Delegation: Penalties for Lying
Instructions (6/5/96)

When Subjects enter Lab:

_____ Ask them to read and sign consent forms.
_____ Pay on-time bonus.
_____ Pay extras.

Supplies:

1. Paper and pencils for notes. 10-sided die. Big coin.
2. Registration forms. Post-experimental questionnaire. Money.
3. Number the consent forms so that we know who passes and fails important quiz questions.
4. Get signaling sheets ready: Heads. Tails.

Read to Subjects:

Welcome to the UCSD Political Science Experimental Lab. Today's experiment is part of a study on decision making. At the end of the experiment, we will pay you for your participation. The amount we pay you depends on your decisions, the decisions of others, and chance. While we cannot guarantee that you will earn any specific amount, we can guarantee that if you are careful, make good decisions, and complete the experiment, then you can expect to earn between $10 and $60. Today's experiment will last no longer than two hours.

This is a pen-and-paper experiment. Thus, you are to record all of your actions on questionnaires that we will later distribute. Along the way, you may have questions about the experiments. If you do, please raise your hand and one of us will assist you. It is very important that you do not communicate with any other participant at any time during the experiment. If you do, we will ask you to leave. [Pause]

Now we are going to tell you how to make money. You can make money by predicting the outcomes of 28 coin tosses. Every time you make a correct prediction, we pay you 50 cents. Every time you make an incorrect prediction, you earn nothing. Are there any questions about how you earn money?

[Distribute Trial 1-6 questionnaire]

We are now handing out a questionnaire. Whenever we give you a new questionnaire, the first thing you should do is write your name on it. This will help us pay you.

To see how our experiment works, please look at Practice Trial 1. In Practice Trial 1, the subject predicts that the coin will land on tails. If the coin does land on tails, then we pay the subject 50 cents. If it lands on heads, then the subject earns nothing.

To make a prediction, put a check on the line next to the word Heads or the word Tails when we instruct you to do so. Once you make a prediction for a particular coin toss, you cannot scribble it out or change it. If you do, then you earn nothing for that coin toss, even if the check mark that is not scribbled out is correct. Are there any questions about how to make a prediction?

Throughout the experiment, we will vary the difficulty of making a correct prediction. In some trials, it will be easy to make correct predictions. In other trials, it will be more difficult. The coin tosses in the first two trials should be very easy to predict. This is true because we will toss the coin and show you the result *before* we ask you to make predictions.

We will now toss the first coin. [Toss the coin]. The outcome of Trial 1 is [heads/tails]. [show all participants the result]. Please make a prediction about the outcome of Trial 1. [Subjects make predictions.]

We will now check the results and pay you for your predictions. [Check results and pay.]

We will now toss the second coin. [Toss the coin]. The outcome of Trial 2 is [heads/tails]. [show all participants the result]. Please predict the outcome of Trial 2. [Subjects make predictions.]

We will now check the results and pay you for your predictions. [Check results and pay.]

We will now toss the coin four more times. As before, we pay you 50 cents every time you make a correct prediction. Unlike before, however, we will record, but will not tell you, the results of the four tosses. Thus, you must make your predictions ***without knowing the coin toss outcomes***. To move the experiment along, we will reveal coin toss outcomes and pay you your remaining earnings at the end of the experiment. Remember: you earn nothing if you scribble out your prediction.

We will now toss the third coin and record the result. [Toss coin.] Please predict the coin toss outcome in Trial 3.

We now toss the [fourth fifth sixth] coin and record the result. [Toss coin.] Please predict the coin toss outcome in Trial [4 5 6].

We will now collect your questionnaires.

[**Collect Trial 1-6 questionnaires.]**

We are now ready to move to the next set of trials. Please pay close attention to these new instructions as they will be followed by a quiz in which we pay you for every question that you answer correctly.

The change in the experiment is that, from now on, we will randomly select one of you to be a *reporter*. We call the other 11 subjects *predictors*. Unlike the 11 predictors, the reporter gets to see the coin toss outcome. After he or she sees the coin toss outcome, the reporter's job is to provide information about the coin toss outcome to the predictors. Then, the predictors make predictions. Now that we have described the general structure of the experiment, we will give you more specific instructions.

[Distribute Common Interests handout (questionnaire attached).]

