UNEQUAL ALTRUISM AND
THE VOTING PARADOX

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In the altruism model of voting, the social benefits of an electoral outcome is considered to offset the low probability of casting a decisive vote, thereby overcoming the voting paradox. One problem with this model is that it assumes both a clearly superior electoral outcome for society and some probability of a tied vote. These two propositions stand in tension with each other.

This Article presents a modified model of altruistic voting. It assumes voter altruism toward selected groups instead of toward the general population. The unequally altruistic voter model not only overcomes the deficiencies of the Edlin, Gelman and Kaplan (2008) model, but also has implications for an integrated analysis of voter turnout, candidate selection, and interest group strategy.

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One of the longstanding puzzles of rational choice theory is the “voting paradox.” The paradox is this: the individual benefits of good government are small, and the likelihood that a single vote can tip the balance of a large election to bring better government is infinitesimally small; while the costs of voting in terms of time and effort are non-trivial. Therefore, the conclusion goes, any rational person should stay home, since the cost of voting will surely outweigh the anticipated benefits once discounted by the probability of casting a decisive vote. The fact that voter turnout consistently exceeds the predictions of this model suggests that voters are not rational. A large literature attacks the rational choice assumptions of economics based on its failure to explain voter turnout (see, e.g., Green and Shapiro 1994, Blais 2000).

Rational choice theorists have not adequately responded to this challenge. Although arguments have been made that (1) the benefits of voting can be quite large, such as for those seeking patronage appointments (Schwartz 1987, 105), (2) the probability of casting a decisive vote is not as low as one might think (Palfrey and Rosenthal 1985), and (3) the cost of voting is minimal (Niemi 1976); these explanations have generally been unsatisfactory. In the absence of a better explanation, economists have treated voting as a form of consumption; that is, economists simply assume that voters bear the
costs of casting a ballot because they gain psychological benefits from supporting a preferred candidate, or from the very act of casting a ballot itself (Riker and Ordeshook 1968). In this taste-based paradigm, a voter’s choice of whether to cast a ballot can no more be rationally analyzed than the voter’s choice of strawberry versus chocolate ice-cream. Instead, all rational choice can do is analyze ancillary questions such as why older people vote more than the young, and why the retired vote more than the unemployed (Posner, 1998, 1554-1555). Public choice analysis of interest group and candidate behavior is undermined when public choice theory cannot explain why the ultimate objects of political appeals—voters—act the way they do.

Discarding rational choice theory in the voting context is premature. As Somin (2006) and Edlin, Gelman and Kaplan (2008) have outlined, voting can be a rational choice when (1) the voter cares about the welfare of his fellow citizens, i.e. is altruistic, (2) the differences between the choices for overall social welfare are significant, and (3) the probability of casting a decisive vote is sufficiently high, even as it remains extremely small. The insight of the altruism model is that, by considering the aggregate benefit to all citizens under the rubric of altruism, the aggregation of benefits can offset the small probability of a tied vote.
The generous view of mankind’s nature from the altruism model, however, is somewhat unrealistic. Few voters are likely to care broadly for the welfare of all of their fellow citizens. Moreover, the model has an inherent tension between its requirement for significant differences and its emphasis on the criticality of a single vote. Intuitively, a candidate who is significantly better for the overall welfare of the country should be expected to win in a landslide, not by a single vote. A voter that expects himself to accurately discern a significant difference between the candidates, despite a tied vote showing the judgment of his fellow citizens that the candidates are approximately equal, exhibits either an impressive degree of overconfidence in his own judgment, or a disturbing lack of faith in the remainder of the electorate.

