

### 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. Proposals will be voted up or down (accepted or rejected) by majority rule.
2. In each election you will have to decide how to divide \$60.00 among five (5) voting blocks. In each election there are five representatives, one for each voting block. As the representative of your voting block you will propose a division between voting blocks.
3. After you have all made your allocations, one of the proposed allocations will be voted on. Proposals will be posted on your computer screens with the proposed allocation to you and the other voting blocks clearly indicated. You will then have to decide whether to accept or reject the division currently proposed.
4. There are a total of 5 votes distributed between the five voting blocks. In each election each voting block controls 1 vote. For the proposal to pass, it must receive a majority of the 5 votes (it must get 3 or more votes). *Any combination* of 3 or more votes results in the proposal passing. If the proposal **passes**, the proposed allocation is binding and we will move on to the next election.
5. If the proposal is defeated (gets less than 3 votes), there will be a call for new proposals and the process will repeat itself. Thus, if the first proposal **is rejected**, new proposals will be called for. You will again propose allocations between yourself and the other voting blocks (these proposals may or may not be the same as your original proposal – this is up to you). One of these proposals will be selected to be voted on. This process will repeat itself until a proposed allocation receives a majority (3 or more votes) and the election ends.
6. The chances of your proposal being selected to be voted on will be equal to the number of votes held by your voting block relative to the total number of votes. Thus, everyone has an equal chance of their proposal being recognized.
7. To summarize, the steps in the election process will work as follows:

*Step 1:* Everyone submits a proposal to split \$60

*Step 2:* One proposal, selected at random, has the floor. All proposals have an equally likely chance of being selected to be voted on.

*Step 3:* An election is held.

*Step 4:* If the proposal receives 3 or more votes it passes and the election is over.

If the proposal is rejected, go back to step 1.

This process repeats itself until a proposal receives majority approval.

8. There will be a total of 11 elections, one (1) practice election and ten (10) elections played for cash.
9. At the conclusion of the experiment, one of the 10 elections played for cash will be randomly selected by computer, and the \$60 distributed according to the proposal that passed 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.
10. There are a total of \_\_\_ voters in the room. In each election you will be assigned to one of \_\_\_ groups of five 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:

Subject 1's proposal is selected, he proposes \$68.01, \$0.99, \$1.00, 0, 0 – ordered by subject number.

Now the votes could be accept, accept, accept, reject, reject – once again ordered by subject number – in which case the proposal would pass as it has a majority (3 of 5) votes. As such, if this election were paid off on, subject 1 would get \$69.01, subject 2 would get \$0.99, subject 3 would get \$1.00 and subjects 4 and 5 would get \$0.

Alternatively

The votes could be accept, reject, accept, reject, reject so the proposal does not receive a majority, and the election would go to the next round. A new set of proposals would be called for, one of which would be selected at random to be voted on and the voting process repeats itself.

Example 2:

Subject 2's proposal is selected, he proposes 0, \$10, \$10, \$10, \$40. Now the votes could be reject, accept, accept, accept, accept in which case the proposal would pass as it has a majority of votes (4 of 5). As such if this election were paid off on subject 1 would get \$0, subjects 2, 3, and 4 would each get \$10 and subject 5 would get \$40.

Alternatively

Subject 2 might propose 20, 40, 10, 0, 0. Now the votes could be accept, accept, accept, reject, reject in which case the proposal would pass as it has a majority of votes (3 of 5). As such if this election were paid off on subject 1 would get \$20, subject 2 would get \$40, subject 3 would get \$10 and subjects 4 and 5 would get \$0.

Alternatively

Both these proposals could fail to receive the necessary 3 votes in which case the election would go to the next round.

Example 3:

Subject 1's proposal is selected, he proposes \$14, \$14, \$14, \$14, \$14. Now the votes might be accept, accept, accept, reject, accept so that the proposal passes and subjects 1, 2, 3, 4, and 5 would get \$14 each. But they don't have to do this. Again they could vote differently and if the election goes to another round, propose something else.

