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Author(s): John H. Aldrich
Source: *American Journal of Political Science*, Vol. 37, No. 1 (Feb., 1993), pp. 246–278
Published by: Midwest Political Science Association
Stable URL: https://www.jstor.org/stable/2111531
Accessed: 01-11-2018 01:24 UTC

Rational Choice and Turnout*

John H. Aldrich, *Department of Political Science, Duke University*

Turning out to vote is the most common and important act of political participation in any democracy. Voting is also less well understood and explained empirically than other political acts engaged in regularly by citizens. Turnout, however, presents a special problem for rational choice theories of politics, for it is taken to be the paradigmatic example of the problem of collective action, in which, although all may benefit from voting, it is rarely in the individual's self-interest to vote.

This paper begins by examining the problem of explaining turnout. A basic form of rational choice models of turnout is developed—basic in the sense that it is common to all such models. This basic model is shown to be incomplete, and the two most important models, the calculus of voting and the minimax regret model, are illustrated as alternative ways to complete this basic model, along with mention of game-theoretic models. Their strengths and weaknesses are then assessed.

The remainder of the paper argues that rational choice accounts of turnout are possible. The first step is to argue that turnout is not an especially problematic version of the collective action problem because it is, for many, a low cost, low (expected) benefit decision. A "strategic politicians" account of turnout and campaigns is examined next. A reinterpretation of the intrinsic benefits of voting is then considered and is used to examine the most important substantive problem in the turnout literature, its decline. These steps, I argue, make theories of ordinary political decisions at once both more political and more integrated into the politics of the larger system.

Turning out to vote is the most common and important act citizens take in a democracy and, therefore, is one of the most important behaviors for scholars of democratic politics to understand. And yet, it is not well understood. In rational choice theory, turnout holds a special place, as the most commonly used example of a major theoretical puzzle. So important is this puzzle that some see turnout as the major example of the failure of rational choice theory. Here, I shall examine this problem and try to show that a richer choice theoretic accounting of turnout is possible. I hope to show that in solving the turnout problem in rational choice theory, that theory, itself, is enriched. Thus, I think of the problem in using rational choice theory to understand turnout not as a problem

but as a challenge. Finally, I hope to show that in seeking to solve the theoretical challenge, we also learn more about electoral politics.

The problem of explaining turnout is not unique to rational choice theory. Earlier we argued (Aldrich and Simon 1986) that, while turnout is one of the most studied of political behaviors, all theoretical account- ings of turnout are problematic. Extant theories are strong in finding variables that increase or decrease the likelihood of turning out. They do not, in a fundamental sense, however, tell us about the absolute level of turnout, that is, why some people vote and others do not.

While the empirical problem of understanding turnout is common to all known theories, turnout assumes a special place in rational choice theory. I begin by laying out the fundamentals of rational choice as ap- plied to turnout. I then consider the two most important specific models that have been proposed and consider their problems. Finally, I turn to the challenge of proposing solutions to the theoretical problem.

The Basic Model

As Simon and I noted, virtually all scholars agree with what we called the "fundamental equation" of political behavior, which is that preferences (or attitudes, beliefs, values) determine behavior. Rational choice theory is about just how those preferences determine behavior. I begin with the basic choice model of turnout—"basic" because all rational choice accounts agree on it. This basic model cannot completely solve the decision problem facing the prospective voter. The theorist then faces a choice of how to complete the theory, and I examine alternatives in subsequent sections.

To begin, suppose that two candidates run for office, the only contest on the ballot. Citizens must choose among exactly three actions: vote for one candidate, vote for the other, or abstain from voting.[1] Citizens' preferences are defined over *outcomes,* from which preferences for ac- tions are inferred and, in turn, from which choices of actions are deter- mined.

While refined below, the basic set of possible outcomes is that one candidate or the other wins the election, or they tie. Citizens' *preferences* are transformed into *utilities* for outcomes when it matters how much the citizen prefers one outcome over another. Suppose the individual prefers the first candidate (A) to the second (B).[2] Let one (utile) represent the

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[1] Voting for minor, third-party candidates can be considered equivalent to abstaining.

[2] Some, perhaps many, may not care which candidate wins (i.e., value A or B winning equally). While perfectly rational, such indifferent individuals will simply be predicted to abstain (or base their decision solely on the C and D terms introduced below).

value of having the preferred candidate win, while that of the other candidate winning is zero.[3] The third outcome is a tie. Conventionally, it is assumed that both candidates are equally likely to win ties (e.g., by a coin toss).[4] If so, the individual receives an expected value of 1/2 utile. In general, *expected utility* is determined by multiplying the probability of an outcome happening by the utility obtained from that outcome and adding similar calculations for all other possible outcomes. Thus, there are three outcomes (A wins, tie, B wins) with their associated utilities for the individual (1, 5, 0).

   Rational choice theories are theories about how the (expected) utility associated with outcomes generates or induces preferences for the particular actions at hand. Rational choice takes it as fundamental that the individual prefers outcomes with higher utility to those with lower utility and chooses actions to receive more highly valued outcomes. Actions are the means to obtain desired ends and have value only insofar as they affect outcomes. That is, actions are instruments to achieve outcomes, and this is known as an *instrumental* or *"investment"* theory of turnout (Fiorina 1976). The vote is "invested" to achieve desired outcomes.

   Clearly, there are *costs of voting*. Presumably, if voters decide to abstain, they do not have to pay these costs; if they vote, they do. These costs include the costs of obtaining information, processing it, and deciding what to do and the direct costs of registering and going to the polls. It is conventional, but false, to say that there are no costs for abstention. This is false, for rational abstainers must "pay" decision-making costs associated with deciding whether they do not, rationally, want to vote in this election. This situation will be considered later. For now, I follow convention and assign costs of voting, C, for choosing to vote, per se, whether that is for A or for B, and zero for abstaining, with $C > 0$. Now all the outcomes in which A wins (B wins, they tie) must be divided into two sets, those in which individuals voted and those in which they abstained. The value of A winning in the first case is $1 - C$, and in the second it is $1 - 0$.

   The next step is to associate actions with outcomes systematically, from which it will be possible to assign values to the actions, and then to predict what the rational citizen should do. This is a key step, for elections are *collective actions* in which the outcome depends on actions

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   [3]Notice that the assignment of a metric utility to the individual is, like various temperature scales, interval but not cardinal. Utility is only comparable to the utility associated with other outcomes.

   [4]This may sound farfetched, and its only theoretical role is convenience. I have, however, watched televised coverage of coin tosses to decide winners of tied contests for mayor in small cities!

Figure 1. Decision Table for Rational Choice Models of Turnout

States of the World

Preferred Candidate is

Actions:	(1) Winning by More than One Vote	(2) Winning by Exactly One Vote	(3) Tied	(4) Losing by Exactly One Vote	(5) Losing by More than One Vote
(1) Vote for Preferred Candidate	$1 - C^a$	$1 - C$	$1 - C$	$1/2 - C$	$0 - C$
(2) Vote for Other Candidate	$1 - C$	$1/2 - C$	$0 - C$	$0 - C$	$0 - C$
(3) Abstain from Voting	1	1	1/2	0	0

[a]Entry is payoff in utiles to decision maker. It is assumed that $0 < C < 1/2$, where C is costs of voting. A tie is assumed to be broken by the flip of a fair coin. Utiles are normalized, so that the value of the preferred candidate winning is 1; the value of the opponent winning is 0.

taken by others as well as the decision maker. Thus, in figuring out what they should do, voters must give some regard to what others are going to do, insofar as possible to judge. Different characterizations of "what regard a voter gives to what others do" yield different rational choice models.