I argue in this Essay for a slightly modified version of the altruism model, which explains the incentive to vote even when the candidates do not differ significantly in their effect on overall welfare. It is rational to vote as long as the candidates differ in their effect on the welfare of subsets of the population, and one happens to be particularly concerned with an affected subset. For example, if a candidate proposed to take wealth from the richer half of the population and distribute it to the poorer half, and the redistribution created no
overall effects, a voter under the broad altruism model would have no incentive to vote. However, if a voter cared particularly for the welfare of the poor, that voter would have an incentive to vote for the candidate; similarly, a voter that cared particular for the welfare of the rich would have an incentive to vote against the candidate. The result in my model is that both such voters would be rationally motivated to vote. By assuming that voters care particularly about subgroups within the population, the model raises implications for interest group behavior and responsive candidate behavior. The model therefore provides a foundation for a consistent theory of rationality and interaction between voters, interest groups, and politicians.

1. THE PARADOX OF VOTING

Downs (1957, 267-270) is generally credited with first articulating the voting paradox. Downs described three conditions that are generally agreed to accurately describe voting in a modern democracy:

1. Voting is costly in many ways: poll taxes (if any) are the most direct cost, but equally the cost of transportation and the opportunity costs of taking the time to vote are real costs borne by voters.
2. The value of an individual vote is miniscule, because the probability of casting a decisive vote is very low, unless other voters collectively abstain.

3. Each voter can obtain the benefits of living in a democracy without himself voting, “so long as a sufficient number of other citizens do.” In short, each abstaining voter can free-ride on the voting efforts of others.

Downs recognized that the immediate incentive of each voter is to not vote, which is a troubling outcome because “[w]hen no one votes, democracy collapses.” (Id., 267.) However, he perceived the solution to be that voters will consider the long-run benefits of living in a democracy, and rationally vote to preserve this long-term interest (Id., 270). As subsequent scholarship has pointed out, this analysis is surely mistaken: it contradicts Downs’ own observation that the voter can free-ride and the basic mechanics of free-riding behavior. A simple analysis reveals that, like the short-term benefits of an electoral result, the long-run health of democracy also is essentially unaffected by whether a lone voter casts his single vote (Barry 1970, 20).
Following from Downs’ work, Riker and Ordeshook (1968, 28) constructed a basic model of the rational calculus of voting. In this model, a citizen will vote when

\[ PB + D > C \]

where

- \( B \) is the differential benefit that an individual voter receives from the success of his preferred candidate versus failure;

- \( P \) is the probability that the citizen, by voting, will bring about the benefit \( B \);\(^1\)

- \( D \) is the psychic benefits of voting, such as affirming one’s participation in the political system, fulfilling a perceived ethical obligation to vote, and satisfaction gained from the ability to simply express a partisan preference; and

\(^1\) \( P \) is not strictly the probability of a tied vote, for several reasons. First, as Riker and Ordeshook point out, in two-stage elections such as those in the United States with a primary and general election, a primary voter must consider the probability of the candidate eventually getting elected in the general election. Second, even when a candidate wins, whether the candidate can enact his policy agenda depends in part on his perceived legitimacy or “mandate,” which may be related to the margin of winning; thus a voter who does not cast a tie-breaking vote might nonetheless contribute marginally to his candidate’s ability to enact various benefits once in office (Stigler 1972). Despite these complications, they are unlikely to affect \( P \) sufficiently to upset the intuition that an individual vote has very little likelihood of making a determinative difference in political outcomes, and I use the vanishingly small probability of casting a tie-breaking vote as an approximation of the more general probability of influencing political outcomes through voting.
$C$ is the cost of voting.

Tullock (1967, 109) suggests a somewhat important addition to this basic framework. Tullock notes that a citizen’s assessment of whether to vote depends not on the actual benefit that the voter will receive—$B$—but on the expected benefit at the time of voting. Moreover, the citizen must adjust his expectation of benefit by some measure of the accuracy of his judgment in these matters. Thus, the equation may be modified to become

$$PBA + D > C$$

where $A$ is the voter's measure of his own accuracy in estimating $B$, where $-1 \leq A \leq 1$, though realistically $A$ should fall between 0 and 1.

