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Jonathan Baron

Department of Psychology, University of Pennsylvania, USA

Abstract

Web studies explored citizens’ concepts of their duty as voters and their choices concerning actual policies. Some people see a moral duty to support their group (their nation) regardless of harmful effects on outsiders. One study supports the hypothesis that this duty avoids betrayal of the nation, which they see as granting the right to vote for the purpose of advancing national interest. Some also see a duty to defend their self-interest through voting; many think this is a rational way to pursue their interests. Another justification is, “If [the voter] does not look out for her own interests, nobody else will.” I hypothesize a norm of responsibility for self-defense, part of the “culture of honor” (Cohen and Nisbett, 1994) in all of us. Yet politics is by design an inefficient way to pursue self-interest, although it is efficient for advancing the good of all.

Keywords

voting, culture of honor, self-interest, utilitarianism, duty

Introduction

Democracy is a wonderful tool, but citizens may not know how to use it for its best purpose. I argue here that it is best suited for advancing the public good, the good of all. It is less well suited for advancing the interests of a group when the group is in conflict with outsiders, and even less well suited

Corresponding author:

Jonathan Baron, Department of Psychology, University of Pennsylvania,
3720 Walnut St., Philadelphia, PA 19104–6241, USA.

Email: baron@psych.upenn.edu

when the group is a single person who tries to use political participation to advance self-interest.

Yet citizens do not always understand these features of the system in which they participate. They fruitlessly try to use their political influence (small as it is) to advance their self-interest or the interest of a particular group. There are better ways to advance self-interest, such as participation in a market economy. Moreover, the desire to advance a group's interest is, arguably, fragile and difficult to defend when the group's interest conflicts both with self-interest and with the good of all (Baron, in press). (If the defense of group interest does not conflict in one of these ways, then it is equivalent to defense of self or all.)

Partly as a result of this lack of understanding, democracy fails to realize its full promise. If people thought of their right of participation as an opportunity to advance the good of all, then the general good might be advanced more than it is now.

Perhaps more interesting is that people think they have a moral duty to advance the interests of their group, and even to advance their self-interest. This is surprising because we usually think of moral duties as obligations that override self-interest and often oppose it.

My argument is similar to that of Caplan (2007), who argues that democracy suffers because voters do not understand economics. I argue here that they do not understand democracy as well as they might, and they moralize their misunderstanding. Elsewhere I have described other sorts of errors, biases, naive theories, and misunderstandings that lead to outcomes that are less good than they could be (Baron, 1998, 2010, in press; Baron et al., 2006). My argument amounts to saying that people have a naive theory of politics in general. Correction of this theory might have considerable benefits.

The purpose of political participation: Self-interest versus some greater good

Downs (1957) pointed out that voting, or, more generally, political participation, is irrational when viewed from the perspective of narrow self-interest. From a self-interested point of view, the expected benefit of voting is the probability of being the decisive vote multiplied by the benefit to you if your side wins. In a large election, the probability of being decisive is very small and is approximately proportional to (but smaller than) $1/N$, where N is the number of voters (Edlin et al., 2007, 2008). Even if the benefit to you is US\$1,000,000 if your side wins, with 100,000,000 voters the expected

benefit is less than one cent. Political scientists have thus concluded that people vote, and participate in politics, for other reasons than rational pursuit of narrow self-interest. People are either irrational or they have other goals, or both.

Yet voting can be rational from a utilitarian perspective, which considers benefits to all those affected, not just the voter. Assume first that the number of affected people is the same as the number of voters. Moreover, assume that the vote is about the provision of some public good that will benefit everyone, such as an improvement in the environment. Then, while the probability of being decisive is proportional to $1/N$, the total benefit to everyone is proportional to N . When we calculate the expected benefit by multiplying $N, \dots, 1/N$, the N 's cancel out and we are left with the expected benefit per person. If the benefit to the average person is reasonably great, and the cost of voting sufficiently small, voting is rational (Edlin et al., 2007, 2008).

However, the situation for the utilitarian voter is quite a bit better in many cases. The number of people affected by some policy issues is orders of magnitude greater than the number of voters. Policies concerning climate change or preservation of fish species, for example, affect children (who cannot vote yet), foreigners, and future people not yet born, possibly many generations of them. This is a lot of people. More generally, when the number of voters is fixed, the expected utilitarian benefit of voting (for what is best overall) increases with the number of people affected (other things being equal).

Of course, people can and do engage in political action for other reasons aside from benefits to self or others. Participation, including voting, may achieve other goals, such as expressing a feeling of solidarity with others, even all of humanity, or, alternatively, expressing moral views about what is good for others, without regard to what is truly in their interest or what they think is in their interest (i.e., moralistic values, as discussed by Baron, 2003, 2010; Baron and Ritov, 2009; related to "nosy preferences" as described by Sen, 1970).

Another way to look at this is to think about the provision of a public good that requires individual sacrifice, such as reducing our "carbon footprint" to prevent global warming. Each of us could reduce our footprint spontaneously. Given the personal cost of this sacrifice, many people are unlikely to make it. Indeed, they have had the chance, and few people have done much. This is a social dilemma, in which the option of "defecting" (doing nothing) is better in terms of self-interest and the other option of "cooperating" (footprint reduction) is better for everyone else.¹ It is also to

some extent a coordination problem. Even those who want to help often need to be told what is best to do, in the context of what others are doing.

A way to solve social dilemmas is to create a second-order social dilemma (Yamagishi, 1986, 1988). Instead of making the primary sacrifice of footprint reduction, we ask people to make a smaller sacrifice, such as voting for a regime in which someone – typically a government – has the power to enforce cooperation with the threat of punishment. The cost of voting is much smaller than the cost of the primary sacrifice. But, if a majority vote for the power in question, then almost everyone will make the sacrifice in question. For example, the sacrifice could be a combination of footprint reduction and paying, directly or indirectly, a carbon tax for whatever part of one's footprint is not reduced. For this scheme to work, of course, the government (or other authority) must already exist, and setting up such an authority at the outset may be more costly (e.g., requiring a revolution).

This sacrifice will be enforced with the threat of punishment for not paying the tax or reducing one's footprint. Punishment is effective for two reasons. First, the cost of levying punishment to the punisher can be much less than the harm that the punishment causes. Thus, the threat of a great harm can be credible. Second, if the threat is credible, then the punishment will rarely be used. People will comply in order to avoid it.

The mere statement of a rule, even without strong enforcement, can at least solve the coordination problem that results from socially concerned individuals not knowing what is best for them to do, in the light of others' actions. Elections themselves are an example of such a solution (so long as voting is optional). Thus, both the decision to vote and the choice of how to vote can serve as expressions of altruistic concern for others, with minimal self-sacrifice.

Given the arguments I have made, we can view government itself as a wonderful design to amplify altruistic concern for the common good and minimize the role of self-interest, for the purpose of putting in place policies that do good for everyone. Given that a system of political expression – such as voting – exists, then participation in this system is an inexpensive way to do good for others, especially when the number of others exceeds the number voters. It is, on the other hand, a highly inefficient way to pursue self-interest. We have many other ways to do that.

Perhaps another relevant comparison is that between participation in politics and in a market for goods and services. When you participate in a market, you have a direct effect on your self-interest. You buy things mostly because the benefit to you is in some sense worth the cost. When you participate in politics, the benefit accrues almost entirely to others.

Still, people sometimes use market participation to express political concerns, such as buying “green” or “ethical” products. They could do this for two reasons. First, the chosen products really might do less harm or more good than the alternatives. Undoubtedly this is usually a small effect (Baron, 1997). Second, buying a product is like a vote for whoever makes it. In a free market, a sufficiently small vote share will put a producer “out of office,” that is, out of business, while a lot of votes will lead to expansion. This sort of expression may be seen as a form of political action combined with an act that is primarily done for self-interest. The increased cost of the better product may be relatively small, like the cost of voting. The existence of a market mechanisms for political action may influence how people think about political action more generally.