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 five voting blocks. Each of you represents a different voting block. In each election each voting block controls 1 vote.
- At the start of each election you will propose a split of \$60.00 between the five voting blocks.
- A proposal to be voted upon will be randomly selected in each round of the election. All proposals have an equally likely chance of being selected.
- If the proposal receives 3 or more votes (a simple majority of the votes) it passes, the proposed allocation is binding, and the election ends.
- If a simple majority rejects the proposal then we will solicit new proposals and the process repeats itself.
- 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?

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Sample of dry run for Baron-Ferejohn game:

**To be read by the experimenter**

A. PUT THE FIRST TRANSPARANCY ON THE PROJECTOR. START THE DRY RUN.

We will now conduct a practice election, this does not count for money.

B. 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, please write it down now. In each election, you will be randomly assigned a subject number (1, 2, 3, 4, 5) 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. Every election, you have to indicate your subject number and you group number on your record sheet. Please do this now. Write Practice for this election.

C. Now you can enter your proposed division and confirm it. Allocations to each block must be between \$0 and \$60. They must be rounded to the nearest penny. And they must add up to \$60. Simply type in the number, do not enter a dollar sign. **[Note that there is a box below where you enter your allocations that you can click which will calculate the actual payments to all voters. In our example we have done this and it shows that the actual money allocation to the person representing the block with 3 votes would get his or her allocation divided by 3 while those with one vote would get the full dollar amount allocated. These payments are shown in brackets next to the dollar shares allocated.]** Finally note that you must click the confirm button for you allocation to be recorded. You can change your allocation prior to this, but not after you have confirmed it

D. PUT THE SECOND TRANSPARANCY ON THE PROJECTOR. This is similar to your second screen. Please wait for my instructions before voting. As you can see in this example subject X's proposal was selected in group A and he proposed payments of A, B, C, D, E. I am using letters, but when you play these will be dollar amounts. The amount each voter gets in this proposal is the amount next to that voters subject number

and on the other side you can see the number of votes controlled by each subject. Remember this is the proposal that was selected in your group. It may not be your proposal. If it is not your proposal it means you were not selected to be the proposer for this round. **[Note that the actual dollar payments if this proposal was accepted are reported in brackets for all voters on this screen. This will always appear on your screens prior to voting. ]**

Now please reject this proposal. **(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.) Remember you must always click the confirm button for your vote to be recorded.

- E. PUT THE THIRD TRANSPARANCY ON THE PROJECTOR. This is what your third screen looks like. You can see who accepted or rejected the proposal and the total number of votes in favor of that proposal.
- F. PUT THE FOURTH TRANSPARANCY ON THE PROJECTOR. The process now starts over again since the proposal was rejected. You can see in the results from the previous round is posted in the top right hand side of your screen (**A** for accepted and **R** for rejected). Please enter new proposals.
- G. PUT THE FIFTH TRANSPARANCY ON THE PROJECTOR. Now please accept this proposal. **(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.)
- H. PUT THE SITH TRANSPARANCY ON THE PROJECTOR. This is similar to your screen with the exception that you are now in round 2 and the proposal was accepted, so that the proposed allocation is binding. Offers and outcomes from previous rounds of this election are always in the upper right hand side of your screens. Results from previous elections are in the lower left hand side of your screens. **[Actual dollar payoffs for all past proposals are always reported in brackets next to the proposed allocations.]**

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.

- I. 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.

- J. Finally note that we have \_\_\_\_ groups/different elections going on at once. Although there are \_\_\_\_ people in the room, the only ones who count for this election are those that are your group. Further, the software is setup so that we cannot move onto a new election until all the groups have finished with their elections. This means that it will be quite normal to wait between elections while the other groups finish up. We have to wait for all the groups to finish before we can go on since we rematch everyone in the room following each election.

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

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Instructions for Baron-Ferejohn Apex 1/3 game. Note that for regular Apex game any mention of dividing payoffs by number of votes has simply been eliminated.