The paradox becomes apparent when one considers that the value of $P$ is extremely small in any election of reasonable size (Mulligan and Hunter 2003). It has generally been estimated at approximately $10^{-8}$ in a U.S. presidential election (Gelman, King and Boscardin 1998, 5). This leads to the conclusion that $P$ is effectively zero (Meehl 1977), rendering the condition for voters choosing to vote effectively

$$D > C$$
an equation that states a virtual tautology. Because consumer preferences are inscrutable, $D$ can be defined to explain virtually any phenomenon observed in voting (Hasen 1996, 2140-2142).

A pure consumption model retains some explanatory force if we can provide concrete theories of how consumers might choose to consume. For example, Posner (2000) posits that voting can be explained as signaling behavior, where a voter gains reputational benefits by showing up to the polling booth. Similarly, Schwartz (1987) posits that citizens who seek political access would vote as a signal of support. However, while these are surely part of the voting calculus, they are unlikely to be complete explanations, in so far as postal voting (which should significantly reduce the signaling effect) does not depress turnout to zero.

Moreover, the biggest problem with all non-instrumentalist explanations for voting is that, by definition, they assume voters are uninterested in influencing the outcome. If voters do not attempt to affect the electoral outcome because $P$ is miniscule, then voters should vote for their most-preferred candidate, without regard to the candidate’s chances of winning. In the extreme, a voter seeking only to maximize expressive utility should cast a write-in ballot for himself.
(see Tullock 1975). Similarly, the observed differences between first-past-the-post systems and proportional representation systems should not exist (see Duverger 1972), if voters do not care about influencing the outcome but only care about expressing support.

The phenomenon of strategic voting—where voters vote for a less-preferred candidate due to that candidate’s superior chance of success—thus poses a challenge to non-instrumentalist theories of voter behavior. It is possible to incorporate strategic voting into a pure consumption model by positing a voter preference to vote for the likely winner (Hinich 1981), or a preference to vote for the likely winner only in close elections, or even a preference to vote for a major-party candidate only in close elections. But this simply demonstrates the infinite malleability of the consumption variable—it is always possible to invent new theories of consumption preferences and retroactively conform them to observed reality. An infinitely malleable model of consumption preferences, however, has little explanatory power.

Another avenue of analysis has been to argue that the value of $P$ can be quite high. Palfrey and Rosenthal (1983) demonstrated a game-theoretic model where $P$ can be very high in circumstances where every voter has complete information about the voting costs and
preferences other voters. The simplified version is like this: If I know whether and how every other eligible voter is going to vote, then I can accurately predict if there is going to be a tie. Palfrey and Rosenthal (1985) later conceded, however, that the assumption of complete information is unrealistic in any election with a large electorate. Thus, in circumstances of a large electorate and incomplete information, “[w]e have come full circle and are once again beset by the paradox of not voting” (Id.). While $P$ would be 1 if expected turnout was zero—and therefore turnout should always be positive (Ledyard 1984, 12-13)—positing a large value for $P$ cannot be realistically maintained in the face of turnout rates in modern state and federal elections in the United States, whereupon $P$ should approach miniscule levels.

A third avenue of analysis is to abandon the expected utility model altogether, and redefine what voters maximize. Ferejohn and Fiorina (1974) argue that turnout can be rational under a minimax-regret model. In this model, voters do not choose to maximize expected utility, but instead attempt to minimize the later maximum regret, \textit{without weighing the probability of the event occurring}. By taking the problematic variable $P$ out of the equation, the minimax-regret model creates a rational citizen that votes. The problem with such a model is that it predicts behavior that should be extraordinarily conservative
because the citizen cannot weigh probabilities; thus a regret-minimaxer should never cross the street, for fear of the miniscule chance that he would be killed in an accident (Dhillon and Peralta 2002, F338). The minimax-regret model thus relies on a voter who is rational under the technical definition of rationality, but who is also completely unreasonable.