Figure 1 presents a *decision table* that ties actions to outcomes. The rows represent the three possible actions open. The columns distinguish among the critical *"states of the world."* A voter should think of these as the outcomes before including his or her vote in the tabulations. There are five important states. The tied outcome is in the middle. The first two columns are cases in which A is winning by more than one vote and by exactly one vote. The last two columns make the same distinction for B. The first and last columns are cases in which the outcome does *not* depend upon what the voter does. The middle three columns represent *all* situations in which the voter's actions affect the outcome, by making or breaking a tie. In these three middle columns, voters are efficacious; in the others, they are not. The problem is that voters do not know the situation they face (i.e., which column is the true state of the world) before having to decide whether to vote or abstain.

The entries in the resulting 15 cells are the values of the outcome, given the state of the world and the action chosen. Thus, if a citizen votes for A (row 1) and the "state of the world" is column 1, the entry is the 1 utile for candidate A winning, less the costs, *C*, of having voted.

How do we analyze this table? The state of the world is unknown, so we must compare the value of voting for A, for B, or abstaining within each column. Consider column 1, for example. If that is the true state of the world, voters receive $1 - C$ if they vote for A or for B, and they receive 1 if they abstain. In this case, therefore, voters would rather abstain than vote for either candidate.

Notice that the entry in row 2 (vote for B) is either the same as the comparable column entry in row 1, or it is smaller. It is never better to choose row 2 than row 1, and sometimes doing so will make voters worse off. We can eliminate row 2, since row 1 *dominates* row 2. Therefore, we conclude the obvious; if citizens vote, they should vote for their preferred candidate. Never vote for the opponent.[5]

We are left with rows 1 and 3, voting for the preferred candidate or abstaining. In this case, it is sometimes better (columns 1, 2, and 5) to abstain than to vote. Columns 3 and 4 represent the cases in which a vote (for A) makes or breaks a tie. Whether the payoff for voting for A or for abstaining is greater depends on the costs of voting compared to the value of A and of B winning. Voting for A is better than abstaining in either column whenever costs are less than one-half, and abstaining is better when costs are one-half or greater.

If costs are one-half or greater, the voter should always abstain. There are two such situations. In one, costs of voting are high absolutely. Thus, as costs of voting increase, turnout should decline, ceteris paribus. In fact, of course, that is precisely what happens. When registration laws were passed, poll taxes were raised, or residency requirements were enacted, turnout fell. The second is when, holding costs constant, the difference in value between A and B winning declines. As citizens become more indifferent to who wins, even low costs become a larger and larger barrier to voting.[6] This circumstance connects citizens' choices to candidates' strategies. For example, in spatial models, candidate convergence makes all voters indifferent and therefore likely to abstain.[7]

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[5]Rational choice accounts conclude that one should never choose a dominated action. If one action dominates all others (e.g., as below if $C > 1/2$), then dominance alone solves the choice problem, and all rational choice models of turnout will conclude that the citizen should take that action. In interesting cases, however, one action rarely dominates all others. It is this fact that yields differing choice-theoretic models.

[6]It is important to note that the costs of voting are actually compared to the *difference* to the voter for having A rather than B elected (not the one utile associated with A winning).

[7]A good account is in Enelow and Hinich (1984). Another common form of abstention in spatial models (and also dependent upon candidates' strategies) is called "alienation," which arises when the preferred candidate offers too little in value (is too far away on policy) to be worth supporting. While indifference flows naturally from choice theory, alienation requires an additional, often ad hoc assumption about a threshold of minimal acceptability of the better choice, regardless of any comparison with the alternative.

To this point, all varieties of rational choice models yield the same conclusions. Rational choice models differ, then, over what to do if costs are less than one-half. Before turning to these differences, the conclusions of this basic (and thus all further) models are:

1. Never vote for the less preferred candidate;
2. If costs of voting are high (.5 or greater), always abstain;
3. If costs of voting are zero (or even negative—i.e., you get more value from voting, per se, than it costs to vote), then vote for A because voting for A dominates abstaining; and,
4. If $0 < C < .5$, the basic model is silent. Note that it is silent because of the middle columns. Thus, rational choice models of turnout differ over ways to handle these middle cases.

The Calculus of Voting Model

The "calculus of voting" was initially developed by Downs (1957) and extended and tested by Riker and Ordeshook (1968). The hallmark of this model is use of expected utility, assuming that citizens estimate the probability of the various states of the world. These probabilities are used to infer the expected utility associated with following each action. It is a decision-theoretic model.

They also made one other addition to the model that could, in principle, have been added to the basic model. I reserved it for here, however, because this addition is controversial, and some prefer to analyze turnout without it. Downs added a term, D, to represent the value of seeing democracy continue. If no one voted, he argued, the political system would fail. Therefore, he reasoned, some may vote to ensure the continued vitality of democracy. Riker and Ordeshook (1968, 1973) expanded his logic. Calling it "citizen duty," they argued that D represents the value of doing one's duty as a citizen, as well as an array of other values, such as expressing support for the country and the political system. These are called "*expressive*" components to the vote, for the voter receives that value from voting, per se, regardless of the outcome. In Fiorina's (1976) terms, voting on this basis is an act of "*consumption,*" a citizen "consumes" voting for its own sake, rather than voting being an act of investment (see also Crain and Deaton 1977; Hinich 1981). Fiorina added to D such concerns as expressing allegiance to a favored candidate or party.

Adding a D term is the same as subtracting a C term. Thus, C can be thought of as "net costs," that is, as costs of voting, less any positive values, such as doing one's duty. A positive C says that duty only partially outweighs costs of voting, but that net costs are increasingly likely to be less than one-half. Thus, the D term does not change the fundamen-

tal analysis, unless $D > C$, in which case it is better to vote for A than to abstain in all circumstances.

The key innovation of the calculus of voting is that each individual assigns a probability of each state of the world being true.[8] What is critical is the probability that one vote will make a difference, that is, that column 3 or 4 is true. Calling the probability that one vote (for A) will make or break a tie, P, and calling the difference in utility for A instead of B winning B (for the difference in "benefits"), Riker and Ordeshook determined the "rewards," or R, for voting as:

$$R = PB + D - C.$$

If R is positive, vote for A; if not, abstain.

An individual sees voting as a collective action, knowing that his or her decision is but one of many to be made in the election. In this model, the "regard given to what others are going to do," as I put it earlier, is captured in the P term. It represents an assessment of the probability of each state of the world being true and is often measured by how close the election was or is expected to be.

The probability of casting the deciding vote should be higher, the closer the election is, ceteris paribus. Of course, not all else is equal. For example, the size of the electorate matters, too. Two equally close contests, one for a town's mayor, the other for president, should be expected to have very different P terms. A large P term, therefore, reflects closeness of the expected vote and size of the electorate. Since this is a subjective estimate, it will vary from person to person.

In sum, the conclusion of the calculus of voting is that probability estimates are used to close the remaining gap in the basic model of turnout. Holding all else constant, the higher the P term, the more likely it is that an individual will vote. This model has been tested extensively, and all tests find that the C, D, and B terms are strong predictors of turnout. Many applications, especially those that use aggregate data, find that the P term is a significant predictor (e.g., Barzel and Silberberg 1973; Settle and Abrams 1976; Silberman and Durden 1975). Other tests using survey data (e.g., Ferejohn and Fiorina 1975; Foster 1984) have found it to be unrelated to the vote.[9] I will attempt to resolve this seeming paradox between aggregate and survey findings later. Ferejohn and Fiorina used their results as one reason to consider an alternative rational choice model of turnout.

[8]If these are true probabilities, their sum across the five columns must be one.
[9]They also examined the PB interaction, finding little evidence for it (see also Aldrich 1976).

The Minimax Regret Model

Ferejohn and Fiorina (1974, 1975) reject completing the basic model by assuming that people form probability assessments of the states of the world.[10] They argue that such assessments are difficult in many contexts. People may not form them and perhaps cannot form them in principle. If probabilities cannot be assessed, the calculus of voting cannot be used. Ferejohn and Fiorina propose a second decision-theoretic method of completion by transforming the problem. In place of expected utility maximization, they propose that people use the decision rule called "minimax regret."[11]

Citizens are uncertain about what to do. Suppose they decided to abstain, and their preferred candidate lost by exactly one vote. Presumably, they would greatly regret their decision to abstain. "Minimax regret" is a decision rule that makes this notion of regret precise.

