

**PATHOLOGIES
OF
RATIONAL
CHOICE
THEORY**

A CRITIQUE OF
APPLICATIONS
IN POLITICAL
SCIENCE

DONALD P. GREEN • IAN SHAPIRO

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Designed by Nancy Ovedovitz and set in Times Roman type by The Composing Room of Michigan, Inc. Printed in the United States of America by Vail-Ballou Press, Binghamton, New York.

Library of Congress Cataloging-in-Publication Data

Green, Donald P., 1961–

Pathologies of rational choice theory : a critique of applications in political science / Donald P. Green and Ian Shapiro.

p. cm.

Includes bibliographical references and index.

ISBN 0-300-06636-8 (pbk.: alk. paper)

1. Rational choice theory. 2. Political science—Methodology.

I. Shapiro, Ian. II. Title.

JA73.G74 1994

320'.01'1—dc20

94-11070

CIP

A catalogue record for this book is available from the British Library.

The paper in this book meets the guidelines for permanence and durability of the Committee on Production Guidelines for Book Longevity of the Council on Library Resources.

10 9 8 7 6

For Ann and Judy

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CHAPTER FOUR

THE PARADOX OF VOTER TURNOUT

At the foundation of democratic politics stands the act of voting, accompanied by a paradox. Starting with Anthony Downs (1957), rational choice theorists have characterized voter turnout as a collective action problem in which individuals are asked to sacrifice time and transportation costs on behalf of a public good, the election of a particular candidate or party. Although rational citizens may care a great deal about which person or group wins the election, an analysis of the instrumental value of voting suggests that they will nevertheless balk at the prospect of contributing to a collective cause since it is readily apparent that any one vote has an infinitesimal probability of altering the election outcome. Why take the time to vote when the election outcome will be unaffected by one's ballot? Unless rational citizens find the act of voting gratifying—because, say, they enjoy democratic participation or seek the status rewards of being seen at the polls—they will abstain and foist the costs of voting onto others.

In situations where voting is optional and altruism rare, the equilibrium posited for voter turnout in large electorates is one in which very few people, if any, bother to go to the polls. Many scholars, including several working within the rational choice tradition (Tullock 1967; Hardin 1982; Brennan and Buchanan 1984; Satz and Ferejohn 1993), therefore view voter turnout as a case in which rational choice theory fails empirically. For our purposes, the case of voter turnout is interesting not because it is a failure but because it illustrates the characteristic ways that rational choice theorists have reacted to discrepancies between theory and observation. In their resolute determination to declare some variant of rational choice theory victorious over the evidence (or, alternatively, to declare peace with honor through artful domain restriction), rational choice theorists have trotted out an astonishing variety of conjectures about the costs and benefits of voting, in the process generating an enormous literature, possibly larger in terms of academic citations and sheer bibliographic length

than any other rational choice literature in American politics. Moreover, it is a literature that has enjoyed something of a renaissance in leading political science journals (Uhlener 1989; Morton 1991; Feddersen 1992; Knack 1992; Aldrich 1993; Filer et al. 1993; see also Grofman 1993a).

In spite of its size and the prestige of the academic publications in which this literature has developed, rational choice scholarship has contributed fewer substantive insights than examples of defective social science research. Choosing voter turnout as our starting point enables us to illustrate many of the pathologies described in the previous chapter, in particular what we have labeled post hoc theorizing, slippery predictions, and an inability to formulate a cogent null hypothesis. The literature on voter turnout also has the advantage of being relatively intuitive and nontechnical. The essential formal ingredients of the rational choice account, with which we begin this chapter, amount to a few elementary expressions. Following a brief overview of the standard rational choice models, we organize the literature according to its two objectives, to grapple with the phenomenon of large absolute numbers of voters and to explain fluctuation in turnout rates by reference to changes in the costs and benefits of voting.

DECISION-THEORETIC MODELS OF VOTING

The rational choice model that has come to dominate accounts of voter turnout characterizes each citizen's decision calculus as a balance of four quantities. The first is B , the benefits a voter derives from seeing his or her preferred candidate win. Sometimes these benefits are conceptualized as tangible gains, such as financial rewards, while other times they are defined to include intangible forms of ideological gratification. For concreteness, one might imagine B to represent the amount of money one would willingly give up in order to determine unilaterally the election outcome (Schwartz 1987). Note that B is a collective good in the sense that no citizen may be excluded from enjoying his or her favored candidate's victory, regardless of whether he or she voted. The rational voter, however, recognizes that the opportunity to cast the decisive ballot is at best an uncertain prospect and assigns to it the probability weight p . The decision-theoretic model, in contrast with the game-theoretic approach discussed below, assumes that p is a fixed quantity rather than a parameter that arises endogenously from the strategic interaction of citizens deciding whether to vote.¹

In addition to the expected electoral consequences of one's ballot, the model

1. Holding p constant, however, gives rise to a paradox: if every voter abstains because no single vote is thought to be decisive (p is very small), then any voter's ballot will be decisive ($p = 1$). See Meehl 1977.

includes the benefits and costs of the voting act. The “selective incentives” of voting (D) represent the utility one receives as a direct consequence of casting a ballot. Tellingly, it is not easy to think of contemporary illustrations of selective incentives that do not take the form of psychic gratification. Grasping a bit, we note that such states as California furnish voters with ballot stubs, which from time to time have served as discount coupons in local fast-food promotions. In this instance, the economic value of the ballot stub is a selective benefit of voting. On the other side of the ledger, the cost of voting (C) includes a myriad of inconveniences, ranging from transportation expenses to foregone opportunities to earn wages (Tollison and Willett 1973). Furthermore, if the act of voting is defined to include voter registration in advance of the election, costs may include the nuisance of figuring out when and where to register (Rosenstone and Wolfinger 1978) or the risk that, having registered, one’s name will be selected for jury duty (Knack 1993b).

According to this formulation, the citizen weighs the opposite sides of the balance sheet and votes if the sum of selective incentives and expected collective benefits exceeds the cost of voting. That is, the citizen goes to the polls if

$$pB + D > C. \quad (4.1)$$

The essential ingredients of the paradox of voter turnout lie in the product term, pB . As Beck (1975), Margolis (1977), and Chamberlain and Rothschild (1981) have suggested, even in situations in which the outcome of a race between two candidates is believed to be quite close, the probability of casting the decisive vote amid a large number of ballots is minuscule.² Suppose, for the sake of argument, that the odds of casting the decisive vote are as high as 1 in 100,000. As Schwartz (1987) notes, even

2. A few words should be said about the statistical models used to calculate the probability of casting a decisive vote in two-candidate elections (see Chamberlain and Rothschild 1981). These models assume that x voters cast ballots and that each voter decides for whom to vote based on an independent flip of a coin that comes up heads with probability p . This model may be said to be unrealistic in two ways. First, it is odd to suppose that each voter enters the voting booth with the same probability of voting for a given candidate. This assumption tends to understate the odds of a tie or one-vote victory (consider the alternative limiting case of two evenly sized parties that vote deterministically for their preferred candidate, producing a deadlock with probability 1). On the other hand, these models also assume the turnout x to be fixed, whereas common sense suggests that not only is any one voter’s turnout decision probabilistic, but the probability of voting need not be independent across voters (who may be exposed to the same get-out-the vote efforts). These nuances greatly complicate the task of calculating the probability of casting a decisive vote. Statistical models aside, the fact remains that in presidential elections, which have always been the mainstay of empirical tests of the rational choice model, thousands of votes separate the winner and loser in small states; tens of thousands in large states.

for a voter willing to exchange as much as \$10,000 for the privilege of unilaterally determining the election outcome, the expected value of voting is no more than a dime. Increase the size of the hypothetical electorate or decrease the closeness of the election outcome and even this deeply committed citizen would find the expected value of voting to be worth less than a penny. To the extent, therefore, that voters sacrifice time and energy to go to the polls, the costs of voting will dissuade citizens from casting ballots (Downs 1957; Tullock 1967, 108–14; Frohlich and Oppenheimer 1978, 97–116).