In summary, given a selfish voter who receives few direct benefits from an electoral outcome, the miniscule likelihood of casting a decisive vote, and the non-trivial costs of voting, the standard model predicts a turnout rate that is much lower than actually observed. The difference is left to be supplied by the consumption variable $D$, a highly unsatisfactory variable. The concrete theories of voter consumption preferences have failed to explain empirical observations (Green and Shapiro 1994), while a malleable theory of voter consumption lacks explanatory power. Meanwhile, abandoning an instrumentalist view of voter behavior leaves economists with few useful things to say about how voters cast their votes or how to predict electoral outcomes.

2. ALTRUISM AS AN EXPLANATION FOR VOTING

Although the selfish voter has dominated discussion of the voting paradox, it is important to remember that rational choice theory
requires no such assumption. Rationality in economics does not require selfishness: “You are free to be as public-spirited as you wish” (Margolis 1982, 85). All rationality requires is that people have a coherent set of preferences and choose the more preferred action over the less preferred. A voter who chooses outcomes based on the welfare of others is as rational as a voter who chooses outcomes based on his own monetary gains. Nor is assuming the existence of altruistic preferences, within limits, regarded as unreasonable.

Tullock (1967, 114) first proposed that some voters might be rational in their decision to vote based on altruism to others. Tullock added, however, that he was quite skeptical of such an explanation for rational voting, stating that “[t]he value put upon the well being of others must be extremely great” for altruism to explain voter turnout (Id.). In proposing a market test of this proposition, Tullock guessed that the “charitable” or altruism value of a vote would not exceed $10 per vote (Id., 113).

At the same time, if the instrumental value of a vote was $10, that would contribute greatly to explaining voter turnout. The cost of voting, in terms of effort and lost time, is unlikely to exceed $10 for many voters. Indeed, enforcing compulsory voting with a small fine
around $10, as is done in Australia (AUD $20), results in turnout that regularly exceeds 95% (Franklin 1999, 212). It is also important to emphasize that resolving the voting paradox does not require showing that people vote solely to determine the outcome of an election. There is an ethic of voting in our society, and people likely do receive psychic and reputational benefits from showing up to the voting booth. The paradox of voting poses a problem not because it assumes that there are non-instrumental reasons to vote, but by positing that those are the only rational reasons to vote. If people vote because they gain $10 worth of utility in attempting to determine the outcome and another $10 of psychic and reputational benefits, then the instrumentalist portion of the voting decision—both whether people vote and who they vote for—can be meaningfully scrutinized and tested.

Somin (2006, 258) constructs an example where voting is rational given assumptions of voter altruism, significant differences between the impact of candidates on the common good, and some probability of casting a decisive vote. In Somin’s example, if the difference between candidates is $5000 worth of welfare to every resident of the United States, and a voter cares about the welfare of other U.S. residents at a rate of 1/1000th of his own, then the aggregate value of $B$ considering the population of the United States is the utility equivalent of $1.5
billion. Thus, a voter is essentially paying $10 for a lottery ticket that is donated to his fellow citizens, the lottery having a jackpot of $1.5 billion and a one in a hundred million chance of winning (Jankowski 2002). Instrumental reasons would themselves justify a voter showing up at the polls, and voting for the superior candidate, due to the calculation:

\[ 10^{-8} \left( 300,000,000 \times \frac{5000}{1000} \right) > 10 \]

Edlin, Gelman and Kaplan (2008) show this in a more generalized analysis. They separate out the variable \( B \) into two components:

\[ B = B_{self} + \alpha NB_{soc} \]

where

- \( B_{self} \) is the direct differential benefit to a selfish voter;
- \( B_{soc} \) is the average benefit to other members of the population;
- \( N \) is the number of affected members in the population; and
- \( \alpha \) is a discounting factor the voter applies to the welfare of others.
Edlin, Gelman and Kaplan then define $P$ as $K/v$, where $K$ is the competitiveness of the election and $v$ is the number of voters.\(^2\) Thus, the rational voting calculus is defined as

$$\frac{K}{v}(B_{self} + \alpha NB_{soc}) + D > C$$

As $v$ increases, and assuming $N \geq v \geq 1$, then the probabilistically adjusted social benefits of voting remain reasonably constant while the selfish benefits approach zero. In other words:

$$\lim_{v \to \infty} (PB) \geq \alpha KB_{soc}$$

The upshot of this analysis is that $PB$ does not approach zero in a large electorate for an altruistically-minded voter, contrary to what the prior wisdom assumed. And the essential problem of the voting paradox has always been that $PB$ was assumed to be essentially zero once the electorate became sufficiently large. The genius of this model lies in the fact that as the probability of making a determinative difference decreases, the benefit of that determinative difference correspondingly increases for both society and, thus, the altruistic voter; these two effects offset each other. This remains true so long as