The "regret" question is to ask, "If it turns out that a given state of the world is true, would you have any regret that you chose the action (voted or abstained) that you did, and if so, how much regret?" To measure regret, use the basic decision table (from Figure 1, repeated in Figure 2.A) to find the action within each column that yields the highest utility (see bottom, Figure 2.A). Thus, in column 1, the best action is to have abstained, yielding a return of 1 utile. Abstention also yields the highest payoff if column 2 is true (1 utile) and if column 5 is true (0 utiles). Columns 3 and 4 depend on the magnitude of the costs involved. If $C <$ 1/2, the best action was to have voted for A (yielding $1 - C$ under column 3 and $1/2 - C$ under column 4). If $C > 1/2$, abstention would have been the best choice, yielding 1/2 and 0, respectively. Note that, before, $C > 1/2$ meant that abstention yielded the highest expected utility under every state of the world. So, too, does abstention yield the least regret in each column, so here, as before, abstain if $C > 1/2$.

Of course, we must choose without knowing the true state of the world, but we can compute a regret table to parallel the decision table. In Figure 2.B, the calculations are shown, while Figure 2.C contains the full regret table. Consider column 1. The regret from voting for A and finding out later that A was already winning by more than one vote would

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[10]More accurately, they argue that not all people use the calculus of voting's logic in deciding whether to vote. They suggest that some might do so, but some (presumably many) might not. Only the "pure" cases of everyone using the same decision rule are considered here, for ease of exposition.

[11]Minimax regret is only one of several decision-making rules that have been proposed for decision making under uncertainty (see Luce and Raiffa 1957). There are good reasons for examining this particular decision rule (e.g., others always predict abstention).

Figure 2. Construction of Minimax Regret Formulation of the Turnout Decision

A. Decision Table and Determination of Regrets from Taking Specific Actions

States of the World

Preferred Candidate is

Actions:	(1) Winning by More than One Vote	(2) Winning by Exactly One Vote	(3) Tied	(4) Losing by Exactly One Vote	(5) Losing by More than One Vote
(1) Vote for Preferred Candidate	$1 - C$	$1 - C$	$1 - C$	$\frac{1}{2} - C$	$0 - C$
(2) Vote for Other Candidate	$1 - C$	$\frac{1}{2} - C$	$0 - C$	$0 - C$	$0 - C$
(3) Abstain from Voting	1	1	$\frac{1}{2}$	0	0
Highest Payoff in Column	1	1	$1 - C$ if $C < \frac{1}{2}$ $\frac{1}{2}$ if $C \geq \frac{1}{2}$	$\frac{1}{2} - C$ if $C < \frac{1}{2}$ 0 if $C \geq \frac{1}{2}$	0

B. Calculation of Table of Regrets, when $C < \frac{1}{2}$

	(1)	(2)	(3)	(4)	(5)
(1) Vote for Preferred Candidate	$1 - (1 - C)$	$1 - (1 - C)$	$(1 - C) - (1 - C)$	$(\frac{1}{2} - C) - (\frac{1}{2} - C)$	$0 - (0 - C)$
(2) Vote for Other Candidate	$1 - (1 - C)$	$1 - (\frac{1}{2} - C)$	$(1 - C) - (0 - C)$	$(\frac{1}{2} - C) - (0 - C)$	$0 - (0 - C)$
(3) Abstain from Voting	$1 - 1$	$1 - 1$	$(1 - C) - (\frac{1}{2})$	$(\frac{1}{2} - C) - 0$	$0 - 0$

C. Table of Regrets, when $C < \frac{1}{2}$, and Calculation of Maximum Regret for Each Action

						Maximum Regret
(1) Vote for Preferred Candidate	C	C	0	0	C	C
(2) Vote for Other Candidate	C	$\frac{1}{2} + C$	1	$\frac{1}{2}$	C	1
(3) Abstain from Voting	0	0	$\frac{1}{2} - C$	$\frac{1}{2} - C$	0	$\frac{1}{2} - C$

D. Calculation of Minimax Regret
(a) $1 > C$; $1 > \frac{1}{2} - C$; therefore row 2 is never the minimum of max regret
(b) $C < (\frac{1}{2} - C)$, if $C < \frac{1}{4}$, vote for preferred candidate
(c) if $C > \frac{1}{4}$, abstain

be 1 (the value if the best act, given that state of the world, had been chosen) minus $(1 - C)$, what you would actually get from voting for A and that being the true state. Thus, you would have C units of regret having voted for A. Obviously, if you choose the best action for that state of the world, you would have no regret. Thus, the larger the entry in the regret table, the worse it is—the greater the regret you would "suffer."

Now consider the act of voting for A. The worst thing that could happen, or the *maximum* regret, is needlessly paying the costs of voting, or C. If you voted for B (and $C < 1/2$), the maximum regret is to have turned the election from a tie to a one-vote win for B, yielding a regret of 1. The maximum regret for abstaining is to find out that your vote for A would have made A either tie with B or would have broken a tie, causing A to win. Finally, *minimax regret* refers to taking the action that yields the minimum of these maximum regrets. The maximum regret for voting for B is 1 (as listed at the end of Figure 2.C), which is larger than that for either other action. The maximum regret for voting for A is C (obtained if state of the world 1, 2, or 5 occurs). The maximum regret for abstaining is $1/2 - C$ (obtained if state of the world 3 or 4 occurs). The minimax regret decision rule says pick whichever of these two is smaller. That is, vote for A if C is smaller than $1/2 - C$. Thus, by the minimax regret rule, a person should vote (for A) if $C < 1/4$. Otherwise, it is better to abstain.

This rule provides a complete specification of the decision-making problem, just as does the calculus of voting. Both yield the same results as the basic model; never vote for B, abstain if costs are prohibitively high ($C > 1/2$), and so forth. The two models differ over how to handle the middle columns.

Ferejohn and Fiorina (1974) argue that their model predicts turnout more often (i.e., for more people in more circumstances) than the calculus of voting. To see this, the minimax regret rule is to vote (for A) if $C < B/4$. By some rearrangements, they show that the calculus of voting rule is to turn out if $C < PB/2$. Minimax regret will yield voting more often when $B/4 > PB/2$, or, with a little algebra, when $[(B)(B/2)] > P$. Since $B = 1$, this reduces to $1/2 > P$. Thus, minimax regret leads to turnout more often whenever the probability of casting the tie-making or tie-breaking vote is less than one-half. Their argument, then, is that P, if it could be formed, is (almost) always smaller than that, so minimax regret predicts turnout for more people more often than does the calculus of voting. To see the full impact of this account, however, we must examine some of the problems found with these models. First, I briefly examine a third approach.

Game-Theoretic Accounts

The above are models based on decision theory, assuming the "regard given to others' decisions" is nonstrategic. That is, the decisions of others are, at most, highly aggregated (into estimates of P), and no one decision is assumed to affect the decisions of others. Game-theoretic models assume that decisions are based on taking others' decisions into explicit account. For instance, voters might reason that everyone will conclude that P is effectively zero, and no one will vote. Then, one vote will be decisive, breaking a 0–0 tie. But if that is true for one, it is true for all, so all will conclude it is rational to vote, leading to a large turnout. But then each concludes that his or her vote is indecisive, and on and on. Ledyard (1984) and Palfrey and Rosenthal (1985) examine such models, searching for game-theoretic equilibria to resolve strategic interaction. Often there are multiple equilibria, but the latter authors show that uncertainty about costs and others' preferences typically yield relatively low subjective estimates of $P,$ and thus a low turnout rate, in equilibrium, in large electorates. These game-theoretic models clearly add more to our understanding of relatively small electorates. I argue elsewhere (1992) that the game-theoretic problem converges to a dominant choice similar to the calculus of voting results as the size of the electorate increases. Generally, true strategic interaction becomes attenuated as the size of the electorate increases, thus making game-theoretic solutions similar to the decision rule derived from the calculus of voting. As a result, it is reasonable to say that any problems associated with the calculus of voting are found as well, at least approximately, in game-theoretic models.