As your handout shows, the sequence of events in the upcoming trials is as follows. First, we toss a coin. Second, we record the coin toss outcome in our computer. Doing this makes calculating your payoffs easier and helps us pay you faster at the end of the experiment. Then, we show the coin toss outcome to the reporter. Next, the reporter reports heads or tails. Whether the reporter decides to send a true report or a false report is entirely up to him or her. [Pause.]

Below step 4 in the sequence of events are two examples of how the reporter makes his or her choice. The reporter makes a report by putting a check on the line next to the word "heads", or next to the word "tails." You can see that the reporter reports heads in Toss 1 and tails in Toss 2.

After the reporter makes his or her report, one of the other experimenters uses an index card to silently signal it to me. I then announce the reporter's report. We send the report in this way so that the predictors do not learn anything about the reporter from the sound of his or her voice. [Pause.] After I announce the report, the predictors make their predictions. Then that trial ends and we move to the next one. Are there any questions about the sequence of events?

Note that the predictors do not see the coin toss result -- all they hear is the reporter's report about it. Also, and unlike the predictors, I do not see the true coin toss outcome, all I see is the reporter's report.

If you turn to the next page of your handout, you can see how the predictors and the reporter earn money. Predictors earn money the same way they did earlier in the experiment, we pay each predictor 50 cents for every correct prediction that they make. The reporter makes money in a different way. We pay the reporter 50 cents every time a predictor makes a correct prediction and there are 11 predictors.

At the bottom of the page are two examples of how the reporter makes money. In the first example, the reporter makes a report and all 11 predictors make correct predictions. As a result, we pay the reporter $5.50 -- that is, 50 cents per correct prediction and we pay each predictor 50 cents. In the second example, you can see that if all 11 predictors make incorrect predictions, then the reporter and the predictors would have earned nothing. Are there any questions about how the reporter makes money?

We will now give you a quiz on the instructions. We will pay you for every question that you answer correctly. Feel free to look at the information on your handout during the quiz. Write your name on the quiz and begin taking when you receive it.

[Distribute Quiz 1.]
[Check, correct, and collect Quiz 1.]

We will now use a coin and a six-sided die to determine who will be the reporter. [roll the die]. To protect the integrity of the experiment, we ask all of you to place your heads on your desk for just a moment. [Pause.] Will the reporter please move to the reporter's chair. [Pause.] You may lift your heads off your desk now.

We are now ready for the next trial. [toss the coin and show to the reporter]. [check report.] The [There is no] report for Trial number [7 8 9 10] is [heads/tails]. Please make your predictions.

We will now collect your questionnaires.

[Collect Common Interest Handouts].

We are now ready to move to the next set of trials. Please pay close attention to these instructions as they will be followed by a quiz in which we pay you for every question that you answer correctly.

[Distribute Conflicting Interest handout & questionnaires.]

As you look through your new handout, you can see that the next set of trials differ from the previous trials in only one way. This time, we pay the reporter 50 cents for every *incorrect* prediction that the predictors make. At the bottom of the page, you can see that if all 11 predictors make correct predictions, then the reporter earns nothing and the predictors earn 50 cents each. By contrast, if all 11 predictors make incorrect predictions, the reporter earns $5.50 and the predictors earn nothing. Are there any questions? *Remember that the predictors do not observe the coin toss and that reporter can, but does not have to, tell the truth.*

We will now give you a quiz on the instructions. Feel free to look at the information on your handout during the quiz. We again pay you for every question that you answer correctly. Please write your name on the quiz and begin taking it when you receive it.

[Distribute Quiz 2.]
[Check, correct, and collect Quiz 2.]

We are now ready for the next trial. [toss the coin and show to the reporter]. [check report.] The [There is no] report for Trial number [11 12 13 14] is [heads/tails]. Please make your predictions.

We will now collect your questionnaires.

[Collect Conflicting Interest handout and questionnaires].

We are now ready to move to the next set of trials. Please pay close attention to the new instructions as they will be followed by a quiz in which we pay you for every question that you answer correctly.

The next set of trials differ from the previous trials in only one way. This time, the reporter must pay $10 for every false report that he or she makes. The new handout describes the upcoming trials in greater detail.

[Distribute PFL handout & questionnaires.]

