Instructions

This is an experiment in the economics of decision making. Funding for this research has been provided by the Ohio State University and the National Science Foundation. The instructions are simple, and if you follow them carefully and make good decisions you may earn a CONSIDERABLE AMOUNT OF MONEY which will be PAID TO YOU IN CASH at the end of the experiment.

1. In this experiment you will act as voters that distribute funds between yourself and others in a series of elections. In each election you must decide how to split a sum of money. The procedure for allocating the money requires that in each "election" a majority "coalition" be formed to allocate the money.
2. In each election you will have to decide how to divide $50.00 among three (3) voting blocks. In each election there are three representatives, one for each voting block. As the representative of your voting block you will make a request for your block's share of the money.
3. There are a total of 3 votes distributed between the three voting blocks with each voting block controlling 1 vote.
4. Elections work as follows: Each voting block will make an initial request for their share of the money as well as the order in which the other voting blocks will get to make their requests. One of these requests, selected at random with probability equal to the proportion of votes controlled, will have their request registered as the first request with subsequent requests made in the order that decided on by that voting block. Once the sum of these requests do not exceed $50, and the number of votes controlled by those making the requests constitute a majority of the votes (2 or more) then the money can be allocated, as requested.
5. Thus, the steps in the election process will work as follows:

Step 1: Each of you reports the amount of money you request for yourself and the order in which you would like those following you to make requests. Then one of you, selected at random will have your request presented to the others.

Step 2: The voting block selected to go second according to the request selected in step 1 then reports the amount of money that block requests for itself. *If* the sum of this request and the requests in steps 1 is less than or equal to the amount of money available ($50) and the sum of the votes in the two blocks constitute a majority (2 or more votes) you get to choose whether or not to

"close" the election. If you "close" the election, you are accepting as the final allocation request 1 along with your own request.

Step 3: Step 3 works as follows.

A. **If the election is closed** in step 2, and there is no money left over, the allocation is binding and we move on to a new election. If the election is closed and there is still money to be allocated, then the remaining voting block can claim the money left over. (Note that if this block requests more than the money remaining this request will be ignored and they will get 0.)

B. **If the election is *not* closed** in step 2 (say because the sum of requests 1 – 2 are more than $50 between them), then the request process continues essentially as in step 2. That is, the remaining voting block gets to make a request. If the sum of this last request and *either* of the requests made in steps 1and 2 is less than or equal to $50 *and* constitutes a majority (controls 2 or more votes), then the subject making this last request can "close" the election.

If the election is closed in step 3 then this allocation is binding and we move on to a new election. If the election is not closed in step 3, for whatever reason, we go back to step 1 and the process repeats itself.

6. The chances of your proposal being selected in step 1 will be equal to the ratio of the number of votes held by your voting block to the total number of votes. As such each voting block has a 33.3% (1/3) chance of their proposal being selected in step 1. Note that if no allocation is achieved in the first round of an election (no one closes the election in step 3 above), new random draws will be made to determine whose request is honored first in the next round (and any subsequent rounds) of that election.
7. There will be a total of 11 elections, one (1) practice election and ten (10) elections played for cash.
8. At the conclusion of the experiment, one of the 10 elections played for cash will be randomly selected by computer, and the $50 distributed according to the final allocation made in that election. Your individual payment for that election will be equal to the allocation given to your voting block for that election. Thus, in each election, you should treat it as the election that you will be paid off on. All payments will be in CASH. In addition, each of you will receive the $8 participation fee promised.
9. There are a total of ___ voters in the room. In each election you will be assigned to one of ___ groups of three voters. Assignments to voting groups will vary randomly from election to election. Note also that your subject numbers vary randomly from election to election.

Some examples might help clarify the voting process. The examples are not necessarily intended to be realistic, just to give you an idea how the process works. In all cases we will assume that there is $70 to be allocated.

Example 1: Request 1 - subject 1 is selected and requests $68.01 and that subject 2 make the second request with subject 3 making the third request.

