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Turnout: Why Do Voters Vote?

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Abstract and Keywords

Within the past seventy years, citizens have cast some twenty-seven billion votes in national elections across the world. This impressive figure would likely double if votes cast in local elections and referenda were included. Electoral participation is a mass phenomenon. However, what exactly motivates people to vote? The question of why people vote has been at the center of positivist political theory. Political scientists and economists have devised numerous theories for why people may or may not vote, in addition to gathering an impressive amount of empirical evidence on the determinants of electoral participation. This chapter offers a bird's-eye view of historical trends in voter turnout, theories of rational voting motivation, and the role of embedding political or socioeconomic environments, as exposed by empirical research.

Keywords: turnout trends, formal theories, decision-theoretic models, game-theoretic models, empirical determinants

15.1 Introduction

WITHIN the past seventy years, citizens have cast some twenty-seven billion votes in national elections across the world. This impressive figure would likely double if we were to include votes cast in local elections and referenda. Electoral participation is a mass phenomenon. However, what exactly motivates people to vote? Gaining insight into this question is important to understanding the democratic process.

In this seventy-year period, seven out of ten people who had the right to vote voted. Citizens generally value the right to vote and exercise their right by going to the polls. This valuation becomes especially visible when a country holds elections for the first time. Since the right of every citizen to vote for political representation has not always been a given, it is fitting to begin a discussion of the determinants of electoral participation with a brief history of universal suffrage.

Universal suffrage, defined as the unrestricted right to vote, is based on the notion of equal rights that dominated philosophical thought during the Enlightenment. Initially, "universal" suffrage applied only to men, but extending franchise to women became a central demand of the liberal and socialist movements of the nineteenth and twentieth centuries. Universal suffrage is a twentieth-century institution. The first country to give women the right to vote (but not run for office) was New Zealand in 1893; the last country to do so was Saudi Arabia in 2015. Today, all countries conduct elections under universal suffrage, yet some countries deny the right to vote to citizens who have committed serious crimes or lived abroad for too long. For a detailed analysis on the role of democratic institutions in different stages of human history, the reader should consult the general history of government by Finer (1999). For a history of democracy from ancient to modern times, the reader is referred to *The Edinburgh Companion to the History of Democracy* by Isakhan and Stockwell (2012). The short (p. 311) excursion into the history of universal suffrage taken in this chapter draws on the *Edinburgh Companion*.

Having outlined the history of universal suffrage, we turn to recent trends in voter turnout. This discussion makes use of data from the international Institute for Democracy and Electoral Assistance (IDEA) in Stockholm. The IDEA has been providing comprehensive data on national elections since 1945, and these figures are widely used in academic research on electoral participation. The data are regularly supplemented by analytical reports addressing numerous historical and current issues on a country-by-country basis. Perhaps the most pertinent issue is how to make sense of the gradual but nearly global decline in electoral participation that has been observed since the 1990s. Other current issues pertain to the role of technological innovation in fostering turnout in industrialized countries and how to improve the voter registration process in developing countries.

The first studies of the determinants of voter turnout were carried out in the 1920s and 1930s, notably in works by Merriam and Gosnell (1924) of the University of Chicago and Tingsten (1937) of the University of Stockholm. These early studies emphasized the fierceness of political competition and the salience of issues as factors that bring voters to the polls. Subsequent milestones in electoral studies were the surveys conducted by researchers at the University of Columbia and the University of Michigan in the 1940s and 1950s (Bartels 2010). Results by the Michigan team in connection with the 1952 and 1956 US presidential elections were published in the monograph *The American Voter* in 1960, which became a canonical piece of electoral research (Campbell et al. 1960). The series of interviews conducted during these studies revealed the attitudes of prospective voters in the run-ups to presidential elections. However, the focus of this classic electoral study lay more on how voters make up their minds than on why they vote.

The question of why became pertinent with the publication of the book *An Economic Theory of Democracy* by Anthony Downs in 1957. His ideas and analytical tools eventually became highly influential in political science and shaped the theory of public choice. The geometric representation of voter preferences became a standard analytical tool in

political science and economics, producing well-known results such as the median voter theorem on a single-dimensional ideology spectrum. The Downsian rational voter hypothesis brought the “why” question to the debating floor, because it implied that rational people should not vote. As this runs contrary to the high turnout rates typically observed in elections, rational choice gives rise to one of the most persistent puzzles in the theory of public choice. This chapter discusses ways that have been proposed to resolve the paradox of voting. Some of the alternative explanations of why people vote salvage the validity of the rational voter hypothesis, while others are eager to discard it. However, there can be little doubt as to the great influence of Anthony Downs on the theory of electoral participation and the theory of public choice.