BF 5 ws 7/V2  
UnEqIWt/UnEqISel 10/02

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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. Proposals will be voted up or down (accepted or rejected) by majority rule.
2. In each election you will have to decide how to divide \$60.00 among five (5) voting blocks. In each election there are five representatives, one for each voting block. As the representative of your voting block you will propose a division between voting blocks.
3. After you have all made your allocations, one of the proposed allocations will be voted on. Proposals will be posted on your computer screens with the proposed allocation to you and the other voting blocks clearly indicated. You will then have to decide whether to accept or reject the division currently proposed.
4. There are a total of 7 votes distributed between the five voting blocks. In each election four of the voting blocks will each control 1 vote, and the fifth block will control 3 votes. For the proposal to pass, it must receive a majority of the 7 votes (it must get 4 or more votes). *Any combination* of 4 or more votes results in the proposal passing. If the proposal **passes**, the proposed allocation is binding and we will move on to the next election. Your block of votes must **all** be allocated either for or against the proposed division of the \$60.
5. If the proposal is defeated (gets less than 4 votes), there will be a call for new proposals and the process will repeat itself. Thus, if the first proposal **is rejected**, new proposals will be called for. You will again propose allocations between yourself and the other voting blocks (these proposals may or may not be the same as your original proposal – this is up to you). One of these proposals will be selected to be voted on. This process will repeat itself until a proposed allocation receives a majority (4 or more votes) and the election ends.
6. For proposals that are passed, payments will be proportionate to the number of votes in your voting block. That is, if you control one vote you will get whatever amount you are

allocated. However, if you control 3 votes you will receive one third of the money allocated to your block. That is, it is as if the person controlling 3 votes represents a group of 3 people who he/she must divide the money up with others in her group.

7. The chances of your proposal being selected to be voted on will be equal to the number of votes held by your voting block relative to the total number of votes. As such each of the blocks controlling 1 vote has a 14.29% (1/7) chance of their proposal being selected and the block controlling 3 votes has a 42.86% (3/7) chance of their proposal being selected.

8. To summarize, the steps in the election process will work as follows:

*Step 1:* Everyone submits a proposal to split \$60

*Step 2:* One proposal, selected at random, has the floor. Subjects with 1 vote have a 1/7 (14.29%) chance of their proposal being selected to be voted on while subjects with 3 votes have a 3/7 (42.86%) chance of their proposal being selected to be voted on.

*Step 3:* An election is held.

*Step 4:* If the proposal receives 4 or more votes it passes and the election is over.

If the proposal is rejected, go back to step 1.

This process repeats itself until a proposal receives majority approval.

9. There will be a total of 11 elections, one (1) practice election and ten (10) elections played for cash. The number of votes in your voting block will remain the same across all elections. That is, if you control 1(3) votes you will always control 1 (3) votes.
10. At the conclusion of the experiment, one of the 10 elections played for cash will be randomly selected by computer, and the \$60 distributed according to the proposal that passed 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 you control. 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.
11. There are a total of \_\_\_ voters in the room. In each election you will be assigned to one of \_\_\_ groups of five voters. Assignments to voting groups will vary randomly from election to election subject to the restriction that there will always be only one voting block of 3 votes in each group. 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. For the example, we will assume that that subject 1 is the one with 3 votes.

Example 1:

Subject 1's proposal is selected, he proposes \$69.01, \$0.99, 0, 0, 0 – ordered by subject number.

Now the votes could be accept, accept, reject, reject, reject – once again ordered by subject number – in which case the proposal would pass as it has a majority (4 of 7) votes. As such, if this election were paid off on, subject 1 would get \$23.00 (one third of \$69.01), subject 2 would get \$0.99 and subjects 3, 4, and 5 would get \$0.

Alternatively

The votes could be accept, reject, reject, reject, reject so the proposal does not receive a majority, and the election would go to the next round. A new set of proposals would be called for, one would be selected according to the selection rules (a 14.29% chance for the blocks controlling 1 vote, a 42.86% chance for the block controlling 3 votes) and the voting process repeats itself.

Example 2:

Subject 2's proposal is selected, he proposes 0, \$10, \$10, \$10, \$40. Now the votes could be reject, accept, accept, accept, accept in which case the proposal would pass as it has a majority of votes (4 of 7). As such if this election were paid off on subject 1 would get \$0, subjects 2, 3, and 4 would each get \$10 and subject 5 would get \$40.