I have described the value of democratic participation in terms of provision of a public good that requires sacrifice of each person. Much of government can fit this model. For example, a major function of government is enforcement of laws that prevent people from harming each other. The sacrifice we must make for this purpose, and for other government functions, is to pay taxes. But we do not pay taxes voluntarily. If we did, many would not pay. Instead of this, we engage in an action that is much less costly than paying taxes, namely, voting for a government that will force us to pay, in part to pay the police and courts that constitute their power to make us pay.

Yet much of politics is not obviously about the provision of public goods, and many political debates concern whether government is attempting to provide too many public goods or which of several possible goods should be provided. If the government is overreaching, then it is a public good to reduce its reach. Likewise, if it is trying to do one thing and should be doing something else, then it is a public good to push it to change. Citizens *who think about the good of all* thus can see *whatever policy they end up favoring* as the provision of a public good. Citizens who think about the good of all will often disagree, and then we must hope that the majority is more often correct than incorrect. I assume here that, other things being equal, the good of all is more likely to be advanced, the more people who try to advance it, even when they disagree about how to do that.

Parochialism

Another goal is to advance the good of a group that includes the citizen. The group could be a profession, an age group, an ethnic group, a religion, or a nation. I shall use the term “parochialism” to refer to this sort of limited altruism.³ Nationalism, action on behalf of a nation, is the most typical. The

smallest possible group contains only the self, although most people seem to take “self” to include immediate family.

Parochialism in this sense is often harmless. Many policies that benefit a nation, for example, do not affect foreigners much, or even help them indirectly. Thus, limited altruism leads to the same preference as altruism for all: it helps some and harms none, so it helps on the whole. The danger is that this neglect of outsiders can lead people to support policies that benefit insiders but harm outsiders enough so that the harms exceed the benefits. This can happen even when a citizen must sacrifice self-interest for the benefit of the group (Baron, *in press*; Baron et al. 2005; Bornstein and Ben-Yossef, 1994; Halevy et al., 2008, *in press*; Schwartz-Shea and Simmons, 1990, 1991). These results are found both in laboratory games in which the payoffs are monetary and in hypothetical scenarios concerning actual policies.

Parochialism is not the same thing as competition. The goal of competition is to increase relative advantage of the in-group over the out-group. Parochialism as studied so far seems to concern “in-group love” rather than “out-group hate” (e.g., Halevy et al. 2008, 2011).

Some parochialism is partly the result of cognitive failures. People think, “What helps my group helps me, because I am a member of my group. Therefore, my own self-sacrifice helps me.” Again, they fail to do the arithmetic to see that cooperation with their own group is a net loss for themselves as well as for everyone (counting outsiders). When people are forced to calculate how much (that is, how little) they get back from their own contribution to the group, and how their contribution affects outsiders, they are less inclined to contribute to help their group when the contribution is costly both to contributors and outsiders (Baron, 2001). However, this is only part of the story. Parochialism survives even when the individual is excluded from the group benefit, so that the sacrifice yields nothing in return (Baron, 2010).

Parochialism is difficult to defend as a moral choice. The problem is that groups may be arbitrarily defined, and it is difficult to produce a reason why we should favor one group and not a broader group that includes it (Singer, 1982), or one that overlaps it. Yet at least some forms of parochialism are not choices so much as biological motives, particularly when the group is the family. (Thus, in this article I define “self-interest” as including immediate family.) Although such motives might extend to groups such as nations or races, I have argued that racism and nationalism are more often the result of cognitive abstractions (Baron, *in press*). When people are encouraged to see foreigners as individuals rather than “Chinese” or “Mexicans,” parochialism is reduced.

Other moderators of parochialism

A few other factors can reduce or moderate the effects of parochialism. First, consider a situation where two or more groups, each with strong group loyalty, are all voting on the same set of proposals or candidates. Examples are Catholics and Protestants in Northern Ireland, or Shiite and Sunni Muslims in Iraq. In a system of plurality voting, each group would (parochially) vote for its own candidate, and the group with more votes would win. A moderate candidate who tried to appeal to both groups would lose because each voter would prefer the group candidate to the moderate. In approval voting, each voter would approve or disapprove each candidate. Many Catholics would approve both the Catholic candidate and the moderate, and many Protestants would approve both the Protestant and the moderate. Because the moderate gets votes from both sides, she might get the most votes and therefore win, as demonstrated by Baron et al.(2005). Of course, as the two examples suggest, opportunities for this solution are rare. They could increase if international agreements were put to a vote in all affected countries. (Israel and Palestine come to mind.)

Second, as I just noted, parochialism is reduced when decisions are presented as affecting individuals. For example, in one study (Baron, in press), subjects were told: "Imagine that you live in the U.S. You work for a company with one other branch in the U.S., nearby and in the same state, another branch in China, and one in India. Sometimes the company gets opportunities to invest money in ways that will generate income immediately. When this happens, the management asks the employees to contribute \$100 to an investment fund, and the gains from the fund are returned to the employees." In a relevant case, subjects were told: "If you contribute \$100, another person in the other U.S. office nearby [the Chinese office] gains \$250. Each contributor is paired with a different recipient. If everyone in your office contributes, then each recipient gains \$250." In this case, which involved individuals, there was very little difference between the contributions for the US and foreign office: 0.39 contribute for US, 0.34 for foreign. Another case involved groups instead of individuals: "If you contribute \$100, a total gain of \$250 is divided equally among those in the other U.S. office nearby [the Chinese office]. Everyone in your office can contribute." In this case the US/foreign difference was significantly larger: 0.30 vs. 0.20 ($t_{75} = 2.34$, $p = .0221$, for the interaction). Baron (in press) argues that groups are seen as abstractions rather than real people, and it is easier to think parochially about abstractions.

Third, parochialism is much greater for harmful omissions than for harmful acts. We are very reluctant to harm outsiders through our actions, but

many people find it acceptable to harm them by doing nothing to help. For example, in a similar set-up to that just described, the omission question was: "If you contribute \$100, the next person on the list in the Indian branch gains \$200. Everyone in both branches has the same choice. Would you contribute?" The corresponding action question was: "In this case the contributions have already been made for everyone and the choice is whether to withdraw them. (The recipients know this.) If you withdraw \$100, the next person on the list in the Indian branch loses \$200. ." The percent choosing the more harmful (less helpful) option was 10.0% for US and 12.3% for foreign in the action case, almost no difference, but was 12.0% and 28.4% in the omission case, a large difference ($t_{75} = 3.49$, $p = .0008$, for the interaction). Whenever we can present "doing nothing to help" as active harm, parochialism might be reduced.

Finally, Buchan et al. (2009, 2011) have found evidence that contribution to global public goods increases when people identify with the world rather than their own nation. The interesting fact is that such identification is possible, and that it already exists in some people.

Duty

People appear to have moral intuitions that are explicitly non-utilitarian. That is, they support options other than those that appear to do the most total good (Baron, 2010; Sunstein, 2005). It is possible, though, that people think that following intuitive rules will in fact bring about the most good. The clearest way to show that people do not justify their intuitions this way is to ask them about consequences, as well as about their moral judgments. Thus, conflicts between moral judgments and judgments of the best overall consequences are clear evidence of non-utilitarian moral heuristics.

People feel that it is their moral duty to support their group, even when they themselves say that this goes against the interests of outsiders and their own self-interest (Baron, 2010; Baron et al., in press). In these studies of hypothetical cases involving nationalistic policies, subjects were asked what was best for their nation (or national group, in the case of Arab and Jewish Israelis), what was best on the whole, and (in Israel) what was best for the other group. Judgments of duty favored the subject's own nation more than did judgments of what was best on the whole. Thus, many subjects thought it was their duty to go against their own judgment of what was best on the whole, in the direction of parochialism. (In Israel, judgments of what was best on the whole were also biased toward the subject's own group.) Finally, when asked what they *would* do in a referendum, subjects

followed their duty rather than what they thought was best. These results are the starting point for the research described here.

