. 5 %

(Please use multiples of 5%  
e.g. 0%, 5%, 10%,..., 95%, 100%)

*Remember: A higher value means more preferred.*

*\$20-\$20 gets 100%, \$0-\$0 gets 0%.*

What are your 2 best guesses of the Column player's *ranking* of the 4 cells? 1=Best,4=Worst

Q6.	1. <u>UL</u> 2. <u>DL</u> 3. <u>UR</u> 4. <u>DR</u>	Prob. Correct <u>90</u> %	Q7.	1. <u>UL</u> 2. <u>UR</u> 3. <u>DL</u> 4. <u>DR</u>	Prob. Correct <u>5</u> %
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(Based on their probability values. Write "UL", "UR", "DL", and "DR" in the blanks. UL = Up-Left, UR = Up-Right, DL = Down-Left, DR = Down-Right.)

What are your *two* best guesses for the Column player's probability values of the four cells? And what are your probabilities that each guess is correct?

Q8.	L	R	Prob. Correct	Q9.	L	R	Prob. Correct
U	50 %	30 %	<u>20</u> %	U	50 %	25 %	<u>5</u> %
D	45 %	5 %		D	50 %	5 %	

(Use multiples of 5% for your guesses, from 0% to 100%. The two guesses must be different in at least one of the cells.)

Q10. What is your probability belief that the Column player will play **Left**? 95 %

(Remember: The Column player will know which row you chose. Please a multiple of 5%)

What are your *two* best guesses about the Column player's belief that *you* will play **Up**? And what are your probabilities that each guess is correct?

Q11.	<u>Guess #1</u>	Prob. Correct	Q12.	<u>Guess #2</u>	Prob. Correct
	<u>100</u> %	<u>90</u> %		<u>95</u> %	<u>5</u> %

(Use multiples of 5% for your guesses. The two guesses must be different.)

Q13. What is your probability belief that the Column player will be *consistent*? 70 %

(*Consistent* means their column choice maximizes their probability value, given your row choice.)

# LOG IN!

Before proceeding, please login to the website.

You will use this to let the Column player know what you chose in each game.

Separate instructions are included.

# GAME #1

	<b>Left</b>	<b>Right</b>
<b>Up</b>	ROW: <b>\$10</b> COL: <b>\$5</b>	ROW: <b>\$15</b> COL: <b>\$15</b>
<b>Down</b>	ROW: <b>\$5</b> COL: <b>\$10</b>	ROW: <b>\$1</b> COL: <b>\$1</b>

Q1. Which row do you choose (circle one)?                      **Up**                      **Down**

Remember: The Column player sees this choice before making their choice. **PLEASE ENTER YOUR CHOICE IN THE WEBSITE NOW!**

For each of the cells, what is your *probability value* of those payments (from 0-100)?

	<b>L</b>	<b>R</b>	
<b>U</b>	Q2.                      %	Q3.                      %	(Please use multiples of 5% e.g. 0%, 5%, 10%,..., 95%, 100%) <i>Remember: A higher value means more preferred.</i> \$20-\$20 gets 100%, \$0-\$0 gets 0%.
<b>D</b>	Q4.                      %	Q5.                      %	

What are your 2 best guesses of the Column player's *ranking* of the 4 cells? 1=Best,4=Worst

Q6. 1. _____ 2. _____ 3. _____ 4. _____	<u>Prob. Correct</u> _____ %	Q7. 1. _____ 2. _____ 3. _____ 4. _____	<u>Prob. Correct</u> _____ %
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(Based on their probability values. Write "UL", "UR", "DL", and "DR" in the blanks. UL = Up-Left, UR = Up-Right, DL = Down-Left, DR = Down-Right.)

What are your *two* most likely guesses for the Column player's probability values of the four cells? And what are your probabilities that each guess is correct?

Q8. <b>L</b> <b>R</b> <table style="border-collapse: collapse; margin: 5px auto;"> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">U</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> </tr> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">D</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> </tr> </table> <u>Prob. Correct</u> _____ %	U	%	%	D	%	%	Q9. <b>L</b> <b>R</b> <table style="border-collapse: collapse; margin: 5px auto;"> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">U</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> </tr> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">D</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> </tr> </table> <u>Prob. Correct</u> _____ %	U	%	%	D	%	%
U	%	%											
D	%	%											
U	%	%											
D	%	%											

(Use multiples of 5% for your guesses, from 0% to 100%. The two guesses must be different in at least one of the cells.)

Q10. What is your probability belief that the Column player will play **Left**? \_\_\_\_\_ %

(Remember: The Column player will know which row you chose. Please a multiple of 5%)

What are your *two* most likely guesses about the Column player's belief that *you* will play **Up**? And what are your probabilities that each guess is correct?

Q11. <u>Guess #1</u> _____ %	<u>Prob. Correct</u> _____ %	Q12. <u>Guess #2</u> _____ %	<u>Prob. Correct</u> _____ %
---------------------------------	---------------------------------	---------------------------------	---------------------------------

(Use multiples of 5% for your guesses. The two guesses must be different.)

Q13. What is your probability belief that the Column player will be *consistent*? \_\_\_\_\_ %

(Consistent means their column choice maximizes their probability value, given your row choice.)

# GAME #2

	<b>Left</b>	<b>Right</b>
<b>Up</b>	ROW: \$15 COL: \$15	ROW: \$1 COL: \$1
<b>Down</b>	ROW: \$2 COL: \$2	ROW: \$5 COL: \$5

Q1. Which row do you choose (circle one)?

Up

Down

Remember: The Column player sees this choice before making their choice. **PLEASE ENTER YOUR CHOICE IN THE WEBSITE NOW!**

For each of the cells, what is your *probability value* of those payments (from 0-100)?

	<b>L</b>	<b>R</b>	
<b>U</b>	Q2. _____ %	Q3. _____ %	<i>(Please use multiples of 5% e.g. 0%, 5%, 10%,..., 95%, 100%) Remember: A higher value means more preferred. \$20-\$20 gets 100%, \$0-\$0 gets 0%.</i>
<b>D</b>	Q4. _____ %	Q5. _____ %	

What are your 2 best guesses of the Column player's *ranking* of the 4 cells? 1=Best,4=Worst

Q6. 1. _____ 2. _____ 3. _____ 4. _____ Prob. Correct _____ %	Q7. 1. _____ 2. _____ 3. _____ 4. _____ Prob. Correct _____ %
--	--

(Based on their probability values. Write "UL", "UR", "DL", and "DR" in the blanks. UL = Up-Left, UR = Up-Right, DL = Down-Left, DR = Down-Right.)

What are your *two* most likely guesses for the Column player's probability values of the four cells? And what are your probabilities that each guess is correct?

Q8. <table style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 5px;"><b>L</b></td> <td style="padding: 5px;"><b>R</b></td> <td style="padding: 5px;"><u>Prob. Correct</u></td> </tr> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">U %</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="padding: 5px;">_____ %</td> </tr> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">D %</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="padding: 5px;">_____ %</td> </tr> </table>	<b>L</b>	<b>R</b>	<u>Prob. Correct</u>	U %	%	_____ %	D %	%	_____ %	Q9. <table style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 5px;"><b>L</b></td> <td style="padding: 5px;"><b>R</b></td> <td style="padding: 5px;"><u>Prob. Correct</u></td> </tr> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">U %</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="padding: 5px;">_____ %</td> </tr> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">D %</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="padding: 5px;">_____ %</td> </tr> </table>	<b>L</b>	<b>R</b>	<u>Prob. Correct</u>	U %	%	_____ %	D %	%	_____ %
<b>L</b>	<b>R</b>	<u>Prob. Correct</u>																	
U %	%	_____ %																	
D %	%	_____ %																	
<b>L</b>	<b>R</b>	<u>Prob. Correct</u>																	
U %	%	_____ %																	
D %	%	_____ %																	

(Use multiples of 5% for your guesses, from 0% to 100%. The two guesses must be different in at least one of the cells.)