THEORY MEETS DATA

“Unfortunately for theory,” laments Carole Uhlaner (1989, 390), “people do vote.” Indeed, in any given national election, tens of millions go to the polls, and sparse though voter turnout may be in many local elections, it is still far from zero. Only a few rational choice theorists, to our knowledge, have had the temerity to adduce theory-confirming instances of elections that ended in a tie or attracted zero turnout (Sanders 1980; Ledyard 1984; Owen and Grofman 1984). Most readily admit that the absolute number of voters exceeds what any simple version of the theory would predict and that voter turnout does not seem destined to converge to an equilibrium at or near zero. Moreover, in experimental settings where voters are assigned carefully controlled monetary rewards depending on which candidate prevails, most voters opt to pay a poll tax even when it exceeds the financial stake they have in the election outcome (Plott 1991). The divergence between the observed rate of turnout and the expected equilibrium presents a *prima facie* problem at least, since irrationality would appear to be an irreducible ingredient of voter participation.

How have rational choice theorists responded to this anomaly? For the most part, scholarship has taken the form of post hoc theorizing designed explicitly to “re-interpret the voting calculus so that [the act of voting] can fit comfortably into a rationalistic theory of political behavior” (Riker and Ordeshook 1968, 25). Rather than concede that actual voters do not fit the description of the free-rider envisioned in economic theories, many rational choice theorists have turned the anomaly on its head and asked: What must be true of the data in order for some rational choice model of voter turnout to be valid? How might the benefits of voting outweigh its costs for large numbers of citizens?

From the start rational choice theorists have had difficulty formulating a satisfactory post hoc model of turnout. Because the probability of casting a decisive vote is so small, rational choice scholarship has time and again appealed to instrumental objectives other than contributing to an electoral coalition. In an effort to escape the conclusion that the equilibrium level of turnout is near zero while at the same time retaining the view of voting as goal-directed activity, Downs (1957) speculated that

voters go to the polls because they fear the collapse of democracy in the event of widespread abstention. As Downs's critics have pointed out, this is not only an implausible account but one that flies in the face of the logic of collective action on which the paradox of voter turnout rests. The maintenance of democratic institutions is itself a public good to which any one voter's contribution is negligible. Why not stay home and let others save democracy? As Barry (1978), Tullock (1967), and Meehl (1977) have noted, Downs merely substitutes the paradox of civic-minded participation for the paradox of voter turnout.

Riker and Ordeshook (1968, 1973), in the most frequently cited attempt to patch the rational choice model of turnout, took the speculation in a different direction, arguing that Downs's original model, which omitted the D term in equation (4.1), had underestimated the selective rewards of voting. What are these selective incentives? In his initial formulation of his theory of mass decision making, Downs sought to restrict attention to tangible costs and benefits, such as money or opportunity costs. Riker and Ordeshook, on the other hand, widened the purview of the theory to include the psychic gratification a citizen derives from going to the polls. These include five sources of "satisfaction": those of "complying with the ethic of voting," "affirming allegiance to the political system," "affirming a partisan preference," "deciding . . . for those who enjoy the act of informing themselves," and "affirming one's efficacy in the political system" (1973, 63).³ This conception of gratification, as Niemi (1976, 117) points out in a sympathetic exegesis, is defined with sufficient breadth to encompass even the value of avoiding having to say "no" when asked whether or not you voted." Voting, in other words, is an act of consumption, and citizens go to the polls because the utility they derive automatically from affirmation and compliance outweighs the voting costs they expect to incur.

Although Riker and Ordeshook (1968) examine some survey data they neither estimate the costs of voting nor attempt to weigh these costs against the psychic rewards of fulfilling one's obligation to vote. Consequently, the argument concerning the balance of costs and benefits is scarcely more than a tautology. What convinces Riker and Ordeshook that selective benefits, such as civic duty, are sufficient to offset the costs of voting? Simply that people would not vote if the benefits of doing so were less than the costs. Indeed, they point out that the very fact of significant voter turnout led them to discover the importance of civic-mindedness in the first place, lest voter turnout be consigned to the "mysterious and inexplicable world of the irrational" (25–26). Having merely *stipulated* that the act of voting is more gratifying than costly,

3. Note that in the rational choice system, sacrifices of utility tend to be ruled out by construction. The very fact that one complies with an obligation is generally taken to "reveal" that the utility of compliance outweighs that of noncompliance. This view, of course, begs the question of whether some voters make genuine sacrifices when they vote instead of engaging in more preferred activities.

these authors solve the paradox of voter turnout by reducing it to the same logical status as the paradox of attendance at free concerts or the paradox of strolls along public beaches.

Many rational choice scholars plainly regard this theory-saving maneuver as an embarrassment, because tastes for doing one's civic duty are exogenous appendages to the rational choice model.⁴ Aside from being a post hoc explanation (and an empirically slippery conjecture in any event), the notion that civic duty shapes voter participation raises more empirical problems than it solves. For one, it is unclear why civic duty should fluctuate from one sort of election to another within the same region, producing sharply different turnouts for Presidential elections, national off-year elections, statewide elections, and local elections.⁵

Second, it is a peculiar brand of civic duty that explains why people turn out to vote by the tens of millions but also accounts for the comparative dearth of letter writing to local officials (Verba and Nie 1972) or of enthusiasm for jury service (Knack 1993b). If the fulfillment of one's civic obligations or the expression of one's partisan identity are indeed consumption goods that citizens wish to enjoy, it is not clear why there should be pent-up demand for voting in national elections, given the myriad of opportunities to do one's duty or show one's colors. Nor does it seem to be the case that consuming more of these goods—whether by displaying lawn signs, contributing to campaigns, or voting in primary elections—diminishes one's thirst for the kinds of gratification that voting supposedly provides (see Margolis 1982).

Although perhaps uncomfortable with the retreat to psychic gratification as an explanation, rational choice theorists are drawn to the idea that side-payments attract voters to the polls. Uhlaner (1989, 419), for example, argues that "group leaders can provide additional benefits for voting (and costs for abstention) that increase the advantage of voting and bring more group members to the polls." It pays for leaders to enhance turnout because, "although the vote of a single individual has little influence on who wins, an increase of a few percentage points in some group's turnout may well change an election outcome," enabling the leader to extract concessions from candi-

4. In framing his economic model of voter turnout, Downs (1957, 276) hoped to circumvent explanations that referred to psychic benefits, arguing that "if it is rational to vote for prestige, why is it not rational to vote so as to please one's employer or one's sweetheart? Soon all behavior whatsoever becomes rational because it is a means to some end the actor values. To avoid this sterile conclusion, we have regarded only actions leading to strictly political or economic ends as rational."