One study in Baron et al. (in press) asked subjects about reasons for nationalistic (US) duty for several policies perceived as favoring the US, such as repealing the free-trade agreement with Mexico (Baron et al., in press):

Which of the following is true about duty in this case? [responses were all yes/no]

Citizens have a duty to help their nation in return for what their nation does for them. [82% yes]

Citizens have a duty to help their fellow citizens before helping others. [89% yes]

People have a duty to help those in need, wherever they are." [58% yes]

People have a duty to help citizens of other nations when their own governments cannot or will not provide the needed help. [47% yes]

A citizen has a duty to support policies that are best for him or her personally. [64% yes]

The percentages in brackets are the frequencies of endorsement in a yes/no choice. The first two reasons were the most strongly endorsed, but they do not explore thoroughly the thinking behind these endorsements. The endorsement of the last reason, concerning self-interest, was higher than some of the others.

In the rest of this article, I report five new studies that explore other reasons for perceived duty and the apparent duty that people sometimes feel toward defending their self-interest. The first study examines why people sometimes do *not* define their duty in terms of advancing the good of all. The fact that they do not see their duty this way is the starting point for asking about other concepts of duty, namely, defense of their nation or themselves. Specifically, the first study examines the possibility that advancing the good of all, even when that conflicts with national good, is a kind of betrayal of the purpose of giving people the right to vote. Since this right is given by a national government, people might think of the purpose as serving the nation.

The remaining studies examine self-interest voting in particular, and they examine national voting as well, building on the research described earlier.

They show that a norm of self-interest voting exists and can even be seen as a moral obligation. The last two studies ask about the particular sorts of policies that are supported when people see themselves as defending their self-interest. In general, self-interest voting is associated with opposition to taxation, and (somewhat less clearly) to opposition to government in general, including government spending.

Ultimately I suggest that the perceived duties to defend self-interest and group interest have similar roots, as might be suggested by the illusion I described in which group- and self-interest are confused (Baron, 2001). Underlying both concepts of duty is a social norm of self-defense, which is extended to defense of one's group when group members think that their self-interest depends on the interest of their group.

Considerable evidence suggests that self-interest plays only a small role in voting and political attitudes more generally (e.g., Sears and Funk, 1991). The phenomenon described here may still be worth exploring. First, many of the studies of self-interest use objective measures of self-interest such as whether the citizen's children will be bused to a more distant school to achieve racial balance, finding that ideology is a more important predictor of attitudes. Yet ideology may affect perceived self-interest, as may other factors. It is of interest to know what people think they are doing. In some cases they may be doing just what they think they are doing. Second, politicians appeal to self-interest and may affect how people think about what they do as well as what they do. Miller (1999) makes this point:

As an illustration, consider then-candidate Ronald Reagan's famous refrain in the 1980 U.S. presidential campaign: "Ask yourself, are you better off today than you were four years ago?" This refrain reflected a message as well as a question. In effect, by telling voters that a vote for him would be good for their pocketbook, Reagan was telling them that it was normative to vote on the basis of their pocketbook. It is interesting to note that the correlation between self-interest (defined by personal financial situation) and candidate preference in the 1980 U.S. presidential election was only .08 (Sears and Funk, 1991). However, it rose to a more substantial .36 by 1984 (Lau, Sears, and Jessor, 1990), tempting one to speculate that the tenor of the self-interest-celebrating rhetoric of Reagan's first term contributed to the social construction of voting behavior as being something that self-interest does and should dominate.

Overview of studies

The details of the five studies are listed below. I summarize the studies in this section. Readers who want to take my word for the summary can skip to the last section.

All studies were done on the World Wide Web using a panel of adult subjects who carried out these studies and others for pay. Almost all subjects were American.

Study 1: Relation between duty and perceived purpose

Perhaps people view utilitarian voting as a kind of subversion or betrayal (in the sense of Koehler and Gershoff, 2003). We get the vote in order to protect the interests of the unit that gave it to us, but then we use it to advance someone else's interests. From a utilitarian perspective, betrayal has the disadvantage of discouraging the granting of such rights. If (for example) we give people the right to own guns in order to defend themselves, and then they use the guns for unprovoked aggression, people will want to put limits on the original right. Yet, in the case of voting, this issue is relatively minor, as the vast majority of voters acquire the right to vote by place of birth, not by decision to grant that right. Moreover, the opportunities for such betrayal are rare. (A possible example is climate change legislation, for those who believe that a carbon tax is bad for the US but good for the future of the world.)

Study 1 tested the idea of betrayal in the context of giving the vote to immigrants, a clear case in which suffrage is the result of a decision rather than a default. Subjects saw brief scenarios about how a new voter had decided to vote. The voter chose the interests of another country over the US, the interests of the world over those of the US, or the interests of the voter over those of the US. Questions asked whether people who think as the voter thought should be given the vote, should choose to vote as opposed to not voting, and should vote as the voter did, assuming that they voted. The main comparison of interest is between the government's choice of granting the right to vote and the voter's choice of which way to vote. If people think that "betrayal" is acceptable, they could give different answers to these questions, in the direction of thinking that it is wrong to grant the right to vote but acceptable to use the vote for a personal purpose once it is granted.

In general people considered it best, in all measures, to vote for one's nation, second best to vote for the good of all people, and worst to vote self-interest, although some subjects did think that self-interest was a good reason for all three choices (giving the vote, choosing to vote, and choosing how to vote). Many subjects said that the right to vote should not be given to those who would use it to advance the good of all.

Importantly, each subject's responses to all three questions concerning a given case were very much the same. Very few subjects thought, for

example, that it was acceptable to vote for the good of all yet not acceptable to grant the vote to those who would vote this way. This result is consistent with the possibility that voting for the good of all is seen as a kind of betrayal.

Studies 2 and 3: Reasons for voting for self-interest

Although Study 1 provided only a little evidence of a norm favoring self-interest voting when it is pitted against national interest, Baron et al. (in press, and described earlier) provided some evidence for such a norm. Studies 2 and 3 examine this norm more closely by asking about the morality and rationality of voting on the basis of self-interest.

The question of rationality arises because people may think of voting for self-interest as a rational way to promote their self-interest, even though economic analyses disagree strongly with this conclusion. One test of this possibility is to examine the effect of making voting costly: in a modification of each scenario, the voter has forgotten an absentee ballot and must pay an additional US\$100 in order to get home in time to vote.

Of particular interest is the possibility that voting is influenced by a norm of self-interest (Miller, 1999; Ratner and Miller, 2001; see also Wilkinson-Ryan, 2008). According to this social norm, it is embarrassing to act altruistically, to the point where people even justify altruistic actions by claiming that they are really self-interested.

The results of Study 2 indicated that some subjects did see voting as an efficient way to advance self-interest, even when voting cost US\$100. Moreover, many subjects saw a duty to vote for proposals that advanced their self-interest even when this conflicted with the interests of their nation and the world, even though they had the option of saying that they had no duty at all. The same results were found for a question about morality/immorality rather than duty.

In Study 3, each of four scenarios pitted self-interest against the good of all. Subjects were asked about several possible reasons for a perceived duty to vote on the basis of self-interest, and for a duty to vote on the basis of what is best for all. The following reasons were all associated with perceived duty to vote self-interest: "If X does not look out for her own interests, nobody else will."; "X will benefit from a reduction in global warming." (for voting for a tax that would reduce it); "If voters vote according to their self-interest, then policies that are best for the majority are likely to be chosen."; "If the pro-tax candidate wins by one vote, and she votes for that candidate, she will regret it." (where a tax would be against the voter's

interests); "Citizens are given the right to vote in order to defend their own self-interest."

The following reasons were associated with a perceived duty to vote for the good of all: "If voters vote according to their view of what is best on the whole, then the best policies for all are likely to be chosen."; "Citizens are given the right to vote in order to help decide what is best on the whole."

In summary, these two studies suggest that there is a norm of self-interest voting, and perceived duty to vote for self-interest has multiple determinants.