Theories aside, political scientists and economists have produced an impressive volume of empirical evidence on the determinants of electoral participation. The main issue here is the nature of these determinants and their relative strength. What role do personal characteristics such as age, income, or education play? Does the embedding (p. 312) community matter? Does political mobilization work? Which political and legal institutions foster turnout? Most of the determinants studied have a political or socioeconomic context. Political determinants range from institutional factors, such as the law and conduct of elections, to the type of electoral system and the realities of political competition. Socioeconomic factors that influence the willingness to participate range from the personal characteristics of the voters to the social and economic realities of their communities. The theory of social capital plays a prominent role in understanding the role of the embedding social environment. There is extensive survey evidence on motives for voting, and experimental evidence that sheds light on many issues influencing the decision to vote.

15.2 Universal Suffrage

The modern concept of universal suffrage has its roots in the Enlightenment and republicanism that took hold of European philosophical thought during the eighteenth century. The philosophical ideas of the time gave impetus to the first movements for universal suffrage, which sought to give all citizens equal rights and powers in choosing their political representation. Before the advent of universal suffrage, the right to vote in countries that held elections for political office was reserved to a small minority, with the right to vote often tied to wealth or rank. Women were often either explicitly excluded from voting or, in countries where they were officially allowed to vote, they were often unable to fulfill the wealth and status requirements. The right to vote was effectively a privilege of wealthy men.

Universal male suffrage has its origins in the French Revolution (1789–1799). The French Constitution of 1793 granted the right to vote to all male adult citizens of the new republic, except for “beggars, vagabonds and domestic servants” (Isakhan and Stockwell 2012, 338). This formally excluded all women, making them “passive” citizens. Extending the franchise to women and the enactment of true universal suffrage became a central

demand of the liberal movements of the nineteenth century and the socialist movements of the early twentieth century. Despite many setbacks during the Enlightenment, the seed planted by the French Revolution and nurtured by the democratic movement finally blossomed into this defining political institution of our age.

New Zealand became the first country, then a self-governing colony, to adopt universal adult suffrage in 1893. The Grand Duchy of Finland, an autonomous part of the Russian Empire and the predecessor of modern Finland, granted women full political rights in 1906. The two big waves of women's enfranchisement coincided with the end of world wars. The Great War transformed the political map of Western Europe and its citizenry. Many Western European countries adopted universal suffrage in the interwar period. The remaining Nordic states of Norway, Denmark, Iceland, and Sweden all enfranchised women between 1913 and 1919, as did Germany and Austria in 1918. In Norway (1907) and the Netherlands (1917), women were granted the right to stand (p. 313) for election several years before they could vote. Meanwhile, across the Atlantic, the women's suffrage movement was gaining momentum. The first ten amendments to the United States Constitution of 1789, known as the Bill of Rights, were vague in stipulating voting rights. It took another 130 years and nine amendments for women to become enfranchised in the United States. This occurred in 1920. The United Kingdom and Ireland adopted restricted female suffrage in 1918, which became unrestricted in 1928. A similar development took place in Belgium, Spain, and Portugal in late 1920s and 1930s, leading to first to restricted voting rights that became unrestricted later. Belgium introduced universal voting rights at the national level in 1948. The transition to democracy in 1976 afforded Spanish and Portuguese women the opportunity to fully exercise their democratic rights. The second wave of women's enfranchisement came after World War II, when France (1944), Italy (1945), and, within a decade, Greece (1952) adopted universal suffrage. Late to follow suit were the smaller states of Malta (1947), San Marino (1959), Monaco (1962), Andorra (1970), and Liechtenstein (1984). Another remarkable late-comer is Switzerland (1971), a country admired for its extensive use of referenda as instruments of direct democracy, which held its first country-wide referendum on voting in 1866.

The end of World War II and the founding of the United Nations fostered the process of women's enfranchisement across the world. The passage of the Universal Declaration of Human Rights in 1948 cemented universal suffrage as a democratic standard. Article 21.3 of the declaration explicitly stipulates "periodic and genuine elections which shall be by universal and equal suffrage." Many Southern European countries such as Bulgaria, Romania, and Yugoslavia introduced universal suffrage immediately after the war, and most of South American nations enfranchised women between the 1940s and 1960s—for example, Argentina in 1947 and Mexico in 1953. The abolishment of colonial rule in many parts of Africa and Asia brought new constitutions and universal enfranchisement to many existing and newly independent states. Even though numerous countries introduced universal suffrage immediately after the end of World War II, the process of democratization persisted until the 1970s.