5. Niemi (1976) claims that local elections are more costly to the voter because polling hours are sometimes shorter, it is more difficult to remember whether it is election day, and it is harder to make up one's mind concerning the obscure contests on local ballots. None of these arguments is tested empirically, however. Indeed, it is not clear that the last of these arguments is consistent with rational choice conjectures regarding "rational ignorance" (see Chapter 5).

dates (392). Leaving aside the fact that it is unclear from her description which social or political groups and leaders she has in mind, Uhlaner offers no persuasive evidence to suggest that selective incentives—as opposed to collective benefits, which would simply give way to a free-rider problem within the group—do in fact bring people to the polls.⁶ As it happens, the lone illustration that she presents with accompanying data (the putative increase in turnout among union members in the dog days of 1982) is striking if only because the group mobilization interpretation she offers is not supported by her own statistical evidence.⁷

Other rational choice scholars know better than to let data clutter up a good story about side-payments. Building on the startling premise that “often it is obvious to others whether one has voted and how,” Schwartz (1987, 104–5) asserts that “because voting is not perfectly secret, political leaders and party organizations, from the precinct on up, can offer selective incentives to individual voters. These include such tangible benefits as patronage, sidewalk maintenance, and zoning variances, as well as greater overall influence and access to public decision-making processes.” Schwartz, though obviously concerned with the empirical strength of his theory vis-à-vis others, presents no evidence to suggest that voter preferences are indeed monitored or that such side-payments are exchanged for votes or that these transactions occur with sufficient frequency to explain the level of turnout in national elections.⁸

If one were to exclude selective benefits from the model on the grounds that they are either ad hoc or unsupported by evidence, the model of turnout reduces to the inequality originally suggested by Downs, in which one votes if

$$pB > C. \quad (4.2)$$

Expressing the model this way naturally leads defenders of rational choice theorizing to adopt a two-pronged strategy: downplay the cost of voting while emphasizing the collective benefits of one’s vote. Olson (1965, 164) calls voting costs “insignificant and imperceptible” to many citizens, while Smith (1975, 65), Niemi (1976), Hinich (1981), Palfrey and Rosenthal (1985), Schwartz (1987), and Aldrich (1993) contend that the opportunity and transportation costs of voting (and by extension, registration) are overblown. In a twist on the usual economic logic of opportunity costs, Niemi

6. See also Morton 1991 for a group-based analysis that neither specifies what is meant by a group nor indicates how the free-rider problem within the group is resolved.

7. Our reanalysis of Uhlaner’s data for 1978–86 using probit (available from the authors on request) turns up no evidence of the interaction she claims exists between union membership and the 1982 election, even when the analysis is restricted to non-Republicans ($p > 0.10$).

8. A useful field exercise for those convinced of the public nature of one’s voting habits is to measure the time it takes to ascertain the turnout history of a stranger living in one’s neighborhood.

(1976, 115) asserts that “virtually everyone takes time out during the day for non-working things, ranging from a few cocktails before lunch, to coffee breaks, to a beer on the way home, to reading to their kids, to reading the newspaper, and so on. It seems likely that time to vote is taken out of these kinds of activities.” Taking this argument one step further, Palfrey and Rosenthal (1985) infer the costlessness of voting from a thought experiment in which they imagine the “near universal” turnout rates that would occur if voters were paid \$20 to go to the polls.⁹ In effect, these authors rely on their theoretical convictions to furnish the evidence necessary to make the theory work.

We have more to say about the effects of registration requirements and other tangible costs, but for the time being we note that the implication of this tendentious argument about the “tremendously exaggerated” cost of voting (Niemi 1976, 115) is that the calculus of voting boils down to

$$pB > \epsilon, \quad (4.3)$$

in which ϵ is a very small quantity. Now any appreciable collective benefit from voting will make turnout rational. Collective benefits, however, are so heavily discounted by the vanishingly small probability that one vote will be decisive that even the low hurdle of equation (4.3) can be surmounted only with some difficulty. One way to preserve the inequality expressed in the equation is to argue that p is not as small as intuition suggests. Here, such authors as Riker and Ordeshook (1968) play one of the wild cards in their deck, asserting that voters *misperceive* the likelihood that their vote will be decisive and act rationally based on their grossly inflated probability assessment. It is noteworthy that Riker and Ordeshook and others since have never supplied any evidence to suggest that citizens indeed harbor such beliefs.¹⁰ At most, those advancing the misperception thesis have cited survey data in which some respondents describe the upcoming election as “extremely close.” This is a far cry, as Cyr (1975, 25) and Aldrich (1993, 259) note, from asking respondents to estimate the odds that some upcoming election will be decided by a single vote. It is

9. The design of this thought experiment, however, evidently omits consideration of the unintended effects of side-payments. A body of actual experimentation suggests that the use of extrinsic rewards at times decreases intrinsic motivation, as when students are paid to get good grades or when bystanders are paid to perform good deeds (see Lane 1991). It is possible that paying citizens to vote would undermine the sense of civic duty that Riker and Ordeshook (1968) contend is critical to voter turnout.

10. Nor have they supplied any systematic evidence to support their notion that there is widespread exposure to and acceptance of propaganda emphasizing that each vote matters (see also Brunk 1980). Nonetheless, there seems to be a strong, if implicit, faith in Downs’s dictum that “citizens who behave irrationally do so partly because someone who stands to gain thereby urges them on” (1957, 10).

even a farther cry from asserting that millions of voters imagine themselves in the role of tie breaker.¹¹

Grasping efforts to resuscitate models of turnout by reference to widespread misperception were greeted no more favorably, both within rational choice circles and without, than were gambits involving civic duty. As Schwartz (1987, 108) notes, this misperception merely transforms the paradox of not voting into the paradox of foolish voters. Yet in their determination to construct an account of turnout that characterized the activity in instrumental terms, rational choice theorists have gradually depleted the supply of conjectures that can be advanced about the four explanatory variables depicted in equation (4.1). As this paradox grew in notoriety, solutions grew increasingly imaginative. Strom (1975; see also Tideman 1985), for example, asserts that the voter's expected utility calculus includes not only the utility one might gain from casting the decisive vote but also the disutility one would experience from failing to do so on account of abstaining.¹² Apparently not convinced by Strom's doubling of the infinitesimal value of voting, Hinich (1981) advanced precisely the opposite ad hoc account, namely, that people derive utility from contributing to a successful collective effort. Hinich claims that citizens seek to participate in the victory of a candidate, happily offering up superfluous ballots in an effort to bask in the glory of the victor. Missing from these explanations is an empirical demonstration that regret-avoidance or bandwagon incentives are sufficiently widespread and sizable to account for observed rates of voter turnout. Like so many rational choice theories, these essays go no further than to imagine data consistent with a conceivable rational choice account.

Another creative approach is to speculate about how a single vote *could* be pivotal. One may sidestep the thorny problem of casting the decisive ballot by assuming that

11. Dennis (1991, 44–47) makes a rare effort to measure perceived decisiveness but stops short of asking directly whether a particular election is likely to be decided by one vote. Instead, he presents a sample of Wisconsin adults with agree/disagree statements like “I sometimes don't vote when the outcome of an election is not going to be close,” and “Whether I vote or not has virtually no effect on who gets elected.”

12. Although not a rational choice model in the sense that it does not presuppose utility maximization (Schwartz 1987), the minimax regret argument advanced by Ferejohn and Fiorina (1974, 1975) antedates Strom's model. Ferejohn and Fiorina suggest that voters minimize the probability of their greatest regret, waking up the day after the election to find that their candidate had lost by one vote. Whether losing an election represents a greater regret than other outcomes—getting hit by a car on the way to the polls, say—has been questioned by many, and the model has been so thoroughly dissected that we have elected not to discuss it (see Beck 1975; Stevens 1975; Tullock 1975; Schwartz 1987; Aldrich 1993). By the same token, we have not taken up the solution proposed by Grafstein (1991), who argues that a “legitimate” rational choice model based on evidential decision theory can explain positive turnout, because the decision calculus envisioned by Grafstein is regarded as the antithesis of rational choice by some (Quattrone and Tversky 1988).

citizens seek merely to bolster their party's demonstrated electoral support by a single vote, enhancing that coalition's mandate to pursue its policy objectives (Stigler 1972). Absent from this account, however, is evidence that a single vote contributes anything appreciable to a party's legislative power.¹³ An alternative scenario in which single ballots prove influential is offered by Schwartz (1987, 105), who argues that while a given vote "has practically no chance of determining which candidate wins the election, it has, at least by comparison, a non-negligible chance of determining which candidate carries her precinct, and that might well determine whether and at what levels her precinct receives certain distributive benefits—road repairs, snow removal, police patrols, and the like, as well as general receptivity to precinct concerns and complaints." Why candidates, and by extension voters trying to avoid their wrath, would care about winning an absolute majority in a given precinct (absent some institutional structure analogous to the Electoral College) is unclear, since presumably a vote is a vote regardless of where it comes from.¹⁴

This criticism applies with even greater force to elections in which a ballot question is at stake. Ultimately, each citizen can cast just one vote (perhaps *against* the powers that be), and it is hard to imagine this ballot proving decisive in any public official's allocative decisions. As it happens, intuition is all the reader has to go on, because Schwartz provides no evidence to suggest that fine-tuned patronage of this sort exists, let alone in a form sufficiently widespread nationwide to engender the sort of strategic calculations he imputes to voters.