\(^2\) Edlin, Gelman and Kaplan use different letters to denote the variables, which for convenience purposes I have changed.
the number of people who benefit ($N$) is larger than the number of voters ($v$).

The Somin and Edlin, Gelman and Kaplan analysis, however, has two interrelated problems. First, both papers assume broad-based altruism that covers all of one’s fellow citizens, and also that the benefits of a candidate’s election will be constant for all members of the population.\(^3\) The conclusion is that the more people that the voter cares about, and the more he cares about them, the more likely the voter will turn out to vote, resulting in “the voter’s subjective benefits [being] proportional to the number of citizens” (Edlin, Gelman and Kaplan 2008, 295). This broad-based altruism appears unrealistic for several reasons, including that few people donate their money to the Federal Government, which should indicate that the government’s distribution of benefits does not map particularly well to citizen preference. Moreover, as demonstrated by Fowler and Kim (2007), people have fairly strong altruistic tendencies towards particular

\(^3\) In fairness, both Somin (2006, 259-260) and Edlin, Gelman and Kaplan (2008, 307) acknowledge that voters may emphasize the benefits of a particular group rather than those of the entire population. However, they maintain a constant value for the $B_{soc}$ term, meaning that there is an implicit assumption that candidates affect all members of the population equally. As discussed in the remainder of the paper, I believe that voter turnout should be more strongly motivated when different electoral outcomes will effect different groups *unequally*, even if the difference on overall social welfare between two candidates is zero.
subgroups in the population, rather than altruistic tendencies towards mankind as a whole.

Second, there is an inherent tension between the assumptions in the broad-based altruism model, which becomes especially problematic when the model is used explain the behavior of all voters. The contradiction is that the rational voter must believe two things: (1) his vote could matter because he might cast the deciding vote; and (2) if he casts the deciding vote, he will bring significant benefits to the entire population because the differences between the candidates for the common welfare is large. These two propositions are in tension because a candidate who is significantly better for the common welfare should be expected to win in a landslide, not by a single vote (Grofman 1993, 96). The discounting factor $A$ needs to be applied as a reflection of the putative voter’s possibly erroneous judgment. The problem in the model then becomes that $P$ and $AB_{soc}$ are inversely related—as the probability of a tied vote increases, the objective likelihood of a voter correctly judging one candidate to be clearly superior decreases.

A response that can be discerned from Somin (2006) is that a tied vote is not indicative of very much, because much of the electorate is rationally politically ignorant. Thus, an informed voter can quite
reasonably believe that there is both a significant difference between
the candidates and that there will be a tied vote. In other words, many
voters can legitimately believe that they have superior judgment than
the remainder of the electorate, because they have superior
information compared to the remainder of the electorate. In the
calculus of voting, such rational informed voters would have a very
high value for $A$.

For any individual voter, Somin’s point about the ignorance of the
electorate has significant force, since any particular voter might justly
believe himself to be superior. The problem is that, once this model is
used in the aggregate to explain general voter turnout, we cannot have
every voter believing that they have better judgment than their peers.
The result of such an assumption would be a collective Lake Wobegon
effect. That is, the purported rationality of voting depends on
confidence by every voter in the electorate in their own superior ability
to assess collective benefit, where such confidence must be quite wrong
for at least a substantial portion of the electorate. Rational voting
depends on having some chance of a tied vote, in which case fifty
percent of the electorate must believe they have better-than-average
judgment and judge candidate X to be significantly better for the
common good, while the other fifty percent must believe they have
better-than-average judgment but judge candidate Y to be significantly better for the common good. Thus, at least fifty percent of voters are overconfident and wrong about their judgment, and it is possible that all the voters are overconfident and wrong, if the candidates are roughly equal.

