Appendix A Experimental Instructions

In this appendix we provide a transcript of the experimental instructions. Brackets indicate parts of the instruction that varied across treatments. The "Experimental Instructions" were given to all subjects (upon arrival) while the "Specific Instructions" were sealed in an envelope and given to the specified roles only. Instructions were also provided on screen. In addition to the instructions, subjects also received a version of table **??** or **??**, according to treatment, without the last column and highlights.

Experimental Instructions

Welcome to today's experiment. Over the next two hours, you will be engaged in an activity for which you will be paid by check upon completion. Just for arriving on time and agreeing to participate, you will be paid a show up fee of $10. Additional money will be earned through the course of the experiment, depending on your choices and the choices made by other participants. During the experiment, all the money you earn will be listed in experimental currency units (ECUs). When the experiment is complete, these will be converted to dollars at a rate of one dollar for every 500 ECUs.

From this point on, you may not speak or attempt to communicate with any of the other participants. Turn OFF, not just to silent, any phones or electronic devices and keep them off for the duration of the experiment. Violation of these policies will result in first a warning and then dismissal from the experiment without payment (but with no further penalty). If you have a question, please raise your hand and an experimenter will come to you to answer your question.

Roles

At the beginning of the experiment, all participants are assigned to be either a Politician or a Voter. Each participant has the same chance of being assigned to one of the two roles. You will remain in the same role for the entire duration of the experiment.

Politicians (2): Two participants will be randomly chosen to be politicians. Of these two, one will be randomly chosen to start as the Incumbent, while the other will be the Candidate seeking to replace the Incumbent. The Incumbent will receive a salary of 500 ECUs per period, while the Candidate will receive a salary of 100 ECUs per period.

Voters (15): The remaining fifteen participants will comprise a nation of voters, randomly split into three communities of five. Once assigned to a community, a voter will remain in that community for the rest of the experiment.

Each voter will also be randomly assigned to receive either a high endowment of 500 ECUs or a low endowment of 100 ECUs per period. This too will remain constant throughout the experiment. [*baseline*: There will be 3 low endowment and 2 high endowment voters in each

community.][*clustered*: There will be 2 communities of 4 low endowment voters and 1 high endowment voter and 1 community of 1 low endowment and 4 high endowment voters.][*poor*: There will be 4 low endowment and 1 high endowment voter in each community.][*heterogeneous*: There will be a community of 4 low endowment and 1 high endowment voters, a community of 3 low endowment and 2 high endowment voters and a community of 2 low endowment and 3 high endowment voters.]

Structure of the experiment

Stage 1: *Politicians choose a tax rate and the tax returns*

In the first stage, politicians make the following choices: the tax rate and the tax returns. The tax rate is the percentage of endowment collected from each voter. It can be a number between 0% and 100% in increments of 10%. The same tax rate t will apply to ALL communities and, thus, all voters. Each tax rate is associated with collected taxes and a tax *revenue*. These relationships can be seen in two ways. First, it is given by mathematical equations. [*baseline, clustered and heterogeneous*: Collected taxes are given by $(3900 * t)$, where 3900 is the total national endowment (everyone's endowment added up). Tax revenue is then given by $(3900 * t) * (1.40 - t)$.][*poor*: Collected taxes are given by $(2700 * t)$, where 2700 is the total national endowment (everyone's endowment added up). Tax revenue is then given by $(2700 * t) * (1.40 - t)$.] If you find this too hard to understand, there is no need to worry. In the accompanying table, we list for every possible t, the collected taxes and tax revenue that it generates.

Once the tax revenue has been determined, the politician has to decide on the tax returns. That is, how much of the tax revenue to return to each community. The total amount returned must be equal to the tax revenue. Within each community the tax return is equally divided among its voters. (Notice a politician can return different amounts to different communities but cannot affect how the tax return is distributed within a community).

The tax rate and tax returns chosen by the Incumbent will be implemented. The choices made by the Candidate are hypothetical proposals that can also be seen by the voters.

Stage 2: *Voters observe information*

Voters will be informed about their own endowment, their own income after taxes and tax returns, and how their own income has changed as a result of these choices.

