APPENDIX: SURVEY QUESTIONS

The following appendix lists the survey questions that we used to measure various personal characteristics in the experiment.

Conservatism

1. Please react to the following statement: "In a free society, it is all right if a few people accumulate a lot of wealth and property while many others live in poverty." (5-point scale, strongly agree to strongly disagree)

2. If the government had a choice between reducing taxes or spending more on social programs like health care, social security, and unemployment benefits, which do you think it should do? (We mean all taxes together, including social security, income tax, sales tax, and all the rest.) (Reduce taxes or Spend More on Social Programs)

3. Some people earn a lot of money while others do not earn very much at all. In order to get people to work hard, do you think large differences in pay are… (5-point scale, definitely necessary to definitely not necessary)

4. Generally speaking, do you usually think of yourself as a Republican, a Democrat, and Independent, or what? IF YOU ARE A REPUBLICAN: Would you call yourself a strong Republican or a not so strong Republican? IF YOU ARE AN INDEPENDENT: Do you think of yourself as closer to the Republicans or closer to the Democrats? IF YOU ARE A DEMOCRAT: Would you call yourself a strong Democrat, or a not so strong Democrat? (7-point scale)

5. In politics today, do you think of yourself as a conservative, as middle of the road, as a liberal, or do you not think of yourself in these terms? (four options as indicated)

Disaster Assistance

1. When a natural disaster strikes an individual's home, tax money should be used to help that person deal with the consequences. (5-point scale, strongly agree to strongly disagree)

2. Most victims of natural disasters could have foreseen that a disaster would happen to them. (5-point scale, strongly agree to strongly disagree)

3. Most people are financially able to move their residence to an area at low risk for natural disasters. (5-point scale, strongly agree to strongly disagree)

4. Tax money should be used to help defray the price of home insurance in areas with high risk of disaster. (5-point scale, strongly agree to strongly disagree)

Unemployment Assistance

1. When a person loses his or her job, tax money should be used to help that person deal with the consequences. (5-point scale, strongly agree to strongly disagree)

2. Most unemployed persons are to blame for their own unemployment. (5-point scale, strongly agree to strongly disagree)

3. Most unemployed persons are capable of quickly getting a suitable new job. (5-point scale, strongly agree to strongly disagree)

INSTRUCTIONS FOR TODAY'S EXPERIMENT

Please read the following instructions carefully. Do not turn to other sections of this instruction packet until asked to do so by an experiment supervisor.

OVERVIEW

In today's experiment, you will be asked to answer questions and make decisions at your computer terminal. No one participating in the experiment today will be able to match your decisions with your identity.

In addition to the $10 payment you receive for showing up today, you will receive payments based on the decisions you and other participants make in the experiment.

The experiment should last between 1 and 1 ½ hours.

Please do not talk or communicate with other participants, or look at other participants' screens, during the experiment. If you have a question, you may raise your hand and an experiment supervisor will come over to help you. Not following this or other instructions will lead to your being excused from the experiment (without ill will from the experimenters) with your show-up fee only.

WALKTHROUGH OF THE PROCEDURE

In each period of this experiment, you will be asked to perform a task, and be rewarded according to your performance on this task. The task consists of twenty multiple-choice spelling questions, with four possible answers plus a "No Answer" option. In each period of the experiment, you will be asked to answer as many of these questions correctly as possible in 90 seconds. For each correct answer you give, you will receive $0.16 as payment. For each incorrect answer you give, you will have $0.053 deducted from your total payment. This deduction is intended to keep random guessing from increasing (or decreasing) your payoffs; random guesses yield an average payoff of $0.00. It is impossible to lose money in this experiment, even if your deductions exceed your positive payments. Any answers you mark "No Answer" will not count toward your payment, nor will they result in a deduction from your payment.

Let us go through a practice screen using the program you will be using to perform today's experiment. Please do not click any buttons until asked to do so by the experimenter. Your actions in this screen will not count toward your payoffs – it is a practice screen only.

As you can see, there are twenty boxes in the upper half of your screen, each of which contains four potential spellings of a word plus a *No Answer* option. In each of the boxes, one of the four options is the correct spelling of the word. The *No Answer* option is selected by default in each box at the start of a period. In order to answer questions, you will first need to select which of the four spellings is correct for some of the boxes on the upper half of the screen. When you believe you know a correct answer, click the button next to that answer to select it. If you mark an answer and later decide to leave that answer blank, you may select *No Answer* to erase your previous answer. Go ahead and mark a few answers now.

