Web Appendix: Sample of Subjects' Instructions

Instructions

Welcome

Welcome to our study of decision making, and thank you for participating. A research foundation provided funds for this experiment.

We will start the study after the instructions have been read and everyone has understood the set-up. The study should take less than 90 minutes to complete.

Please do not say anything aloud at any time. If you have a question, please raise your hand.

Confidentiality and Payment

You will be paid for your participation today. What you earn will depend partly on your decisions and partly on chance. If you are careful and make good decisions, you may earn a considerable amount of money.
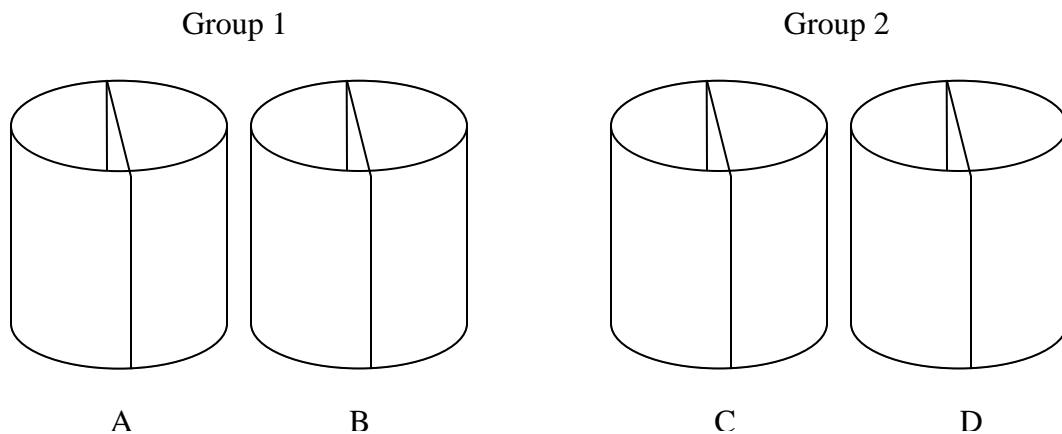
You will be paid privately, in cash, at the end of the experiment. Your decisions and earnings will be completely confidential. Neither the experimenter nor the other participants will ever be able to connect you to the decisions or earnings you make. Not even the person giving you your payment in the envelope will know what is inside.

Before beginning, you will draw a card from a deck of cards. This card will show your individual number and a password, which you will need to log on your computer. Your individual number will be used by the computer to record your decisions and calculate your earnings. At the end of the experiment, you use this card to claim your earnings envelope.

The Task

The study today will be divided into three parts, called *Sets*. Let's describe what happens in one of those sets.

The Urns and the Groups. In each set, we will be drawing balls from *one* of four urns, like those shown in the figure below.

Group 1   Group 2

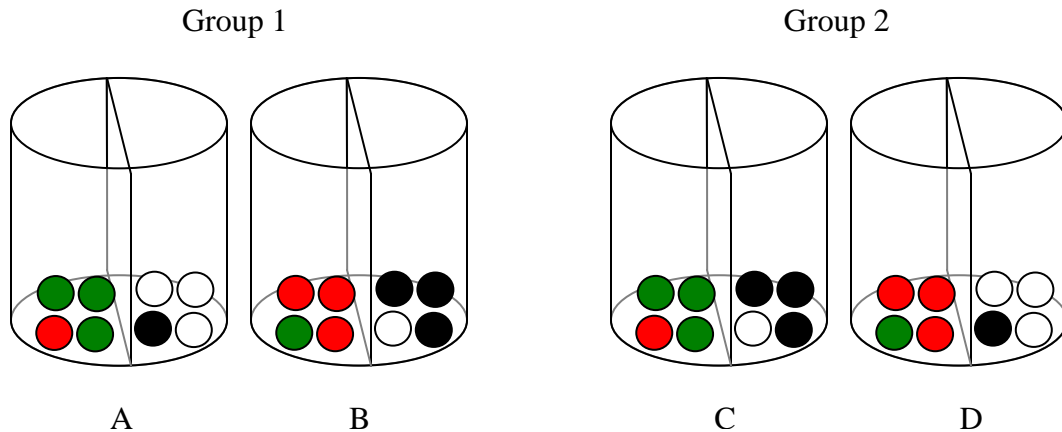A   B   C   D

As you can see, the urns are labeled A, B, C and D, and are divided into two Groups:
- Group 1 with urns A and B,
- Group 2 with urns C and D.

We will draw balls from *one and only one* of the urns. Your task during the study will be to try to figure out whether the urn we are using is in Group 1 (urn A or B) or in Group 2 (urn C or D). You can express your confidence about which group it is by placing bets on Group 1, Group 2, on both groups, or on neither group. We'll say more about bets later.

The content of the urns.   If you could look inside the urns, this is what you would see.

Group 1   Group 2

A   B   C   D

As you can see, the urns have different fractions of red, green, white and black balls. Moreover, the urns have two separate compartments, a Red/Green Compartment and White/Black Compartment.

Notice the following patterns:
- Red/Green Compartment:
  - Urns A and C have three green and one red balls.
  - Urns B and D have one green and three red balls.
- White/Black Compartment:
  - Urns A and D have three white and one black balls.
  - Urns B and C have one white and three black balls.