Studies 4 and 5: Policy preferences of self-interest voters

The next two studies were designed to find out the policy concerns of citizens who thought of voting as defending their self-interest. Subjects were asked about specific proposals that might affect the US government's budget. These included tax increases (e.g., an increase in the tax on gasoline or removal of a tax deduction for mortgages), tax cuts (corporate profits, inheritance), spending cuts (e.g., military, prisons), and spending increases (e.g., inspection of incoming goods, aid for college tuition). For each proposal, the subject answered questions about its effect on the US as a whole, the effect on the budget, the effect on the subject, and how the subject would vote on it in a referendum. In addition, for each proposal, subjects were asked whether the duty of citizens was to vote on the basis of self-interest or national interest (or both, but with one or the other getting priority). For each proposal, I looked at the correlation between the duty question and support for (or opposition to) the proposal.⁴

I expected that a perceived self-interest duty would correlate with opposition to taxation, because paying taxes is by its nature an act of self-sacrifice for the general good. I initially expected that self-interest voters would also favor government spending, because it was in their interest to benefit from spending. Putting these preferences together, they would end up favoring policies leading to deficits.

However, the opposite appeared to be the case for most of the spending proposals. Self-interest voters were generally opposed to spending as well as taxation. They were thus generally in favor of smaller government, although the pattern was not so consistent with spending as with taxes. In hindsight it is easy to understand this result. For one thing, everyone is affected by most forms of taxation, but spending policies typically benefit only a minority in the case of each policy, for example, students, the unemployed, etc. In fact, the spending proposals that correlated with self-interest duty were those that the subjects thought would benefit them personally.

Study I: Relation between duty and perceived purpose

I now proceed with the details that support the summary given in the last section. Readers willing to skip these details can skip to the Discussion section.

Method

Subjects in this study and all other studies reported here were from a panel of about 1200 adults who did studies for pay, typically on the order of US\$3 for a study expected to take 15 minutes. The panel was created over a period of 15 years, first by advertisements and then by word of mouth and search engines. I sent invitations to 400 at a time and closed the study when about 80 have responded. The studies were programmed in client-side JavaScript. They typically involved an introductory page, then several pages each with a case and several questions about the case, all of which had to be answered before going to the next page. The order of the pages was randomized for each subject. The panel was mostly Americans and was typical of the US in age distribution (except that all subjects had to be at least 18), education, and income, but with females vastly overrepresented. In this study, the 88 subjects had a median age of 45 (range: 23 to 72), and 67% were female.

Each of 16 proposals, one to a page, began with “X is voting in an election in the US for the first time, after becoming a citizen. X thinks that the main issue in the election is ...”, followed by issues of three types. In the first type (four pages), a voter who sided with his or her perception of the interest of a particular other nation against the US. In the second type (four pages), a voter sided with the world against the US. In the third type (eight pages), the voter voted so as to benefit him or her, against the US. Here are examples of the three types:

- A proposal that would increase military aid to Israel. X thinks that the proposal would be bad for the US but good for Israel. X is now a dual citizen of the US and Israel, and in this case he feels more loyalty to Israel, so he votes for the candidate who favors the proposal.
- A tax on carbon fuels in the US. X thinks that the tax would be bad for the US but good for the world on the whole because it would reduce the harm caused by global warming, harm that would fall mostly on other countries. X votes for the candidate who favors the tax.
- A tax on carbon fuels in the US. X thinks that the tax would be bad for the US but good for X because she is in the solar energy business. X votes for the candidate who favors the tax because it is good for X.

The questions following each item were as follows, with the gender of the voter matched to that of the subject (female in the examples):

Do you think that the rules should allow people like X to get the right to vote?

- * Yes, thinking this way is the way that new citizens should think.
- * Thinking this way is not a good recommendation for citizenship, but this should not be the only factor.
- * No, people who think this way should not become citizens.
- * Not sure that any of the first three answers apply. [counted as missing data]

Which of the following are good reasons to give people like X the right to vote?

yes no To vote for what they think is best for their new country.

yes no To vote for what they think is best for themselves.

yes no To vote for what they think is best for all people.

Consider X's decision to vote, regardless of how she decides to vote. Do you think that X is making this decision for a good reason?

- * Yes, thinking this way is the way that new citizens should think.
- * Thinking this way is not a good recommendation for citizenship, but this should not be the only factor.
- * No, people who think this way should not become citizens.
- * Not sure that any of the first three answers apply.

In an election like this, which of the following are good reasons for people to vote at all, as opposed to staying home?

yes no To vote for what they think is best for their new country.

yes no To vote for what they think is best for themselves.

yes no To vote for what they think is best for all people.

Now consider X's decision of "how" (which way) to vote. Do you think that she is making this decision for a good reason? [same responses as above]

In an election like this, which of the following are good reasons for people to decide how to vote? [same responses as above]

Results

Table 1 shows the percentage of disapproval of any sort as a function of the type of decision – giving the right to vote to the immigrant, choosing to vote at all, and choosing *how* to vote – and the three types of items. Recall that in all three item types the voter voted against the interest of the US. It is apparent that, if one is to go against the US, the best case to do that is when one

Table 1. Percentage disapproval of any sort (“not a good recommendation for citizenship” or “should not become citizens”). The percentage for the extreme answer, “should not become citizens,” is in parentheses.

Item type	Giving vote	Voting	Choosing
Other nation	78 (21)	72 (20)	72 (20)
All people	46 (8)	48 (9)	51 (8)
Self	79 (22)	79 (21)	81 (23)

Table 2. Percentage “no” to yes/no question about whether the reason is good.

Reason	Giving vote	Voting	Choosing
Your nation	7	5	5
Self	37	33	33
All people	16	13	13

votes for the good of all. Voting on the basis of self-interest or the interest of a particular other nation elicits more disapproval.

Table 2 shows the percentage of negative answers to the question about reasons as a function of the decision type and the reason (averaged over item types, which showed only small differences). Voting for the self was the worst reason, but voting for the good of all people was worse than voting for the nation ($p < .02$ or better for all tests across subjects or items). Thus, although voting for the good of all is not seen as terrible, it is on average worse than voting for one’s nation.

Of primary interest is the close agreement among the three decision types. Moreover, of these, the decision to grant the vote and the decision of how to vote are of greatest interest. (It might be argued that the decision of whether to vote is somewhat dependent on whether the decision of how to vote can be made, and the latter is what voters think about.) Of particular interest is the very small proportion of cases in which granting the vote to someone who would vote for the good of all was considered bad while the choice of voting this way was considered good (4.3%, as opposed to 1.1% with the reverse discrepancy). The corresponding results were similar for voting for self (5.5% and 1.6%, respectively).

Subjects also differed in their attitudes. Out of the 88 subjects, 60 showed no difference between voting for the good of all and voting for the nation, as good or bad reasons, both in choices about granting the vote and in how to vote; 18 found voting for the good of all to be worse for both kinds of decisions; three found voting for the good of all to be *better* in both kinds of

decisions; and, importantly, only seven subjects showed any discrepancies, none of which were reversals in direction. The correlation coefficient between [number of cases in which voting for all was a bad reason minus number of cases which voting for nation was a bad reason] for the two decision types (granting the vote and deciding how to vote) was .96.

Although this study was not designed to assess endorsement of self-interest voting, many subjects thought it was a good reason for choice of how to vote. Subjects were more stringent about granting the right to vote, but this could result from a general belief that the standards for national loyalty for new citizens should be high.

In summary, these results are consistent with the hypothesis that reasons for choosing how to vote should be consistent with reasons for granting the vote. What the present results do not show is a causal effect of the latter on the former.

Study 2: Reasons for voting

Method

This study used two types of items, with three examples of each type, and it asked about the morality of voting on each side and also of not voting. One type pitted world interest versus US interest, for example: "Jim thinks that the main issue in the election is a tax on carbon fuels in the US. Jim thinks that the tax would be bad for the US because of its effects on the economy, but would be good for the world on the whole because it would reduce the harm caused by global warming, harm that would fall mostly on other countries."