GAME THEORY TO THE RESCUE?

In the hierarchy of rational choice models, game theoretic accounts, which allow for the possibility that people take into account the strategic decisions confronting others, seem to trump decision theoretic accounts, which present choices to individuals assuming the behavior of others to be given. Game theoretic models allow for more subtle rational calculation of costs and benefits; thus, if game theory were to succeed where earlier models had failed, it would be something of a coup.

13. Political scientists are divided, in fact, over the question of whether the size of a winning coalition affects the success with which executives pursue their policy objectives (see Michelson 1994).

14. Schwartz offers a host of other possible "subelectorates": ward, city, legislative district, neighborhoods, sections of town, labor unions, racial minorities, and income categories. Augmenting the slipperiness of his predictions, he notes that "the winning candidate (or the party in power) might reward a subelectorate for meeting some strategically assigned quota, for exceeding some predicted vote total by a specified amount, or for being pivotal in the election. There might be more than one point at which an additional vote would secure a noticeable jump in subelectorate benefits" (107).

That rational choice theorists would play the game-theory card to explain voter turnout may have been inevitable in any event given the awkward structure of the model in equation (4.1): the probability of casting a decisive ballot, which appears as an independent variable, is in turn a consequence of the decision to vote. If many people vote, one's chances of being decisive are trivial; if this reasoning leads others not to vote, then one's own vote will prove decisive (Meehl 1977).

During the 1980s there was a glimmer of hope that game theoretic models in which voters simultaneously decide whether to vote based on their strategic anticipation of others' actions could produce an equilibrium result in which many people turned out. Rather than take p as given (and infinitesimal), these scholars sought to investigate what would happen if the value of p were determined endogenously by the interaction of strategically minded voters, each confronting a similar decision. Palfrey and Rosenthal (1983) initially found that this theoretical development paid dividends.¹⁵ Their model, in which voters possess complete information about the preferences and voting costs of other voters, generates certain equilibria in which high rates of turnout occurred. Ledyard (1981, 1984), using a somewhat different model, suggested that positive turnout results even when some uncertainty exists, although he was unable to ascertain just how positive these rates of turnout would be.¹⁶ This seemed to be the breakthrough that rational choice was waiting for: a model that could accommodate significant voter participation without resorting to post hoc conjectures about civic duty and whatnot.

It was soon discovered, however, that once one allowed for either the possibility that voters may be uncertain about the voting costs of other citizens or that voters lack perfect information about the precise level of support for two competing candidates, the high turnout equilibrium result collapsed. The game-theoretic model might have survived by dint of Friedman-instrumentalist argumentation about the role of unrealistic assumptions in a predictive theory had it not turned out that the equilibrium disintegrates in the presence of a "relatively small degree of strategic uncertainty"

15. Palfrey and Rosenthal's model, like Ledyard's (see below), presupposes that the competing candidates offer distinct platforms, an issue to which we shall return in Chapter 7. As Morton (1991), among others, has noted, when candidates propose identical platforms, models which assume that voters evaluate candidates based on policy concerns predict zero turnout as long as $C > D$.

16. Over the years, many scholars (e.g., Schram [1991]) have announced with great satisfaction that their models of rational behavior predict "positive turnout." This seems to be an especially popular claim to make in abstracts to articles (e.g., Feddersen 1992; Morton 1991). Of course, the domain of positive numbers (integers, really) encompasses quite a wide range of potentially observable outcomes. Notably, authors seem reluctant to commit to any such very positive number as 104,000,000, roughly the number of voters nationwide who cast ballots in the 1992 national election. Perhaps this is because it is not clear from the models themselves whether voters will outnumber, say, exit pollsters.

(Palfrey and Rosenthal 1985, 73).¹⁷ In an abrupt turnabout from their earlier findings, Palfrey and Rosenthal reluctantly adopted the standard fallback position of rational choice theorists, noting that “in very large electorates the only voters are citizens with net positive benefits from the act of voting, citizens whose sense of duty outweighs any cost in voting. We have come full circle and are once again beset by the paradox of not voting” (64). Game-theoretic solutions to the turnout problem have not resurfaced since this retreat was sounded almost a decade ago.

PEACE WITH HONOR VIA ARBITRARY DOMAIN RESTRICTION

The unpersuasiveness of the various attempts to formulate a general equilibrium model in which voters go to the polls in great numbers has led some rational choice theorists to expel the pesky turnout problem. In his recent review of the turnout literature, Aldrich (1993, 261) argues that turnout falls outside the boundaries of rational choice. According to Aldrich, the decision to vote, in contrast to such activities as contributing money to a campaign, is characteristically a “low-cost, low-benefit” affair. This is precisely the sort of behavior that rational choice is ill suited to explain, he maintains, and rational choice theory should not be impugned on account of its inability to make sense of voter turnout.

This argument represents an instance of arbitrary domain restriction in two senses. In the first place, there is nothing in rational choice theory that specifies the level at which costs or benefits are sufficiently small to render the theory inapplicable. Aldrich’s intuition about the tractability of the phenomenon of turnout is precisely opposite that of rational choice theorists who have over the years asserted that turnout presents no insurmountable anomaly for rational choice (for example, Riker and Ordeshook [1968]; Strom [1975]; Schwartz [1987]; Uhlener [1989]) and who, like Morton (1991, 759), have asked: “If we cannot explain individual voter turnout, then how can the rational choice approach be useful in examining political equilibrium?” It seems clear that turnout was banished from rational choice theory only when it became apparent that no satisfying theoretical solution could be worked out.

Second, Aldrich’s attempt to pigeonhole turnout as a special case of collective action in which costs and benefits are low grossly underestimates the challenge that turnout poses for rational choice theory. Can it be said of Latin American elections, in which voters spend hours in polling lines, sometimes amid threats of violence, that turnout is a low-cost activity? What of the more than 100,000 African-Americans who persevered through the intimidation and poll taxes of the Jim Crow South and

17. An example of this retreat within the confines of a single essay may be found in Owen and Grofman’s analysis of mixed strategies (1984), which initially asserts that the paradox of voter turnout is “easy enough to solve” (315), but a few turgid pages later concedes that voting makes sense only in elections that are believed to be extremely close (318).

voted in the national elections of the 1950s?¹⁸ And if we reason that turnout promises low benefits to the voter because he or she cannot plausibly expect to shape the election outcome, it is unclear what distinguishes turnout from \$100 contributions to political parties or other costly but ineffectual activities that Aldrich seems to regard as susceptible to rational choice theorizing. Like those who would have rational choice theory explain turnout, Aldrich, in his attempt to retreat from voting, fails to undertake the kinds of empirical investigation that would put his thesis to the test.