Request 2 - subject 2 is selected he/she can choose to request $1.99 and close the coalition, in which case he/she would get $1.99 and subject 1 would get $68.01 and subject 3 would get $0. But subject 2 does not have to do this.

Alternatively

Subject 2 can make a request that is greater than $1.99. This permits a request by subject 3 so that some alternative coalition can be formed with a different allocation of the $70.

Example 2:

Request 1 - subject 2 is selected and requests $10 and that subject 3 gets to request next followed by subject 1.

Request 2 - subject 3 is selected and can close the coalition. He/she can do so with a request of $60 in which case 2 gets $10, 3 gets $60, and subject 1 gets $0.

Alternatively

Subject 3 can close the coalition with a request of less than $60, in which case subject 1 can receive an allocation from the remaining money

Alternatively

Subject 3 can make a request that is greater than $60. This permits a request by subject 1 and the possibility of forming some alternative coalition.

Alternatively

Subject 3 can make a request of $40 or less and not close the coalition, in which case he/she is passing on the right to close the coalition and to determine the coalition members to subject 1.

Example 3:

Request 1 - subject 3 is selected and requests $23.33 and that subject 2 gets to request next followed by subject 1.

Request 2 - subject 2 is selected, requests $23.33, and doesn't close the coalition.

Request 3 - subject 1 is selected, requests $23.33, and closes the coalition.

But they don't have to do this, as there are many other possibilities.

Example 4:

Request 1 – subject 1 is selected and requests $40 and that subject 3 gets to request next followed by subject 2.

Request 2 – subject 3 is selected and requests $40 so that it is not possible to close the coalition.

Request 3- subject 3 is selected and requests $40 so that it is still not possible to close the coalition.

In this case we would enter round 2 of this election and the process would repeat itself but with a new random draw to determine which subject gets to have their request honored first.

But they don't have to do this, as there are many other possibilities.

As you can see there are many possibilities here. What should you do? If we knew the answer to this question we would not have to conduct the experiment. You should do what you think is best.

Review. Let's summarize the main points:

- The experiment will consist of 11 elections, 1 practice and 10 for real. There may be several rounds to each election.
- In each election there are three voting blocks. Each of you represents a different voting block with each voting block controlling 1 vote.
- At the start of each election you will request a share of $50.00 for your voting block and the order in which the different voting blocks (after yours) get to choose.
- One of these initial requests will be randomly selected to start that round of an election. The probability with which one of these initial requests is selected is equal to the number of votes in the voting block divided by the total number of votes. If a majority coalition is formed (those requesting have 2 or more votes and the sum of their requests do not exceed $50), the proposed allocation is binding, and the election ends.

- If no majority coalition is formed after everyone has made a request the process will repeat itself until someone is able to close the election.
- At the end of the 10 cash elections, one election, selected at random will be paid off on. Your earnings will be equal to your payment for that election plus the participation fee.

Are there any questions?

To be read by the experimenter

A. We will now conduct a practice election. This does not count for money. Please don't do anything until I tell you to.

B. PUT THE FIRST TRANSPARANCY ON THE PROJECTOR. START THE DRY RUN This is the first screen you will see. Each one of you has been assigned a subject ID (1, 2, 3, …) which you can see in the top right corner of your screen. Your subject ID will remain the same throughout the experiment. Please write down your subject ID on your record sheet. You can also see in the top left corner of your screen the number of votes you control in your voting block. This will also remain constant throughout the experiment. In each election, you will be randomly assigned a subject number (1, 2, 3) which you can see in the top left corner of your screen. Be careful not to confuse this with your ID number. Both your subject number and ID number are strictly private information and should not be revealed to anyone else. Subject numbers will be randomly assigned prior to the start of each election, so that all the voters are likely to have their subject numbers change from one election to the next. ***Write Practice for this election.***

C. Now you can enter your request and confirm it. Requests must be between $0 and $30. They must be rounded to the nearest penny and you do not type in the dollar sign, just the amount of money you are requesting. You must also enter the order in which you want subsequent requests to be made. [**Note that there is a box below where you enter your request that you can click which will calculate the actual payment you would receive if your request is accepted – you are included in the coalition. These payments are shown in brackets next to the dollar shares allocated. Of course this is only really relevant for the subject representing the voting block with 2 votes.]**

D. Once everyone has entered their requests, the computer will randomly select one of the requests in your group to go first and to determine the order in which subsequent requests will be made.