Denying women the right to vote was not the only impediment on the road to universal suffrage; other obstacles were discrimination based on race, skin color, or ethnicity. The abolishment of slavery with the Thirteenth Amendment to the US Constitution and the end of the American Civil War (1861–1865) did not automatically enfranchise the former slaves. The Fourteenth Amendment of 1868 paved the way for equal rights for all citizens of the United States. It made the Bill of Rights applicable at the state level. The Fifteenth Amendment of 1870 granted equal suffrage to all men, regardless of their race. In practice, however, lopsided voter registration requirements discriminated against male African Americans in the former Confederate states. Jointly, the three so-called Reconstruction Amendments laid the legal groundwork for the post–Civil War era. Voting rights were extended to Native Americans in 1924. One century after the passage of the Reconstruction Amendments, the 1960s civil rights movement achieved the abolition of all racial discrimination, granting full and universal enfranchisement in the Civil Rights Act of 1964 and the Voting Rights Act of 1965.

(p. 314) 15.3 Trends in Voter Turnout

Today, nearly all countries hold presidential or parliamentary elections. This has not always been the case. For example, of the one hundred countries that existed in the 1950s, only sixty-two held national elections. In the following decade this number increased to seventy-four. Since the 1970s the world has witnessed a remarkable spread of democratic institutions, as measured by the number of countries that held elections for the first time. Of the thirty-eight countries that held elections for the first time in the 1970s or 1980s, most were in Africa (thirteen), Asia (ten), and Oceania (seven). Part of this increase is due to the emergence of new states, for example, due to the dissolution of colonies. The 1990s saw a significant increase in the number of African states holding elections, while the dissolution of the Eastern Bloc, comprising the Soviet Union and the countries of the Warsaw Pact, added many Eastern European countries to the already impressive tally of this eventful decade. Of the sixty-five countries that held elections for the first time in the 1990s, twenty-two were African, twenty European, and sixteen Asian.

The institution of elections has undergone a process of globalization in the past twenty to thirty years. Some observers would like to add a point of contention by arguing that the number of democratic countries has not increased by nearly as much as the number of countries holding elections. According to the 2000 Freedom of the World report by Freedom House, a US-based nongovernmental organization, at the turn of the twenty-first century only 120 of the world’s 192 countries could be classified as electoral democracies, yet only 85 of those countries could be called free. Democracy is difficult to define and even harder to identify in practice (Diamond 2002), yet most agree that conducting elections is a necessary precondition for the existence of democracy. At the same time, a single institution does not constitute a system. While the exact definition of democracy can vary, most people would agree that a functional democracy requires a score of other institutions, such as civil rights, a free press, and free and fair elections. Deciding if a political system is a democracy has become increasingly difficult due to the

emergence of so-called hybrid systems. Diamond argues that many countries may qualify as electoral democracies, but not as liberal democracies—a category that, for example, includes many South American countries—and provides examples of highly ambiguous cases. This calls for a more nuanced and gradual evaluation of political systems in comparative analysis. One example of such an analysis can be found in Ekman (2009), who compares Tanzania, Russia, and Venezuela.

There are several ways of defining voter turnout. It can be defined as the number of people who voted, divided by the number of registered voters or by the voting-age population. For various reasons the number of registered voters will typically be lower than the voting-age population or the number of citizens having attained the minimum age of eligibility. This distinction is important because voter registration can be compulsory or voluntary, and a voluntary decision not to register is an abstention. **(p. 315)** Voluntary registration can be assisted or unassisted (and sometimes impeded) by the state authorities. In many developing countries electoral participation is hampered by a low-quality voter registration process, which effectively disenfranchises parts of society. Improving voter registration is one of the challenges faced by young democracies in developing countries. A third alternative is the number of citizens who are eligible to vote in an election. This definition excludes citizens who lost the voting right due to, for example, criminal conviction. Such data, however, are rarely available. The review of the empirical literature on voter turnout by Geys (2006) shows that the number of voters divided by the voting-age population is the most commonly used measure of voter turnout, followed by a definition based on the number of registered voters. In the following overview of historical turnout data we will use the definition based on the number of registered voters.