FROM WHY PEOPLE VOTE TO WHY TURNOUT RATES CHANGE

Thus far we have considered the question, What is the equilibrium rate of turnout predicted by a rational choice analysis? In the initial formulation of the paradox, the answer was zero or virtually so. No one could expect to sway the election unless he or she could be certain that only a handful of the millions of eligible voters would make it to the polls—a belief that would be absurd for any citizen deciding whether to vote during the waning hours of an election day. The null hypothesis that people cast ineffectual votes in large numbers obviously could not be rejected, and with successive emendations rational choice accounts were tailored to observed patterns of turnout in which millions made it to the polls. Notably, these reformulations, for all of their formal sophistication, were unable to specify what the newly predicted turnout equilibrium might be or, more to the point, what rate of turnout would be *inconsistent* with a rational choice analysis.

In addition, rational choice theorists have had difficulty demonstrating the role of strategic thinking in the turnout decision. Game-theoretic explanations, such as that offered by Palfrey and Rosenthal (1983), collapsed under their own weight, while the your-vote-does-matter arguments of Schwartz (1987) or Stigler (1972) were neither intuitively plausible nor supported by any systematic empirical investigation. Rational choice theorists have continually retreated to the fallback position articulated by Riker and Ordeshook (1968, 1973) that the psychic benefits of doing one's civic duty explain turnout (Palfrey and Rosenthal 1985; Plott 1991). It should be underscored, however, that since these psychic benefits are rarely measured and never in terms commensurate with the costs of voting, this hypothesis remains little more than an untested (and perhaps untestable) conjecture.

Now it may be argued that such *variables* as the perceived closeness of the election or the degree to which one feels a sense of civic duty have been shown to affect the rate

18. It was difficult to ascertain precisely how many African-Americans voted in the South in any given election during this period. Our rough estimate was pieced together from survey data reported in Campbell et al. 1960 (297) and 1950 Census data. A similar point could have been made with regard to registration figures for the pre-Voting Rights Act South (U.S. Commission on Civil Rights 1965, 1968).

of voter turnout *at the margin* (Grofman 1993a). Leaving aside for the moment whether these claims are substantiated empirically, it is important to recognize the subtle but important distinction between arguments of this sort and the equilibrium analyses discussed above. It is one thing to argue, for instance, that the rewards of civic duty are sufficient to make the ratio of benefits to costs greater than one; it is quite another to contend that increasing one's sense of civic duty leads to a concomitant increase in the likelihood that one will vote. It is logically possible that only one of these two conjectures could hold empirically.

A simple hypothetical example illustrates this point. Recall that the rational choice model of the decision to vote presented in equation (4.1) included four variables: the net benefits associated with the victory of one's preferred candidate, the probability of casting a decisive ballot, the costs of voting, and the selective benefits of voting. Suppose we gather a sample of eight eligible voters. For the purposes of this example, let us assume that costs (C) are constant for our hypothetical citizens. For concreteness, we will assign this cost "9 utiles" in our numerical example. We further assume that all of the citizens in our sample believe their probability of casting the decisive vote to be ϵ , a trivially small number. Thus, although some of our citizens care a great deal about which candidate prevails, the improbability of casting a pivotal ballot renders pb_i less than 1 utile for each person. What remains are the selective benefits associated with voting, which we assume vary from one person to the next.

Table 4.1 presents the costs, benefits, expectations, and turnout decisions of eight

Table 4.1. Hypothetical Illustration of the Distinction Between Rational Turnout and the Marginal Effects of Changing Selective Benefits of Voting

<i>Voter</i>	<i>Expected Probability of Casting Decisive Vote</i> (p)	<i>Collective Benefits</i> (b)	<i>Selective Benefits (utiles)</i> (D)	<i>Costs (utiles)</i> (C)	<i>Do They Vote?</i>	<i>Is it Rational to Vote?</i>
Anthony	ϵ	b_1	1	9	No	No
Bruce	ϵ	b_2	2	9	No	No
Carole	ϵ	b_3	3	9	Yes	No
Duncan	ϵ	b_4	4	9	No	No
Edward	ϵ	b_5	5	9	No	No
Frances	ϵ	b_6	6	9	Yes	No
Gordon	ϵ	b_7	7	9	Yes	No
Harold	ϵ	b_8	8	9	Yes	No

Note: Assume that $b_i\epsilon < 1$ for all i voters.

hypothetical citizens. It is apparent from the table that the probability of voting rises dramatically as selective benefits increase. If subjected to a standard statistical analysis, these data would reveal an "effect" of citizen duty. But is voting rational, in the sense of equation (4.1)? The answer is no: the expected value of voting is always negative, and hence the predicted equilibrium is that none of these citizens goes to the polls. Finding that the variables in the canonical rational choice model exert a *marginal* influence on turnout does not imply that voters act rationally in the sense of equation (4.1). Indeed, marginal effects need not even imply that *most* voters act rationally; the implication of table 4.1 remains unchanged if we increase the proportion of citizens whose costs and benefits resemble those of the hypothetical voters named "Gordon" and "Harold."¹⁹

The distinction between showing that costs and benefits affect behavior at the margin and showing that voters reap a net gain from going to the polls may seem an arcane point. It turns out, however, to be critical to understanding a flaw in much of the argumentation in the turnout literature. Even if it were found that the closeness of a state or national election enhances turnout by increasing any single voter's chance of casting a pivotal ballot, as Frohlich et al. (1978), Silberman and Durden (1975), and Barzel and Silberberg (1973) contend, it would not follow that the expected benefits of voting are sufficient to explain why people incur the costs. In any large electorate, the odds of casting a decisive vote are, at best, extremely long; to say that a voter is more likely to cast a pivotal vote in a close national election is, in Schwartz's words (1987, 118), tantamount to "saying that tall men are more likely than short men to bump their heads on the moon." Similarly, if those with a strong sense of civic obligation vote at higher rates than those without this sense of duty, as Riker and Ordeshook (1968) allege, it does not follow that the gains from fulfilling one's obligation are great enough to offset the costs. The way these questions of sufficiency could be answered would be to measure directly the costs and benefits of voting (perhaps using the demand-revelation techniques that have been developed in the field of economics) and compare them; the marginal effects of such variables as closeness are in some sense beside the point.

This is not to say, however, that estimating marginal effects is uninformative. It may in the end be a more informative enterprise but one that is directed at a different sort of theoretical question, namely: What sorts of factors affect the equilibrium rate

19. It is also possible to construct the obverse example, in which the rational voting model is true for all voters in the sense that equation (4.1) is satisfied for everyone, but where the marginal influence of cost is estimated by linear regression to be very small. Consider the case in which net voting costs (x) are uniformly distributed from -100 to $+100$ (but $x \neq 0$), and the probability of voting is

$$\frac{1}{1 + e(-x^{-1})}$$

of voter turnout? Presumably, one cannot arrive at this “comparative statics” question through rational choice theorizing until one has resolved the issue of why the apparent equilibrium rate of turnout in the United States seems to hover at about 50 percent rather than zero. But having discussed this issue at some length already, let us set it aside and consider what rational choice theory has to say about marginal effects and the source of variation in observed rates of voter turnout.

The expected utility framework underlying equation (4.1) seems to imply two testable hypotheses about marginal effects (compare Ferejohn and Fiorina 1974, 1975). First, the collective benefits associated with an election outcome should not matter when the probability of casting the decisive vote is virtually indistinguishable from zero. Consider one of the highest-stakes elections: ballot measures designed to make fundamental shifts in the tax code. What difference should it make if such tax reduction measures as California’s Proposition 13 offer one group of citizens tens of thousands of dollars in property tax relief while offering another group next to nothing? When the vote is expected to be lopsided—as was Proposition 13, which won by a 2-to-1 margin—the chance of casting a decisive vote is absurdly small, probably less than that of suffering a severe accident en route to the polls. Since this minute probability is multiplied by the collective benefits at stake to yield expected utility, even several orders of magnitude difference in B between the big winners and big losers washes out. Those who stand to gain or lose from an election outcome nonetheless have an incentive to shirk the costs of voting onto others.