Problems with the Calculus of Voting

There are two important and commonly cited problems with the calculus of voting. The first problem is the D term. Whether or not the D term is considered relevant is not unique to the calculus of voting, although Ferejohn and Fiorina (1975) chose not to include it in their minimax regret model (to see it with a D term, see Aldrich 1976). Riker and Ordeshook's (1968) tests yielded support for all variables in the calculus. However, Barry (1970) pointed out that the strongest relationship appears to be due to the D term.[12] This, of course, is not a problem by itself.

[12]Tests of turnout models that use survey data either have no measure of the costs of voting (e.g., Riker and Ordeshook 1968) or are forced to make problematic empirical decisions (e.g., that level of education is a measure of costs—and not of other theoretical terms). It might be supposed, however, that if good measures of costs were available in surveys, they would also show strong effects. If so, the argument in the text would be largely unaffected, and in particular, the decision to vote would continue to be dominated by "consumption" terms and not investment terms.

Barry (1970) argues that the theoretical problem is that, if all the "action" is in the D term, turnout is not usefully understood by rational choice theory. To be sure, voting due to a high D term is perfectly rational. The answer to why someone voted, however, is simply that they valued voting on its own. If so, turnout is, effectively, noninstrumental. Moreover, if the answer to the question, "Why did you vote?" is that "I voted because I wanted to," then it moves the theoretically important question back one step to, "Why did you want to vote?" As Barry puts it, it makes turnout a "matter of taste," even though "taste" may mean "deeply held values." And rational choice models are not models of "where tastes come from," but how one acts, given tastes. Thus, theoretically, if turnout is due to the D term, rational choice models add nothing to the explanation of how preferences shape actions.

The more theoretically consequential problem concerns the P term. Simply put, in any large electorate, there is no reasonable basis for asserting that your vote will make or break a tie. Even in close elections, $PB/2$ will be very small and not outweigh even low costs of voting, unless $B/2$ is incredibly large. Those who take this position argue that the inevitable conclusion of the calculus of voting is that no one who has any plausible estimate of P should vote in a large electorate.

There is a sort of double whammy. The PB term should be *very* small, and P is the weakest, empirically, of all terms in the calculus. Empirically, the problematic D term is strong. Both PB and D point toward turnout as consumption. Therefore, an instrumental model of turnout yields, theoretically and empirically, a noninstrumental explanation of voting (but see Hinich 1981).

The empirical results of estimating the calculus of voting present something of a second paradox. Those who use aggregate data almost invariably find that electoral closeness is strongly related to the turnout rate (see sources cited above). Survey research finds it much less strongly related to the vote, if related at all. Of course, that may simply be because there is variation in the true closeness of elections over time or in different constituencies, thus showing up in aggregate measures, but no difference within a given election, thus showing up as random error in response to P-like questions on surveys.[13]

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[13]I argued this position (1976) and provided some survey evidence to support it. Kramer (1983) made a much more elegant account, applied to a different problem (see below). Some psychologists argue that people are notoriously bad in estimating probabilities (e.g., Kahneman, Slovic, and Tversky 1982), which, of course, would also make the P term problematic.

Problems with the Minimax Regret Model

There are also two theoretical problems with the minimax regret model. One concerns the P term. This may seem an odd assertion, since the whole purpose of turning to it was to develop a rational choice model in which there is no probability term at all. But refer to the regret table. If only the first and last columns are considered, abstention dominates voting. Thus, the only time there would be any regret from failing to vote is when it would make or break a tie. It may be that people do not, perhaps cannot, estimate probabilities, and they may reason by minimax regret logic. And it is theoretically consistent to say that individuals cannot say that these three columns have zero probabilities. If they do not estimate probabilities, there may be no way for such individuals to say column 1 (or 5) is more likely to be true than column 3. Such a statement is a probabilistic statement and is therefore inadmissible. Yet it seems clear that people may well have said, "Sure, it is more likely that Bush is ahead by at least one vote than it is that he is tied with Dukakis." They may say so without any coherent set of probabilities in mind, or using them in their decisions if formed. Perhaps there is a middle ground.

The question is not what specific probabilities people assign. The question is do people believe that there is *any* chance of an election being decided by exactly one vote, and can they do so without calculating (or using) probability terms systematically? Put alternatively, scholars have tried to make calculations of the probability of an exact tie in a very large electorate, but they do not need to know how small P is to believe that it is very, very small. You do not have to be able to say how close the election will be to believe that there is no chance that it will be decided by a single vote.

The second problem is also related to probabilities. The calculus of voting applied to multicandidate or multiparty elections predicts that some may well (rationally) choose to vote for a second-ranked party or candidate, rather than their first choice, to avoid "wasting" their vote on someone who has no chance of winning.[14] Ferejohn and Fiorina (1974) show that the minimax regret model predicts that *all* voters will vote for their first choice. There is *no* wasted voting logic consistent with their model. Avoiding wasting a vote in the calculus of voting is dependent on P terms of the same form as a two-candidate case (i.e., on probabilities

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[14]Technically, it may be rational, by the calculus of voting, to vote for any candidate or party except the last-ranked alternative, depending upon the particular probabilities involved. It is easier to write this as voting for a second-choice alternative, so I shall do so here.

of ties or one-vote margins). One clear test between these two models is to examine multialternative contests to see whether voting occurs for candidates other than the first choice. It turns out that there is consistent evidence of the wasted-vote account in multiparty systems (Black 1978; Cain 1978), in voting in U.S. presidential primaries (Abramson et al. 1992), and perhaps in the three-candidate presidential contests (see below).

It would be an odd theory that applied to two-candidate contests only and failed in multicandidate races—especially if that means that it applies to some presidential races, but not others. We would need a theory about why the P term appears to be ignored in the first case and employed in the second, or why people *cannot* calculate probabilities in the first case, but magically can in the second. It is even more surprising because there is a lot of information about the expected closeness of two-candidate presidential elections, and it is relatively easy to process that information, while probability assessments are not as easy to assess in complicated multicandidate races, and when U.S. voters so rarely confront them. All this would point toward P terms being more likely to be employed in the first case and not in the second, just the opposite of the empirical findings.

It does not follow that the evidence that people do avoid wasting votes "saves" the calculus of voting. In fact, if the logic is compelling that the P term in a two-candidate contest should be considered effectively zero, then the logic is just as compelling that there is no chance that one vote will make or break a tie involving the voter's second-choice candidate. If a vote is "wasted" in the first case (i.e., a voter wastes the costs of voting by turning out), that vote will be just as wasted in multicandidate contests, no matter whom is supported. In 1980 Jimmy Carter argued that "a vote for John Anderson is a vote for Ronald Reagan" (i.e., that voting for the independent candidate instead of Carter was a wasted vote, since Anderson had no chance to win, while Carter [whom most Anderson supporters preferred to Reagan] could defeat the Republican nominee). In fact, a vote for Carter (or for Reagan) was just as wasted, since it had no chance of making or breaking a tie.[15]

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[15]Tullock (1975) wrote a critique of the minimax regret formulation that he entitled "The Paradox of Not Voting for Oneself." Suppose that you write your name in on the presidential ballot and that you are your most preferred candidate. If so, it is not logically impossible that you could win (perhaps everyone else follows the calculus of voting logic, calculates small P terms and abstains, so you win one vote to zero). Minimax regret concludes that you always vote for your first-choice candidate, no matter what, if you vote at all. So minimax regret "predicts," according to Tullock's logic, that at least a great many should turn out and vote for themselves.

The appearance of wasted voting, therefore, undermines the plausibility of the minimax regret formulation, since it is developed from expectational logic. The irony is that evidence for it does not strengthen the plausibility of the calculus of voting, if the arguments about the P term are credible, even if it undermines the universal applicability of minimax regret. The key question, therefore, is how to construct a model of turnout that is both theoretically tenable within a rational choice perspective and that conforms to basic empirical facts known about turnout.