Q10. What is your probability belief that the Column player will play **Left**? \_\_\_\_\_ %

(Remember: The Column player will know which row you chose. Please a multiple of 5%)

What are your *two* most likely guesses about the Column player's belief that *you* will play **Up**? And what are your probabilities that each guess is correct?

Q11. <u>Guess #1</u> _____ % <u>Prob. Correct</u> _____ %	Q12. <u>Guess #2</u> _____ % <u>Prob. Correct</u> _____ %
--	--

(Use multiples of 5% for your guesses. The two guesses must be different.)

Q13. What is your probability belief that the Column player will be *consistent*? \_\_\_\_\_ %

(Consistent means their column choice maximizes their probability value, given your row choice.)

# GAME #3

	<b>Left</b>	<b>Right</b>
<b>Up</b>	ROW: \$10 COL: \$10	ROW: \$1 COL: \$15
<b>Down</b>	ROW: \$15 COL: \$1	ROW: \$5 COL: \$5

Q1. Which row do you choose (circle one)?

Up

Down

Remember: The Column player sees this choice before making their choice. **PLEASE ENTER YOUR CHOICE IN THE WEBSITE NOW!**

For each of the cells, what is your *probability value* of those payments (from 0-100)?

	<b>L</b>	<b>R</b>
<b>U</b>	Q2. _____ %	Q3. _____ %
<b>D</b>	Q4. _____ %	Q5. _____ %

*(Please use multiples of 5% e.g. 0%, 5%, 10%,..., 95%, 100%)  
Remember: A higher value means more preferred.  
\$20-\$20 gets 100%, \$0-\$0 gets 0%.*

What are your 2 best guesses of the Column player's *ranking* of the 4 cells? 1=Best,4=Worst

Q6. 1. _____ 2. _____ 3. _____ 4. _____	<u>Prob. Correct</u> _____ %	Q7. 1. _____ 2. _____ 3. _____ 4. _____	<u>Prob. Correct</u> _____ %
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(Based on their probability values. Write "UL", "UR", "DL", and "DR" in the blanks. UL = Up-Left, UR = Up-Right, DL = Down-Left, DR = Down-Right.)

What are your *two* most likely guesses for the Column player's probability values of the four cells? And what are your probabilities that each guess is correct?

Q8. <table style="width: 100%; border-collapse: collapse;"> <tr> <td></td> <td style="text-align: center; padding: 5px;"><b>L</b></td> <td style="text-align: center; padding: 5px;"><b>R</b></td> <td style="padding: 5px;"></td> </tr> <tr> <td style="text-align: center; padding: 5px;"><b>U</b></td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="padding: 5px;"><u>Prob. Correct</u></td> </tr> <tr> <td style="text-align: center; padding: 5px;"><b>D</b></td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="padding: 5px;">_____ %</td> </tr> </table>		<b>L</b>	<b>R</b>		<b>U</b>	%	%	<u>Prob. Correct</u>	<b>D</b>	%	%	_____ %	Q9. <table style="width: 100%; border-collapse: collapse;"> <tr> <td></td> <td style="text-align: center; padding: 5px;"><b>L</b></td> <td style="text-align: center; padding: 5px;"><b>R</b></td> <td style="padding: 5px;"></td> </tr> <tr> <td style="text-align: center; padding: 5px;"><b>U</b></td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="padding: 5px;"><u>Prob. Correct</u></td> </tr> <tr> <td style="text-align: center; padding: 5px;"><b>D</b></td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="padding: 5px;">_____ %</td> </tr> </table>		<b>L</b>	<b>R</b>		<b>U</b>	%	%	<u>Prob. Correct</u>	<b>D</b>	%	%	_____ %
	<b>L</b>	<b>R</b>																							
<b>U</b>	%	%	<u>Prob. Correct</u>																						
<b>D</b>	%	%	_____ %																						
	<b>L</b>	<b>R</b>																							
<b>U</b>	%	%	<u>Prob. Correct</u>																						
<b>D</b>	%	%	_____ %																						

(Use multiples of 5% for your guesses, from 0% to 100%. The two guesses must be different in at least one of the cells.)

Q10. What is your probability belief that the Column player will play **Left**? \_\_\_\_\_ %

(Remember: The Column player will know which row you chose. Please a multiple of 5%)

What are your *two* most likely guesses about the Column player's belief that *you* will play **Up**? And what are your probabilities that each guess is correct?

Q11. <u>Guess #1</u> _____ %	<u>Prob. Correct</u> _____ %	Q12. <u>Guess #2</u> _____ %	<u>Prob. Correct</u> _____ %
---------------------------------	---------------------------------	---------------------------------	---------------------------------

(Use multiples of 5% for your guesses. The two guesses must be different.)

Q13. What is your probability belief that the Column player will be *consistent*? \_\_\_\_\_ %

(Consistent means their column choice maximizes their probability value, given your row choice.)

# GAME #4

	<b>Left</b>	<b>Right</b>
<b>Up</b>	ROW: \$15 COL: \$5	ROW: \$5 COL: \$10
<b>Down</b>	ROW: \$5 COL: \$10	ROW: \$10 COL: \$5

Q1. Which row do you choose (circle one)?

Up

Down

Remember: The Column player sees this choice before making their choice. **PLEASE ENTER YOUR CHOICE IN THE WEBSITE NOW!**

For each of the cells, what is your *probability value* of those payments (from 0-100)?

	<b>L</b>	<b>R</b>
<b>U</b>	Q2. _____ %	Q3. _____ %
<b>D</b>	Q4. _____ %	Q5. _____ %

*(Please use multiples of 5% e.g. 0%, 5%, 10%,..., 95%, 100%)  
Remember: A higher value means more preferred.  
\$20-\$20 gets 100%, \$0-\$0 gets 0%.*

What are your 2 best guesses of the Column player's *ranking* of the 4 cells? 1=Best,4=Worst

Q6. 1. _____ 2. _____ 3. _____ 4. _____	<u>Prob. Correct</u> _____ %	Q7. 1. _____ 2. _____ 3. _____ 4. _____	<u>Prob. Correct</u> _____ %
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(Based on their probability values. Write "UL", "UR", "DL", and "DR" in the blanks. UL = Up-Left, UR = Up-Right, DL = Down-Left, DR = Down-Right.)

What are your *two* most likely guesses for the Column player's probability values of the four cells? And what are your probabilities that each guess is correct?