It is often proclaimed that the higher the turnout at an election is, the more representative—and hence the more legitimate—the outcome will be (Teixeira 1992). High turnout rates thus appear to be desirable, making an increased turnout rate a valid policy objective. However, when can turnout be considered high? This question appears to yield no useful answer. Scholars instead focus on the variation of turnout over time or between countries (Norris 2002; Franklin 2004). We shall follow this tradition and provide a brief overview of the dynamics of turnout rates since 1945.

The IDEA data show that voter turnout across the world has gradually decreased almost everywhere. Despite this global phenomenon, significant regional differences exist. To gain a bird’s-eye view of trends in voter turnout, we shall consider change in average turnout in presidential and parliamentary elections by geographical region before and after 1990. Since 1990, average turnout has decreased by 12.7 percentage points in Northern America, 9 percentage points in Western Europe, and 8.3 percentage points in Northern Europe. Average turnout in Southern Europe has decreased by 14.4 percentage points, while in Australia and New Zealand it decreased by 2.1 percentage points. Taken together, these figures show a negative trend in established democracies over the past two and a half decades. The aggregate of Southern Europe includes such as Italy, Spain, Portugal, and Greece, as well as the states of the former Yugoslav Republic. Has the

dissolution of the Eastern Bloc instilled a taste for democratic participation in people? The data suggest that participation rates dropped following an initial increase in the wake of the democratization movement. The average turnout rates in this region decreased from 66.3 percent in the 1990s to 59.7 percent in the first decade of the current century. Comparable substantial declines have been recorded in certain African countries before and after 1990, especially in Eastern Africa (–13.8) and Middle Africa (–22.2). Other parts of the African continent have seen notable expectations to the general negative trend in electoral participation since 1990. The highest increase since 1990 was recorded in the countries of Western Africa (+13). Average turnout rates have been on the rise in Southern Africa (+5.9) and the microstates of Melanesia and Polynesia. The decline in turnout in South America and Asia has been low to moderate. Countries in Central America (–3.4), South America (–4.8), and the Caribbean (–7.8) have experienced (p. 316) moderate declines, as have countries in Western Asia (–5.6) and Eastern Asia (–7.4). Nearly constant participation rates have been observed in Southern Asia (+0.9) and Southeastern Asia (–1.8). Taking an overall look at national elections, average turnout after 1990 was 6.4 percentage points lower than the average turnout before 1990.

These figures show that turnout rates have declined in most regions of the world. Despite the concern that declining turnout rates may be a symptom of reduced confidence in political institutions and disenchantment with democracy, turnout rates have been rather stable over time. To put the magnitude of regional declines into perspective, we compare these to the overall standard deviation of the turnout rates since 1945. The mean of voter turnout for all presidential and parliamentary elections around the world since 1945 is 71.9 percent, with a standard deviation of 15.7 percent. This shows that the highest regional declines in voter turnout since 1990 have had the magnitude of one and a half of the standard deviation. Thus, voter turnout has been rather stable over time, at least on average, despite the observed decline.

15.3.1 Voting Age

Stability is a quality we would expect of a highly aggregate time series, such as average turnout. Yet it also hints at the habitual nature of the underlying individual behavior. Surveys show that partisan loyalties are long-term commitments. The same appears to be true of voting as a commitment to participation in the democratic process. Someone who has voted in the first election he or she became eligible to vote in is also likely to vote in subsequent elections. At the same time, someone who has not voted in the first few elections is likely to become a lifelong nonvoter (Plutzer 2002).

Many habits are formed at a young age. If voting can be considered a habit, an idea to which we shall return when discussing theories of turnout, then it is natural to seek part of the explanation for voting behavior in the formation of this habit, which leads us to the issue of voting age. In the late twentieth century, many European countries lowered the minimum voting age from between twenty-three and thirty to eighteen, while simultaneously abolishing the requirement of literacy (IDEA 2004). In 1971, the Twenty-Sixth Amendment to the US Constitution lowered the voting age from twenty-one to

eighteen. There is an ongoing debate about lowering the voting age even further to sixteen. Proponents for this step argue that it will increase electoral participation, while giving politicians more of an incentive to represent the interests of young generations.

Political scientists have argued that lowering the voting age may have contributed to the native trend in voter turnout in established democracies (Franklin 2004). If voting is a habit, then not establishing the habit at a young age will lead to a gradual decline in the overall turnout rate as the younger cohorts of nonvoters replace the older cohorts of voters. Survey evidence suggests that younger citizens are less likely to have clear partisan preferences and if they do their loyalties are less likely to be stable. The effect of generational replacement on turnout variation is different from that of the extension of the franchise to a previously disenfranchised part of the society, as it was after the (p. 317) enfranchisement of women. In this case, we would expect the initial sharp drop in turnout to gradually ease up, as previously nonvoting groups acquire the voting habit. On the contrary, the expected long-term effect of generational replacement on voter turnout is negative.