Voters will have the opportunity to purchase additional information for 2 ECUs per piece. Voters can buy up to 5 pieces of information. The information relates to the tax rate and the Average Income Change, that is, how much better or worse an average voter is compared to her initial endowment. The five pieces of information available are: tax rate, Average Income Change in the voter's own community, in each of the other two communities, and at the national level.

Voters can see the same information (including purchased information) for both politicians. That means, if a voter purchases a piece of information, s/he will have access to that piece of information about both politicians.

Stage 3: *Approval Poll / Election*

Voters will have the chance to say whether or not they are happy with the current Incumbent's policies. A question of the form "Do you approve of the job Politician X is doing as leader?" will be posed. Voters must select either yes or no. The results will be announced at the end of the period.

Every third period, instead of an approval question, there will be an election. Voters will have the choice to vote for either Politician 1 or Politician 2 to be the leader for the next three periods. The politician who receives the most votes wins. Results are announced at the end of the period.

Stage 4: *Summary*

At the end of each period, a screen will appear showing results of the *Approval Poll / Election*, income from that period, and cumulative earnings.

Ending Conditions

This procedure will be repeated a pre-determined number of times. When the experiment has been completed, you will be asked to fill out a short questionnaire. When everyone is finished, you will each be called individually to the back of the room to be paid privately.

Please press "Continue" on your screen once you finish reading this part. You will learn about your role (Politician or Voter) and receive further instructions about your screen.

Specific Instructions for Politicians: (Seen only by politicians)

As mentioned before, politicians make the following choices: the tax rate and the tax returns. The tax rate is set by moving the slider at the top of your screen from left to right. As you move the slider, you will see directly underneath, how the tax rate affects the tax revenue. The next choice to be made is the tax returns to each community. This has to be entered to each community individually on the left hand side of your screen.

To assist you in your decisions, below the tax revenue, there is an indication of the amount not yet distributed. There is also a calculator button on the rightmost side of the screen. You can click on this button to call a calculator in case you believe it may help you with the computations.

On the right side of your screen, you will see a column labeled "Total Income Change". This refers to the amount your policies have given to or taken from certain voters. For example, total income change of 70.00 for Community 1 means that you have made that community 70 ECUs better off than it was before.

This view is called the "Aggregate Distribution View". At the bottom of the screen, you will see a button labeled "Income Distribution View". If you click this button, you will be shown how many low and high endowment voters are in each community and how your policy has affected the average voter in each group. Click "Aggregate Distribution View" to return to the previous view.

At anytime you can click the "Preview" button to see the effects of your current policy and to update the amount not yet distributed. Note: to preview a policy, the total amount returned to the communities must be no more than the tax revenue.

You will also see a button at the bottom of your screen labeled "History". Click this button to see the policies chosen by you and by the other politician in previous periods. The buttons "Own History" and "Other Politician's History" allow you to alternate views accordingly. The following information is provided on the history screen: Period, Status (Incumbent or Candidate), Tax Rate and Tax Returns for each community. (Note this will be empty in the first period). Click "Current Period" to return to current period's view.

Once you are satisfied with a policy that completely distributes the tax revenue you can click "OK". In the next period, this will be shown as the starting policy. You will, of course, be free to change it.

When both politicians have pressed "OK", voters will be able to see the information and fill the Approval/ Election ballot. During this time, you will be shown a screen similar to your decision screen, which you can use to try different policies and test their effects. No values entered during this stage will be implemented or recorded into the "History" screen.

Please press "Continue" on your screen once you finish reading this part. This concludes the instructions.

Specific Instructions for Voters: (seen only by voters)

Once both politicians have decided on their policies, you will see how their choices have translated into payoffs.

In the middle of the screen, you will see your endowment. Directly underneath, a table starts. This table presents a column associated with each Politician's policy. The first two rows indicate your income after taxes and tax returns, and how your income has changed. You have the opportunity to purchase up to 5 additional pieces of information for 2 ECUs per piece. The row below your income change holds the tax rate. Click on the button "Purchase Information"

to reveal the tax rate. Next, there is a sub-table. The first columns indicate the number of low and high endowment voters, followed by the average income. The final columns refer to the Avg. Income Change. For this column, the first three options are Own Community, Other Community 1, and Other Community 2. If you click on one of the "Purchase Information" buttons, you will be told how much better or worse off the average member of that community is, compared to the initial endowment, due to the policy choices. The final row provides information about the whole nation, that is, the number of low and high endowment voters and the average endowment, and the possibility to "Purchase Information" about the Avg. Income Change in the nation as a whole.