E. PUT THE SECOND TRANSPARANCY ON THE PROJECTOR. This is similar to what your second screen will look like. First, you can see the request made by the player selected to go first – point to payoff the amount requested is X**.** I am using letters, but when you play this will be the dollar amount requested. **[*N*ote that the actual dollar payments X would get if their demand wound up being accepted – they were part of the coalition – is reported in brackets]**

F. If you have been selected to go second, there will be space to post your request – *point to it.* If you have been selected to go third you cannot make a request. Instead the space will note Please Wait in red. And if your request was selected to go first it will note in red that your request has already been selected. For those of you selected to go second, please enter your request for stage 2 and even if it's possible do **not** close this election. **(Remember, this is just a dry run to get you used to seeing the screen layouts**. When we play for cash it is strictly up to you to decide what to do.)

G. PUT TRANSP 3 UP: When its possible to close an election you will see this choice. *Point to – selecting yes would close the election*. Selecting no moves us to the third stage.

H. Transparency 4 up - Since the player selected to go second did not close the coalition the third player gets to make a request . Their screen will look like this. *Point out two earlier requests and space to make request.* Please make your requests now but do **not** close the coalition.

I. PUT THE 5th TRANSPARANCY ON THE PROJECTOR. This is what your screen looks like after a round where no one has closed the election. You can see all the requests made in that round. **[Remember actual dollar payments each voter would get if their demand wound up being accepted – they were part of the coalition – are always reported in brackets]**

J. The process now starts over again since no majority coalition was formed. Everyone gets to make a first stage request (along with the order of subsequent requests), one of which, selected at random according to the rules specified, will be selected to go first. Of course it is strictly up to you what to do here as you are free to repeat your earlier requests or change them. Please make these first stage requests and make your second stage requests when the chance comes. BUT FOR THIS EXERCISE DO NOT CLOSE THE COALITION EVEN IF YOU CAN. Finally, the player selected to go third should enter a request – *a request of 0 for this exercise* and close the coalition. Now you can see, you'll be offered who to include in the coalition since with a request of 0 you can form a coalition with anybody. Please close the coalition. **(Remember, this is just a dry run to get you used to seeing the screen layouts**. When we play for cash it is strictly up to you to decide what to do.) PUT THE SIXTH TRANSPARANCY ON THE PROJECTOR. Once you choose to close a coalition, if there is more than one possible coalition, this is what your screen would look like, simply select the subjects you want to include in your coalition and confirm your selection. Please do so now.

K. Finally, if a coalition is formed that does not spend the full $50, than the remainder of the money will be offered to the voter who has not been selected yet. And this is what their screens would look like – put Transparency 7 up.

L. PUT TRANSPARANCY 8 UP. After an election is completed your screens will look like this. As you can see, it gives the payoffs for each subject in your group. The voters included in the coalition are denoted by an asterix. If there is more than one round, offers from previous rounds are posted to the left of this. Outcomes of past elections are recorded below this. Note that the results from past rounds show you the requests that were made, NOT the payoffs, whereas the results from past elections indicate the actual allocations if this election were chosen to be paid off on. **[Remember actual dollar payments each voter would get are always reported in brackets. Requests are shown just to the left of this.]** You all have record sheets that enable you to record some of the relevant information. We suggest that you do so but its not required to do so.

M. After a few seconds, a new election will start. The voters in this election can, and likely will differ, from those in the previous election, since the voters in each group are randomly determined prior to each election. Your subject number (but **not** your ID number) could also change. That too is randomly determined at the start of each election.