As Brennan and Buchanan (1984) point out, rational choice theorists have sometimes been reluctant to concede that collective benefits should not influence turnout in large electorates. Asserting what amounts to the opposite of this hypothesis, some have characterized voting as an “investment” (Fiorina 1976), suggesting that such tangible interests as “property and income subject to taxation” (Stigler 1975, 744) will drive voters to the polls. Wittman, for example, argues that “a statewide referendum on giving veterans certain benefits could be used to test hypotheses concerning rational voting. Presumably those areas with large percentages of either active or retired armed forces personnel would tend to have both a greater probability of voting and a higher probability of voting in favor than other areas with similar demographic characteristics except armed forces experience” (1975, 737). To be sure, hypotheses of this kind have a rational choice ring to them insofar as they presuppose a form of instrumental calculation (see Smith 1975; Filer et al. 1993). But viewed against the backdrop of the free-rider problem, they seem inconsistent with the rational choice perspective on collective action unless one is prepared to argue that voters place unreasonably high odds on casting the decisive ballot.

A second and less murky hypothesis is that the marginal effects of collective benefits should increase as the perceived closeness of the election increases. If one accepts the premise that the closer the election, the greater one’s likelihood of casting

a decisive ballot (p), then the expected utility model predicts that the closer the election, the greater the causal influence of B . We should therefore find an interaction between perceived closeness and citizens' stakes in an election outcome: as noted above, collective benefits should be all but irrelevant to the decisions of those who regard the contest as likely to end in a lopsided victory but increasingly influential as voters come to regard the election as a dead heat.

Empirical tests of rational choice models are divided between two methods of testing hypotheses about the interplay between collective benefits and the probability of casting a pivotal vote. One method uses aggregate data and compares the closeness and collective benefits of different elections; each observation in this type of analysis is a single election. The other method uses survey data and compares individuals with different perceptions about the closeness of an election and different interests in the election outcome. For most applications, the latter approach is more informative for three reasons. Those who use aggregate data rely on the closeness of the election outcome as the indicator of perceived closeness. Not only might actual closeness and perceived closeness differ, but any apparent "effect" of actual closeness on aggregate turnout may reflect forces having nothing to do with strategic thinking on the part of individual voters—such as the increased campaign effort that accompanies close contests and stimulates voter turnout (Gosnell 1927; Cox and Munger 1989). Second, analysis of statewide or countywide turnout patterns runs afoul of the general problem of statistical inference from aggregate data, in which the independent variables are group means (for example, the percentage of a group with high school diplomas), but the parameters of interest refer to individual-level decisions. For decades this kind of ecological analysis has been known to produce severely biased inferences (Robinson 1950; Palmquist 1993), but this critique has seldom been leveled at voter turnout research (see, however, Grofman 1993a). To make matters worse, aggregate regression analyses generally ignore the interaction between perceived closeness and benefits as it applies to the turnout decisions of individuals, perhaps a tacit admission that ecological regression would not work to recover the parameters associated with this interaction anyway. Even if it were found that "high-stakes elections" attract the greatest number of voters, it need not follow that *at the individual level* the marginal effect of one's stake in the election increases with the perceived closeness of the contest.²⁰

20. Cox (1988) adds to this list an econometric objection about the use of measures of closeness other than the absolute gap in votes between the winning and losing candidates. Leaving aside these objections, we note for the sake of completeness that the literature seems to suggest that closeness matters in congressional, gubernatorial, and presidential elections (Barzel and Silberberg 1973; Silberman and Durden 1975; Dawson and Zinser 1976; Gray 1976; Patterson and Caldiera 1983; Crain, Leavens, and Abbot 1987), though some discrepant results turn up (Foster 1984; Ostrosky 1984). Suffice it to say that many of the essays that find closeness

Restricting our attention to tests of rational choice models in which the individual is the unit of analysis, the evidence turns out to be inconsistent with both expected utility hypotheses. Data presented by Riker and Ordeshook (1968) on turnout in presidential elections show that collective benefits affected turnout in 1952, 1956, and 1960 even among those who did not regard the election as close.²¹

Although this sort of analysis has been criticized on the grounds that national elections feature a wide assortment of contests, any one of which might draw voters to the polls (Wittman 1975; Hansen, Palfrey, and Rosenthal 1987; Wolfinger 1993), the conclusions do not change when we focus on special elections or elections dominated by a single ballot proposition. In a special citywide referendum on busing in Boston during 1974, for example, homeowners and the parents of children who attended public schools were significantly more likely to go to the polls despite the transparent lopsidedness of the contest (Green and Cowden 1992). Other survey data on participation in local school elections reveal similar patterns, suggesting that measures of personal concern or interest affect turnout even when the outcome is a foregone conclusion.

Another setback for the expected utility model is the weak or nonexistent interaction between perceived closeness and collective benefits. Ferejohn and Fiorina's examination of the turnout decision among registered voters showed that collective benefits are not more influential among those who believe the election to be very close (1975). Although Frohlich et al. (1978) claim to find such an interaction for the 1964

to be influential advertise their results as evidence for rational choice theories of voter turnout. The best of these works is probably a study of Oregon school district elections, which finds turnout to be inversely proportional to the number of registered voters in a district (Hanson et al. 1987). Unfortunately, this study does not compare district turnout rates for state or national elections in order to test the extent to which the prospect of casting the pivotal vote indeed lures voters in small school districts. Lest it be said that this book critiques only the weakest pieces of rational choice scholarship, we have omitted mention of many ecological studies that are on par with Kau and Rubin's demonstration that the Electoral College depresses turnout because populous states tend to have fewer electors per capita and thus their voters have less "voting power" (1976).

21. Collective benefits were measured according to whether one said that one cared about how the election turned out. Other measures of "benefits," as Aldrich notes (1976), produce similar or weaker results. Interestingly, some lukewarm support for the Downsian model was found by Campbell et al. (1960, 99–100), who note a slight increase in the effect of B when the election is perceived to be close. The authors note, however, that closeness of the national election (the survey measure that Riker and Ordeshook would later use) exerts more statistical influence than the more theoretically meaningful statewide closeness measure. Extending this analysis for the 1964 and 1972 elections, Aldrich (1976) obtains very similar results even when, for 1972, he uses a survey measure of perceived closeness of the contest in a respondent's state. Rational voters evidently do not find it in their interests to investigate the operation of the Electoral College.

election, Aldrich (1976) and Cyr (1975) show this effect to be faint and not replicated in other presidential elections. Voter turnout, like other forms of collective action to be discussed in the next chapter, tends not to follow the contours of an expected utility formulation.

What do rational choice theorists make of these results? Some concede that there is “very little evidence favoring an expected utility model” (Aldrich 1976, 732) and suggest that citizens instead follow such a quasi-rational decision rule as minimizing their maximum regret (see footnote 12). Others contend that the lack of interaction between election closeness and collective benefits, far from being a blow to expected utility, is really a strike in favor of Stigler’s notion (1972) that citizens wish to make a nonprobabilistic contribution (of one vote) to an electoral coalition (Thompson 1982).