In the top right hand corner of the screen, a timer shows how much time you have remaining to answer questions in this period. The timer starts at 90 seconds. At the bottom of your screen, there are twenty smaller boxes showing the answer form you will submit to the experimenter at the end of the 90-second time limit. By default, this form is set to "No Answer" for every spelling question at the top of the screen. In order to update this form with the answers you have selected, you must click on the gray *Save Answers* button separating the top and bottom halves of your screen. Once you have clicked this button, the answers you selected in the top half of the screen will appear in the form in the bottom half of the screen. **If you change**

Please wait to turn the page until the experimental supervisor asks you to do so.

your answers, you must always click *Save Answers* to update your form with the latest entries. Any answers you give in the top half of the screen will not count toward your payoffs unless you click the *Save Answers* button.

Please click the *Save Answers* button now to update your answer form with the answers you selected earlier. If you have done this correctly, the answers you selected in the top half of the screen should now appear listed on the form in the bottom half of the screen. Now, change a few answers at the top of the screen, then click *Save Answers* again to see the form in the bottom half of the screen updated with the new entries.

Once the timer reaches zero, you will no longer be able to enter new answers or update your form using the *Save Answers* button. Please ensure that you have entered all answers and updated your form using the *Save Answers* button before the timer reaches zero.

Are there questions about this screen or anything we have reviewed so far?

Once time has expired, you will receive a results screen based on your performance in the previous round. At the top of the screen, your pay rate per correctly answered question and penalty per incorrectly answered question are listed for your convenience. Directly under those boxes, the screen lists how many questions you answered correctly, how much money (in U.S. dollars) you were paid for those correct answers, how many questions you answered incorrectly, and how much money (in dollars) you were penalized for those incorrect answers. For this practice screen, everyone is listed as having answered 10 questions correctly and 8 incorrectly.

Please note the line of red text on the practice results screen, indicating that you have suffered a randomly determined loss of 80 percent of your earnings. At the end of every round of this experiment, there is a 20 percent chance that you will lose 80 percent of your earnings. The computer will randomly pick a number between 1 and 100; if that number is between 1 and 20, you will lose 80 percent of your net earnings. If the randomly picked number is between 21 and 100, you will keep all of your net earnings.

The boxes under "earnings summary" in the middle of the screen on the left show how much money you earned before random losses, the amount you lose due to the random event, and your net earnings after losses. At the bottom of the screen, you can also see the net payment for all participants this period , including yourself. Each box corresponds to a participant's net earnings. Red text indicates that the participant suffered a random loss in this period. A star next to the number in a box indicates that your record is being displayed in that box. The overall average net earnings after losses for all participants in this period is listed in the last box at the right.

Are there questions about this screen or anything we have reviewed so far?

When you are finished reviewing this results screen, you may click OK to continue the experiment.

Every full period of the experiment consists of 90 seconds of time for answering questions, followed by the results screen. Once the time period for the results screen is over, the next 90 second answer time will immediately begin.

Now, the experiment will commence. When the experimenter begins the experiment, a screen will appear to remind you of your pay rate per correctly answered question, and your penalty rate per incorrectly answered question. Once everyone has clicked OK on this screen, or when the timer in the top right hand corner reaches zero, the first round of questions will begin. There will be five full periods of questions and results. If you have any questions, please raise your hand and a supervisor will come to help you. *Remember not to talk to or look at the screens of others!*

Please wait to turn the page until the experimental supervisor asks you to do so.

TAXING AND REDISTRIBUTION

Now, we will provide an opportunity for you and the other participants to vote on an income redistribution plan for the group. This portion of the instruction explains the redistribution process, how you can vote, and how all votes are tabulated to produce the group tax rate.

Under the redistribution plan, some percentage of every participant's income will be collected as tax and put into a group account. Then, participants who suffer a random loss will have the loss removed from their post-tax earnings. Finally, every participant will receive an equal share of the group account. Final net earnings are therefore one's pre-tax earnings, minus tax payment, minus random losses, plus one's equal share of the group account.

Let's do an example of the redistribution process. Suppose that there are 7 participants in the group and that the tax rate is 60%.

ID #	Pre-Tax Earnings	Tax Payment	Random Loss	Payment from Group	Net Earnings
1	$0.50	$0.50*60%=$0.30	$0.00	$4.56/7 = $0.65	$0.50-$0.30-$0.00+$0.65=**$0.85**
2	$0.65	$0.65*60%=$0.39	$0.26*80%=$0.21	$4.56/7 = $0.65	$0.65-$0.39-$0.21+$0.65=**$0.70**
3	$0.70	$0.70*60%=$0.42	$0.00	$4.56/7 = $0.65	$0.70-$0.42-$0.00+$0.65=**$0.93**
4	$1.00	$1.00*60%=$0.60	$0.40*80%=$0.32	$4.56/7 = $0.65	$1.00-$0.60-$0.32+$0.65=**$0.73**
5	$1.25	$1.25*60%=$0.75	$0.50*80%=$0.40	$4.56/7 = $0.65	$1.25-$0.75-$0.40+$0.65=**$0.75**
6	$1.50	$1.50*60%=$0.90	$0.00	$4.56/7 = $0.65	$1.50-$0.90-$0.00+$0.65=**$1.25**
7	$2.00	$2.00*60%=$1.20	$.80*80%=$0.64	$4.56/7 = $0.65	$2.00-$1.20-$0.64+$0.65=**$0.81**
		Sum of Payments/ Total Group Account=**$4.56**			

Are there questions about the redistribution process or anything we have reviewed so far?