Strictly speaking, this is not an assumption of irrationality because people can have rational preferences to delude themselves (Cowen 2005). Thus rational voters may simply be persistently overestimating their own judgment capabilities (A), or persistently overestimating the probability of their vote determining the outcome (P) (see Acevedo and Krueger 2004). But an assumption that voters are persistently deluded “merely transforms the paradox of not voting into the paradox of foolish voters” (Green and Shapiro 1994, 55), an almost equally unsatisfactory outcome.

3. AN UNEQUAL ALTRUISM MODEL OF RATIONAL VOTING

Resolving the dilemma requires modifying the model slightly. Instead of assuming that a voter is altruistic towards the entire population, it seems more reasonable to assume that voters care about particular subgroups within the population. For example, a voter may care particularly about poor people, but not rich people, or vice versa.
Moreover, the voter may care about different groups in the population to different degrees. The rational voting calculus is therefore

\[ P(\alpha_1 N_1 B_1 + \alpha_2 N_2 B_2 + \ldots + \alpha_n N_n B_n)A + D > C \]

where

- \( \alpha_n \) is the degree of altruism the voter has towards group \( n \);
- \( N_n \) is the number of members in group \( n \); and
- \( B_n \) is the expected average differential benefit to each member of group \( n \) from a particular electoral outcome.

In this general model, a selfish voter would result in \( \alpha_1 = 1 \) and \( N_1 = 1 \), with all subsequent alphas equaling zero. In similar vein, the voter can assign negative alphas to groups that he dislikes; that is, the voter could be malicious. To avoid double-counting, I assume here that various groups are non-overlapping, though the analysis can be easily extended to groups that are overlapping.

The two key points of the model are (1) it is no longer safe to assume that \( N_x \geq v \), since the size of the group may be significantly smaller than the general population and the voter turnout; and (2) it is perfectly reasonable for a voter to believe \( PB_x A > 0 \), that is, the vote in the general population may be tied while the candidates have
significantly different effects on the subgroups that the voter cares about. This is because different candidates may favor different subgroups within the population, assembling coalitions from different directions that ultimately converge upon the median voter. Thus, unequal altruism resolves an important tension in the Edlin, Gelman and Kaplan model.

As Edlin, Gelman and Kaplan (2008) noted in their paper, the altruism explanation for voting helps to explain strategic voting behavior that is observed, since voters do not vote for their most preferred candidate (presumably themselves, as pointed out in Tullock (1975)) but rather candidates that are perceived as having some probability of winning. This is most frequently observed in first-past-the-post systems that tend to result in a two-party system, as in the United States (Duverger 1972). The unequal altruism model similarly explains strategic voting behavior, as voters will act instrumentally by voting to maximize $PB$. Some additional implications of the unequal altruism model are considered below.

3.1 Polarizing Elections Should Spark Higher Turnout

In the Edlin, Gelman and Kaplan model, elections that are highly polarized but have roughly equal effects on overall welfare should have
low turnout, because the $B_{soc}$ variable will approach zero. For example, suppose that a country is evenly divided among ethnic lines and has tremendous conflict between ethnic groups. Candidate X proposes to redistribute all the wealth from Group A to Group B; while candidate Y proposes to redistribute all the wealth from Group B to Group A. The prediction of the Edlin, Gelman and Kaplan model is that turnout should be very low if Group A and Group B have the same population and wealth, since the effect on overall welfare is zero (even though $K$ will be relatively high), and thus we return to the traditional voter paradox where the determinative variable is $PB_{self}$.