At the bottom of the screen there are also two buttons labeled "History Politician 1" and "History Politician 2" which will show you information about previous periods. You will be shown the following information: Period, Status (Incumbent or Candidate), Own Income Change and, if purchased, Tax Rate, Average Income Change in your Own Community, Other Community 1, Other Community 2 and Nation. Notice it is not possible to purchase information regarding previous periods. Click "Current Period" to return to current period's view.

The ballot for approval or election will appear on the top of your screen. You must indicate if you approve or not of the job the current incumbent is doing as the leader, and in election periods (every third period), indicate instead, for whom you wish to vote.

Once you are done reviewing information and casting your vote, please click "OK" to continue, in the bottom right corner of the screen. The experiment cannot continue until all voters have done this, so please remember to click the button.

While the politicians are making their choices you will be shown the "History" screens. (Note this will be empty on the first period).

Please press "Continue" on your screen once you finish reading this part. This concludes the instructions.

Appendix B   Experimental Screen Shots

In this appendix we provide screen shots of the politicians (1(a)) and voters (1(b)) decision screens, in order to illustrate the interface used by subjects and the information possibility contained in their screens.

Appendix C   More on Other-regarding Behavior

To further examine other-regarding behavior, consider instances where individuals are personally harmed by the incumbent's policy. Table 1 presents the results of two random effects

Figure 1: Experimental Screen Shots

(a) Politicians

(b) Voters

Notes. The figure presents screen shots for the politicians (panel (a)) and voters ((b)). These are illustrative examples and not a taken from an actual session.

probit models of vote choice. The first includes all voters, in all voting rounds, while the second includes only those voters who experienced a net after-policy decrease in welfare (i.e. the incumbent took more in taxes than was returned to that individual).

Several important things can be noted here. First, as would seem reasonable, a subject is more likely to vote for the incumbent, when the incumbent provides more net benefits to that individual than does the challenger. Similarly, a voter is more likely to support the incumbent, when more ECUs are redistributed to that voter's community. But note that this effect remains, even when the voter in question is personally harmed by the policy. Next, in both models, incumbents were punished for moving away from the optimal tax rate of 20% (though in the full model, this effect is only significant at the 10% level), again in-line with pro-social preferences.

Table 1: Voting Behavior

	All Voters	Harmed Voters
Incumbent Advantage	0.014*	0.008*
	(0.001)	(0.002)
Change in Own Community Welfare	0.014*	0.018*
	(0.003)	(0.005)
$\|Tax_{Incumbent} - 20\|$	-0.010	-0.028*
	(0.005)	(0.011)
$\|Tax_{Candidate} - 20\|$	-0.002	0.006
	(0.004)	(0.009)
Incumbent Fairness	0.003*	0.003
	(0.002)	(0.003)
Candidate Fairness	-0.003	-0.004
	(0.002)	(0.003)
Endowment	0.000	-0.003
	(0.000)	(0.002)
Constant	0.100	1.664*
	(0.094)	(0.831)
$\ln L$	-708.3	-233.3
N	1200	407

Notes. Above are the results of two random effects probit models of vote choice. The dependent variable is a dummy for whether or not the individual voted for the incumbent to stay in office. Standard errors in parentheses. (*) denotes statistical significance at the 5%-level or better.

Finally, consider the coefficient on *Incumbent Fairness*. This is a measure of how evenly the tax revenue is spread across the communities, with higher values meaning a more even distribution.[1] In the full model, this has a positive and significant effect, but the effect drops out, when analysis is restricted to harmed voters. Combining the interpretations of these effects, there is evidence to suggest a distinction between egotropic, communotropic, and sociotropic

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[1] *Incumbent Fairness* is measured by first taking the standard deviation of the amount redistributed to each community and then multiplying this by -1. That is, if the politi-

motives, even where there is only a weak in-group bond induced by the experimental environment. Where communal ties are stronger, as they are in society, these effects would likely be even larger.

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cian redistributes revenue exactly evenly, this will be 0. But as the distribution becomes

more and more uneven, this score gets more and more negative.