The other type pitted self-interest against world and US interest (although not strongly), for example: "Betty thinks that the main issue in the election is a tax on carbon fuels in the US. Betty thinks that the bad effects of the tax on the world and US economy would slightly outweigh its long-term benefits in reducing global warming, but it would be good for her because she in the solar energy business."

Each proposal was followed by 20 questions, spread over two pages, with a reminder of the proposal on each page:

For the first few questions, imagine that the voter is home and can vote with little difficulty.

Rate the morality of each of the following options for Barbara.

Barbara decides not to vote.

completely immoral	immoral	neither moral nor immoral	moral but not best
best (or tied for best)			

Barbara decides to vote for the candidate who favors the proposal. [same options]

Barbara decides to vote against the candidate who favors the proposal. [same options]

If Barbara's view is correct, how does each option affect Barbara's self-interest. [same three voting options]

worst (or tied for worst)
 neither best nor worst
 best (or tied for best)

If Barbara's view is correct, how does each option affect the US. [same voting options and questions]

If Barbara's view is correct, how does each option affect the world. [same voting options and questions]

Suppose now that Barbara is traveling, forgot to get an absentee ballot, and now must pay an extra US\$100 in order to get home in time to vote.

Rate the morality of each of the following options for Barbara. [same]

If Barbara's view is correct, how does each option affect Barbara's self-interest. [same]

Now suppose that Barbara can vote without difficulty.

What is Barbara's duty in this case?

- * vote for the candidate who favors the proposal
- * vote against the candidate
- * do not vote
- * no duty

What is Barbara's duty as a citizen in this case? [same answers]

The 83 subjects had a median age of 46 (range 20–73) and were 63% female.

Results

Table 3 shows the answers to the questions about duty. For proposals that pitted the world against the US, most of the responses favored the US, for example, 37% thought it was the voter's duty to vote against a proposal that the voter saw as good for the world but bad for the US. Importantly, for the items pitting self-interest against both US and world, a substantial number of responses (32% for the voter's duty) thought that there was a *duty* to support self-interest. Note that the subjects had the option to say that there was no duty, and many did so, but about a third of responses saw not just a right but also a duty to vote in favor of one's own interest.

Results were similar for the questions about morality. In fact, subjects differed in the relative morality they assigned to world vs. US or self vs. both, and these differences were correlated with corresponding differences (for minus against) in the duty judgments in Table 3. For the world items, the correlation coefficient was .50, and it was .33 for the self items (both significant at $p < .002$, one tailed). Subjects differed not only in the magnitude

Table 3. Percentage answers to the last two questions in Study 2, those about the voter's duty and a citizen's duty, for the two types of items, those pitting the world (voting "for" the proposal) against the US ("against" and those pitting the self ("for") against both the world and the US ("against").

	For	Against	Not vote	No duty
Duty (world items)	28	37	3	33
Citizen duty (world)	30	47	3	20
Duty (self items)	32	30	6	32
Citizen duty (self)	31	42	6	21

Table 4. Mean scores for belief questions, Study 2. Scores go from -1 to 1. "Costly" refers to the conditions in which the voter had to pay in order to vote.

	Score for "for" minus score for "against."					
	Morality	Self-int	US-int	World-int	Morality costly	Self-int costly
World items	.13	-.37	-.78	.74	.03	-.40
Self items	-.33	.68	-.67	-.35	-.31	.67
Score for not voting						
World items	-.12	-.20	-.23	-.16	.01	-.12
Self items	-.09*	-.26	-.18	-.20	.00*	-.22

[.3ex] * $P = .05$ for difference.

of these effects but also in their direction. The association was present when only the direction was considered and all subjects with 0 differences were removed (Fisher test: $p = .0499$ for self, $.0002$ for world, one tailed).

Table 4 shows the mean difference scores for the questions about beliefs, including the morality questions just discussed. Of greatest interest here are the results for self-interest in the self items. People in this sample do tend to think that it is in their self-interest to vote for proposals that are in their interest (mean of .68), even when it is costly to do so (.67; the difference was not significant). Moreover, they think that not voting is not in their interest (-.26), even when voting is costly (-.22, not significantly different from -.26), although they do think that not voting is less immoral when it is costly (-.09, vs. .00). In general these results support the account of

self-interest voting in terms of the belief that voting is in fact an efficient way to advance one's self-interest.

Study 3: Reasons for voting

Method

Each subject saw four pages, one with each of four cases. The introduction to the study read:

This is about reasons for voting in a congressional election in the US. Each page describes the situation facing a voter, who is a US citizen and votes in the US. About 200,000 people are expected to vote in the voter's congressional district. All the cases concern a tax on carbon fuels (oil, gasoline, coal, etc.). The idea is to reduce global warming in the future.

The cases differ in the voter's opinion about whether the tax is good or bad, and in whether the voter has other people (family) depending on her.

The election promises to be close, and it is not clear who will win. It is also not clear what will happen to the tax, in congress, after the election.

In two of the four cases, the voter thought that the carbon tax would be a good idea but bad for her. (All were female, with different names.) In the other two cases, the voter thought that the tax was a bad idea but good for her. Within each of these pairs, the cases differed in whether the voter had dependents.

One good-idea condition case read: "June thinks that the main issue in the election is a tax on carbon fuels in the US. June thinks that the tax is a **good idea** on the whole because of its long-term benefits in reducing global warming. But the tax would be **bad for her** because she is a heavy user of oil. **June is single with no children and does not plan to have any. Nobody works for her, and she does not plan to hire anyone.**" For the dependent condition, the voter was married with two children.

For the bad-idea condition, the case read (after the first sentence): "thinks that the tax is a **bad idea** on the whole. She thinks that its bad effects on the world and US economy would slightly outweigh its long-term benefits in reducing global warming. But the tax would be **good for her** because she holds a patent on a technology that would be used for generating electricity from sunlight." This case also had two versions, with and without dependents. The questions about each of the four cases, with criteria for scoring in brackets, were:

Test question: If Betty's view is correct, which option is best for her long run *self-interest*?

- * Vote for the candidate who opposes the tax
- * Vote for the candidate who favors the tax
- * It doesn't matter

Evaluate each of the following reasons:

[In the questions about reasons, "for" is scored as +1 and "against" as -1 unless noted otherwise.]

If Betty does not look out for her own interests, nobody else will.

- * This is a good reason to vote for the candidate who favors the tax.
- * This is not a good reason to vote for or against either candidate.
- * This is a good reason to vote against the candidate who favors the tax.

[This item was reverse scored for the good-idea conditions, because it is a reason to vote against the candidate who favors the tax.]

She will benefit from a reduction in global warming. [Same answer options to this question and all subsequent questions about reasons.]

If voters vote according to their self-interest, then policies that are best for the majority are likely to be chosen.

[Reverse scored for good-idea items.]

If the pro-tax candidate wins by one vote, and she votes for that candidate, she will regret it.

[Reverse scored and analyzed only for good-idea items (where the tax is bad for her), because it makes no sense for the bad-idea items.]

If voters vote according to their view of what is best on the whole, then the best policies for all are likely to be chosen.

[Reverse scored for bad-idea items, where she thinks the tax is bad on the whole.]

Citizens are given the right to vote in order to defend their own self-interest.

[Reverse scored for good-idea items, where the tax is against her self-interest.]

Citizens are given the right to vote in order to help decide what is best on the whole.

[Reverse scored for bad-idea items.]

What is Betty's overall moral duty in this case?

- * vote for the candidate who favors the tax
- * vote against the candidate
- * do not vote
- * vote, but no duty to vote for one side or the other
- * no duty

[This item is scored as +1 if the vote favors self-interest, -1 if favors the other candidate, and 0 otherwise.]

The 93 subjects used had a median age of 47 (range 22–73); 65% were female. Seventeen additional subjects were omitted because they answered the test question at less than 50% correct (not counting “It doesn’t matter”), and 27 of the 93 subjects had missing data for the first question about reasons because of a programming error (leaving 63 for this question).