The Rationality of Turnout

In this section, I suggest that turnout is not a particularly good example of the problem of collective action. The main reason is that turnout is, for many people most of the time, a low-cost, low-benefit action. Turnout is a decision almost always made "at the margin." Small changes in costs and benefits alter the turnout decision for many citizens. This argument applies to the basic model and thus all further formulations.

First, the models rest on the assumption that there is only one contest, whereas U.S. ballots are typically cluttered with numerous contests. It is not clear how to model turnout in such cases. One possibility is to assume that someone will turn out if R is positive (or $B > 1/4$) in any *one* contest. It does not follow that this person would therefore vote for all contests, but it does follow that this person will stand in the voting booth. Alternatively, the voter may be assumed to calculate a summary value for voting in all contests and will vote if the summary value is high enough, even if this is not true for any one contest considered in isolation. Whatever the case, the incidence of voting should be higher, and certainly no lower, in multiple, simultaneous elections than in separate ones. The result is that there will be "economies of scale" for voting in several contests at the same time, and the voter will need to associate lower (expected) benefits to find it worthwhile to vote in any one contest.[16]

Niemi (1976) argued that costs of voting are ordinarily low for most people, most of the time. With liberalization of registration laws, it is no longer as difficult or time-consuming to become registered. It does not take *that* long to vote, and for most people polling places are not *that* far away. To be sure, the United States differs from many democracies by requiring the individual to be responsible for becoming registered, and it does not go as far as other nations in making voting as convenient as possible. Still, the costs of registration and voting are relatively low and getting lower, which combines with the presence of multiple, simultane-

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[16]From the government's perspective, economies of scale in the costs of conducting elections are precisely why so many contests are on the same ballot.

ous contests that reduce costs per contest.[17] Decision costs remain. As noted earlier, if one really believes in a rational choice model of turnout, some of these must be paid to decide that it is rational to abstain. Hence, the difference in decision costs between voting and abstaining is not as high as it appears in the various models.

Downs (1957) pointed out that many people come to the vote decision with "accidental" (or incidental) information. Simply in the course of ordinary life, most people pick up at least some information about at least some election campaigns, and as such these are not included in the C term. How much information a person acquires incidentally will vary from person to person and from election to election. Presidential contests are so heavily covered in the media that it is hard to avoid incidental information, perhaps in large quantities. At the other extreme are contests for which very little information is available even if purposefully sought (e.g., for nonpartisan contests to elect boards of trustees for state universities). Political scientists have studied turnout almost exclusively in high profile contests, in which case information acquisition (if not processing) costs can safely be considered small.[18] Of course, some people are exposed to more incidental information than others. Predictably, such people are, in fact, much more likely to vote, for decision-making costs are lower.

It is still necessary to process such information to decide which candidate is preferred and by how much. It is hard to say how costly such a process is. Virtually everyone will tell pollsters who they would like to see elected president (and forecast the outcome, see Lewis-Beck and Skalaban 1989), and this is true very early in the campaign, which sug-

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[17]This is not to say that the costs of registration and voting are low in some absolute sense or that they are equally low for all people. Obviously, even low costs may be an effective barrier to voting for the poor, and laws may still be manipulated to regulate who is more and who is less likely to vote. In this vein, see Piven and Cloward (1988). U.S. registration laws may have been generally liberalized, but not completely and not equally.

[18]One exception that has received a great deal of attention (although not in terms of turnout, per se) is the often tremendous asymmetry between the information relatively easily available for the incumbent, but not the challenger, in U.S. House contests. This literature can be used to imply that, in general, voters do not seek information on challengers for the purpose of getting informed (just as Downs's "rational ignorance" account would imply), but many do have at least some limited information on incumbents. Moreover, they appear to construct decision rules about whom to support from this asymmetric informational base. All of this is consistent with the Downsian account of voting. Since the incumbent has an unusually high degree of control over this readily obtainable information in House elections, it should be no surprise that the rationally ill informed voter typically decides that the incumbent is doing at least an adequate job.

gests that, at least for important cases, decision-making costs are not particularly high.[19] Moreover, most contests are partisan, and with the party affiliation of the candidates clearly labeled on the ballot, acquisition of this bit of information is very cheap. Even in an era of partisan dealignment, most citizens report at least some partisan leanings. V. O. Key, Jr. (1966), referred to party identification as a "standing decision." By this he meant that partisans would reason that they initially favor their parties' candidates, until and unless given good reason not to. Indeed, the very reason that they are partisans must be that, for most candidates, most of the time, they favor them over the opposition. Thus, an initial decision could be reached very easily and cheaply. While new information might give reasons to change that initial decision, preferences will exist before, as after, receiving that information. If anything, recent studies have analyzed new informational short cuts (such as voting retrospectively or for the incumbent in congressional elections) that also reduce decision-making costs.

If costs are, indeed, low, (expected) benefits are also low. Even in the minimax regret formulation, it is not at all clear that people perceive much difference about who wins most elections. This may be least true for president. But even there, it is not at all clear that having Dukakis as president would make my life, nor even the country's, all that different from having Bush as president. It is far less clear that it makes a great deal of difference who represents my district in Congress. After all, he or she is but one out of 435 to begin with, and it is not that obvious that having a Republican Senate from 1981 to 1987 made much difference from having it a Democratic Senate before or since then. There is some difference, to be sure, but not that much.

This is just as it should be. About half the electorate voted in 1988.[20] The decline in turnout from 1960 to 1988 has occasioned much concern, even alarm, but that massive decline is of about 13 percentage points. Low benefits to voting match well with low costs. For most people, I submit, turnout is a marginal decision. Change the costs of voting only slightly and turnout changes. As the level of partisanship has declined,

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[19]Such costs will be higher, the more similar the two candidates. For example, in 1976 Ford and Carter adopted relatively similar policy stances, requiring more information to decide whose platforms were preferred than in contests in which candidates' platforms were more distinct.

[20]While our turnout is, of course, low, these figures overstate somewhat the incidence of (purposeful) abstention, since they include those not legally eligible to vote or even to register.

so has the decline in turnout.[21] Modest changes in the costs or benefits of voting breed modest changes in aggregate levels of turnout.

Politicians know this. Registration and get-out-the-vote drives work. A national effort for registration or turnout is quite expensive, but the costs spent on any individual are low. A small expenditure per capita can increase turnout. Take registration forms door to door. Offer rides to the polls or an hour's worth of child care. These tactics work, and the cost of creating this new voter is quite low—$5 or $10 or less, which is sufficient to outweigh the costs of voting. The implications of "politicians knowing this" will be considered soon. First, however, there are some important consequences that flow directly from voting being a low-cost, low-benefit decision.

Some Initial Consequences of Low-Cost, Low-Benefit Choice

If turnout is a low-cost, low-benefit decision-making problem, small changes in costs and benefits can make a significant difference.[22] I believe that this explains four of the most important characteristics of the empirical literature on turnout.

1. Many variables are related to turnout; they are related to turnout consistently in study after study, election after election, but they are often moderately or weakly related to turnout.
2. Since turnout is, however, a close call for the typical citizen, we still do not know why the absolute level of turnout is what it is; we do not know, fundamentally, why some people vote and others do not. It may be a chimera to believe that we could assess all of the small bits of benefits and costs involved in the turnout decision. Therefore, it may be a chimera to expect to have a complete answer to "Who votes?" precisely because it is a low-cost, low-benefit decision.
3. Citizens may make many "errors" in these decisions, since it is not worth much effort to decide whether R really is positive (or

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[21]The decline in party affiliation is indicated by the increase in "pure" independents from a low of 6% in 1952 and an average preparty decline of about 8% to an all-time high of 15% in 1974 and 1976 and a postparty decline average of about 12%. On the relationship between the decline in strength of partisanship and turnout, see Abramson and Aldrich (1982).