The tax rate placed on the group will be chosen by voting. Every person will vote on the tax rate they want to apply to the group. The median vote (that is, the vote with an equal number of votes higher and lower) will be chosen as the effective tax rate. Let's do an example of the voting process. Suppose that 7 participants cast the votes shown in the table below, marked as **Case 1**. The tax rate that is actually selected is starred. As you can see, the median vote (50 percent) of Voter #4 is chosen as the tax rate that will be used.

Voter ID #	Case 1	Case 2	Case 3	Case 4	Case 5
1	44	44	14	44	58
2	46	46	26	46	46
3	48	48	38	48*	48
4	50*	50*	50*	45	50
5	52	72	52	52	52*
6	54	84	54	54	54
7	56	96	56	56	56

Now, suppose that people who wished to have a tax rate higher than 50 percent (Voters #5, 6, and 7) had cast higher votes. The column marked **Case 2** reflects this situation. As you can see, as long as the median voter does not change his/her vote, the tax rate remains at 50 percent.

Suppose that people who wished to have a tax rate lower than 50 percent (Voters #1, 2, and 3) had cast lower votes. The column marked **Case 3** reflects this situation. As you can see, as long as the median voter does not change his/her vote, the tax rate remains at 50 percent.

Now, suppose that the median voter (Voter #4) had cast a lower vote, 45 instead of 50. The column marked **Case 4** reflects this situation. As you can see, the tax rate would have been lower—it is 48 percent. However, the previous median voter's proposal of 45 percent was not adopted.

Finally, suppose that the voter who voted for 44 percent tax rates in Case 1 (Voter #1) had voted for a 58 percent tax rate instead. The column marked **Case 5** reflects this situation. The tax rate would have been higher—52 percent.

Are there questions about the voting process or anything we have reviewed so far?

Please take a look at the voting screen displayed on your computer monitor. This voting screen shows you what the tax rate was during the last three periods (0 percent). You can type the tax rate you prefer (in percentages, from 0 to 100) into the blank. Note that this is a practice round only – votes are not binding and will not affect your payoffs, nor will the other subjects be able to see your vote. Pressing "Submit Vote" submits your vote.

Underneath the vote submission form is information about what has happened over the last three periods. The first row of boxes shows the average amount of money each participant has earned in the last three periods, neglecting random losses and tax payments. The number with the star next to it corresponds to the average amount of money that you have earned in the last three periods without losses or tax payments; in this practice screen, the star is always in the first box from the left. The last box at the right shows the overall average earnings over the last three periods for all people in the experiment. This number is the average of all the numbers in the boxes to the left.

The second row of boxes shows the average amount of money each participant has earned in the last three periods, with random losses but neglecting tax payments. Again, the number with the star next to it corresponds to your average earnings with losses in the last three periods; in this practice screen, the star is always in the first box from the left. The last box at the right shows the overall average earnings including losses over the last three periods for all people in the experiment.

Please choose a tax rate from 0 to 100 and press "Submit Vote" now.

Once all votes are submitted, every participant's vote is arranged in order from lowest to highest. The result screen showing the voting outcome (34 percent in this practice example) is shown on your computer screen now. This practice screen contains pre-programmed information not connected to what you entered on the previous practice screen. After taking a look at it, you may continue the experiment by pressing OK.

The results screen after a round of production will change slightly to reflect the effect of taxes and redistribution on income. Note that the numbers on this sample screen are examples only, and do not pertain to your actions nor do they affect your payoffs. Please take a look at the results screen on your computer monitor, but do not press the OK button until asked to by the experimenter. As you can see, there is a new table at the left showing the adjustments to your earnings based on the tax rate. The boxes show your earnings before taxes and losses, your tax payment, the amount you lost due to a random event, the payment from the group to you, and your final net earnings. The screen also shows the tax rate and the total tax revenue collected. Finally, note that at the bottom of the screen there is a new row of boxes indicating information about the earnings of participants with random losses and with payments from the group.

Are there questions about the voting or results screen or anything we have reviewed so far?