Alternatively

Subject 2 might propose 20, 50, 0, 0, 0. Now the votes could be accept, accept, reject, reject, reject in which case the proposal would pass as it has a majority of votes (4 of 7). As such if this election were paid off on subject 1 would get \$6.67 (one third of \$20), subject 2 would get \$50, and subjects 3, 4, and 5 would get \$0.

Alternatively

Both these proposals could fail to receive the necessary 4 votes in which case the election would go to the next round.

Example 3:

Subject 1's proposal is selected, he proposes \$14, \$14, \$14, \$14, \$14. Now the votes could be accept, accept, accept, accept, reject so that the proposal passes and subject 1 would get \$4.67 (one third of \$14), and subjects 2, 3, 4, and 5 would each get \$14. But they don't have to do this. Again they could vote differently and if the election goes to another round, propose something else.

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 five voting blocks. Each of you represents a different voting block. In each election four voting blocks will control 1 vote each, and the fifth block will control 3 votes.
- At the start of each election you will propose a split of \$60.00 between the five voting blocks.
- A proposal to be voted upon will be randomly selected in each round of the election. The chances of your proposal being selected are equal to the ratio of the votes held by your voting block to the total number of votes (a  $1/7$  [14.29%] chance for the blocks controlling 1 vote, a  $3/7$  [42.86%] chance for the block controlling 3 votes).
- If the proposal receives 4 or more votes (a simple majority of the votes) it passes, the proposed allocation is binding, and the election ends.
- If a simple majority rejects the proposal then we will solicit new proposals and the process repeats itself.
- 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 controlled plus the participation fee.

Are there any questions?

|

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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 \$60.00 among five (5) voting blocks. In each election there are five representatives, one for each voting block. As the representative of your voting block you will make a request for your share of the money.
3. Elections work as follows: Each of you will make requests for your share of the money in a fixed order. Once 3 or more requests have been made *and* the sum of these requests do not exceed \$60, then the money can be allocated, as requested.
4. There are a total of 5 votes distributed between the five voting blocks. In each election each voting block controls 1 vote.
5. The steps in the election process will work as follows:

*Step 1:* Each of you reports the amount of money you request for yourself. Then one of you, selected at random will have your request presented to the others

*Step 2:* Each of you will again report the amount of money you request for yourself, and one of the *remaining* voters will be selected at random and their request presented to others.

*Step 3:* Each of you will again report the amount of money you request for yourself, and one of the *remaining* voters will be selected at random and their request presented to others. *If* the sum of this request and the requests in steps 1 and 2 is less than or equal to the amount of money available (\$60) 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 and 2 along with your own request.

*Step 4:* Step 4 works as follows.

A. **If the election is closed** in step 3, 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 everyone writes down a request (this is only to preserve anonymity) for their share of the remaining money. Then each of the subjects not chosen in steps 1 and 2 will be picked in random order to get what they request until all the money has been allocated. (Note that if any of these voters 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 3 (say because the sum of requests 1 – 3 are more than \$60 between them), then the request process continues essentially as in step 3. That is, a fourth person is selected to make a request. If the sum of their requests made by any combination of subjects in steps 1-3 in conjunction with this last request is less than or equal to \$60 *and* constitutes a majority (controls 3 or more votes), then the subject making the latest (fourth) request can “close” the election. Note, it is possible, given the fourth request, that more than one possible majority coalition can be formed. If this is the case and the decision is to close the election, then the last (fourth) requester gets to decide which requests/requests to include in their “coalition.”

This process repeats itself until an election is closed or all 5 requests have been made and still no one is able to, or wishes to, close the election, in which case we would go back to step 1 and the process repeats itself.

6. The order in which requests will be made is random with the probability of being selected the same for everyone in each step.
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 \$60 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 five 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. Request 2 - subject 2 is selected and requests \$1.00. Now in step 3 suppose subject 3 is selected. He/she can choose to request \$0.99 and close the coalition, in which case he/she would get \$0.99 and subjects 1, 2, 4 and 5 would get \$69.01, \$1.00, \$0, \$0, respectively. But he/she does not have to do this.