Most of the commentary about the variables p and B , however, is beside the point, addressing the separate marginal effects each exerts on voter turnout rather than their interaction. Riker and Ordeshook (1968) trumpet the fact that perceived closeness is a predictor of voter turnout, noting that people have been subjected to “propaganda” that leads them to overestimate their chances of casting a decisive vote (see also Brunk 1980; Thompson 1982). But when perceived closeness fails as a predictor, the notion that individuals might actually believe in their minuscule chances of casting a decisive vote is derided as illusory (Ashenfelter and Kelley 1975) or preposterous (Schwartz 1987). Either way, a version of rational choice theory finds support: if the closeness of an election is not related to turnout, models based on the formal mathematics of the odds of casting a decisive ballot are confirmed (Foster 1984); if closeness matters, voters have proved themselves to be good rational actors but poor statisticians (Barzel and Silberberg 1973; Silberman and Durden 1975; Frohlich et al. 1978; Filer and Kenny 1980). The prodigious literature on the effects of closeness, in sum, speaks obliquely to the underlying theory in question and offers a set of predictions that exhausts the range of possible empirical observations.

VOTING COSTS AND SELECTIVE INCENTIVES

Let us now consider the role that costs play in shaping voter turnout.²² Here, the evidence seems to suggest that such factors as poll taxes, literacy requirements, and stringent registration requirements diminish voter turnout (Ashenfelter and Kelley 1975; Rosenstone and Wolfinger 1978).²³ These effects, while important

22. We exclude from our discussion Frohlich et al. 1978, Sanders 1980, or Schram 1991, which discuss the effects of costs but do not measure them directly.

23. For example, the expected turnout rate in states with closing dates fifty days prior to the election, such as Arizona or Georgia, is considerably lower than in a state such as North Dakota, which has day-of-the-election registration. It is not immediately apparent, however,

for policy making, are from a theoretical standpoint neither overwhelming nor surprising. As Ashenfelter and Kelley (1975) themselves note, it is surely banal to assert that cost reduces turnout to some degree. Granted, the poll tax and the one-party system that accompanied it depressed turnout. But such less severe (and time-bound) disincentives as short polling hours, irregular times during which one may register to vote, and the threat of being selected for jury service as a result of registering have much less influence on voting or registration rates (Ashenfelter and Kelley 1975; Knack 1993b; Rosenstone and Wolfinger 1978). Weaker still is the influence exerted by cost factors that vary across elections. Although, as Knack points out, it is often asserted as an article of faith that inclement weather depresses voter turnout, the effects of temperature and precipitation in fact prove to be small and statistically elusive (Traugott 1974; Knack 1994).

When one compares turnout rates across different types of individuals, evidence about costs becomes murkier, and predictions grow correspondingly more slippery. A recurrent finding for nearly a half-century is that American turnout increases with income (Press and Traugott 1992). Some have argued that personal income should be positively related to voting insofar as affluent people have more leisure time to devote to such activities as voting (Downs 1957; Russell 1972) or becoming informed (Sanders 1980). On the other hand, the economic logic of substitution suggests that high-income people have correspondingly higher opportunity costs in the form of foregone wages or comparably valued leisure time (Tollison and Willett 1973). Splitting the difference between these contrasting predictions while still generating the known result that turnout increases with income, Frey (1971) speculates that those with higher wages are more likely to have occupations that enable them to “work” (that is, reflect) while waiting in line at the polls.²⁴ Fraser (1972) and Niemi (1976), however, regard the time demands of voting to be so trivial as to render both income and substitution effects irrelevant. Rounding out the field are Filer et al. (1993), who interpret the positive income effect in terms of expected value, arguing that the fundamentally redistributive character of politics affects the assets of the rich more profoundly. It would appear, then, that most any observed relation between income and voter turnout may be said to be consistent with a rational choice interpretation.

The obverse of voting costs are the selective benefits of voting. We have already remarked about the absence of any systematic evidence to suggest that people vote because they think that it will buy them influence with local officials (Schwartz 1987)

that the correlation between stringent deadlines and cross-sectional voting rates ought to be interpreted as showing the effects of costs. It could well be that states in which feelings of “civic duty” run high are those in which policy steps are taken to make registration requirements less difficult.

24. Curiously, from the standpoint of this argument, the newly unemployed do not show a surge in their voting or in other forms of political participation (Schlozman and Verba 1979).

or curry favor with friends (Niemi 1976). Equally thin is the literature on whether these sorts of strategic objectives affect turnout rates at the margin. Knack (1992) presents some evidence purporting to show that the social pressure one spouse exerts on the other changes the probability that the latter will vote, but the design of this study is not compelling.²⁵ And as noted earlier, Uhlaner's demonstration of the effects of interest group encouragement to voters ironically reveals little indication that labor union members go to the polls when trade unionism is on the line (1989).

The main contender supported by data is the notion that people vote at greater rates when they think that they have an obligation to do so or when they wish to affirm their partisan identity (Riker and Ordeshook 1968, 1973). In defense of this claim, Riker and Ordeshook show that those who disagree with such statements as "It isn't so important to vote when you know your party doesn't have a chance to win" or "So many other people vote in the national elections that it doesn't matter much to me whether I vote or not" are more likely to vote (compare Aldrich 1976, 728).²⁶ Wolfinger (1993) criticizes the validity of these measures persuasively, arguing that they do not seem to tap the kinds of consumption benefits that Riker and Ordeshook postulate. Certainly, it is no small irony, given the importance of expected utility reasoning for rational choice theorists, that the ethos tapped by these survey items holds that one should vote regardless of whether one's ballot is likely to be influential.

It might be said that although the finding of higher rates of turnout among those with a stronger sense of civic duty strains the theoretical coherence of rational choice theory, it nonetheless represents an empirical discovery generated by rational choice scholarship.²⁷ Perhaps it may be said that the role of civic duty became a more actively debated issue in the wake of rational choice theorizing (Ordeshook 1986, 50), but credit for the empirical research itself cannot properly be assigned to rational

25. Because Knack relies on a nonexperimental cross-sectional study, he is restricted in the allowance he can make for the myriad of omitted factors that might make norm-enforcing couples more likely to vote. The particular statistical analysis that Knack employs, as it happens, takes no account of the general level of political communication between spouses.

26. Other survey measures in the civic duty scale used by Riker and Ordeshook include "A good many local elections aren't important enough to bother with" and "If a person doesn't care how an election comes out he shouldn't vote in it" (Campbell, Gurin, and Miller 1954, 194). Note that all of the questions in this scale are worded so that disagreement represents an expression of civic duty. Because respondents with more education are less likely to acquiesce to such agree-disagree survey questions, it is unclear how much of the civic duty "effect" on turnout is in fact attributable to education.

27. One should not be too hasty to declare the endorsement of civic norms a causal antecedent of voting intentions. As Wittman (1975, 740) has suggested, an alternative hypothesis not entertained by those investigating the statistical link between duty and turnout is that those with a positive attitude toward voting are more likely both to vote and to endorse favorable statements about voting.

choice scholarship. Just as the effects of perceived closeness on voter turnout had been assessed by such authors as Gosnell (1927, 3) or Campbell et al. (1960, 99–100) long before this activity became fashionable in rational choice circles, so too with civic duty. Employing the very survey measures that Riker and Ordeshook were later to use, the authors of *The Voter Decides* concluded that “the more strongly a person feels a sense of obligation to discharge his civic duties, the more likely he is to be politically active” (Campbell, Gurin, and Miller 1954, 199). Riker and Ordeshook’s innovation over previous social-psychological work was to repackage this conclusion and claim for rational choice the empirical finding that people vote when they believe they should vote. To this day commentators who do not cite Riker and Ordeshook’s work (for example, Knack [1992]) take this finding to be evidence for a “sociological” interpretation of voting.