K. You are not to reveal your (potential) earnings, nor are you to speak to any other subject while the experiment is in progress. This is important to the validity of the study and will not be tolerated.

Are there any questions? We will now play for money!

Usually, after round 1 of election 1, some groups are finished and others are not. Remind them that its normal to wait between elections since some groups might finish before others, and we have to wait for everybody in the room to finish their election before we can go on since they are re-matched with everybody in the room.

DB 3/V2
UW/US 1/04

Instructions

This is an experiment in the economics of decision making. Funding for this research has been provided by the Ohio State University and the National Science Foundation. The instructions are simple, and if you follow them carefully and make good decisions you may earn a CONSIDERABLE AMOUNT OF MONEY which will be PAID TO YOU IN CASH at the end of the experiment.

1. In this experiment you will act as voters that distribute funds between yourself and others in a series of elections. In each election you must decide how to split a sum of money. The procedure for allocating the money requires that in each "election" a majority "coalition" be formed to allocate the money.
2. In each election you will have to decide how to divide $50.00 among three (3) voting blocks. In each election there are three representatives, one for each voting block. As the representative of your voting block you will make a request for your block's share of the money.
3. There are a total of 5 votes distributed between the three voting blocks. In each election two of the voting blocks will each control 2 votes, and the third block will control 1 vote. The number of votes in your voting block will remain the same throughout the experiment.
4. Elections work as follows: Each voting block will make an initial request for their share of the money as well as the order in which the other voting blocks will get to make their requests. One of these requests, selected at random with probability equal to the proportion of votes controlled, will have their request registered as the first request with subsequent requests made in the order that decided on by that voting block. Once the sum of these requests do not exceed $50, and the number of votes controlled by those making the requests constitute a majority of the votes (3 or more) then the money can be allocated, as requested.
5. Thus, the steps in the election process will work as follows:

Step 1: Each of you reports the amount of money you request for yourself and the order in which you would like those following you to make requests. Then one of you, selected at random will have your request presented to the others.

Step 2: The voting block selected to go second according to the request selected in step 1 then reports the amount of money that block requests for itself. *If* the sum of this request and the requests in steps 1 is less than or equal to the amount of money available ($50) and the sum of the

votes in the two blocks constitute a majority (3 or more votes) you get to choose whether or not to "close" the election. If you "close" the election, you are accepting as the final allocation request 1 along with your own request.

Step 3: Step 3 works as follows.

A. **If the election is closed** in step 2, and there is no money left over, the allocation is binding and we move on to a new election. If the election is closed and there is still money to be allocated, then the remaining voting block can claim the money left over. (Note that if this block requests more than the money remaining this request will be ignored and they will get 0.)

B. **If the election is *not* closed** in step 2 (say because the sum of requests 1 – 2 are more than $50 between them), then the request process continues essentially as in step 2. That is, the remaining voting block gets to make a request. If the sum of this last request and *either* of the requests made in steps 1and 2 is less than or equal to $50 *and* constitutes a majority (controls 3 or more votes), then the subject making this last request can "close" the election.

If the election is closed in step 3 then this allocation is binding and we move on to a new election. If the election is not closed in step 3, for whatever reason, we go back to step 1 and the process repeats itself.

6. The chances of your proposal being selected in step 1 will be equal to the ratio of the number of votes held by your voting block to the total number of votes. As such each of the blocks controlling 2 votes has a 40% (2/5) chance of their proposal being selected in step 1 and the block controlling 1 votes has a 20% (1/5) chance of their proposal being selected in step 1. Note that if no allocation is achieved in the first round of an election (no one closes the election in step 3 above), new random draws will be made to determine whose request is honored first in the next round (and any subsequent rounds) of that election.
7. There will be a total of 11 elections, one (1) practice election and ten (10) elections played for cash.
8. At the conclusion of the experiment, one of the 10 elections played for cash will be randomly selected by computer, and the $50 distributed according to the final allocation made in that election. Your individual payment for that election will be equal to the allocation given to your voting block for that election divided by the number of votes in your voting block. Thus, in each election, you should treat it as the election that you will be paid off on. All payments will be in CASH. In addition, each of you will receive the $8 participation fee promised.