Results

Subjects said that there was a duty to vote for self-interest in 15% of the cases, a duty to vote for the good of all in 22% of the cases, and no duty in the remaining 63% of the cases (44% of the subjects never endorsing any duty).

Table 5 shows the association between duty measures and endorsements of the various reasons for voting on one side or the other. All reasons correlated appropriately with perceived duty. That is, the reasons for voting for self-interest were associated with a perceived duty to vote for self-interest, and likewise for the good of all.

To test these associations, I used a mixed-model logistic regression, with the appropriate duty as the dependent variable and each reason as a predictor, along with a fixed effect for the identities of the four items and a random effect for subjects. All predictions were highly significant (coefficients above 1, *z*’s above 2.4). The dependent variable was a duty to vote for self-interest, or a duty to vote against self-interest for reasons that concerned the good of all, from the two questions about the reason for getting the vote.

In summary, this study provides additional evidence for a self-interest norm. One expression of this norm is the idea that one must defend oneself because nobody else will. Another justification is that voting for self-interest yields the best outcome. Finally, there is additional support for the idea that voting choice should be consistent with why the vote is granted.

The presence of dependents had no consistent effect.

Study 4: Policy correlates of self-interest duty

Method

I used data from 78 subjects (30 males, 48 females; median age 45.5, range 20–72); five others were omitted because they were outliers on the question about understanding the proposals (described below).

The introduction to the study said “The US government has a problem about its long-term budget. This study is about various proposals that will affect the budget, and other things. Consider each proposal as if it were in a referendum by itself, with no other proposals. You can do this if you are not a US resident or citizen; but please take the point of view of a US resident.

Table 5. Percentage of yes answers about reasons for voting for and against self-interest, or for and against the good of all.

Reason	Self-interest		Good of all	
	For	Against	For	Against
Reasons that favor self-interest voting:				
If X does not look out for her own interests, nobody else will.	73	47	24	59
She will benefit from a reduction in global warming.	64	63	72	61
If voters vote according to their self-interest, then policies that are best for the majority are likely to be chosen.	55	28	19	36
If the pro-tax candidate wins by one vote, and she votes for that candidate, she will regret it.	75	33	26	42
Citizens are given the right to vote in order to defend their own self-interest.	73	43	31	52
Reasons that favor voting for good of all:				
If voters vote according to their view of what is best on the whole, then the best policies for all are likely to be chosen.	16	44	72	32
Citizens are given the right to vote in order to help decide what is best on the whole.	25	54	69	44

If you are unfamiliar with some issue, you have a chance to indicate that.” There were 26 proposals. Ten involved tax increases; two tax cuts; five spending cuts; seven spending increases; and two were indeterminate (taxing individuals instead of couples, and changing from an income to a consumption tax). All (except for the consumption tax, which few subjects understood) were edited and used in Study 5, and those edited proposals are included in the description of Study 5.

Each page of the study gave a proposal followed by eight questions, for example:

Proposal: Increase US funding for inspection of incoming cargo for materials useful to terrorists by US\$100 per citizen per year.

Do you understand this proposal well enough to vote on it?
yes no not sure

How would you vote on this in a referendum?
for against abstain or unsure

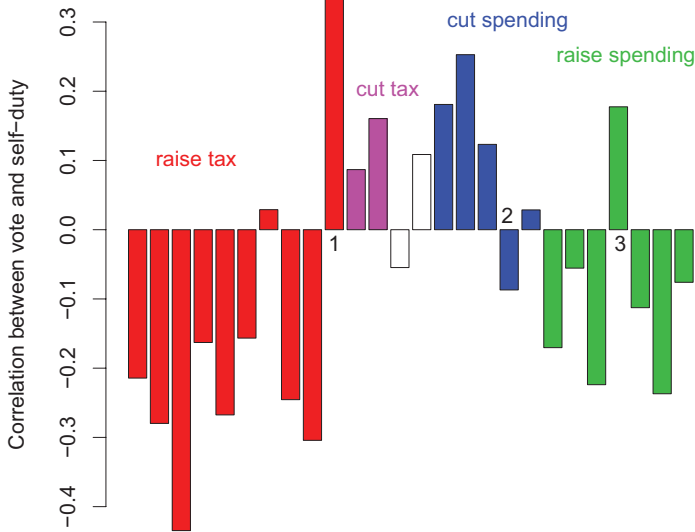


Figure 1. Correlation across subjects between voting for each item (1, 0, -1) and answer to the question about citizens' duty "to vote on the basis of what is best for them as individuals and for those close to them" (also scored 1, 0, -1). The two white bars are for the cases that were not categorized as tax increases or decreases. Numbers 1-3 indicate exceptions to the overall pattern.

How should you vote, from a moral point of view, on this in a referendum?
for against abstain or unsure

How would this proposal affect you and those close to you, if it were passed?
It would help. It would hurt. Not sure.

How would this proposal affect the US budget deficit if it were passed?
It would reduce the deficit. It would increase the deficit. Not sure.

How would this proposal affect the US on the whole if it were passed?
It would help. It would hurt. Not sure.

Concerning this proposal, is it the duty of citizens to vote on the basis of what is what is best for them as individuals and for those close to them.
yes no not sure

Concerning this proposal, do think that people affected by it need to defend their interests through voting?
yes no not sure

Results

I eliminated the 15% of responses when the subject answered the first question, about understanding, “no” or “not sure.”

Figure 1 shows the correlations between voting for a proposal (yes scored as 1, no as -1) and answering the second to last question, the one about whether citizens have a duty to vote in their self-interest. It is apparent that self-interest voting is correlated with voting against tax increases, in favor of tax cuts, in favor of spending cuts, and against spending increases. The three main exceptions to this pattern, labeled 1–3 in Figure 1, are, respectively: “Legalize marijuana and tax it as much as possible without creating a new black market”; “Eliminate the Veterans Administration Medical Centers (which include the hospitals)”; and “Increase US funding for border enforcement of illegal immigration by US\$100 per citizen per year.” The first of these did not replicate in Study 5, and I will discuss the other two in that context.

Despite the exceptions, the correlations are significantly higher for the 12 cases that involved less government (mean 0.11) than for the 12 cases that involved more government (-0.14 ; $t_{22} = -3.27$, $p = 0.0035$, for the difference).

The result also held for individual differences. I formed an index of voting for smaller government for each subject by adding the pro-small-government votes (one for pro-small-government, -1 for anti-small) the 24 relevant issues. This index correlated, across the 78 subjects, with subjects’ mean endorsement of self-interest voting ($r = 0.37$, $p = .0007$).

Finally, a mixed-model analysis treating both subjects and cases as random effects (Baayen et al., 2008) predicted voting as the dependent variable (for or against the proposal) from the self-interest duty question, a small-government code (1 or -1) for each proposal, and the interaction of self-interest duty and small government. The interaction was significant, indicating that small government had more of an effect on the vote when self-duty was endorsed (coefficient 0.13, $p = .0001$ using Markov-Chain Monte Carlo sampling as described by Baayen et al.) A similar interaction was found between self-interest duty and the subject’s perception of self-interest of the proposal, in predicting voting (coefficient 0.09, $p = .0018$). In the same analysis, self-interest duty had the opposite interaction with perceived benefit to the US on the whole ($-.10$, $p = .0001$).

The question about defending self-interest (the last question) yielded similar results to the question about duty, but the interaction with small government was not significant, although the interaction with perceived self-interest was significant ($.10$, $p = .0036$), as was the interaction with perceived US interest ($-.09$, $p = .0036$).

The need for an additional study was suggested by the unexpectedly high endorsement of the self-duty question: 78% of the answers were yes, and only 13% were no. Possibly this high rate resulted from the fact that the

question gave no other possible justifications. In addition, only 57% of the responses to the question about the budget were correct according to my own classification; 14% were reversed.

Study 5: Policy correlates of self-interest duty

Method

I used data from all 100 subjects who did the study (31 males, 69 females; median age 44, range 23–76); some had missing data, however.