We will randomly select **_one of_** the urns to draw balls from. Based on the draws, you will have to guess whether the urn is in Group 1 or Group 2.

How the balls are drawn. We will make a total of 15 draws from the selected urn. The first draw will be a ***private*** draw – only you will see it. This first draw will be from the Red/Green compartment only. Each of you will come up, and we will draw a ball for you. We will then show it to you and RETURN the ball to the urn before the next participant comes up.

Next we will begin a series of 14 ***public*** draws—these will be seen by everyone. These public draws will all be made from the White/Black compartment only. After each public draw we will RETURN the ball to the urn before making the next public draw. In total, there will be 14 public draws in one set.

Bets.   After each one of the 15 draws, you can make bets on which Group you think the urn is in. Depending on how confident you feel, you can place bets on Group 1, Group 2, both groups, or neither group.

In each round you can place from 0 to 9 bets on each of the groups of urns. That is, after each draw you can simultaneously make up to 18 bets, 9 or fewer bets on Group 1 and 9 or fewer bets on Group 2.

After your bets on the 15th draw, we will reveal the total numbers of bets on each group by all the participants here today, and then give you one more chance to bet.

In total, therefore, there will 16 rounds of bets for each set.

Earning Money.

Your decisions today will earn you points. At the end of all three sets, we will pay you $1 for each 10 points in your *Earnings Account.* If you have 215 points, for example, we will pay you $21.50.

In the beginning of each set the computer will place 45 points in your *earnings account.* In the end of the set, after all 16 rounds of bets, we will reveal the urn from which the balls have been drawn. We will then select *one* of the 16 rounds at random. Call this the *payment round.* We will use your decisions for *only* this payment round to determine the payments from winning and the costs of bets.

Payment for winning bets. The computer will add 10 points to your account for every successful bet in the payment round. That is, every bet on the group which contains the urn used in this set will earn you 10 points.

Costs for placing bets. The bets you made in the payment round will also have costs. The first bet you make on Group 1 in this round costs one point. The cost of each additional bet on Group 1 is one point more than the cost of the previous bet on Group 1. That is, the 2nd bet costs 2 points, the 3rd bet costs 3 points, and so on. Similarly, the 1st bet you make on Group 2 in this round costs 1 point, the 2nd bet costs 2 points, and so on. The computer will subtract the total cost of the bets in the payment round, both on Group 1 and Group 2, from your account.

As you will see, the computer program will help you keep track of the costs and potential winnings of each bet.

Important You only pay for bets you make in the one payment round. Likewise, you only earn points on bets you make in the one payment round.

The Sets

We just described how a single set will be run. Today we will run 3 sets. Each of the three sets will be run as we described above. We first randomly choose one of the four urns to make draws from, and take 15 draws. For the next set we again randomly choose one of the four urns, and make 15 draws from it, and so on. We will add your earnings from each set to determine your total earnings today.

Procedures.

Everything we described will be run on the computer. The computer will help you keep track of the private and public draws, the costs of bets, the potential winnings from bets, and your earnings in the study.

The computer will also keep the history of information and your bets for the current set. You can access it at any time by pressing the button `History'.

Practice.

Before we begin the experiment, we will go through a practice set. The practice set will have one private draw from the Red/Green Compartment and four public draws from the White/Black Compartment. This practice set will help you understand things better.
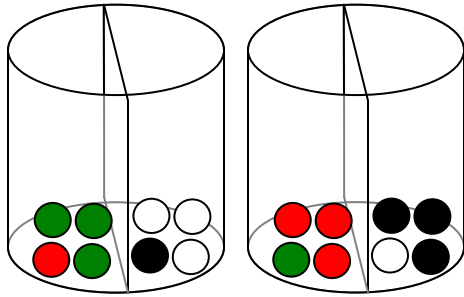
Things to Remember:

- In each set we will choose *one* of the four urns to draw balls.
- First is a *private draw* (that only you see) from the Red/Green compartment, followed by 14 *public draws* (that everyone sees) from the White/Black compartment.
- After each draw, you can make 0-9 bets on Group 1 and 0-9 bets on Group 2. You can bet on just one group, both groups, or neither.
- After all 15 draws, we will reveal the total bets on each group by all the participants today and allow a final bet.
- We will choose one of the 16 rounds of bets to determine your payoffs.
- In each round of bets, each additional bet on each group costs one more point, beginning at 1 point for the 1st bet up to 9 points for the 9th bet. Each bet that wins earns you 10 points.
- In the end of each set, we randomly select one of the rounds of bets and reveal the chosen urn. The cost of all bets made in the selected round is subtracted from your account. For each successful bet we add 10 points to your account.
- We will run three sets in total.

Thanks and good luck!

We will next begin the practice round on the computer.
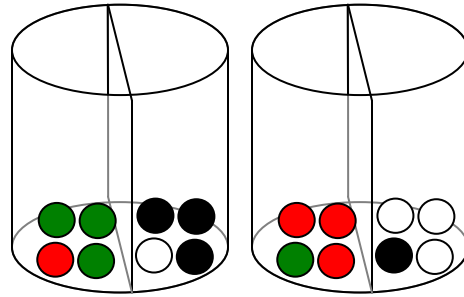
Reminder of the Possible Urns

Group 1   Group 2

A   B   C   D