Now, the experiment will continue. In a moment, a voting screen will appear allowing you to cast your vote. Once everyone has submitted their vote, a result screen will show the outcome of the voting process. Then, there will be three full periods of questions and results as before. Please press OK on your practice screen now to continue the experiment.

TAXING AND REDISTRIBUTION II

Now, there will be another opportunity for the group to vote on a new tax rate. Following the vote, a screen will show you the outcome of the vote—that is, which tax rate will be applied to future earnings. The voting and redistribution process works exactly as it did before.

A practice version of the voting screen is now displayed on your screen (note that the past tax rate displayed on your screen is pre-programmed for this practice screen, and is not the actual past tax rate). As you can see, there is some additional information on this screen compared to the first time: there is now a third row of boxes at the bottom of the screen. This row shows the average net earnings over the last three periods, including random losses, taxes, and group payments, for each of the participants. The last box at the right shows the overall average earnings (with losses, taxes, and group payments) over the last three periods for all people in the experiment. This number is the average of all the numbers in the boxes to the left.

Are there questions about the tax decision or anything we have reviewed so far?

Now, the experiment will continue. Once everyone has submitted a practice vote on this practice screen, the real voting screen will appear. Once everyone has submitted their vote, a result screen will show the outcome of the voting process. Then, there will be three full periods of questions and results as before. Please submit a practice vote now, and the experiment will continue.

LOTTERIES

We will now begin the final phase of the experiment. Please look at your computer screen and follow along as I read this portion of the instructions.

You will be presented with 10 lottery pairs and asked to select an option in each after having a chance to practice with them. Please press the Continue button now.

You should now see 10 lottery pairs on your computer screen. Option A shows one lottery, and Option B shows another lottery. In this screen, we would like you to select which lottery you would prefer to participate in--Option A, or Option B--for each of the 10 lottery pairs. Once everyone has made their choices, the computer will randomly select one of these 10 pairs and pay you according to the choice you made. To determine your payoff in a lottery, the computer will draw a number between 1 and 100. If that number is less than or equal to the percentage value in front of the first payoff, you get the first payoff in the lottery. If that number is greater than the percentage value in front of the first payoff, you get the second payoff in the lottery.

Consider the first pair of lotteries, Pair #1. Suppose you chose Option A. If the randomly drawn number were less than or equal to 10, you would receive $2.00. If the randomly drawn number were greater than 10, you would receive $1.60.

Now suppose you chose Option B in Pair #1. If the randomly drawn number were less than or equal to 10, you would receive $3.85. If the randomly drawn number were greater than 10, you would receive 10 cents.

Consider the seventh pair of lotteries, Pair #7. Suppose you chose Option A. If the randomly drawn number were less than or equal to 70, you would receive $2.00. If the randomly drawn number were greater than 70, you would receive $1.60. Now suppose you chose Option B in Pair #7. If the randomly drawn number were less than or equal to 70, you would receive $3.85. If the randomly drawn number were greater than 70, you would receive 10 cents.

You can use the Test button in the rightmost column of your screen to simulate an outcome based on your choice, if this pair is selected. For example, if you click ``Test1,'' the computer will draw a number between 1 and 100 and show you what you would have been paid if Pair 1 were selected for payment. Select Option A or B for Pair #1, then click the Test1 button. (Has anyone not selected?) The right side of your screen should now show you a sample outcome.

You can click a Test button multiple times to show you many different possible outcomes. Without changing your choice of Option A or B, click the Test1 button again. The right side of the screen should now show you a different random number that the computer used to determine your outcome.

The red Reset button at the bottom of the right side of the screen allows you to erase the outcome displayed on your screen. It is not necessary to click Reset before clicking the Test button again.

Are there any questions about how this screen works?

Please choose the Option you most prefer for all 10 pairs, using the Test button as much as you like to simulate outcomes. Once you are finished, press Continue to finish the experiment. When everyone has pressed Continue, the experiment will display the results of the lottery randomly chosen for payment.

FINAL QUESTIONNAIRE

In a moment, you will be asked to enter your name and your social security number into the computer so that the supervisors can match your earnings to your name. Once you have pressed the OK button, the computer will also ask you a few survey questions. Some of these questions are demographic (age, race, sex, and so on.) Other questions are about your political beliefs. Your answers will not be matched with your name, and will be kept anonymous. Please answer these questions, using the scroll bar at the side of the screen to ensure that you have answered each question. Press the button marked "I'm finished" at the bottom of the survey form to complete the experiment.

After everyone has completed the survey, the supervisor will call you up to the front desk, one by one, to pay you your earnings and show-up fee. You will be asked to sign a receipt verifying that you received payment.

Thank you for participating in this experiment!