Q8. <table style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 5px;"><b>L</b></td> <td style="padding: 5px;"><b>R</b></td> <td style="padding: 5px;"><u>Prob. Correct</u></td> </tr> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">U %</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="padding: 5px;">_____ %</td> </tr> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">D %</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="padding: 5px;">_____ %</td> </tr> </table>	<b>L</b>	<b>R</b>	<u>Prob. Correct</u>	U %	%	_____ %	D %	%	_____ %	Q9. <table style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 5px;"><b>L</b></td> <td style="padding: 5px;"><b>R</b></td> <td style="padding: 5px;"><u>Prob. Correct</u></td> </tr> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">U %</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="padding: 5px;">_____ %</td> </tr> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">D %</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="padding: 5px;">_____ %</td> </tr> </table>	<b>L</b>	<b>R</b>	<u>Prob. Correct</u>	U %	%	_____ %	D %	%	_____ %
<b>L</b>	<b>R</b>	<u>Prob. Correct</u>																	
U %	%	_____ %																	
D %	%	_____ %																	
<b>L</b>	<b>R</b>	<u>Prob. Correct</u>																	
U %	%	_____ %																	
D %	%	_____ %																	

(Use multiples of 5% for your guesses, from 0% to 100%. The two guesses must be different in at least one of the cells.)

Q10. What is your probability belief that the Column player will play **Left**? \_\_\_\_\_ %

(Remember: The Column player will know which row you chose. Please a multiple of 5%)

What are your *two* most likely guesses about the Column player's belief that *you* will play **Up**? And what are your probabilities that each guess is correct?

Q11. <u>Guess #1</u> _____ %	<u>Prob. Correct</u> _____ %	Q12. <u>Guess #2</u> _____ %	<u>Prob. Correct</u> _____ %
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(Use multiples of 5% for your guesses. The two guesses must be different.)

Q13. What is your probability belief that the Column player will be *consistent*? \_\_\_\_\_ %

(*Consistent* means their column choice maximizes their probability value, given your row choice.)

# GAME #5

	<b>Left</b>	<b>Right</b>
<b>Up</b>	ROW: \$15 COL: \$5	ROW: \$2 COL: \$1
<b>Down</b>	ROW: \$1 COL: \$2	ROW: \$5 COL: \$10

Q1. Which row do you choose (circle one)?

Up      Down

Remember: The Column player sees this choice before making their choice. **PLEASE ENTER YOUR CHOICE IN THE WEBSITE NOW!**

For each of the cells, what is your *probability value* of those payments (from 0-100)?

	<b>L</b>	<b>R</b>	
<b>U</b>	Q2. _____ %	Q3. _____ %	(Please use multiples of 5% e.g. 0%, 5%, 10%,..., 95%, 100%) <b>Remember:</b> A higher value means more preferred. \$20-\$20 gets 100%, \$0-\$0 gets 0%.
<b>D</b>	Q4. _____ %	Q5. _____ %	

What are your 2 best guesses of the Column player's *ranking* of the 4 cells? 1=Best,4=Worst

Q6. 1. _____ 2. _____ 3. _____ 4. _____ Prob. Correct _____ %	Q7. 1. _____ 2. _____ 3. _____ 4. _____ Prob. Correct _____ %
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(Based on their probability values. Write "UL", "UR", "DL", and "DR" in the blanks. UL = Up-Left, UR = Up-Right, DL = Down-Left, DR = Down-Right.)

What are your *two* most likely guesses for the Column player's probability values of the four cells? And what are your probabilities that each guess is correct?

Q8. <table style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 5px;"><b>L</b></td> <td style="padding: 5px;"><b>R</b></td> <td style="padding: 5px;"><u>Prob. Correct</u></td> </tr> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">U</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> </tr> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">D</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">_____ %</td> </tr> </table>	<b>L</b>	<b>R</b>	<u>Prob. Correct</u>	U	%	%	D	%	_____ %	Q9. <table style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 5px;"><b>L</b></td> <td style="padding: 5px;"><b>R</b></td> <td style="padding: 5px;"><u>Prob. Correct</u></td> </tr> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">U</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> </tr> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">D</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">_____ %</td> </tr> </table>	<b>L</b>	<b>R</b>	<u>Prob. Correct</u>	U	%	%	D	%	_____ %
<b>L</b>	<b>R</b>	<u>Prob. Correct</u>																	
U	%	%																	
D	%	_____ %																	
<b>L</b>	<b>R</b>	<u>Prob. Correct</u>																	
U	%	%																	
D	%	_____ %																	

(Use multiples of 5% for your guesses, from 0% to 100%. The two guesses must be different in at least one of the cells.)

Q10. What is your probability belief that the Column player will play **Left**? \_\_\_\_\_ %

(Remember: The Column player will know which row you chose. Please a multiple of 5%)

What are your *two* most likely guesses about the Column player's belief that *you* will play **Up**? And what are your probabilities that each guess is correct?

Q11. <u>Guess #1</u> _____ % <u>Prob. Correct</u> _____ %	Q12. <u>Guess #2</u> _____ % <u>Prob. Correct</u> _____ %
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(Use multiples of 5% for your guesses. The two guesses must be different.)

Q13. What is your probability belief that the Column player will be *consistent*? \_\_\_\_\_ %

(Consistent means their column choice maximizes their probability value, given your row choice.)

## Part #6

The experimenter will roll a 20-sided die. In each question (Q1 through Q10) you have a choice between two different bets on that die roll. For each question, check the box next to the option you prefer.

<b>Q1.</b>	Roll 1-10 pays \$10	Roll 11-20 pays \$5	<input type="checkbox"/>	or	Roll 1 pays \$15	Roll 2-20 pays \$1	<input type="checkbox"/>
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<b>Q2.</b>	Roll 1-10 pays \$10	Roll 11-20 pays \$5	<input type="checkbox"/>	or	Roll 1-3 pays \$15	Roll 4-20 pays \$1	<input type="checkbox"/>
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<b>Q3.</b>	Roll 1-10 pays \$10	Roll 11-20 pays \$5	<input type="checkbox"/>	or	Roll 1-5 pays \$15	Roll 6-20 pays \$1	<input type="checkbox"/>
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<b>Q4.</b>	Roll 1-10 pays \$10	Roll 11-20 pays \$5	<input type="checkbox"/>	or	Roll 1-7 pays \$15	Roll 8-20 pays \$1	<input type="checkbox"/>
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<b>Q5.</b>	Roll 1-10 pays \$10	Roll 11-20 pays \$5	<input type="checkbox"/>	or	Roll 1-9 pays \$15	Roll 10-20 pays \$1	<input type="checkbox"/>
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<b>Q6.</b>	Roll 1-10 pays \$10	Roll 11-20 pays \$5	<input type="checkbox"/>	or	Roll 1-11 pays \$15	Roll 12-20 pays \$1	<input type="checkbox"/>
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<b>Q7.</b>	Roll 1-10 pays \$10	Roll 11-20 pays \$5	<input type="checkbox"/>	or	Roll 1-13 pays \$15	Roll 14-20 pays \$1	<input type="checkbox"/>
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<b>Q8.</b>	Roll 1-10 pays \$10	Roll 11-20 pays \$5	<input type="checkbox"/>	or	Roll 1-15 pays \$15	Roll 16-20 pays \$1	<input type="checkbox"/>
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<b>Q9.</b>	Roll 1-10 pays \$10	Roll 11-20 pays \$5	<input type="checkbox"/>	or	Roll 1-17 pays \$15	Roll 18-20 pays \$1	<input type="checkbox"/>
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<b>Q10.</b>	Roll 1-10 pays \$10	Roll 11-20 pays \$5	<input type="checkbox"/>	or	Roll 1-19 pays \$15	Roll 20 pays \$1	<input type="checkbox"/>
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## Part #6 (Continued)

The experimenter has a bag containing 20 poker chips. There are red chips and white chips in the bag, but the exact number of each is unknown to you. The number could be anywhere from 0 to 20 (as long as # red chips + # white chips = 20). The experimenter will draw one chip from this bag without looking.