Alternatively

Subject 3 can make a request that is greater than \$0.99. This permits a request by either subject 4 or 5 (which can possibly be followed by additional requests) 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.

Request 2 - subject 3 is selected and requests \$10.

Request 3 - subject 4 is selected and can close the coalition. He/she can do so with a request of \$40 in which case 2 gets \$10, 3 gets \$10, 4 gets \$40, and subjects 1 and 5 get \$0.

Alternatively

Subject 4 can close the coalition with a request of less than \$40, in which case subjects 1 and /or 5 can receive an allocation from the remaining money

Alternatively

Subject 4 can make a request that is greater than \$40. This permits a request by subjects 1 and/or 5, and the possibility of forming some alternative coalition.

Alternatively

Subject 4 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 either subject 1 or 5.

Example 3:

Request 1 - subject 1 is selected and requests \$14.

Request 2 - subject 2 is selected, requests \$14, and doesn't close the coalition.

Request 3 - subject 3 is selected, requests \$14, and doesn't close the coalition.

Request 4 - subject 4 is selected, requests \$14, and doesn't close the coalition.

Request 5 - subject 5 requests \$14 and closes the coalition to include subjects 1-5.

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 five voting blocks. Each of you represents a different voting block with one vote each.
- At the start of each election you will request a share of \$60.00 for your voting block.
- A request will be randomly selected in each step of the election with all requests having an equally likely chance of being accepted. If a majority coalition is formed (those requesting have 3 or more votes and the sum of their requests do not exceed \$60), the proposed allocation is binding, and the election ends.
- If no majority coalition is formed after everyone has made their 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?

|

Instructions: Sample of dry-run for DB sessions.

**To be read by the experimenter**

- A. PUT THE FIRST TRANSPARANCY ON THE PROJECTOR. START THE DRY RUN.  
We will now conduct a practice election, this does not count for money.
- B. 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, please write it down now. In each election, you will be randomly assigned a subject number (1, 2, 3, 4, 5) 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. Every election, you have to indicate your subject number and you group number on your record sheet. Please do this now. *Write Practice for this election.*
- C. Now you can enter your request and confirm it. Requests must be between \$0 and \$60. 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. **[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 3 votes.]**
- D. PUT THE SECOND TRANSPARANCY ON THE PROJECTOR. This is similar to what your second screen will look like except if your demand was selected in the first round (we will come back to what screens will look like in this case in a moment). As you can see subject X's request was selected in group A and he requested X. I am using letters, but when you play these will be the dollar amounts requested. The amount X requested is posted on the left of the screen next, to that voters subject number along with the number of votes controlled by X. **[Note 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]** Now please enter your request for stage 2 and even if its 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.)

Note that even those whose requests were accepted in stage 1 (or any stage for that matter) must enter another request. The software requires it. But this request will not count, it is not even saved by the software. Nonetheless, you have to enter a number and confirm it for the software to continue. Put screen – **08** up.

Now do the same thing for the third request: enter a request and don't close the coalition. Continue this until everyone has placed a request but please don't close the election so we can show you what happens in this case. Remember even after your request was accepted you still have to enter a number to keep the election moving along

To summarize: (1) at each stage everyone makes a demand as if his/her demand was going to be selected, but only one demand is selected (2) whether your demand was selected or not everyone makes a new demand in the next stage (but only the demands of subjects that weren't selected already count), (3) If after your demand has been selected a coalition can be formed you are asked to decide if you would like to close the election and if more than coalition can be formed you are asked who you want to include in that coalition, and (4) only the demands of those included in the coalition will be honored if this is the election paid off on.

- E. PUT THE THIRD 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]**
- F. PUT THE FOURTH TRANSPARANCY ON THE PROJECTOR. The process now starts over in another round since no majority coalition was formed. Please enter new requests.
- G. PUT THE FIFTH TRANSPARANCY ON THE PROJECTOR. Now please enter a second, third, and fourth requests and never close the coalition. Finally, enter a fifth request (such that you can form a coalition – please enter a request of 0) 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.)
- H. 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.

- I. Finally, if a coalition is formed that does not spend the full \$60, than the remainder of the money will be offered to voters that haven't been selected yet (they will be selected randomly following the usual procedure). And this is what their screens would look like [put in slide dbscreen\_shot\_09\_money\_is\_left.gif].