[22]Pomper and Sernekos (1989) argue along these lines. They entitle theirs a "bake sale theory" of voting because bake sales are held at the polls in their area. The attraction of a bake sale is another of those small benefits available to those who turn out. These are a part, of course, of the D term, and bake sales are consistent with Barry's (1970) argument that the D term is a matter of taste!

B is greater than 1/4). In the aggregate, these "errors" might cancel out, but individual decisions will be consistent with these theoretical principles only probabilistically and not with the certainty implied by the theoretical equations.
4. Measurement error should also loom large in model estimation, attenuating estimates.

These all point to a major general conclusion. Low-cost, low-benefit actions are consistent with the empirical findings, in which there is weaker performance of turnout models than comparable models of other forms of participation or of candidate choice. There are more "errors" made by decision makers in low versus high cost-benefit contexts; measurement error will be more consequential; and a large range of variables that contribute small amounts of costs or of benefits and that are generally impossible to measure completely will have a greater impact on decisions.[23]

Like implication 4, implication 5 concerns social science rather than actual citizens' decisions. The fifth point, however, is an important theoretical issue.

5. Turnout is seen as a very central problem in rational choice theory because it is seen as the major and archetypical example of the problem of collective action. The turnout decision is an example of a collective action problem, but it is not a very good, nor even terribly problematic, example of it. The problem of collective action is, in large part, that people who share the same values for collective choices may find it difficult to attain and maintain the ability to act on those shared interests, precisely because there is little individual efficacy in action. While turnout is a collective action problem, it is not a good illustration because it differs from almost all other important collective action problems in a crucial regard. Collective action problems typically assume importance because they are high-cost, high (potential) benefit decisions, where small P terms mean that the high B terms are substantially discounted. Turnout is a low-cost, low-benefit decision and sheds little light on most important collective action problems.

[23] I put the "errors" in decisions in quotation marks because it is not a mistake in judgment or failure of rationality involved. It is an "error" only if the decision maker were fully informed. As Downs (1957) showed, however, it would be irrational to be fully informed, and thus the rational decision maker knowingly tolerates (and expects) "errors" at the margin, as here.

6. I suspect that the low-cost, low-benefit nature of the turnout decision really means that most of the action is, in fact, in the intrinsic values of voting per se (i.e., in C and D terms). After all, these apply directly to the voter, regardless.

The problem at this point is to see whether there is an explanation of (nearly) expressive or consumptive voting that fits with the undeniably political and strategic nature of election campaigns. The problem is, if voting is primarily an expression of personal values, then there is little political or strategic content to the decision. Can it really be that voting is noninstrumental and nonstrategic, especially in this most strategic of political contexts? There is, I believe, a resolution to the conundrum.

Strategic Politicians and Rational Turnout

The actions of strategic politicians explain why turnout is higher in close elections, even if people ignore P terms in their own decisions. It is these actions that also explain why there is behavior consistent with the wasted-voting thesis, whether or not citizens weigh P term calculations.

Jacobson and Kernell (1983) proposed an answer to the following empirical puzzle about congressional elections. Economic conditions are often thought to affect voting choices. When times are bad, congressional candidates of the party of the president should be hurt, but those candidates should be helped by a strong economy. As Jacobson and Kernell show, aggregate analyses of this relationship find that economic conditions are, indeed, strongly related to the congressional vote. Survey research, however, typically finds that individual voters' perceptions of, experience with, and preferences over personal economic conditions are weakly related to vote choices (Jacobson and Kernell 1983; Kiewiet 1983; Lewis-Beck 1988). Jacobson and Kernell proposed a resolution of this puzzling disjuncture between aggregate- and individual-level data results, which they called the "strategic politicians" hypothesis.[24]

Congressional incumbents are very difficult to defeat, a fact known

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[24]Kramer (1983) proposes another answer. He points out that surveys rely on respondents' assessments. Since these respondents are affected by the same national economic conditions, much of the variation in these assessments will be variations in perceptions of the same "reality" and simple measurement error. Over-time studies, such as the aggregate analyses, examine "true" variation in actual national economic circumstances. Hence, if economic conditions do matter, they should be revealed in over-time studies, but they will be greatly attenuated in cross-sectional studies. This parallels the P term. Survey data for a presidential election will have variation due not to differences in the "true" closeness of the election but to differences in perception, interpretation, and/or error in assessing the true closeness. Over-time studies, therefore, would find a stronger impact of the P term because there is true variation in expected closeness.

to the potentially strongest challengers (e.g., state legislators), who have much to lose if defeated. In bad economic circumstances, however, incumbents are relatively more vulnerable. Strong challengers, therefore, are more likely to run (and be able to raise resources) in such circumstances. Voters, of course, are much more likely to support a strong challenger than a weak one. Because there are more strong challengers, more citizens vote against incumbents in bad times than good. Even if voters paid no attention at all to economic circumstances in deciding how to vote, we would observe a relationship between voting for the incumbent and economic circumstances due to politicians' strategic decisions.

The strategic politician hypothesis provides an even more convincing explanation of an analogous empirical puzzle in turnout. As noted earlier, the relationship between the P term and turnout mirrors economic conditions and congressional voting. Empirical relationships are strong at the aggregate level, but are weak or nonexistent at the individual level.

While citizens may not care whether the election is close, politicians do. Campaign resources are allocated by parties, PACs, and interest groups where those resources will do the most good, and they will do the most good where elections hang in the balance, rather than in elections that appear likely to be won or lost by large margins. Thus, analogous to strong challengers running in bad rather than good times, politicians (and politically active groups) allocate resources to close rather than to one-sided contests. This argument is not new. It was made, for example, by Key (1949). Moreover, Jacobson (1992) and others have clearly shown that in congressional elections, challengers to incumbents find it extremely difficult to raise enough money to make an effective race. They need to convince skeptical potential donors that they have a realistic chance of winning, and when they can do so, they can get money. This money, available primarily in close elections, can be "invested" by the candidate in turn-out-to-vote campaigns, thus stimulating turnout.

What of the people who must decide whether to vote? It may be that citizens are more likely to vote if the election is close. Even if not, they will be the recipients of greater campaign efforts if the election is expected to be close. Therefore, the costs of voting will, typically, be reduced, perhaps by more intensive registration and get-out-the-vote campaigns. A close, hard, expensively fought contest will, on average, increase interest in it, thereby increasing the likelihood that people will become informed about it out of general interest or incidentally due to more lavish advertising campaigns. Candidates, of course, seek to provide good reasons to vote for them and not their opponents, so higher amounts of incidental information may increase the perceptions of how different the candidates are, leading to higher B terms. It may even in-

crease the feelings of duty or expression of allegiance to the favored candidate or party. Adding the strategic politicians hypothesis to the low-cost, low-benefits argument yields a seventh conclusion.

> 7. Strategic politicians will invest more heavily in the closest con-tests, and this investment will be reflected in increasing levels of turnout, even if voters do not consider the closeness of the con-test. Hence, turnout should increase with the closeness of the contest at the aggregate level, even if perceived closeness is weakly related, or even entirely unrelated, to the turnout deci-sion of any individual voter. Indeed, voters can be purely expres-sive voters or "consumers"—they could decide purely on the basis of C and D kinds of variables—and still a correlation would exist between closeness and turnout at the aggregate level.