15.4 Theories of Turnout

Voter turnout is an electoral statistic that describes an aggregate phenomenon. Theories of voter turnout provide a micro-foundation for this aggregate phenomenon by explaining the decision to vote from the point of view of citizens. To formulate conjectures about individual behavior, theories of voter turnout rely on a notion of economic rationality. This basic notion assumes that the voter evaluates all available actions according to their cost and benefits, and chooses the action that yields the highest net benefit. When facing uncertainty, the voter chooses the action that yields the highest expected net benefit, where the expectation is formed according to a stochastic model that may, for example, describe the behavior of other individuals involved. The rational behavior need not be purely selfish; it may also account for the well-being of others. This setting constitutes the economic model of political behavior, which is central to public choice as a discipline that applies theories and methods of economics to the analysis of political behavior.

Most theories of voter turnout take the Downsian theory as a point of reference and, occasionally, a point of departure. In this theory, voters view their votes as instruments in bringing about a desired election outcome. This instrumental motive of political behavior is an epitome of the theory of public choice. One vote may have a fair chance of swinging the outcome in a committee. Yet in any sizable electorate the power of one vote is negligible, and so is its instrumental value. Why so many people cast ineffectual votes is the main challenge faced by this line of reasoning, and a strong motive for proposing alternative explanations of why people vote.

In the following, we shall summarize the main theoretical ideas. Even though social scientists have provided extensive survey, empirical, and experimental evidence on the determinants of voter turnout, the following discussion will focus on theories. The empirical evidence on the determinants of voter turnout will be discussed briefly at the

end of the chapter, with a focus on the empirical testing of the theories. Aside from testing theories, substantial differences in turnout rates between countries suggest that the political, social, and institutional realities of these countries matter, and political scientists and economists have gone a long way in exploring how and why they do.

15.4.1 The Rational Voter Hypothesis

Initially formulated by Downs (1957) and elaborated by Tullock (1967) and Riker and Ordeshook (1968), the rational voter hypothesis is the baseline model of voter turnout (p. 318) in the theory of public choice to which most alternatives are compared. As a baseline model, it has been subject to the utmost theoretical scrutiny and extensive empirical testing. Every term of the equation has been questioned and evaluated by numerous scholars. The ensuing theoretical debate has been fruitful and has led to alternative and in some cases more balanced and plausible explanations for why people vote. The core of the theory is simple cost-benefit reasoning. To grasp the theory we need to immerse ourselves in the world of two-way elections characteristic of the US political system.

What is the benefit of voting? The benefit of voting in a two-way election is the difference in utility between the voter's preferred and alternative outcomes. This difference is referred to as the B-term. Since the outcome of the election is uncertain, the gains from the desired election outcome must be taken as expected gains, in the sense of mathematical expectation under the probability that the vote will be decisive in bringing about the desired outcome. This probability is called the P-term.

What is the cost of voting? Downs (1957) emphasized the cost of collecting and digesting the information required to decide which candidate or party to vote for. The physical inconvenience of going to the polls and the opportunity cost of voting, or the value of the next best action that could be taken instead (e.g., walking one's dog), are often added to the cost of staying informed about the politics. Regardless of its nature, the cost of voting is positive and certain. This is the C-term.

What is the decision rule? The rational voter hypothesis holds that people vote to maximize the expected individual net benefit of voting. An individual votes if the expected net benefit is positive, or if the product of the P- and B-terms exceeds the cost of voting given by the C-term; otherwise, the individual abstains. The model explains participation but not partisan choice. It is assumed that the voter chooses his or her most preferred alternative without specifying what these preferences are. The model thus takes the parties' platforms and voters' preferences as given and constant.

Since the probability of a vote deciding the outcome of an election is tiny in electorates of even moderate size under any reasonable stochastic model of voter behavior, the rational voter hypothesis predicts that rational and selfish people will not vote because the tiny probability of the vote being decisive negates any private payoffs associated with the electoral outcome, even at a small cost.

The initial proposal for solving the paradox of voting was to add a noninstrumental benefit, so that the total benefit is sure to outweigh the cost. This additional noninstrumental benefit accrues from the sense of fulfillment of civil duty, the belief that participation in the democratic process upholds the democracy as a political system, or that it contributes to the provision of democracy as a public good. Indeed, when asked, many voters cite voting as the duty of a good citizen.