CONCLUDING REMARKS

Readers interested in the determinants of voter turnout, in sum, will derive little insight from the empirical work in the rational choice tradition. Enduring research questions, such as why education exerts such a profound statistical influence on the voting behavior of Americans, are seldom addressed in illuminating ways. Some commentators (Sanders [1980]; Schram [1991]) speculate that education reduces the tangible costs of voting (or voter registration) but furnish no systematic empirical assessment of the costs of voting and how they impinge on those with differing levels of education.²⁸ Others contend that education imparts a sense of civic duty and enhances interest in politics; here rational choice theory contributes nothing, because it is silent about the process by which people develop tastes and identities. Occasionally, rational choice theorists come to grips with the strong correlation between education and turnout by reference to instrumental reasoning about side-payments, but such attempts border on the ludicrous. Schwartz (1987, 116), for example, asserts that “education often . . . helps one appreciate the complex and subtle ways in which subelectorate voting [that is, the vote outcome in one’s precinct] affects the delivery of policy benefits.” And during unguarded moments, rational

28. There are two variants of the argument that education lowers voting costs, one suggesting that education helps one negotiate the bureaucratic steps necessary to register and find out when and where to vote (but see Nagler 1991), the other asserting that education renders less costly the task of understanding the issues at stake in an election. Although Downs (1957, 265) argues that information costs contribute to abstention (see also Aldrich 1993, 248, 263; Filer et al. 1993, 80), this contention is not consistent with rational choice theory as it is ordinarily conceived. As Frohlich et al. point out, “To argue that the cost of information constitutes a barrier to voting flies directly in the face of the Downsian conclusion that it is often rational to vote in relative ignorance” (1978, 182). See Chapter 5.

choice theorists tacitly admit that the effects of education are somewhat anomalous. Brunk (1980, 562), on the basis of an experiment in which a lecture on Downs apparently diminished students' intention to vote, asserts that the positive relation between education and voting may eventually be reversed "since those who are better educated will be more likely to encounter theories of rational participation."

The phenomenon of voter turnout may, in the end, say more about rational choice theory than the reverse. The inability to state and maintain a hypothesis about what any variant of rational choice theory does *not* predict shows up both in theorizing about the equilibrium rate of turnout in large electorates and in the marginal effects of explanatory variables. What observation would in principle be inconsistent with a theoretical framework that allows for post hoc insertion of idiosyncratic tastes, beliefs, and probability assessments as explanatory devices? Voting for presidential candidates in Guam, which in 1992 (because of a typhoon) took place a week after the rest of the United States had cast their ballots? No, doubtless a tale could be woven about how some combination of civic duty and the allure of other Guamanian contests drew several thousand citizens to the polls. Perhaps the fact that the act of voting seems to be habit-forming? No, it could be said that the voting experience relieves apprehensions a person might have about going to the polls. The positive effect of campaign appeals and door-to-door canvassing on turnout? Again, it may be argued that such appeals enhance one's sense of civic duty or reduce the information costs of voting or instill a fear of reprisal at the hands of angry activists prone to lash out at the uncooperative. Grafstein (1991, 989) remarks that "rational choice theory has had a difficult time getting voters to the polls." To this we would add that rational choice models would increase their theoretical import if they had *more* difficulty doing so.

Rational choice theorizing about voter turnout could be improved through several changes in approach. The coherence and explanatory power of these models could be enhanced if the commitment to universalism were discarded in favor of what we have termed partial universalism, or the view that rational maximizing is but one of several factors at work in the turnout decision and that the influence of strategic considerations is likely to vary across people and decision contexts. Although a synthesis of different theoretical perspectives entails a sacrifice in terms of theoretical parsimony, it offers a number of advantages. First, the coherence of rational choice theory would be improved by placing such phenomena as adherence to norms of civic duty or expression of partisan enthusiasm into a separate explanatory category from that of the more manifestly instrumental motives, such as the desire to reap the expected benefits of casting the decisive vote or the aversion to wasting time waiting in line. Sharpening the theoretical boundaries in this way helps reduce the conceptual strain that occurs when seemingly habitual, expressive, or rule-directed behaviors are forced into an interpretive scheme that recognizes only utility maximization. Second, a more synoptic view of the causal process that governs the decision to vote could

enable rational choice scholars to move beyond interminable post hoc theorizing about why so many people vote to more nuanced and informative research. The phenomenon of voter turnout clearly contains many interesting facets that could be informed by rational choice theorizing, but not rational choice theorizing alone. For example, Knack (1994) finds that although weather does not affect the odds of voting among those with a strong sense of civic duty, those who do not endorse these norms are significantly influenced by whether it rains on election day. The interaction between one's normative mindset and the role that costs play in the decision process, which has been observed in other contexts (Green 1992), suggests a more complex psychology of choice than that assumed by conventional rational choice or social-psychological models. Freeing rational choice theorizing from the requirement that each facet of the explanation be consistent with utility maximization and the convention that a single (read parsimonious) decision calculus applies to all citizens provides researchers with greater latitude to anticipate such novel facts as these.

Rational choice scholarship would profit not only from a change in theoretical orientation but also from a change in the way scholars collect and analyze data on voter turnout. Very few studies of turnout decisions *among individuals* have been conducted by rational choice modelers themselves. The data analysis that is conducted, therefore, relies on survey measures that were developed by social-psychologists for very different purposes. To advance the study of how costs and benefits influence behavior, much more attention must be focused on the measurement of these theoretical terms, and rational choice theorists themselves must be at the forefront of these efforts.²⁹ If the strides made through social-psychological inquiry during the 1950s and 1960s are any indication, a closer connection with data may make for more trenchant theorizing.

In the short run, empirical rational choice scholarship in this area could be rejuvenated by applied statistical studies of the influence of various policy interventions. If rational choice provides one advantage over competing explanatory approaches, it is the ability to make clear predictions about the effects of increasing or decreasing the costs of voting. How would voter turnout change if absentee ballots were routinely distributed to eligible voters? What if voting were a week-long affair, or if ballots could be cast at a host of locations, such as supermarkets? What if voter registration forms were mailed periodically to unregistered voters? Perhaps if close empirical research guided by rational choice insights were to achieve some predictive successes (for example, in anticipating the consequences of the recently enacted registration bill due to take effect in 1995), scholarship in this area might be weaned away from

29. A survey effort designed to test rational choice theories of turnout undertaken by Jack Dennis (1991), however praiseworthy as one of the few efforts of its kind, suffers from serious conceptual problems that might have been alleviated had the work involved rational choice collaborators. See critical comments in Knack 1993a.

ethereal speculation about why rational citizens vote and refocused on questions of a more down-to-earth nature.

At present, empirical successes inspired by rational choice theory are difficult to identify, and consequently empirical investigations of voter turnout seldom do more than mention rational choice theory in passing (for example, Teixeira 1987, Wolfinger and Rosenstone 1980). Perhaps this state of affairs reflects the fact that most rational choice theorists are interested in turnout only insofar as this phenomenon represents what some regard as “the paradox that ate rational choice theory” (Fiorina 1990, 334). Whatever the case may be, there is a sense among some rational choice scholars that voter turnout is a distinctively recalcitrant area of application, unrepresentative of the empirical success rational choice theory has enjoyed elsewhere. Unaccompanied by a compelling account of why the act of going to the polls should fall outside the purview of rational choice theory, this view is merely an outgrowth of arbitrary domain restriction and may be criticized as such. All the same, we are not convinced that this point should be conceded. The literature on turnout *is* representative of a broad class of applications of rational choice theory in American politics. That empirical scholarship on voter turnout *seems* unusually problematic reflects an inflated appraisal of other applications, which have received less critical attention. As we turn our attention to collective action, legislative politics, and candidate competition, we again find it difficult to identify instances in which rational choice theorizing has contributed to the stock of empirically based knowledge about American politics.