While not put in these terms, several rational choice models have been developed based on this logic. Uhlaner (1989), for example, exam-ines a model in which candidates adopt policy positions in part to receive support from interest groups. Group leaders use these policy benefits to acquire funds to invest in turning out their group members, thereby re-ducing costs. Morton (1987) has developed a closely related model. Aldrich and McGinnis (1989) have developed a model in which political parties allocate resources to candidates who invest these resources in get-out-the-vote campaigns. Recently, Cox and Munger (1989) have esti-mated a "strategic politicians" model using data from the 1982 congres-sional elections. They found that both the amount of money expended in the campaign and the closeness of the contest stimulated increased levels of turnout, controlling for a variety of other variables. Spending an extra dollar per capita increased turnout by 3.1%, and a race closer by one thousand votes increased turnout by 0.15%.[25]

More generally, empirical studies have consistently found that cam-paign efforts by parties and other groups stimulate turnout. Patterson and Caldiera (1983) provide a particularly good example, while Kramer (1970) demonstrates the impact of precinct-level campaigning on voting behav-ior. To illustrate, one of the most strategic politicians of all times was Martin Van Buren. He began constructing the first mass-based political party for the 1828 election. The Democrats in 1828 and 1832 effectively determined where there would be substantial attempts at mass mobiliza-

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[25]They report that these two variables had standardized betas of .33 and .45, respec-tively, in this aggregate data model. While betas are problematic, their magnitude suggests that these two variables are, indeed, strongly related to (aggregate) turnout.

tion.[26] I show (forthcoming) that the national party organized state and local Democratic parties strategically, beginning with the closest expected contests of 1828 and then of 1832. In 1828, turnout increased 18.3% in the 13 states not organized. In the five states that the party succeeded in organizing, turnout increased 41.7%. In a more completely specified model, due to that organization, turnout in organized states was estimated to have increased 17.5% in 1828, 5.1% (on the already higher base) in 1832, and another 14.7% more in 1836, ceteris paribus.

I believe the strategic politicians hypothesis also can help explain why there is consistent evidence of the wasted-vote thesis. Under minimax regret, this kind of choice should never happen. Under the calculus of voting, we should observe very little such voting if the P term is small and weakly related to choice. Thus, it is a puzzle for each model.

In the 1968 and 1980 presidential elections, the third-party candidate stood much higher in public opinion polls in September than in November. According to National Election Studies (NES) survey data, over 95% of those who ranked a major-party candidate first voted for him, but only 85% of those who ranked George Wallace first voted for him, and only 57% of those who said John Anderson was their favored candidate voted for him (Abramson, Aldrich, and Rohde 1983, 175). Wallace had strong regional appeal, actually carried several southern states and came close in others, while Anderson's support was not concentrated. This is consistent with the fact that Anderson's support fell more dramatically, since the wasted-vote logic was more compelling in his case. Moreover, Wallace supporters who "defected" (to their second choice, generally Nixon) were found in states where the Wallace vote was small. In strong Wallace states, he held much more of his support. In other words, the pattern of data is precisely what we would expect if voters made expected utility calculations. Why would this be true if the comparable probability calculations are all but ignored in deciding about turnout?

The strategic politicians hypothesis provides an answer. It is clearly in the interest of most politicians to support a major party because virtually all of them are successful politicians within one of those two parties. Indeed, both Wallace and Anderson had difficulty even finding a major politician to run with them. Interest groups benefit from maintenance of the current two-party system. Unions, for example, devoted great effort

[26]This is not to say that they were the only groups that attempted to mobilize the electorate. Local groups opposed to Jackson may have countermobilized upon seeing the new Democratic party take to the field. In either case, the Democrats chose the locales of competition.

to convince their members to support Humphrey over Wallace, even though many members preferred Wallace. Unions also have a long-standing relationship with the Democratic party.

The two parties, their nominees, and interest groups, therefore, make the argument publicly that a vote for a third-party candidate will be wasted. Resources were systematically devoted to convincing people that "a vote for Anderson is a vote for Reagan," as Carter put it (i.e., that a vote for a third-party candidate is a wasted vote). Survey responses in 1980 suggest that the Democratic argument was heard by respondents, as 45% of those who had considered voting for Anderson said they decided not to because they felt he had no chance to win, while nearly 55% of them agreed with Carter's plea that a vote for Anderson would "help elect another candidate I dislike more." Of the 27% of the sample who had considered voting for Anderson, nearly half had changed to support a major-party nominee. Strategic politicians, whether the nominees themselves, other party figures, or even interest groups, clearly behave strategically. Voters appear to respond to this strategic prompting. Thus, an eighth conclusion is that

   8. Strategic politicians inform voters of the wasted-vote argument
      and convince at least some voters that it is sensible to act as
      "strategic voters."

The Decline of Turnout and a Broader Theory of Preferences

Perhaps the single most studied and discussed fact about turnout in recent years is the decline in turnout in presidential and congressional general elections. Presidential elections hit a peak of turnout in 1960. Turnout has declined more or less continually since then, just as turnout in midterm elections peaked in 1962 and has declined since then. How are we to make sense of this in a rational choice context? Rational choice models are election-specific models, in which citizens choose based on the characteristics of the particular contest.

Suppose that people turn out, if at all, primarily to vote in the presidential election in relevant years.[27] It is very hard to imagine an election-specific explanation that would lead to the observed pattern of more or less monotonic decline in turnout from 1960 through 1988. In that period, we have had several very close elections (1960, 1968, and 1976) and several very one-sided contests (1964, 1972, and 1984). Turnout rose

[27]More specifically, assume that the decline is due primarily to the presidential contest (or forces independent of any particular contest). What needs to be avoided is declining turnout in presidential years due to changes in election-specific factors about contests on the ballot other than the presidency.

slightly in 1984, even though it was more one-sided than in 1980,[28] and it fell sharply between 1984 and 1988, even though 1988 was closer. Thus, P terms are not a very promising route.

Neither are B terms. Presidential nominees have been moderates, conservatives, and liberals. Sometimes (e.g., 1960 and 1976) the candidates have been fairly similar in policy stance; in most others, they have been very dissimilar. Sometimes a popular incumbent has run, sometimes an unpopular incumbent, and sometimes no incumbent at all (even once an unelected incumbent). We have had two candidates most of the time, but twice we have had three major candidates. There is no pattern to these that would yield an explanation for steadily decreasing turnout.

Changing costs are also an unlikely explanation. Material costs have, if anything, been reduced systematically due to liberalized registration laws, to the elimination of poll taxes, and so on. The civil rights movement, the Voting Rights Act, and Jesse Jackson's more recent efforts have made extensive gains among blacks, while conservative religious groups and others have made gains, especially among southern whites. It is true that candidates have tended to favor media and other "high tech" campaign strategies over the nuts and bolts of turnout drives, but Gibson et al. (e.g., 1983) show that state and local political parties are more professionalized and better financed now than in earlier decades. Levels of education and some other variables that might be expected to reduce decision costs have risen, not fallen.

Even the duty term is an unlikely explanation. The measures that Riker and Ordeshook (1968, 1973) examined have not been asked for some time. However, the so-called "internal efficacy" scale, which is about the closest surrogate measure that has been asked over this period, has not declined; indeed it has hardly changed at all in the aggregate. In sum, nothing about the specific elections seems able to account for even a portion of the decline in turnout. If anything, they predict an increase. More likely, they predict an erratic pattern.

Does this mean that election-specific models are the wrong way to think about turnout? I think not. There is no reason to imagine that people do not take election-specific characteristics, notably their preferences between candidates, into account in deciding whether to vote. It does suggest, however, the election-specific models are insufficient.

What variables do seem to account for the decline in turnout? Basically, these are long-term attitudinal and some demographic variables. Abramson and I (1982), among others, have pointed to the ability of party identification to predict turnout both cross-sectionally and over time, and

[28]The 1980 election was "too close to call" in virtually all final preelection polls.

this general conclusion holds even in models richer than ours (e.g., Teixeira 1987). In much the same fashion, "external efficacy" (i.e., the perception of the government's ability to respond to its citizens and to solve pressing problems) has declined over this period and seems to explain an even larger portion of the decline in turnout. Other variables have been proposed, such as increasing rates of residential mobility and others. Each of these shares the characteristic that they are not election-specific variables.