Let us perform a mental sensitivity analysis of the cost-benefit equation. The theory predicts that the individual propensity to vote should increase with the probability of being decisive, while it should decrease with the cost of voting. The baffling fact is that, whereas the central prediction of the rational voter hypothesis does not square with the empirical evidence, the partial predictions associated with the individual components of the cost-benefit equation have some predictive power. This forms the basis of the (p. 319) so-called marginalist defense of the Downsian hypothesis, which asserts that, while the hypothesis cannot explain the absolute level of turnout, its constituent parts can account for a nontrivial part of the observed variation in turnout (Grofman 1993).

15.4.1.1 Probability of Pivotality

The probability of pivotality depends on the assumptions of the stochastic model of votes. The choice of the appropriate model has been a point of debate. In the standard binomial model, each vote has the given probability of being in favor of a candidate and all votes are independent. Under this model, the probability of a tie diminishes very quickly with the size of the electorate and even more quickly as the probability moves away from one-half. It is negligibly small for any sizable electorate in all but the closest of elections. These features of the binomial model of voting are discussed in Good and Mayer (1975) and Chamberlain and Rothschild (1981).

The second point of contention is the stochastic independence of votes. Bandwagon effects in public opinion, the existence of political parties, and special interest groups are but a few reasons that the independence assumption may not be tenable. Such factors are likely to induce correlations between the votes, and we often see positive correlations in voting data. While stochastic independence finds little empirical support, introducing correlations often makes the models significantly more complex and consequently less amenable to analytical analysis (Gelman, King, and Boscardin 1998; Gelman, Katz, and Tuerlinckx 2002).

In addition to the formal modeling issues, there is reasonable doubt as to the relevance of the probability of pivotality for the decision to participate in a general election. Survey evidence discussed in Blais (2000) reveals that voters do not consider this probability when making their decision and glossily overestimate it when asked to do so (Barzel and Silberberg 1973; Blais 2000). It appears to be more plausible that voters seek to contribute to victory rather than be motivated by the tiny chance of tipping the outcome, and that the margin of victory matters even in two-way elections under a majoritarian voting system (Mackie 2015).

15.4.1.2 The Costs of Voting

The validity of the voting paradox depends crucially on the relevance of voting costs. That voters can be ignorant or hold incorrect and even preposterous views has been documented over the history of electoral studies dating back as far as the early 1950s. The information deficits of an average voter portrayed in recent popular accounts such as Shenkman (2008) lend credit to the Downsian emphasis on the cost of becoming informed. But does this cost influence the decision to vote?

The effect of information endowment on participation is likely to be stronger in small voting bodies such as juries or committees, in which a single vote has the nontrivial power to affect the outcome. When not adequately informed, a voter would rather abstain than risk tipping the outcome. The fact that some voters are better informed than others should lead less informed yet honest voters to abstain (Feddersen and Pesendorfer 1996, 1999). Whether this analogy also applies to general elections (p. 320) is less evident because the cost of personal error is negligible in a large election. Such impunity breeds irrational voting behavior (Caplan 2007). The bottom line is that the possibility of the cost of becoming informed being a tangible barrier to participation in general elections is largely an empirical issue, and one that is best studied using electoral surveys. Survey evidence discussed in Blais (2000) shows that the cost of becoming informed might not be significant to the average voter.

This conclusion largely applies to other types of costs. The survey by Geys (2006) documents the circumstantial empirical evidence of the effect of physical and opportunity costs on voter turnout. Thus, countries with compulsory voting tend to enjoy higher average turnout rates, in part due to the cost of noncompliance, however small that cost may be. Remote voting and weekend elections tend to increase turnout. Holding several elections on a single date, laxer registration requirements, and even good weather tend to increase turnout. These findings lend some credibility to the relevance of costs in participation decisions.

Despite some scope for the role of information in large elections and the empirical evidence of the effects of costs, one cannot escape the impression that we are trading in negligible quantities on either side of the cost-benefit equation (Barry 1988). Kirchgässner and Pommerehne (1993) take this idea further and emphasize the limits of the economic model of political behavior in predicting the outcome of low-benefit and low-cost decisions. Not only does the theory have difficulty explaining turnout but also it cannot explain why anyone would vote for their preferred alternative over any other alternative, knowing that their vote does not matter. This tells us that either the rational voter hypothesis suffers from the omission of significant factors or the actual voting behavior follows an altogether different logic. We shall now turn to civil duty as a possibly omitted factor. Such omitted factors are typically referred to as D-terms. Their inclusion in the voting equation is a popular way of resolving the paradox of voting.