In following questions, you can bet on the chip draw (the left option) or on a roll of a 20-sided die (the right option). In each question, check the box next to the one you prefer. The experimenter will draw the chip *before* it is known which question is chosen for payment. You can inspect the bag after the experiment is over, if you wish.

<b>Q11.</b>	Red chip pays \$20	White chip pays \$0	<input type="checkbox"/>	or	Roll 1-9 pays \$20	Roll 10-20 pays \$0	<input type="checkbox"/>
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<b>Q12.</b>	White chip pays \$20	Red chip pays \$0	<input type="checkbox"/>	or	Roll 1-5 pays \$20	Roll 6-20 pays \$0	<input type="checkbox"/>
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<b>Q13.</b>	Red chip pays \$20	White chip pays \$0	<input type="checkbox"/>	or	Roll 1-7 pays \$20	Roll 8-20 pays \$0	<input type="checkbox"/>
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## Part #6 (Continued)

The last three questions offer more bets on the same bag with 20 red and white chips, compared to bets on a 20-sided die roll. Again, pick the option you prefer for each question.

<b>Q14.</b>	White chip pays \$20	Red chip pays \$0	<input type="checkbox"/>	or	Roll 1-7 pays \$20	Roll 8-20 pays \$0	<input type="checkbox"/>
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<b>Q15.</b>	Red chip pays \$20	White chip pays \$0	<input type="checkbox"/>	or	Roll 1-5 pays \$20	Roll 6-20 pays \$0	<input type="checkbox"/>
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<b>Q16.</b>	White chip pays \$20	Red chip pays \$0	<input type="checkbox"/>	or	Roll 1-9 pays \$20	Roll 10-20 pays \$0	<input type="checkbox"/>
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APPENDIX I. INSTRUCTIONS & BOOKLET FOR THE SEQ TREATMENT: COLUMN PLAYERS

The instructions and decision booklet given to column players in the SEQ treatment appears below.

## (TO BE READ ALOUD AFTER ELICITATION INSTRUCTIONS)

We are now ready to proceed with the actual experiment.

Here is a quick summary of the experiment. You will be playing 5 games with another person in the room. One of you will be called the Row Player, and the other person will be called the Column Player. In each game, the Row Player makes their choice first. They will use a website to tell the Column Player what they chose. Then the Column player makes their choice second. Again, the Row Player goes first, and the Column player goes second in each game.

You have been given two sets of instructions. One is titled "Experiment Instructions" and the other is titled "Computer Instructions". Start with the Experiment Instructions. Read these on your own. At some point it will ask you to log into the website. You can use the "Computer Instructions" to figure out how to log in.

At any time if you have any questions or are confused, please raise your hand.

Go ahead and begin the experiment and proceed at your own pace.

## COMPUTER INSTRUCTIONS: Receiving Row Choices from the Row Player

In this experiment you need to see what the Row player chose **before** making your own choices. You do that through a computer interface.

Now open either Google Chrome or Mozilla Firefox (Internet browser), and go to:

<http://healy.econ.ohio-state.edu/exp/ab95/col>

Once there, login with your ID# (from your instruction booklet) and the following code:

**CODE:** \_\_\_\_\_

As the Row player makes his/her choices, you will see them appear on your screen. Once you see a choice for a given game, you may proceed to make your own choice for that game. (The Row player cannot go back and change their choice.)

The screen should automatically update itself every few seconds. If you want to manually update the screen, click the "Manually Reload" button whenever you like.

## EXPERIMENT INSTRUCTIONS: OVERVIEW

This is an experiment in the economics of decision-making. If you follow these instructions and make good decisions, you could earn a considerable amount of cash that will be paid to you at the end of the experiment.

Please silence & put away your cell phones. Please do not communicate with anyone other than the experimenter during this experiment. If you need help or have questions, please raise your hand at any time.

YOU ARE A COLUMN PLAYER WITH ID# \_\_\_\_\_

You are matched with the ROW player who has the same ID number. You will not see which person that is until the end of the experiment.

Following the instructions, there are 6 parts in this booklet. On each of the first 5 pages you are shown a game and asked several questions about that game. The sixth part asks you to choose between several gambles. At the end of the experiment, I will randomly pick one part, and randomly pick one question from that part. You will be paid based on what you chose in that *one* question. Exactly what the questions are will be explained shortly.

Every participant will receive a \$5 'show-up' fee for completing their booklet, in addition to their earnings from the one chosen question.

Please do not talk or try to communicate with anyone else during this experiment. If you have any questions, please raise your hand and the experimenter will assist you. If anything is confusing, please ask for clarification!

Turn the page now for detailed instructions, and then proceed at your own pace. When you are finished with your booklet, please turn it in to the experimenter. You can then return to your seat and wait patiently until all participants are finished.

## EXPERIMENT INSTRUCTIONS: GAMES & QUESTIONS

Turn two pages. You will see an example of one game and the 13 questions you will be asked about that game. This is exactly what you will be filling out in this experiment. This example page is already filled out, just to show you how to fill out the real pages for yourself. Obviously your answers may differ from those given in the example.

At the top of the page is the game itself. You are always the **COLUMN** player, which means you will choose one of the two **COLUMNS** (**Left** or **Right**) in the game. The person you're matched with is the **ROW** player, meaning they will pick one of the two **ROWS** (**Up** or **Down**) in the game. The row player will always choose **FIRST**. As the column player, you will always choose **SECOND**, meaning you will see their row choice before you pick a column. The four cells show the payoffs to each of you if that row and column are chosen. For example, if the other person chooses **Up** and then you choose **Right**, you get \$5 and they get \$10. If they choose **Down** and then you choose **Left**, you get \$10 and they get \$5. And so on. Remember, you will see which row the Row player chose before making your choice.

Before you can proceed with each game, **you must wait for the Row player to make their choice for that game**. You will see their choices through an interactive website. A separate page of instructions describes how to access that website.

For each game, the first question (Q1) is: which column do you choose? For our example player, the Row player chose Up (it is circled). So our example player picked Left. The outcome is Up-Left, meaning Row gets \$10 and Column (you) gets \$10. If this choice is chosen for payment, then two players will actually receive \$10 for the experiment (plus the show-up fee).

Q2-Q5 ask for your probability values for the payments in each of the four cells. For Q2 (the Up-Left cell), our example player feels that Row getting \$10 and Column getting \$10 is worth the same to her as a 50% chance of them both getting \$20. For Q3 (the Up-Right cell), our example player feels that Row getting \$10 and Column getting \$5 is worth the same to her as a 25% chance of them both getting \$20. Q4 and Q5 ask the same question for the Down-Left and Down-Right cells. Our example player answered "40%" and "5%", respectively, but of course your answers might be different. If one of these questions is chosen for payment, we'll randomly pick one of you, and use the method described in Part 2.5 of the "elicitation instructions" to determine your payments based on that person's answers.

Q6 and Q7 ask you to guess which cell the *other person* ranked the highest, 2<sup>nd</sup> highest, 3<sup>rd</sup> highest, and 4<sup>th</sup> highest, according to the probability values they gave. Our example player thinks it's most likely that the Row player put his highest value on the UL cell, his 2<sup>nd</sup>-highest value on the UR cell, his 3<sup>rd</sup>-highest value on the DL cell, and his lowest value on the DR cell. She is 90% sure that her guess is correct. For Q7, her next-best guess is that UL is highest, DL is 2<sup>nd</sup>-highest, UR is 3<sup>rd</sup> highest, and DR is lowest for the Row player. She's pretty sure her Q6 guess is right, so she only thinks her Q7 guess has a 5% chance of being correct. If one of these questions is chosen for payment, we'll use the method described in Part 4 of the "elicitation instructions" to determine your payment.