PUT THE SEVENTH TRANSPARANCY ON THE PROJECTOR. 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.]**

- J. 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, I 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.

Instructions for Demand Bargaining Apex 1/3 game: Note that for regular Apex game any mention of dividing payoffs by number of votes has simply been eliminated.

DB 5 ws 7/V2  
UnEqIWt/UnEqSel 10/02

### 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 \$60.00 among five (5) voting blocks. In each election there are five representatives, one for each voting block. As the representative of your voting block you will make a request for your share of the money.
3. Elections work as follows: Each of you will make requests for your share of the money in a fixed order. Once 2 or more requests have a majority of the votes *and* the sum of these requests do not exceed \$60, then the money can be allocated, as requested.
4. There are a total of 7 votes distributed between the five voting blocks. In each election four of the voting blocks will each control 1 vote, and the fifth block will control 3 votes.
5. The steps in the election process will work as follows:

*Step 1:* Each of you reports the amount of money you request for yourself. Then one of you, selected at random will have your request presented to the others

*Step 2:* Each of you will again report the amount of money you request for yourself, and one of the *remaining* voters will be selected at random and their request presented to the others. *If* the sum of this request and the request in step 1 is less than or equal to the amount of money available (\$60) *and* the number of votes controlled by the first request and your request constitute a majority (4 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 everyone writes down a request (this is only to preserve anonymity) for their share of the remaining money. Then each of the subjects not chosen in steps 1 and 2 will be picked in random order to get what they request until all the money has been allocated. (Note that if any of these voters 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 requests 1 and 2 do not constitute a majority of the votes and/or they request more than \$60 between them), then the request process continues essentially as in step 2. That is, a third person is selected to make a request. If the subjects making requests 1, 2, and 3 can constitute a majority (control 4 or more votes) and the sum of their requests are less than or equal to \$60, then the subject making the latest (third) request can “close” the election. Note, it is possible, given the third request, that more than one possible majority coalition can be formed. If this is the case and the decision is to close the election, then the last (third) requester gets to decide which requests/voters to include in their “coalition.”

This process repeats itself until an election is closed or all 5 requests have been made and still no one is able to or wishes to close the election, in which case we would go back to step 1 and the process would repeat itself.

6. Payments made once an election is closed will be proportionate to the number of votes in your voting block. That is, if you are included in the coalition and you control one vote you will get whatever amount you requested. However, if you control 3 votes you will receive one third of the money requested. That is, it is as if the person controlling 3 votes represents a group of 3 people who he/she must divide the money.
7. The order in which requests will be made is random but the probability of being selected is a function of the number of votes held by your voting block. Thus, for the first request, each of the blocks controlling 1 vote has a 14.29% ( $1/7$ ) chance of their request being selected first and the block controlling 3 votes has a 42.86% ( $3/7$ ) chance of their request being selected first. If the block with 3 votes was selected first, then the remaining blocks have an equal ( $1/4$ ) chance of being selected second. If the block selected first had 1 vote, then the block with 3 votes has a 50% chance ( $3/6$ ) of its request being selected second and each of the blocks with 1 vote have a 16.67% chance ( $1/6$ ) of being selected second, etc. That is, the

chances of your block being selected are a function of the number of votes your block controls divided by the total number of votes for blocks that have not been selected yet.

8. There will be a total of 11 elections, one (1) practice election and ten (10) elections played for cash. The number of votes in your voting block will remain the same across all elections. That is, if you control 1 (3) votes you will always control 1 (3) votes.
9. At the conclusion of the experiment, one of the 10 elections played for cash will be randomly selected by computer, and the \$60 distributed according to the final allocation 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 you control. 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.
10. There are a total of \_\_\_ voters in the room. In each election you will be assigned to one of \_\_\_ groups of five voters. . Assignments to voting groups will vary randomly from election to election subject to the restriction that there will always be only one voting block of 3 votes in each group. 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. For the example, we will assume that that subject 1 is the one with 3 votes.