The introduction began: “The US government has a problem about its long-term budget. This study is about various proposals that will affect the budget, and other things. Proposals to cut taxes or increase spending will increase the budget deficit. Proposals to increase taxes (including those that eliminate deductions) or reduce spending will reduce the deficit. Of course, the deficit is not the only issue.” The proposals are listed below. An example of a page is:

Proposal: Increase US government funding for research on removal of greenhouse gases (CO₂ and methane) from the atmosphere, by US\$50 per citizen per year. Removal of these gases would reduce the risk from global warming.

Test question: How would this proposal affect the US budget deficit, in the short term, if it were passed?

It would reduce the deficit. It would increase the deficit.

How would this proposal affect the US on the whole if it were passed?

It would help. It would hurt. Not sure.

How would this proposal affect you and those close to you, if it were passed?

It would help. It would hurt. Not sure.

How would you vote on this in a referendum?

for against abstain or unsure

Concerning this proposal, what is the duty of a citizen? That is, what is the morally best way to think about how to vote?

- A voter should vote for proposals that would benefit the voter and those close to him or her, regardless of their effect on the nation.
- A voter should vote for proposals that benefit the nation as a whole, regardless of their effect on the voter.
- A voter should take both self and nation into account but make sure to defend self-interest primarily.
- A voter should take both self and nation into account but give national interest priority over self-interest.

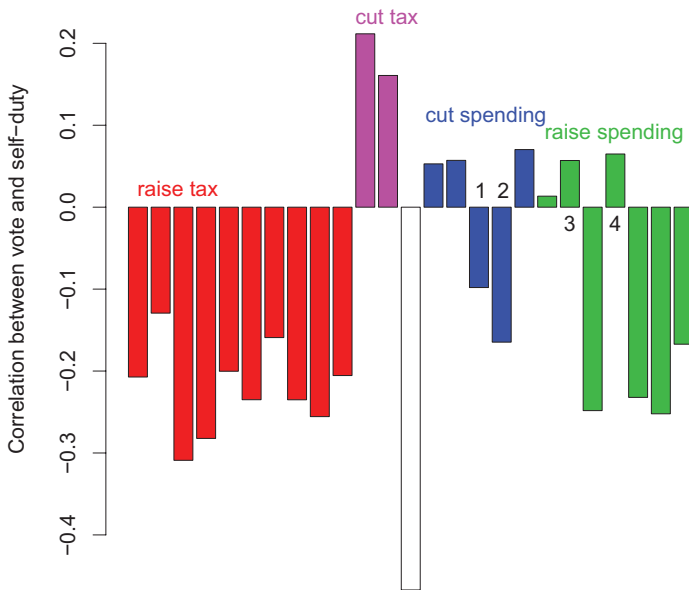


Figure 2. Correlation across subjects between voting for each item (1, 0, -1) and answer to the question about citizens’ duty (scored 1.5, 0.5 -0.5, -1.5, where positive numbers favor self-interest). The white bar is for elimination of marriage from the tax code, which has unclear effects on tax rates. Numbers 1-4 indicate exceptions to the overall pattern of opposition to both taxes and spending; these are marked respectively with * in the Appendix.

Proposals

The items marked with * are exceptions in Figure 2.

Raise taxes

Increase the retirement ages for Social Security (government pensions) by five years, to take effect gradually over a period of 10 years. This reduces government spending and increases tax collection.

Impose a 10% value-added tax (VAT), which would increase the price of all goods and services by 10%.

Impose a US\$1/gallon tax increase on gasoline.

Impose a US\$1/gallon tax increase on gasoline and heating oil.

Remove the tax deduction for interest on all home mortgages, to be phased in over a period of 10 years. This will increase taxes.

Remove the tax exemption for health insurance paid by employers. This exemption not available to self-employed individuals, who now pay for

insurance with after-tax income. Employees with insurance provided by their employer would pay more tax than they do now. But it would not affect the taxes of others.

Increase the income tax by 20% of the current tax on income over US\$250,000/year for a couple (or US\$125,000 for an individual).

Increase the income tax by 10% of the current tax on income over US\$100,000/year for a couple (or US\$50,000 for an individual).

Remove of the limit on wages subject to Social Security taxes. The limit is now about US\$110,000/year, so, for example, someone earning US\$220,000 pays the same number of dollars tax as someone earning US\$110,000, which is half as much as a percentage of income. If the limit were removed, everyone would pay the same percentage.

Legalize marijuana and tax it as much as possible without creating a new black market.

Cut taxes

Eliminate the tax on corporate profits.

Eliminate the inheritance tax.

Unclear tax effects

Eliminate marriage from the tax code: all taxes would be on individuals. When one member of a couple earned most of the income, he or she would be in a higher bracket, so the couple together would pay more tax than they do now. When both members of a couple earn about the same, then they would be in a lower bracket, so they would pay less tax than they do now.

[consumption tax item was eliminated]

Cut spending

Cut military spending by 25% (allowing the services to decide where the cuts are made).

Eliminate spending on foreign aid (now less than 1% of the US budget).

Eliminate the Veterans Administration Medical Centers (which include the hospitals).*

Eliminate Medicare for those now 55 years old or younger (who would qualify for it in 10 years).*

Reduce the number of inmates in federal prisons by 25%. This would reduce spending.

Raise spending

Increase US aid to elementary and secondary education by an average of US\$100 per citizen per year.

Increase US assistance for college tuition (Pell grants) by an average of US\$50 per citizen per year.*

Increase US aid for maintenance of infrastructure by US\$100 per citizen per year: bridges, tunnels, ports, water, sewage, and electric power transmission, etc.

Increase US government funding for border enforcement of illegal immigration by US\$100 per citizen per year.*

Increase US government funding for inspection of incoming cargo for materials useful to terrorists, such as poisons and components of explosives, by US\$100 per citizen per year.

Increase US government funding for research on removal of greenhouse gases (CO₂ and methane) from the atmosphere, by US\$50 per citizen per year. Removal of these gases would reduce the risk from global warming.

Increase US government funding for inspection of food and beverages, including water, including imports, to avoid contamination that can affect health, by US\$100 per citizen per year.

Results

Figure 2 shows the correlations between voting for a proposal (yes scored as 1, no as -1) and answering the last question, the one about whether citizens' duty is to vote in self-interest or national interest. (The mean response to that question was -0.15 on a scale from -1.5 to 1.5, where self-interest is positive.) It is apparent that self-interest voting is correlated with voting against tax increases and in favor of tax cuts. The results for spending are less clear but tend in the same direction as Study 4: in favor of spending cuts, and against spending increases. The four main exceptions to this pattern, labeled 1-4 in Figure 2, are elimination of the Veterans Administration Medical Centers, elimination of Medicare for those now 55 or younger, increased spending for college aid, and increased spending for border enforcement. The first two, the spending cuts, were the two spending proposals seen as having the most negative effect on self-interest ("How would this proposal affect you", both -.43 on a -1 to 1 scale). College-aid spending was seen as having the strongest positive effect on self-interest (.33). The immigration was also positive (.20) but this item may also be supported in terms of the general positions of anti-government movements in the US; people tend to endorse positions that are endorsed by politicians whom they support (Baron, 2009).

Despite the exceptions, as in Study 4, the correlations shown in Figure 2 are significantly higher for the 12 cases that involved less government (mean 0.04) than for the 12 cases that involved more government (-0.18 ; $t_{22} = -4.0295$, $p = 0.0006$, for the difference).

The result also held for individual differences. The index of voting for smaller government for each subject, computed as in Study 4, correlated, across the 100 subjects, with subjects' mean endorsement of self-interest voting ($r = 0.34$, $p = .0006$). Finally, a mixed-model analysis, treating both subjects and cases as random effects, with voting as the dependent variable, found a highly significant interaction ($p = .0001$) between coding for "small government" and the duty question; that is, small government had more effect on the vote (in the direction of voting for smaller government) when a duty to support self-interest was endorsed. A similar interaction was found between self-interest duty and the subject's perception of self-interest of the proposal in predicting voting.