Q8 and Q9 ask you to guess the actual probability values that the Row player put in the four cells in Q2-Q5. Our example player's best guesses for the Row player's values are shown in Q8 (they are 50%, 45%, 30%, and 5%), and she thinks there's a 20% chance her guess is correct. Her second-best guess appears in Q9 (50%, 50%, 25%, 5%), and she's only 5% sure that guess is correct. If one of these questions is chosen for payment, we'll use the method described in Part 4 of the "elicitation instructions" to determine your payment.

For Q10 you do not do anything. However, the Row player has been asked their probability belief that you're going to choose Left. If this question is chosen for payment the Row player will be paid based on Part 3 of the "elicitation instructions", but you will receive a flat payment of \$10.

In Q11 and Q12, you are asked to give your 2 best guesses of the other person's answer to Q10. Our example player's best guess is that he said 100%, and she's 90% sure that's what he said. Her second-best guess is that he said 95%, but she's only 5% sure that's right (because she's pretty sure he said 100%). If this question is chosen for payment, we'll use the method described in Part 4 of the "elicitation instructions" to determine your payment

Q13 you can also skip. If this is chosen for payment then you will receive \$10.

The last part of the booklet (Part 6) simply asks you to choose between several gambles. If that page is chosen, one of your choices will be randomly selected and you will receive the outcome of that gamble.

Once you are done with all the pages of the booklet, please turn it in to the experimenter. Once everyone is finished, we will choose which page and which question is actually chosen for payment. We will then call you up in pairs to determine your actual payoffs. Remember you will get a \$5 show-up fee in addition to your earnings from the experiment.

# EXAMPLE GAME – ALREADY FILLED OUT

	Left	Right
Up	ROW: \$10 COL: \$10	ROW: \$10 COL: \$5
Down	ROW: \$5 COL: \$10	ROW: \$1 COL: \$1

Q1. Which column do you choose (circle one)?

Left

Right

For each of the cells, what is your *probability value* of those payments (from 0-100)?

	L	R
U	Q2. 50 %	Q3. 25 %
D	Q4. 40 %	Q5. 5 %

(Please use multiples of 5%  
e.g. 0%, 5%, 10%,..., 95%, 100%)  
*Remember: A higher value means more preferred.*  
\$20-\$20 gets 100%, \$0-\$0 gets 0%.

What are your 2 best guesses of the Row player's *ranking* of the 4 cells? 1=Best,4=Worst

Q6.	1. <u>UL</u> 2. <u>UR</u> 3. <u>DL</u> 4. <u>DR</u>	Prob. Correct <u>90 %</u>	Q7.	1. <u>UL</u> 2. <u>DL</u> 3. <u>UR</u> 4. <u>DR</u>	Prob. Correct <u>5 %</u>
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(Based on their probability values. Write "UL", "UR", "DL", and "DR" in the blanks. UL = Up-Left, UR = Up-Right, DL = Down-Left, DR = Down-Right.)

What are your *two* best guesses for the Row player's probability values of the four cells?  
And what are your probabilities that each guess is correct?

Q8.	L	R	Prob. Correct	Q9.	L	R	Prob. Correct
U	50 %	45 %	<u>20 %</u>	U	50 %	50 %	<u>5 %</u>
D	30 %	5 %		D	25 %	5 %	

(Use multiples of 5% for your guesses, from 0% to 100%. The two guesses must be different in at least one of the cells.)

Q10. [Skip.]

What are your *two* best guesses about the Row player's belief that *you* will play Left?  
And what are your probabilities that each guess is correct?

Q11.	<u>Guess #1</u>	Prob. Correct	Q12.	<u>Guess #2</u>	Prob. Correct
	<u>100 %</u>	<u>90 %</u>		<u>95 %</u>	<u>5 %</u>

(Use multiples of 5% for your guesses. The two guesses must be different.)

Q13. [Skip.]

# WAIT!

Please login to the website. Separate instructions are included. Use the website to find out which rows the Row player has chosen.

If you want, you may work on Part #6 (at the end of the booklet) until the Row player starts making his/her choices.

# GAME #1

	<b>Left</b>	<b>Right</b>
<b>Up</b>	ROW: <b>\$10</b> COL: <b>\$5</b>	ROW: <b>\$15</b> COL: <b>\$15</b>
<b>Down</b>	ROW: <b>\$5</b> COL: <b>\$10</b>	ROW: <b>\$1</b> COL: <b>\$1</b>

Q1. Which column do you choose (circle one)?

**Left**      **Right**

For each of the cells, what is your *probability value* of those payments (from 0-100)?

	<b>L</b>	<b>R</b>	
<b>U</b>	Q2. _____ %	Q3. _____ %	<i>(Please use multiples of 5% e.g. 0%, 5%, 10%,..., 95%, 100%) Remember: A higher value means more preferred. \$20-\$20 gets 100%, \$0-\$0 gets 0%.</i>
<b>D</b>	Q4. _____ %	Q5. _____ %	

What are your 2 best guesses of the Row player's *ranking* of the 4 cells? 1=Best,4=Worst

Q6. 1. _____ 2. _____ 3. _____ 4. _____	<u>Prob. Correct</u> _____ %	Q7. 1. _____ 2. _____ 3. _____ 4. _____	<u>Prob. Correct</u> _____ %
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(Based on their probability values. Write "UL", "UR", "DL", and "DR" in the blanks. UL = Up-Left, UR = Up-Right, DL = Down-Left, DR = Down-Right.)

What are your *two* best guesses for the Row player's probability values of the four cells? And what are your probabilities that each guess is correct?

Q8. <b>L</b> <b>R</b> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;"><b>U</b></td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> </tr> <tr> <td><b>D</b></td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> </tr> </table> <u>Prob. Correct</u> _____ %	<b>U</b>	%	%	<b>D</b>	%	%	Q9. <b>L</b> <b>R</b> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;"><b>U</b></td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> </tr> <tr> <td><b>D</b></td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> </tr> </table> <u>Prob. Correct</u> _____ %	<b>U</b>	%	%	<b>D</b>	%	%
<b>U</b>	%	%											
<b>D</b>	%	%											
<b>U</b>	%	%											
<b>D</b>	%	%											

(Use multiples of 5% for your guesses, from 0% to 100%. The two guesses must be different in at least one of the cells.)

Q10. [Skip.]

What are your *two* best guesses about the Row player's belief that *you* will play **Left**? And what are your probabilities that each guess is correct?

Q11. <u>Guess #1</u> _____ %	<u>Prob. Correct</u> _____ %	Q12. <u>Guess #2</u> _____ %	<u>Prob. Correct</u> _____ %
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(Use multiples of 5% for your guesses. The two guesses must be different.)

Q13. [Skip.]

# GAME #2

	<b>Left</b>	<b>Right</b>
<b>Up</b>	ROW: \$15 COL: \$15	ROW: \$1 COL: \$1
<b>Down</b>	ROW: \$2 COL: \$2	ROW: \$5 COL: \$5

Q1. Which column do you choose (circle one)?                      **Left**                      **Right**

For each of the cells, what is your *probability value* of those payments (from 0-100)?