In contrast, the unequal altruism model would predict that polarizing elections should spark higher turnout because voters with differing preferences have a reason to vote for their preferred candidate and preferred subgroups, and against their non-preferred candidate and those subgroups they dislike. The empirical evidence in this area tends to be weak because measuring polarization relies primarily on self-reporting. Nonetheless, what evidence is available tends to show that polarized electorates have high turnout (see, e.g., Moser 1999, 160, Powell 1986).

3.2 Committed Partisans Should Turn Out and Vote for Their Side
A corollary to the above is that strong partisans on both sides should be motivated to turn out. In contrast, assuming a broadly-altruistic rational voter would lead to a prediction that clearly superior candidates should win by an unanimous vote. Since each individual’s selfish interest is made virtually irrelevant by the low probability of casting a decisive vote but the common good is not (due to the offsetting advantage of large numbers), any voter that shows up must vote for the common social good.

The generous assumption that rational people vote for the common good seems in tension with reality, when even candidates supporting policies that clearly diminish overall social welfare receive a substantial portion of the vote. Part of the minority vote, of course, can be attributed to good faith differences in perspective (Edlin, Gelman and Kaplan 2008, 298 & note 1) or political ignorance (Somin 2006). But it is difficult to believe that those who voted for, say, the Communist Party of America believed that they were voting for the candidate that would enhance overall welfare as opposed to the welfare of a subgroup such as the working class.

The unequal altruism model predicts higher turnout among committed partisans for two reasons. First, a committed partisan
should have a high \( \alpha \) value for members of his favored group, which may offset the relatively lower \( N \) value of that group. Second, a committed partisan should have a negative \( \alpha \) value for members of an identified opposition group, which may then magnified if the \( N \) value of the opposing group is large. Thus, a polarized election with equal results for overall welfare should nonetheless provoke the partisans on both sides to turn out and vote for their own side; and even an election where the result is almost a foregone conclusion (i.e. a low \( K \) value) should still see turnout by the most committed partisans.

The empirical evidence appears to support this theory. Fowler (2006) finds that being an altruistic partisan is significant and positively correlated with voting turnout, but that being generally altruistic is not. Indeed, Fowler finds that being a non-partisan altruist may be negatively correlated with turnout, a finding that is extremely problematic under the Edlin, Gelman and Kaplan model but easily explained under an unequal altruism analysis (see id., 678-679).

3.3 Integrating Analysis of Turnout and Voting Strategy

The unequal altruism model provides an explanation for voting behavior that allows public choice theory to study both why people vote and who they vote for. Numerous authors have created models for how
voters choose particular candidates—and therefore how candidates should appeal to voters—with assumptions of instrumentalist voters (see, e.g., Myerson and Weber 1993). The common problem in all these models is that they must ignore the initial decision to vote and simply assume voter turnout. It requires no small degree of mental gymnastics to model the behavior of a rational instrumentalist voter who, by assumption, turned out to vote in the first place for irrational or non-instrumentalist reasons. In short, if voters turn out to vote only for non-instrumentalist reasons ($D$), then politicians would have no discernible basis upon which to appeal to them for their votes.

Furthermore, the dominant model of candidate strategy in public choice theory is the median voter model, which predicts that candidates will converge on the preferences of the median voter (Black 1948). Like all other theories of candidate preference, the median voter theory assumes constant turnout (Niskanen 2004). The analysis of the median voter model, however, is particularly problematic for turnout the candidates are predicted to converge. If the candidates converge, the differential benefit $B$ should fall to zero; and if $B$ equals zero, then turnout among rational instrumentalist voters should also be zero, even without the usual complication that $P$ is vanishingly
small. The voting paradox has thus precluded a model that reasonably explains why a citizen might turn out and vote for a particular candidate, because it has precluded any reasonable assumption of a rational instrumentalist voter.