9. There are a total of ___ voters in the room. In each election you will be assigned to one of ___ groups with 3 voting blocks in each group. Assignments to voting groups will vary randomly from election to election. Note also that your subject numbers vary randomly from election to election.

Some examples might help clarify the voting process. The examples are not necessarily intended to be realistic, just to give you an idea how the process works. In all cases we will assume that there is $70 to be allocated and that subjects 1 and 2 each control 2 votes, with subject 3 controlling 1 vote.

Example 1: Request 1 - subject 1 is selected and requests $68.01 and that subject 2 make the second request with subject 3 making the third request.

Request 2 - subject 2 is selected he/she can choose to request $1.99 and close the coalition, in which case he/she would get $1.00 ($1.99/2) and subject 1 would get $34.01 ($68.01/2) and subject 3 would get $0.

But subject 2 does not have to do this.

Alternatively

Subject 2 can make a request that is greater than $1.99. This permits a request by subject 3 so that some alternative coalition can be formed with a different allocation of the $70.

Example 2:

Request 1 - subject 2 is selected and requests $10 and that subject 3 gets to request next followed by subject 1.

Request 2 - subject 3 is selected and can close the coalition. He/she can do so with a request of $60 in which case 2 gets $5 ($10/2), 3 gets $60, and subject 1 gets $0.

Alternatively

Subject 3 can close the coalition with a request of less than $60, in which case subjects 1 can receive an allocation from the remaining money

Alternatively

Subject 3 can make a request that is greater than $60. This permits a request by subject 1 and the possibility of forming some alternative coalition.

Alternatively, subject 3 can make a request of $60 or less and not close the coalition, in which case he/she is passing on the right to close the coalition and to determine the coalition members to subject 1.

Example 3:

Request 1 - subject 3 is selected and requests $23.33 and that subject 2 gets to request next followed by subject 1.
Request 2 - subject 2 is selected, requests $23.33, and doesn't close the coalition.
Request 3 - subject 1 is selected, requests $23.33, and closes the coalition.
But they don't have to do this, as there are many other possibilities.

Example 4:
Request 1 – subject 1 is selected and requests $40 and that subject 3 gets to request next followed by subject 2.
Request 2 – subject 3 is selected and requests $40 so that it is not possible to close the coalition.
Request 3- subject 3 is selected and requests $40 so that it is still not possible to close the coalition.
In this case we would enter round 2 of this election and the process would repeat itself but with a new random draw to determine which subject gets to have their request honored first.
But they don't have to do this, as there are many other possibilities.

As you can see there are many possibilities here. What should you do? If we knew the answer to this question we would not have to conduct the experiment. You should do what you think is best.

Review. Let's summarize the main points:

- The experiment will consist of 11 elections, 1 practice and 10 for real. There may be several rounds to each election.
- In each election there are three voting blocks. Each of you represents a different voting block with two voting blocks controlling 2 votes and one block controlling 1 vote. The number of votes in your voting block will remain the same for the entire experiment.
- At the start of each election you will request a share of $50.00 for your voting block and the order in which the different voting blocks (after yours) get to choose.
- One of these initial requests will be randomly selected to start that round of an election. The probability with which one of these initial requests is selected is equal to the number of votes in the voting block divided by the total number of votes. If a majority coalition is formed (those requesting have 3 or more votes and the sum of their requests do not exceed $50), the proposed allocation is binding, and the election ends.

- If no majority coalition is formed after everyone has made a request the process will repeat itself until someone is able to close the election.
- At the end of the 10 cash elections, one election, selected at random will be paid off on. Your earnings will be equal to your payment for that election divided by the number of votes in your voting block plus the participation fee.

Are there any questions?