Discussion

Both self-interest voting and parochial voting seem to share a similar heuristic or norm, the idea of responsibility for one's own defense. To some extent, this aspect of the "culture of honor" may exist in most citizens, even those outside the American south (where it was found to by Cohen and Nisbett, 1994). The idea of a responsibility for self-defense is consistent with self-interest voting and with parochial voting. Indeed, these may be seen as related (as suggested by the findings of Baron, 2001). Rarely are self-interest and parochial voting in conflict.⁶

Like other heuristics, the norm of defending self-interest may extend to a situation where it is inappropriate. In this case it is not totally useless, but almost. As I argued earlier, the expected effect of a single vote on the voter is much too small for rational justification, without taking into account the effect of the vote on others. Even a parochial vote typically has an effect that is too small to justify action, especially when the action itself has costs to the self (Baron et al., 2006).⁷

The present argument is consistent with other results and claims in the literature. For example, Nannicini et al. (2010) recently argued that "social capital," which they measure through prevalence of voluntary blood donation in a district, is associated with voting in the general good, as measured by punishment of corrupt politicians at the polls. The authors suggest that, in my terms, both parochial and self-interested voting would reduce such punishment, as many voters would consider the favors that the corrupt politicians had done for them or their group. Of course, voluntary blood donation could also indicate altruism toward others outside of one's particular

group; the beneficiaries of such donations are generally unknown to the donors.

Baron and McCaffery (2008) found inconsistent attitudes about taxes and government spending. Most of our subjects (from the same panel as the studies reported here) favored lower taxation and lower government spending in general. However, when they were given an exhaustive list of the major categories of government spending and asked to adjust the spending in each category upward or downward to match what the spending level should be, they adjusted some of the categories upward, with the result that total spending was essentially unchanged, even though the subjects still favored lower taxes. The overall pattern is like that in Studies 5 and 6 here for the subjects who endorsed self-interest voting.

There are of course other factors that distort voting behavior away from the utilitarian ideal. One is the existence of moralistic values (Baron, 2003, 2010). People try to impose values on others through their political behavior, even when these values are not shared by others and when those doing the imposing admit that the consequences would be worse.

A related idea is that people engage in expressive voting, in which they try to express their moral beliefs (including moralistic values) or their group loyalties without regard for consequences (Brennan and Hamlin, 1998; Brennan and Lomasky, 1993). Expressive voting is “much more like cheering at a football match than it is like purchasing an asset portfolio” (Brennan and Hamlin, 1998). As Brennan and Lomasky point out, one difficulty with this idea is that it is inconsistent with the very small number of votes for third-party candidates who cannot win, even when the support for those candidates in opinion polls is much higher. The idea has also not fared well in experimental tests (Baron, 2010; Tyran, 2004). Moralistic voting is not simply expressive. People engage in it because they hope it will have real consequences. They really want the law to follow their moral intuitions, even when they are in a minority. (Some may hope to build a movement even if they lose a particular election.)

Note that the nature of self-interest and parochial voting is separable from, but related to, the question of why people vote at all. It has been known for some time that self-interest does not usually justify voting, no matter how one votes. People may not realize this. They may also vote out of a moral duty to vote. The decision to vote can be made for different reasons from those that justify the choice of how to vote. And the decision to vote is not the main issue I have discussed here. However, I have presented some evidence that the decision to vote is related to the choice of how to vote, in that people want to see the latter as consistent with the reasons for the former, and, in particular, with the reasons they were given the right to vote in the first place.

Of course, even if everyone voted for the good of all, they would not necessarily maximize utility, because they could make errors in their judgments about what is in fact in the general good. Some of these errors are random but others are systematic. For example, Caplan (2007) presents evidence that people systematically misunderstand or underestimate the power of some basic economic principles, such as the power of incentives to shape behavior or the benefit of comparative advantage. (Baron and Kemp, 2004, provide supporting evidence concerning comparative advantage.) People also tend to isolate proposals, thinking only about their immediate or intended effects and neglecting secondary effects or unintended but inevitable side effects (McCaffery and Baron, 2006). For example, they favor taxes on business over taxes on individuals until they think through the question of who will actually pay the business taxes.

Yet it is often the case that the policy that is the best for all is fairly clear, and people still favor parochial policies or policies that are in their self-interest. Climate change is one such issue (except for those who truly do not believe that more should be done now to prevent its bad effects). Other issues are not even “on the table” because it so obvious that they are political non-starters. Many examples of this are greater support for world government in various forms. Many problems in the world are the result of insufficient contributions to international public goods such as police agencies to prevent terrorism and the development of weapons of mass destruction, information networks concerning the state of natural resources, and medical research. Other problems are the result of lack of coordination among nations, and the lack of international agreements. Many such agreements are prevented because the relevant international agencies, such as the World Trade Organization, are concerned with a narrow range of issues, thus making log-rolling across issues much more difficult.

I have suggested here that one major impediment to the adoption of proposals that advance the good of all is that people misunderstand their roles as citizens. They fail to understand that political behavior is an extremely inefficient (indeed, wasteful of time and money) way to advance narrow self-interest and a moderately inefficient way to advance group interest, compared to its efficiency at advancing the good of the largest possible group. There are other, better, ways to advance self-interest and group interest. People would achieve their goals better if they devoted more of their time and money to what was most efficient at achieving each goal.

In the case of group interest when the group is a nation, one difficulty is that people may see voting for the good of all as a betrayal of national loyalty, as suggested by Study 1. Note that, in this study as in all studies reported here, individual differences are substantial. It is thus possible that people would be able to adopt a different attitude (as suggested by

the findings of Buchan et al., 2009, 2011). They might be able to think of voting and other forms of citizen participation as a simple opportunity to do good, whatever the origin of this opportunity. The right to vote is not analogous to a charitable foundation, where the donor may specify what ends the foundation is allowed to achieve and the administrators are constrained by the donor's wishes. The right to vote is granted without strings attached.

Can we change the norms about when different kinds of action are effective and appropriate? Can people understand these efficiency arguments? We have reasons for optimism. These arguments are not that difficult, and they are essentially not made. People do not hear them. They are absent from high-school civics or government courses, from most college courses about political science, from the news media, and from political discourse itself, including campaigns and speeches of politicians in office. Thus, before we attribute people's lack of understanding to some sort of inherent cognitive limitation, we ought to see if people can, in fact, learn.

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Notes

- 1 I use this example because it is one that is now common in discussions of climate change. It is unusual because most of the benefits of footprint reduction will accrue to those not yet born.
- 2 More generally, Khalil (2011) argues that a lack of coordination can produce outcomes similar to those produced by free riding out of self-interest, even when self-interest would not be sufficient to prevent cooperation.
- 3 Several authors (Baron et al., submitted; Bornstein and Ben-Yossef, 1994; Baron, 2009, in press; Baron et al. 2005; Schwartz-Shea and Simmons, 1990, 1991) have used this term in a technical sense similar to the way I define it here.
- 4 Several results from Study 4 suggested that subjects were not fully understanding some of the questions and options (described below). Accordingly, Study 5 tried to clarify the presentation of the proposals and also included a test question. If the subject got the test question wrong, an alert encouraged the subject to reconsider. The idea was to prevent the subject from going on without giving the correct answer. This device failed for most subjects, so "errors" were still made,

but the results were indistinguishable as a function of whether it failed or not. Below I describe Study 4 briefly and Study 5 in more detail.

- 5 The questions about would vote and should vote are highly correlated and the “should” question is not analyzed.
- 6 One possible case is one used in Study 3 here, in which self-interest arises from owning a particular type of business that would benefit from a proposal. It is unlikely that a business owner would want to engage in parochial defense of her competitors, but she would favor her self-interest. This argument does not deny that such owners can join together to promote their mutual self-interest.
- 7 Political action in favor of a group might be more effective in the case of protests designed to gain publicity for a cause.

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