15.4.2 Civil Duty and the Ethical Voter

Downs's (1957) suggestion for resolving the voting paradox stipulates that people vote out of a sense of civic duty. This theme has been further explored in a classic article by Riker and Ordeshook (1968). When questioned in surveys, many people indeed refer to voting as the duty of a good citizen (Blais 2000). Fulfilling a duty bestows gratification that adds value on the benefit side of the cost-benefit equation and tips the balance from abstaining from voting. This additional value is noninstrumental, for a single vote is as ineffectual in securing democracy in a political system as it is in bringing about the desired election outcome. From this perspective, voters are gratified by the act of voting rather than the outcome.

Whether each person has a duty to vote has been the subject of academic debate. Lomasky and Brennan (2000) argue that there is no universal duty to vote. This additional expressive benefit should not come at the risk of imposing bad political outcomes on the collectivity. In his book on the ethics of voting, Brennan (2011) argues that it is not (p. 321) about voting for the sake of voting, but about doing so in an informative and thoughtful way. Thus, for some, voting may be worthwhile, while for others abstaining is the more ethical choice. Additionally, if voters believe that voting contributes to upholding democracy as a public good, then we shall expect a strong incentive for some citizens to lean on the efforts of others to secure democracy, a behavior that economics refer to as free-riding.

The ethical voter hypothesis postulates that voters care about the well-being of others. Goodin and Roberts (1975) argue that ethical motives are likely to be prevalent in low-cost situations in which the expected individual benefit is small, but the impact on the community is large. Jankowski (2002) discusses altruistic motives in the context of voting. Feddersen and Sandroni (2006) offer a game-theoretic view, in which voting generates endogenous payoffs for a group of citizens if other members of the group also vote. Thus, the fulfillment of civic duty is an act of cooperation. Similar group-based models are proposed in Coate and Conlin (2004) and Fowler (2006).

15.4.3 The Expressive Voter

Instrumental reasoning posits that voters perceive their votes as a private investment in a better government. Being rational, they invest if the expected return exceeds the cost. But what if voters see it as an act of consumption rather than investment? What if they are gratified by the act of voting as an opportunity to express their opinion? The expressive voter hypothesis was proposed by Fiorina (1976) and further developed by Brennan and Lomasky (1993) and Brennan and Hamlin (2000) as a way of resolving the paradox of voting. The inclusion of expressive benefit offers another D-term solution to the paradox, whereby the additional expressive benefit helps to overcome the cost.

The expressive voting theorists view instrumental and expressive motives as complementary, while emphasizing that in the case of voting the instrumental motive must be rather weak. Note that an instrumental vote need not be sincere in the sense

that it may be given to a candidate other than the preferred candidate to prevent an undesirable election outcome. In this case, we say that the voter acts strategically. Critics of the expressive account use strategic voting to show logical tension between the two motives (Dowding 2005; Mackie 2011). They argue that proliferation of strategic voting precludes a purely expressive account, which in turn is disputed by the proponents of expressive voting, who see no contradiction between the two motives (Taylor 2015).

The presence of noninstrumental motivations adds new facets to the relationship between voter turnout, closeness of the election, and the size of the electorate. The instrumental explanation is egocentric in the sense that the decision to participate is based on private payoffs, and the expected net benefit of voting is modeled using a utility function. The calculus of selfish voting implies that the larger the electorate and the more lopsided the outcome, the less significant the vote. Schuessler (2000) argues that the relationship between size and turnout may be nonmonotonic when voters are driven by both instrumental and expressive motivations. Assuming that voters have both social (p. 322) and selfish preferences can lead to a conclusion that turnout increases with the size of the electorate (Edlin, Gelman, and Kaplan 2007).

In their survey of the theory of expressive political behavior, Hamlin and Jennings (2011) argue that the expressive theory offers more than just a solution to the paradox of voting. First, whereas the rational voter hypothesis explains why people vote, the expressive theory also suggests how people vote when they do. It is thus a theory of choice, as well as participation. Second, it applies to many aspects of political behavior, not just voting. In fact, party membership or political activism might offer more attractive settings for expressive behavior than a secret ballot, for expressive voting is comparable to cheering on a favorite sports team in front of a private television set. Third, a general theory of expressive political behavior begs the question of how the politicians cater to expressive motives, and what the consequences for political competition might be. Brennan and Hamlin (2000) and Hillman (2010, 2011) discuss the consequences of expressive behavior for political competition. This part of the theory is still under development.