Please look at the first page of your handout. Here you can see that the sequence of events is the same as before. First, we toss a coin. Second, we record the coin toss outcome in our computer. Next, we show the coin toss outcome to the reporter. Then, the reporter makes a report, which may be true or false. Next, the reporter's report is signaled to me and I announce the report. Then, the predictors make predictions. After they do, then we move the next trial.

What is different about the upcoming trials is how the reporter makes money. You can see this difference on the second page of your handout. As before, we pay the reporter 50 cents for every predictor who makes an incorrect prediction. However, in the next set of trials, false reports cost the reporter $10 each. True reports cost the reporter nothing. Again, every time the reporter makes a false report, we deduct $10 from his or her experimental earnings.

The examples at the bottom of the page show exactly how this change in the experiment affects the reporter's payoffs. In example 1, you can see that if the reporter makes a false report and all 11 predictors make correct predictions, then the reporter loses $10 and the predictors earn 50 cents each. In example 2, you can see that if the reporter makes a false report and all 11 predictors make incorrect predictions, then the reporter loses a total of $4.50 and the predictors earn nothing. In example 3, you can see that if the reporter makes a true report and all 11 predictors make correct predictions, then the reporter neither makes money nor loses money and the predictors earn 50 cents each. Finally, in example 4, you can see that if the reporter makes a true report and all 11 predictors make incorrect predictions, then the reporter earns $5.50 and the predictors earn nothing. Are there any questions about how the reporter and predictors earn money?

We will now give you a quiz on the instructions. Feel free to look at the information on your handout during the quiz. Again, we pay you for every quiz question that you answer correctly. You may begin the quiz when you receive it.

[Distribute, then Check Quiz 3.]

We are now ready for the next trial. [check report.] The [There is no] report for Trial number [15 16 17 18] is [heads/tails]. Please make your predictions.

We will now collect your questionnaires.

[Collect PFL handout and questionnaire.]

We are now ready to move to the next set of trials. Please pay close attention to the new instructions as they will be followed by a quiz in which we pay you for every question that you answer correctly. We are now going to change the experiment in a substantial way. The first change in the experiment is that each trial will now consist of two stages. We call these stages Stage 1 and Stage 2. Each of you will participate in either Stage 1 or Stage 2. None of you will participate in both stages. Stage 1 is totally new. We will give you more details about it in a moment. Stage 2 is the same as some of the previous trials. Since it is familiar, I will first describe Stage 2. Then, we will discuss Stage 1.

[Distribute Delegation-Common Interests handout.]

Please look at the Stage 2 sequence of events. First, we show the coin toss outcome to the reporter. Next, the reporter reports heads or tails. Then, the report is delivered to the predictor. Next, the predictor makes a prediction. Then, we move to Stage I of the next trial. Note that the main difference between Stage 2 and the previous trials is that now only two of you will participate in it. That is, from now on, only one of you will be a reporter and only one of you will be a predictor. Are there any questions about Stage 2?

On the second page of your handout is information about Stage 1. In each of the remaining experimental trials, ten of you will participate in Stage 1. We will call you Stage 1 players. Stage 1 players do not participate in Stage 2. That is, Stage 1 players are neither reporters nor predictors.

Stage 1 begins with the coin toss. Then, we record the coin toss in our computer. Then, I direct Stage 1 players to look at their questionnaires. Step 4 on the sequence of events shows what the Stage 1 players will see. You can see that for each trial, a Stage 1 player's questionnaire contains two pieces of information. The first piece of information is the coin toss outcome. In Toss 1, this outcome is Heads. In Toss 2, this outcome is Tails. Note that we earlier today flipped the coin one time for each of the remaining experimental trials to make the experiment run efficiently. We then typed these outcomes into the Stage 1 player questionnaires. As a result, all 10 Stage 1 players see and know the coin toss outcome for every remaining experimental trial. Are there any questions about this?

The second piece of information on Stage 1 player questionnaires is an option. Below step 4a in the sequence of events you can see an example of such an option. In the example, the stage 1 player can choose to either earn a fixed amount of $1.40 or to earn $2 if the predictor in stage 2 correctly predicts the coin toss outcome. When a Stage I player takes this option, he or she makes $2 when the predictor gets the coin toss right

and earn nothing if the predictor makes an error. Thus, taking the option is like betting that the predictor will make a correct prediction. Are there any questions?