The unequal altruism model overcomes this difficulty. The key variable $P(\alpha_1N_1B_1 + \alpha_2N_2B_2 + \ldots + \alpha_nN_nB_n)$ attempts to model both why voters show up and why they vote for a particular candidate. Moreover, unlike the assumption of Somin and Edlin, Gelman and Kaplan of uniform voter preferences (in their case, to maximize the common welfare), individual voters can have different preferences for different subgroups within society. Candidate strategy should therefore revolve around forming distributing benefits to various groups in a way that can motivate sympathetic voters to turn out and vote for the candidate in sufficient numbers to form a majority among voters. The prediction that committed partisans are more likely to vote, coupled with the necessity of motivating citizens to turn out, leads to a prediction that the candidates will not converge on the preferences of the median voter in my integrated model of turnout and instrumentalist voting.

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Overall turnout, of course, should not fall to zero if $D > C$ for some citizens. But no one should turn out to vote for any particular candidate if turnout is driven only by the consumption benefits of the act of voting and not by a desire to achieve any outcome.
preferences. The exact equilibrium position of candidates, of course, will depend on the distribution of voter preferences.

3.4 The Optimal Strategy of Interest Groups

The unequal altruism model provides potentially important insights into the role of interest groups in voting behavior. Previous attempts to resolve the voting paradox has posited that interest groups may distribute benefits to voters to cause them to vote (Uhlaner 1989). The problem with such analysis has always been that interest groups cannot possibly distribute sufficient selfish benefits to explain the degree of turnout, for the same reasons as the general voting paradox. Thus, the role of interest groups has provided only a partial explanation for the voting paradox (Morton 1991, 762).

Under an unequal altruism model, interest groups should attempt to maximize $\alpha$, $N$, and $B$ among voters as respect to the group. That is, it is in the political interest of an interest group to maximize the sympathy, numbers and political benefits received by their group, which results in higher voter turnout and more votes for candidates that favor the group’s interests. The problem for an interest group is that the dynamic relationship between these variables is extremely complicated (see Peltzman 1976). $N$ and $B$ have an inherent tension
that, as the group's membership numbers increase, the per capita
benefits will tend to decrease. \( a \) and \( N \) are also in tension for many
groups: for example, closely-knit communities will have a high \( a \)
among their own members, but a lower membership total. Finally, \( a \)
and \( B \) probably have some inherent tension due to the fact that a
group that receives outsized benefits from the government is likely to
provoke resentment among non-members even while increasing the \( a \)
value within its own membership.

The result is that interest groups must carefully balance their
membership numbers, the distribution of benefits within the
membership, as well as the degree of commitment demanded from
members. Of particular interest is that the driver of political influence
in this model is voter altruism towards various groups that they may
or may not be members of, which means that interest groups may have
more success appealing to altruistic motivations rather than selfish
impulses, and thus may obtain support for its agenda from non-
members who receive no benefits from the group. The feasibility of
this strategy is reflected by the fact that some highly-sympathetic
groups (e.g. children) have tremendous electoral influence despite the
small or non-existent voter base of its membership, making them
predictable targets of candidate appeals and government largess. The
unequal altruism model permits further studies into the dynamic effects of voter motivation and interest group persuasion while using an instrumentalist model of voter behavior that does not succumb to the voting paradox.

4. CONCLUSION

Rumors of the demise of rational choice theory, it should appear, have been greatly exaggerated. While altruism and instrumental reasons are surely not the sole motivations for voting, the instrumental value of a vote becomes an important element in the calculus of voting once altruism is considered. The insight of voter altruism is extremely important. At the same time, a simple model that assumes universal altruism towards the common welfare is not feasible as a general model of voting.

A model of unequal altruism towards various subgroups significantly increases the explanatory power of rational choice theory in voting behavior and electoral outcomes. This is particularly evident when candidates have different policy platforms that have differential impact various subgroups, ultimately benefiting allies and harming opponents, and motivating both sides to vote. The effect of polarization in motivating turnout among allies and opponents alike is an
important element of candidate strategy that is not captured in standard median voter theory; and candidates must formulate their policy platforms by considering the effect on turnout among the entire electorate. The integration of turnout with candidate choice in a single model facilitates further study into the strategies of candidates and interest groups when appealing to citizens.

REFERENCES