How can we reconcile the rational choice models with this argument that it is variables that are not election specific that shape the decline of turnout? The way to do this is simple: reexamine the D term. The D term is always understood to mean either maintenance of democracy or performing one's duty as a citizen, but Riker and Ordeshook had a more extensive interpretation of it, and Fiorina (1976) expanded it further to include expression of party affiliation (and he provided a rational choice model of partisanship, 1981; see also Achen 1989). If this is done, the portion of the decline that appears to be attributable to declining party attachments is included in the model. Moreover, the one "election-specific" variable used in tests of the calculus of voting that has declined along with turnout is the question that asks respondents how much they care which *party* wins the election. Therefore, its decline captures declining attachment to parties. Fewer strong partisans add up to fewer who care about party victories. The same could be done for other sorts of expressive values considered by Riker and Ordeshook.

If we agree with Fiorina's argument, then the B term appears in both the investment and the consumption portion of the model. That is, D is, in part, B. This concept not only allows us to understand how declining strength of party attachments has led to declining levels of turnout, but it also means that the "political" (perhaps even election-specific) nature of elections appears on the consumption side. In turn, this facilitates the strategic politicians hypothesis and "repoliticizes" the relatively politically inert appearance of voting as consumption.[29]

External political efficacy presents a slightly different, and perhaps theoretically more interesting, alternative. Low efficacy means that the respondent thinks that the government is unwilling or unable to solve current problems and to respond to the demands of its citizens. This fits nicely with choice-theoretic accounts. A citizen might see Bush and

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[29]Citizen duty per se is often seen as not very political. I suspect that is one reason that Barry's (1970) arguments are persuasive. If, however, duty were derived from a well-formed theory of democratic citizenship, performing one's duty would appear both more political and more profound.

Dukakis as offering very distinct choices. Most did. A citizen might even have clear preferences between those policy options. This would suggest a big B term. But if the voter perceives that, no matter how much he or she prefers the options of one candidate over the other, neither can make any impact, that B term is reduced substantially. Declining efficacy implies that there are lesser benefits from electing any particular candidate to office. Problems are too complex, politicians are too corrupt or incompetent, and the political system is too unwieldy to expect that the election of any single individual will make any appreciable difference, no matter how desirable the program of the preferred candidate. Perhaps this is partially a consequence of lengthening experience with divided government.

Other long-term variables may also have an impact on the instrumental, as well as on the expressive, value of voting. Declining party affiliations, for instance, may be a measure of the declining perceptions of the ability or inclination of a party to impact on the fortunes of our nation, and hence on the B differential. Thus, long-term attitudes might not just expand the number of explanatory variables; they might even improve our understanding of election-specific forces. If consumption values can be expanded in these ways, we can reach some final conclusions.

9. The D term is not "politically inert" but may include highly political, even election-specific, values. The D term may also conflate investment with consumption factors (further suggesting why consumption terms appear so consequential).

10. If D includes, in part, B-like considerations, then the strategic politicians hypothesis provides even greater empirical leverage, as strategic politicians can both "manipulate" costs and, perhaps, sense of duty and stimulate turnout strategically, based on benefits.

11. An expanded view of the elements of D provides that ability to open the rational-choice account of voting to include long-term beliefs and values, as well as election-specific ones. As a result, the model can be seen to be consistent with many explanations of the decline in turnout.

Note that, in this account, turnout may be based in large part on consumption or expressive values, rather than on investment variables. However, that may be an overly narrow view. If D has genuine political content, it may better be thought of as *long-term* political considerations. These long-term considerations may be just as much "investments" as voting to make or break a tie (or avoid associated regrets), but just not as investing in this particular contest alone. This view of D-like variables

as long-term investments is not new. It is, in fact, Downs's (1957) own position. Taking this view seriously would require a different model than the calculus of voting and, in particular, would require modeling D differently. The newer model would not simply add some constant to the act of voting but would be modeled as any long-term investment. While beyond the scope of this paper, this account suggests a new modeling strategy with reasonably clear outlines, even if messy details remain.

Conclusion

The major purposes of this article have been to explain the nature of rational choice models of the turnout decision and to show how they can be used to explain broad patterns of behavior. A major lesson is that prior work using these models—and especially in criticizing these models—has been hampered by an overly narrow interpretation of the theoretical models. With the exception of wasted voting, all of the conclusions I have drawn apply to both the calculus of voting and minimax regret formulations.

The first major argument was that the turnout decision is a marginal decision with low costs and low (expected) benefits for many people, most of the time. Contrary to many interpretations, turnout is not a particularly good example of the problem of collective action because it is a relatively minor one. Further, many variables affect turnout because anything that affects benefits or costs even slightly can change individuals' choices. And yet, it is very difficult, perhaps practically impossible, to explain just who does and who does not vote in some absolute sense, precisely because marginal, small forces can be just enough to make the difference.

The marginality of the decision to turn out also provides an opportunity for political leaders and groups to affect turnout through their strategic actions. Thus, if we add the strategic politicians hypothesis to the low-cost, low-benefit assumption, we can explain why individuals are more likely to vote in close contests than in one-sided ones, even if they do not consider closeness of the contest in making their decisions. Theoretically, the strategic politician hypothesis has two important consequences. First, it permits the integration of the rational choice of voting or abstention into broader theories of political behavior by tying individuals' decisions with the actions of parties, groups, and candidates in campaigns. Second, the narrow interpretation of turnout makes that decision appear relatively apolitical, a "mere" matter of tastes. Turnout is "explained" by saying that people vote because they want to. The strategic politicians hypothesis, however, more broadly integrates even "mere matters of taste" into a richer, highly political, and strategic account of campaigns and elections.

The third major argument was that the D term has been overly narrowly interpreted in ways that remove it from the politics of election campaigns. If there is a reward for expressing support for the preferred candidate or party, the D term assumes a genuine political and electorally relevant status. A response to Barry's criticism (1970) that the D term reduces turnout to a mere matter of tastes comes in three steps. First, if costs are low, these expressive values of voting need only be relatively small. Indeed, they must be so, if we are to explain why half of the electorate or less votes in most important U.S. elections. Second, the D term can be understood as a set of highly political and electorally relevant values. Third, use of these electoral values is part of the politicians' strategic repertoire; they are not merely a matter of tastes but play an integral and strategic role in campaigns and elections.

Finally, I have argued that the benefits part of the turnout equation has been interpreted too narrowly as election specific or as long-term forces that are "beyond politics." We should, instead, see nonelection-specific forces as reflecting longer-term political values and preferences. If so, we can begin to model turnout as a rational, long-term investment.

There is a genuine danger that interpreting cost and benefit terms broadly will make the rational choice explanation tautological. If everything is a cost or benefit, the theory predicts everything, which is the same as predicting nothing. One response is that the usual interpretation of the model is too narrow: it excludes too much, including long-established empirical regularities that any serious account must explain. But a stronger response is possible. If D term values are moved from the category of simple constants to a long-term investment category, there are well-developed models for such investments, models that can, in principle, be tested—and found wanting. Indeed, such a move would make even the narrower interpretations of the current models *less* tautological. Such investment decisions, to be rational, must fit certain patterns. Finally, if the strategic politicians hypothesis is examined rigorously, turnout models will be integrated into theories of campaigning and decision making by political elites. This integration will, in fact, provide more structure, more opportunities for testing, and more points at which the models could be found empirically insupportable. Thus, if theorized properly, this expanded view of the turnout decision may actually be less tautological than current, more isolated models.

The major argument is that the turnout decision can be fruitfully understood as an exercise in rational decision making. Current theories provide the basic framework for studying these decisions. Current interpretations of these theories, however, have been overly narrow. As a result, the conclusions drawn from them have been overly sterile, empirically narrow, or dubious. Narrow interpretations have led many to see,

falsely I believe, rational choice in general as inappropriate for under-
standing politics, since narrow interpretations cannot make sense of one
of the most common and important forms of political behavior. And
overly narrow interpretations have missed genuine and important oppor-
tunities for developing more complete and insightful theoretical accounts
of the politics of campaigns and elections and for providing a richer un-
derstanding of how and why people vote or abstain.

Manuscript submitted 30 April 1991
Final manuscript received 2 May 1992

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