Below step 4b you can see the other option available to Stage 1 players. In this case, Stage 1 players choose to take the fixed amount of $1.40 or to earn $2 if the predictor in stage 2 gets the coin toss wrong. When a Stage I player takes this option, he or she profits from the predictor's mistakes and earns nothing when the predictor gets the coin toss right. Thus, taking *this* option is like betting that the predictor will make *an incorrect* prediction. In sum, sometimes Stage 1 players have the option to earn $2 when the predictor makes a correct prediction (as in step 4a), while other times they have the option to earn $2 when the predictor makes an incorrect prediction. Are there any questions about the stage 1 sequence of events?

If you turn to the next page of your handout, you can see how the stage 1 players can affect the reporter's and predictor's earnings. Note that nothing the Stage I players do can affect the reporter's earnings. As before, every false report costs the reporter $10. Unlike before, we pay the reporter $5 if the predictor makes an incorrect prediction and nothing if the predictor makes a correct prediction. Note that there is only one predictor. What this means is that, if the reporter makes a false report and all the predictors makes a correct prediction, then the reporter loses $10; if the reporter makes a false report and the predictor makes an incorrect predictions, then the reporter loses $5; if the reporter makes a true report and the predictors makes a correct prediction, then the reporter neither makes money nor loses money; and, if the reporter makes a true report and the predictor makes an incorrect predictions, then the reporter earns $5. Are there any questions about how the reporter earns money?

Moving down the page, you can see the new way that the predictor makes money. The predictor makes money only if two things happen. First, the predictor must make a correct prediction. Second, at least one Stage 1 player must choose the bet. Thus, if all 10 Stage I players choose to earn the fixed amount or the predictor makes an incorrect prediction, then the predictor earns nothing. By contrast, for every stage 1 player who bets on the predictor's prediction, we pay the predictor $1 if he or she makes a correct prediction. So, for example, if all 10 stage 1 players bet on the predictor's prediction, and the predictor makes a correct prediction, then we pay the predictor $10 or 10 times $1.

The next page of your handout provides more detailed examples of how the predictor is paid. Please take a minute to look at this page to understand how we pay the predictor and ask questions if there is something that you do not understand. [20 second pause.] Are there any questions about how we pay the predictor?

We will now give you a quiz on the new instructions. Feel free to look at the information on your handout during the quiz. We again pay you for every question that you answer correctly. Please write your name on the quiz and begin taking it when you receive it.

[Distribute Quiz 4.]

[Check, correct, and collect Quiz 4.]

We now need to select the predictor. To make this selection, we again use a coin and a six-sided die. To protect the integrity of the experiment, we ask all of you to place your heads on your desk for just a moment. [Pause.] Will the predictor please move to the predictor's chair. [Pause.] You may lift your heads off your desk now.

[Distribute Toss 19-28 questionnaires.]

Before we resume the experiment, I would like to take a moment to tell you precisely what is going to happen in the upcoming trials. First, I will ask the stage I players to please look at the information on their questionnaires and choose an option. Then, one of the experimenters will show the coin toss outcome to the reporter. Note that the coin toss outcome is not printed on the reporter's questionnaire, so when we show the reporter the coin toss outcome, this will be the first time that he or she sees it. After we show the reporter the coin toss outcome, the reporter will make a report. Then, the experimenter will show the predictor the reporter's report. Then, I will ask the predictor to make a prediction. Then, we will move to the next trial. Please take a moment to look at your new handout. Are there any questions?

Stage I players, please look at the information on your questionnaires and choose an option for toss [19 20 21 22 23 24 25 26 27 28]. [10 second pause.]

We are now showing the coin toss outcome to the reporter. [10 second pause.]

We are now delivering a report to the predictor. Please make your prediction.

We will now collect your questionnaires. **[Collect handout and questionnaires.]**

Conclusion

This concludes the experiment. We will now compute the results and your payoffs. While we are doing this, we would like you to fill out a post experimental survey. Please respond to each of the questions carefully. In a few moments, we will call each of you individually to collect your survey and to pay you. At that time, you are free to go. Thanks again for your participation.

[Tabulate results and call up each participant individually to collect post experiment questionnaire and pay them. Give each participant a receipt (with their social security number) and business card.]