	<b>L</b>	<b>R</b>	
<b>U</b>	Q2. _____ %	Q3. _____ %	<i>(Please use multiples of 5% e.g. 0%, 5%, 10%,..., 95%, 100%) Remember: A higher value means more preferred. \$20-\$20 gets 100%, \$0-\$0 gets 0%.</i>
<b>D</b>	Q4. _____ %	Q5. _____ %	

What are your 2 best guesses of the Row player's *ranking* of the 4 cells? 1=Best,4=Worst

Q6. 1. _____ 2. _____ 3. _____ 4. _____	<u>Prob. Correct</u> _____ %	Q7. 1. _____ 2. _____ 3. _____ 4. _____	<u>Prob. Correct</u> _____ %
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(Based on their probability values. Write "UL", "UR", "DL", and "DR" in the blanks. UL = Up-Left, UR = Up-Right, DL = Down-Left, DR = Down-Right.)

What are your *two* best guesses for the Row player's probability values of the four cells?  
And what are your probabilities that each guess is correct?

Q8. <b>L</b> <b>R</b> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">U</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> </tr> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">D</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> </tr> </table> <u>Prob. Correct</u> _____ %	U	%	%	D	%	%	Q9. <b>L</b> <b>R</b> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">U</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> </tr> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">D</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> </tr> </table> <u>Prob. Correct</u> _____ %	U	%	%	D	%	%
U	%	%											
D	%	%											
U	%	%											
D	%	%											

(Use multiples of 5% for your guesses, from 0% to 100%. The two guesses must be different in at least one of the cells.)

Q10. [Skip.]

What are your *two* best guesses about the Row player's belief that *you* will play **Left**?  
And what are your probabilities that each guess is correct?

Q11. <u>Guess #1</u> _____ %	<u>Prob. Correct</u> _____ %	Q12. <u>Guess #2</u> _____ %	<u>Prob. Correct</u> _____ %
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(Use multiples of 5% for your guesses. The two guesses must be different.)

Q13. [Skip.]

# GAME #3

	<b>Left</b>	<b>Right</b>
<b>Up</b>	ROW: \$10 COL: \$10	ROW: \$1 COL: \$15
<b>Down</b>	ROW: \$15 COL: \$1	ROW: \$5 COL: \$5

Q1. Which column do you choose (circle one)?                      **Left**                      **Right**

For each of the cells, what is your *probability value* of those payments (from 0-100)?

	<b>L</b>	<b>R</b>	
<b>U</b>	Q2. _____ %	Q3. _____ %	<i>(Please use multiples of 5% e.g. 0%, 5%, 10%,..., 95%, 100%) Remember: A higher value means more preferred. \$20-\$20 gets 100%, \$0-\$0 gets 0%.</i>
<b>D</b>	Q4. _____ %	Q5. _____ %	

What are your 2 best guesses of the Row player's *ranking* of the 4 cells? 1=Best,4=Worst

Q6. 1. _____ 2. _____ 3. _____ 4. _____	<u>Prob. Correct</u> _____ %	Q7. 1. _____ 2. _____ 3. _____ 4. _____	<u>Prob. Correct</u> _____ %
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(Based on their probability values. Write "UL", "UR", "DL", and "DR" in the blanks. UL = Up-Left, UR = Up-Right, DL = Down-Left, DR = Down-Right.)

What are your *two* best guesses for the Row player's probability values of the four cells?  
And what are your probabilities that each guess is correct?

Q8. <table style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 5px;"><b>L</b></td> <td style="padding: 5px;"><b>R</b></td> </tr> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> </tr> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> </tr> </table> <u>Prob. Correct</u> _____ %	<b>L</b>	<b>R</b>	%	%	%	%	Q9. <table style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 5px;"><b>L</b></td> <td style="padding: 5px;"><b>R</b></td> </tr> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> </tr> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> </tr> </table> <u>Prob. Correct</u> _____ %	<b>L</b>	<b>R</b>	%	%	%	%
<b>L</b>	<b>R</b>												
%	%												
%	%												
<b>L</b>	<b>R</b>												
%	%												
%	%												

(Use multiples of 5% for your guesses, from 0% to 100%. The two guesses must be different in at least one of the cells.)

Q10. [Skip.]

What are your *two* best guesses about the Row player's belief that *you* will play **Left**?  
And what are your probabilities that each guess is correct?

Q11. <u>Guess #1</u> _____ %	<u>Prob. Correct</u> _____ %	Q12. <u>Guess #2</u> _____ %	<u>Prob. Correct</u> _____ %
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(Use multiples of 5% for your guesses. The two guesses must be different.)

Q13. [Skip.]

# GAME #4

	<b>Left</b>	<b>Right</b>
<b>Up</b>	ROW: \$15 COL: \$5	ROW: \$5 COL: \$10
<b>Down</b>	ROW: \$5 COL: \$10	ROW: \$10 COL: \$5

Q1. Which column do you choose (circle one)?                      **Left**                      **Right**

For each of the cells, what is your *probability value* of those payments (from 0-100)?

	<b>L</b>	<b>R</b>	
<b>U</b>	Q2. _____ %	Q3. _____ %	<i>(Please use multiples of 5% e.g. 0%, 5%, 10%,..., 95%, 100%) Remember: A higher value means more preferred. \$20-\$20 gets 100%, \$0-\$0 gets 0%.</i>
<b>D</b>	Q4. _____ %	Q5. _____ %	

What are your 2 best guesses of the Row player's *ranking* of the 4 cells? 1=Best,4=Worst

Q6. 1. _____ 2. _____ 3. _____ 4. _____	<u>Prob. Correct</u> _____ %	Q7. 1. _____ 2. _____ 3. _____ 4. _____	<u>Prob. Correct</u> _____ %
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(Based on their probability values. Write "UL", "UR", "DL", and "DR" in the blanks. UL = Up-Left, UR = Up-Right, DL = Down-Left, DR = Down-Right.)

What are your *two* best guesses for the Row player's probability values of the four cells?  
And what are your probabilities that each guess is correct?

Q8.	<b>L</b>	<b>R</b>		Q9.	<b>L</b>	<b>R</b>	
<b>U</b>	%	%	<u>Prob. Correct</u>	<b>U</b>	%	%	<u>Prob. Correct</u>
<b>D</b>	%	%	_____ %	<b>D</b>	%	%	_____ %

(Use multiples of 5% for your guesses, from 0% to 100%. The two guesses must be different in at least one of the cells.)

Q10. [Skip.]

What are your *two* best guesses about the Row player's belief that *you* will play **Left**?  
And what are your probabilities that each guess is correct?

Q11. <u>Guess #1</u>	<u>Prob. Correct</u>	Q12. <u>Guess #2</u>	<u>Prob. Correct</u>
_____ %	_____ %	_____ %	_____ %

(Use multiples of 5% for your guesses. The two guesses must be different.)

Q13. [Skip.]

# GAME #5

	<b>Left</b>	<b>Right</b>
<b>Up</b>	ROW: \$15 COL: \$5	ROW: \$2 COL: \$1
<b>Down</b>	ROW: \$1 COL: \$2	ROW: \$5 COL: \$10

Q1. Which column do you choose (circle one)?

**Left**                      **Right**

For each of the cells, what is your *probability value* of those payments (from 0-100)?