Example 1: Request 1 - subject 1 is selected and requests \$69.01. Now in step 2, suppose subject 2 is selected, he/she can choose to request \$0.99 and close the coalition, in which case he/she would get \$0.99 and subject 1 would get \$23 (one third of \$69.01) and subjects 3, 4 and 5 would each get \$0. But he/she does not have to do this.

Alternatively

Subject 2 can make a request that is greater than \$0.99. This permits a request by either subjects 3, 4 or 5 (which can potentially be followed by additional requests), 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.

Request 2 - subject 3 is selected and requests \$10.

Request 3 - subject 4 is selected and requests \$10.

Request 4 - subject 5 is selected and can close the coalition. He/she can do so with a request of \$40 in which case 2 gets \$10, 3 gets \$10, 4 gets \$10, 5 gets \$40 and 1 gets \$0

Alternatively

Subject 5 can close the coalition with a request of less than \$40, in which case subject 1 can receive an allocation from the remaining money

Alternatively

Subject 5 can make a request that is greater than \$40. This permits a request by subject 1, and the possibility of forming some alternative coalition.

Alternatively

Subject 5 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 1 is selected and requests \$14.

Request 2 - subject 2 is selected, requests \$14, and doesn't close the coalition.

Request 3 - subject 3 is selected, requests \$14, and doesn't close the coalition.

Request 4 - subject 4 is selected, requests \$14, and doesn't close the coalition.

Request 5 - subject 5 requests \$14 and closes the coalition to include subjects 1-5.

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 five voting blocks. Each of you represents a different voting block. In each election 4 voting blocks will control 1 vote each, and the fifth block will control 3 votes.
- At the start of each election you will request a share of \$60.00 for your voting block.
- A request will be randomly selected in each step of the election. The chances of your request being selected are equal to the ratio of the votes held by your voting block to the total number of votes.
- If a majority coalition is formed (those requesting have 4 or more votes and the sum of their requests do not exceed \$60), the proposed allocation is binding, and the election ends.
- If no majority coalition is formed after everyone has made their 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?

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Sample of summary instructions for experienced subjects for Baron-Ferejohn game:

BF 5 ew Exp

11/02

### Instructions: Experienced Subjects

You have all participated in an experiment like the one you are about to participate in but with different subjects. The purpose of bringing you back to participate again is to see how more experienced subjects behave in situations of this sort. We will briefly review the rules of the experiment below:

- In each election there are five voting blocks. Each of you represents a different voting block. Each voting block controls 1 vote.
- At the start of each election you will propose a split of \$60.00 between the five voting blocks.
- A proposal to be voted upon will be randomly selected in each round of the election. All proposals have an equal chance of being selected to be voted on in each round of each election.
- If the proposal receives 3 or more votes (a simple majority of the votes) it passes, the proposed allocation is binding, and the election ends.
- If a simple majority rejects the proposal then we will solicit new proposals and the process repeats itself.
- There will be a total of 10 elections. At the end of the experiment one election, selected at random will be paid off on. Your earnings will be equal to the amount of money allocated to your voting block in that election. Everyone will also receive the \$8 participation fee.

Are there any questions?

Summary instructions for experienced subjects in DB game:

DB 5 ew Exp  
11/02

### Instructions: Experienced Subjects

You have all participated in an experiment like the one you are about to participate in but with different subjects. The purpose of bringing you back to participate again is to see how more experienced subjects behave in situations of this sort. We will briefly review the rules of the experiment below:

- In each election there are five voting blocks. Each of you represents a different voting block. Each voting block controls 1 vote.
- At the start of each election you will request a share of \$60.00 for your voting block.
- A request will be randomly selected in each step of the election. All requests have an equally likely chance of being selected in each round of each election.
- If a majority coalition is formed (those requesting have 3 or more votes *and* the sum of their requests do not exceed \$60), the proposed allocation is binding, and the election ends.
- If no majority coalition is formed after everyone has made their request the process will repeat itself until someone is able to close the election.
- There will be a total of 10 elections. At the end of the experiment one election, selected at random will be paid off on. Your earnings will be equal to the amount of money allocated to your voting block in that election. Everyone will also receive the \$8 participation fee.

Are there any questions?