	<b>L</b>	<b>R</b>	
<b>U</b>	Q2. _____ %	Q3. _____ %	<i>(Please use multiples of 5% e.g. 0%, 5%, 10%,..., 95%, 100%) Remember: A higher value means more preferred. \$20-\$20 gets 100%, \$0-\$0 gets 0%.</i>
<b>D</b>	Q4. _____ %	Q5. _____ %	

What are your 2 best guesses of the Row player's *ranking* of the 4 cells? 1=Best,4=Worst

Q6. 1. _____ 2. _____ 3. _____ 4. _____	<u>Prob. Correct</u> _____ %	Q7. 1. _____ 2. _____ 3. _____ 4. _____	<u>Prob. Correct</u> _____ %
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(Based on their probability values. Write "UL", "UR", "DL", and "DR" in the blanks. UL = Up-Left, UR = Up-Right, DL = Down-Left, DR = Down-Right.)

What are your *two* best guesses for the Row player's probability values of the four cells?  
And what are your probabilities that each guess is correct?

Q8. <b>L</b> <b>R</b> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">U</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> </tr> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">D</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> </tr> </table> <u>Prob. Correct</u> _____ %	U	%	%	D	%	%	Q9. <b>L</b> <b>R</b> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">U</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> </tr> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">D</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">%</td> </tr> </table> <u>Prob. Correct</u> _____ %	U	%	%	D	%	%
U	%	%											
D	%	%											
U	%	%											
D	%	%											

(Use multiples of 5% for your guesses, from 0% to 100%. The two guesses must be different in at least one of the cells.)

Q10. [Skip.]

What are your *two* best guesses about the Row player's belief that *you* will play **Left**?  
And what are your probabilities that each guess is correct?

Q11. <u>Guess #1</u> _____ %	<u>Prob. Correct</u> _____ %	Q12. <u>Guess #2</u> _____ %	<u>Prob. Correct</u> _____ %
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(Use multiples of 5% for your guesses. The two guesses must be different.)

Q13. [Skip.]

## Part #6

The experimenter will roll a 20-sided die. In each question (Q1 through Q10) you have a choice between two different bets on that die roll. For each question, check the box next to the option you prefer.

<b>Q1.</b>	Roll 1-10 pays \$10	Roll 11-20 pays \$5	<input type="checkbox"/>	or	Roll 1 pays \$15	Roll 2-20 pays \$1	<input type="checkbox"/>
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<b>Q2.</b>	Roll 1-10 pays \$10	Roll 11-20 pays \$5	<input type="checkbox"/>	or	Roll 1-3 pays \$15	Roll 4-20 pays \$1	<input type="checkbox"/>
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<b>Q3.</b>	Roll 1-10 pays \$10	Roll 11-20 pays \$5	<input type="checkbox"/>	or	Roll 1-5 pays \$15	Roll 6-20 pays \$1	<input type="checkbox"/>
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<b>Q4.</b>	Roll 1-10 pays \$10	Roll 11-20 pays \$5	<input type="checkbox"/>	or	Roll 1-7 pays \$15	Roll 8-20 pays \$1	<input type="checkbox"/>
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<b>Q5.</b>	Roll 1-10 pays \$10	Roll 11-20 pays \$5	<input type="checkbox"/>	or	Roll 1-9 pays \$15	Roll 10-20 pays \$1	<input type="checkbox"/>
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<b>Q6.</b>	Roll 1-10 pays \$10	Roll 11-20 pays \$5	<input type="checkbox"/>	or	Roll 1-11 pays \$15	Roll 12-20 pays \$1	<input type="checkbox"/>
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<b>Q7.</b>	Roll 1-10 pays \$10	Roll 11-20 pays \$5	<input type="checkbox"/>	or	Roll 1-13 pays \$15	Roll 14-20 pays \$1	<input type="checkbox"/>
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<b>Q8.</b>	Roll 1-10 pays \$10	Roll 11-20 pays \$5	<input type="checkbox"/>	or	Roll 1-15 pays \$15	Roll 16-20 pays \$1	<input type="checkbox"/>
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<b>Q9.</b>	Roll 1-10 pays \$10	Roll 11-20 pays \$5	<input type="checkbox"/>	or	Roll 1-17 pays \$15	Roll 18-20 pays \$1	<input type="checkbox"/>
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<b>Q10.</b>	Roll 1-10 pays \$10	Roll 11-20 pays \$5	<input type="checkbox"/>	or	Roll 1-19 pays \$15	Roll 20 pays \$1	<input type="checkbox"/>
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## Part #6 (Continued)

The experimenter has a bag containing 20 poker chips. There are red chips and white chips in the bag, but the exact number of each is unknown to you. The number could be anywhere from 0 to 20 (as long as # red chips + # white chips = 20). The experimenter will draw one chip from this bag without looking.

In following questions, you can bet on the chip draw (the left option) or on a roll of a 20-sided die (the right option). In each question, check the box next to the one you prefer. The experimenter will draw the chip *before* it is known which question is chosen for payment. You can inspect the bag after the experiment is over, if you wish.

<b>Q11.</b>	Red chip pays \$20	White chip pays \$0	<input type="checkbox"/>	or	Roll 1-9 pays \$20	Roll 10-20 pays \$0	<input type="checkbox"/>
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<b>Q12.</b>	White chip pays \$20	Red chip pays \$0	<input type="checkbox"/>	or	Roll 1-5 pays \$20	Roll 6-20 pays \$0	<input type="checkbox"/>
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<b>Q13.</b>	Red chip pays \$20	White chip pays \$0	<input type="checkbox"/>	or	Roll 1-7 pays \$20	Roll 8-20 pays \$0	<input type="checkbox"/>
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## Part #6 (Continued)

The last three questions offer more bets on the same bag with 20 red and white chips, compared to bets on a 20-sided die roll. Again, pick the option you prefer for each question.

<b>Q14.</b>	White chip pays \$20	Red chip pays \$0	<input type="checkbox"/>	or	Roll 1-7 pays \$20	Roll 8-20 pays \$0	<input type="checkbox"/>
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<b>Q15.</b>	Red chip pays \$20	White chip pays \$0	<input type="checkbox"/>	or	Roll 1-5 pays \$20	Roll 6-20 pays \$0	<input type="checkbox"/>
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<b>Q16.</b>	White chip pays \$20	Red chip pays \$0	<input type="checkbox"/>	or	Roll 1-9 pays \$20	Roll 10-20 pays \$0	<input type="checkbox"/>
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APPENDIX J. INSTRUCTIONS & BOOKLET FOR THE SIM-NOE TREATMENT: ROW  
PLAYERS

The instructions and decision booklet given to row players in the SIM-NoE treatment appears below.

## **EXPERIMENT INSTRUCTIONS: OVERVIEW**

This is an experiment in the economics of decision-making. If you follow these instructions and make good decisions, you could earn a considerable amount of cash that will be paid to you at the end of the experiment.

Please silence & put away your cell phones. Please do not communicate with anyone other than the experimenter during this experiment. If you need help or have questions, please raise your hand at any time.

**YOU ARE A ROW PLAYER WITH ID#\_\_\_\_\_**

You are matched with the COLUMN player who has the same ID number. You will not see which person that is until the end of the experiment.

Following the instructions, there are 5 pages in this booklet. On each of those 5 pages you are shown a game and asked to play that game. At the end of the experiment, I will randomly pick one page and pay you based on what you and the COLUMN player chose for that game.

Every participant will receive a \$5 'show-up' fee for completing their booklet, in addition to their earnings from the one chosen game.

Please do not talk or try to communicate with anyone else during this experiment. If you have any questions, please raise your hand and the experimenter will assist you. If anything is confusing, please ask for clarification!

Turn the page now for detailed instructions, and then proceed at your own pace. When you are finished with your booklet, please turn it in to the experimenter. You can then return to your seat and wait patiently until all participants are finished.

## EXPERIMENT INSTRUCTIONS: GAMES & QUESTIONS

Turn the page. You will see an example of a game. This example page is already filled out, just to show you how to fill out the real pages for yourself. Obviously your answers may differ from those given in the example.

At the top of the page is the game. You are always the **ROW** player, which means you will choose one of the two **ROWS** (**Up** or **Down**) in the game. The person you're matched with is the **COLUMN** player, meaning they will pick one of the two **COLUMNS** (**Left** or **Right**) in the game. The four cells show the payoffs to each of you if that row and column are chosen. For example, if you choose **Up** and the other person chooses **Right**, you get \$10 and they get \$5. If you choose **Down** and they choose **Left**, then you get \$5 and they get \$10. And so on.

Below that you are asked to choose a row. For our example player, she picked **Up**. If this game were randomly selected for payment, then we would look at what the Column player chose. If he chose **Left**, then the outcome is **Up-Left**, so Row (you) gets \$10 and Column gets \$10. If he chose **Right**, then the outcome is **Up-Right**, so Row (you) gets \$10 and Column (you) gets \$5. In other words, we actually pay you both based on the game's outcome.

Once you are done with all the pages of the booklet, please turn it in to the experimenter. Once everyone is finished, we will choose which page and which question is actually chosen for payment. We will then call you up in pairs to determine your actual payoffs. Remember you will get a \$5 show-up fee in addition to your earnings from the experiment.

# EXAMPLE GAME – ALREADY FILLED OUT

	Left	Right
Up	ROW: \$10 COL: \$10	ROW: \$10 COL: \$5
Down	ROW: \$5 COL: \$10	ROW: \$1 COL: \$1

Which row do you choose (circle one)?

Up

Down

# GAME #1

	Left	Right
Up	ROW: \$10 COL: \$5	ROW: \$15 COL: \$15
Down	ROW: \$5 COL: \$10	ROW: \$1 COL: \$1

Which row do you choose (circle one)?

Up

Down

## GAME #2

	Left	Right
Up	ROW: \$15 COL: \$15	ROW: \$1 COL: \$1
Down	ROW: \$2 COL: \$2	ROW: \$5 COL: \$5

Which row do you choose (circle one)?

Up

Down

# GAME #3

	Left	Right
Up	ROW: \$10 COL: \$10	ROW: \$1 COL: \$15
Down	ROW: \$15 COL: \$1	ROW: \$5 COL: \$5

Which row do you choose (circle one)?

Up

Down

# GAME #4

	Left	Right
Up	ROW: \$15 COL: \$5	ROW: \$5 COL: \$10
Down	ROW: \$5 COL: \$10	ROW: \$10 COL: \$5

Which row do you choose (circle one)?

Up

Down

# GAME #5

	Left	Right
Up	ROW: \$15 COL: \$5	ROW: \$2 COL: \$1
Down	ROW: \$1 COL: \$2	ROW: \$5 COL: \$10

Which row do you choose (circle one)?

Up

Down

APPENDIX K. INSTRUCTIONS & BOOKLET FOR THE SIM-NOE TREATMENT: COLUMN  
PLAYERS

The instructions and decision booklet given to column players in the SIM-NoE treatment appears below.

## **EXPERIMENT INSTRUCTIONS: OVERVIEW**

This is an experiment in the economics of decision-making. If you follow these instructions and make good decisions, you could earn a considerable amount of cash that will be paid to you at the end of the experiment.

Please silence & put away your cell phones. Please do not communicate with anyone other than the experimenter during this experiment. If you need help or have questions, please raise your hand at any time.

**YOU ARE A COLUMN PLAYER WITH ID#\_\_\_\_\_**

You are matched with the ROW player who has the same ID number. You will not see which person that is until the end of the experiment.

Following the instructions, there are 5 pages in this booklet. On each of those 5 pages you are shown a game and asked to play that game. At the end of the experiment, I will randomly pick one page and pay you based on what you and the ROW player chose for that game.

Every participant will receive a \$5 'show-up' fee for completing their booklet, in addition to their earnings from the one chosen game.

Please do not talk or try to communicate with anyone else during this experiment. If you have any questions, please raise your hand and the experimenter will assist you. If anything is confusing, please ask for clarification!

Turn the page now for detailed instructions, and then proceed at your own pace. When you are finished with your booklet, please turn it in to the experimenter. You can then return to your seat and wait patiently until all participants are finished.

## EXPERIMENT INSTRUCTIONS: GAMES & QUESTIONS

Turn the page. You will see an example of a game. This example page is already filled out, just to show you how to fill out the real pages for yourself. Obviously your answers may differ from those given in the example.

At the top of the page is the game. You are always the **COLUMN** player, which means you will choose one of the two **COLUMNS** (**Left** or **Right**) in the game. The person you're matched with is the **ROW** player, meaning they will pick one of the two **ROWS** (**Up** or **Down**) in the game. The four cells show the payoffs to each of you if that row and column are chosen. For example, if you choose **Right** and the other person chooses **Up**, you get \$5 and they get \$10. If you choose **Left** and they choose **Down**, then you get \$10 and they get \$5. And so on.

Below that you are asked to choose a column. For our example player, she picked Left. If this game were randomly selected for payment, then we would look at what the Row player chose. If he chose Up, then the outcome is Up-Left, so Row gets \$10 and Column (you) gets \$10. If he chose Down, then the outcome is Down-Left, so Row gets \$5 and Column (you) gets \$10. In other words, we actually pay you both based on the game's outcome.

Once you are done with all the pages of the booklet, please turn it in to the experimenter. Once everyone is finished, we will choose which page and which question is actually chosen for payment. We will then call you up in pairs to determine your actual payoffs. Remember you will get a \$5 show-up fee in addition to your earnings from the experiment.

# EXAMPLE GAME – ALREADY FILLED OUT

	Left	Right
Up	ROW: \$10 COL: \$10	ROW: \$10 COL: \$5
Down	ROW: \$5 COL: \$10	ROW: \$1 COL: \$1

Which column do you choose (circle one)?

Left

Right

# GAME #1

	Left	Right
Up	ROW: \$10 COL: \$5	ROW: \$15 COL: \$15
Down	ROW: \$5 COL: \$10	ROW: \$1 COL: \$1

Which column do you choose (circle one)?

Left

Right

## GAME #2

	Left	Right
Up	ROW: \$15 COL: \$15	ROW: \$1 COL: \$1
Down	ROW: \$2 COL: \$2	ROW: \$5 COL: \$5

Which column do you choose (circle one)?

Left

Right

# GAME #3

	Left	Right
Up	ROW: \$10 COL: \$10	ROW: \$1 COL: \$15
Down	ROW: \$15 COL: \$1	ROW: \$5 COL: \$5

Which column do you choose (circle one)?

Left

Right

# GAME #4

	Left	Right
Up	ROW: \$15 COL: \$5	ROW: \$5 COL: \$10
Down	ROW: \$5 COL: \$10	ROW: \$10 COL: \$5

Which column do you choose (circle one)?

Left

Right

# GAME #5

	Left	Right
Up	ROW: \$15 COL: \$5	ROW: \$2 COL: \$1
Down	ROW: \$1 COL: \$2	ROW: \$5 COL: \$10

Which column do you choose (circle one)?

Left

Right

I can't believe you made it to the end of this document!