Hillman (2010) sees the role of expressive political behavior in fostering identity as “a view that people have of themselves” (403). Expressive behavior, in particular political rhetoric, thrives in low-cost environments, as the personal consequences are small. Hillman discusses ways in which individual expressive behavior can produce undesirable social outcomes and in which the expressive behavior of voters and the expressive behavior of politicians interact.

15.4.4 The Irrational Voter

The models of electoral participation assume that voters are rational and are willing and able to identify the alternative that best serves their personal interest or the common good. Introducing uncertainty to the electoral outcome and the realization of political promises implies that even rational voters can err. But their errors are unsystematic so that the judgment of a large group of rational voters is correct on average. The question

is why democracies choose bad policies, and how bad policies can become popular enough to outlive a subsequent election.

In his book, Bryan Caplan (2007) sets out to dispel *The Myth of the Rational Voter* by arguing that the negligible personal consequences of acting irrationally in the context of elections makes it easy for voters to do so. People have preferences and beliefs and are gratified by acting on their preferences. Some of their beliefs are more rational than others. In certain circumstances, acting on irrational beliefs, such as crossing the street when the light is red under the assumption that no car will come, can be life-threatening. However, within the context of elections, the personal price of a bad choice is negligible. The vote is secret and has little bearing on the outcome. In the democratic process this leads people to feed their irrational beliefs via elections, leading to bad policies. The voters are thus rationally irrational in the sense that they consciously make bad choices or, in the words of Caplan, "know that feel-good policies are ineffective" (p. 323) (138). This differentiates irrational and expressive voters. While the irrational voter acts expressively in full awareness that the choice may not be optimal, the expressive voter believes in the correctness of his or her choice. The conclusion is that voter rationality is misguided as a theoretical assumption. It cannot serve as a basis for fruitful empirical research on why and especially how people vote.

15.4.5 The Game-Theoretic Models

By taking the aggregate turnout as given when computing the probability of casting a decisive vote, a Downsian voter applies a logical double standard. The voter would abstain if the net benefits of voting were negative, but the computation of the benefit assumes that all other voters vote. If many voters followed the Downsian reasoning and abstained because their vote appeared powerless, the vote would become sufficiently powerful for the voter in question to be willing to participate.

This reasoning suggests a game-theoretic modeling of turnout, one that explicitly accounts for strategic interaction between the voters. Voting in a single election can be considered a one-shot game. In such games, strategies are identified with actions. In general, a strategy is a contingent action plan that may involve a series of actions. In any case, voting or abstaining must account for what other voters would do under the same premise. A voting equilibrium is a situation of mutual consistency of rational actions in which no voter wishes to change the strategy. The focus on strategic interaction is the main conceptual difference between the game-theoretic models and the decision-theoretic models of the Downsian kind.

The second conceptual difference is the amount of information imputed to the voter. The case of incomplete information, in which some voters may possess private information unavailable to other voters, requires a different equilibrium concept (Bayesian-Nash) than that of complete and perfect information (Nash). Private information may pertain to voting costs or the knowledge of political platforms. Differences between voters define their types. In Nash equilibrium, each type of voter chooses a strategy that maximizes

expected utility given the actions of all types. In Nash-Bayesian equilibrium, each type of voter does so given his or her belief about the other voters.

The first strand of game-theoretic turnout models appeared in a paper by Ledyard (1982). Here, the voters choose between two parties to maximize their expected utility under incomplete information on voting costs. The probability of pivotality is endogenously determined by a voter's behavior. The model also includes two political parties that choose their platforms to maximize support. Ledyard provides conditions for the existence of Bayesian-Nash equilibrium for the voters, and Nash equilibrium for the parties that split the votes between them. For fixed party platforms the model implies positive turnout for sufficiently low costs. A full electoral equilibrium with flexible party platforms involves identical platforms and a zero turnout.

The complexity of the model, which includes endogenous party platforms and voter behavior, means that the aggregate turnout can be characterized for special cases only. (p. 324) Palfrey and Rosenthal (1983) study a simplified version of Ledyard's model with given party platforms and complete information. The model again involves two partisan camps, with the voters simultaneously deciding whether to abstain or vote for their preferred alternative. The model implies positive turnout even in large electorates, but the assumption of complete information is unrealistic. Models with complete information often have multiple solutions that are unstable. In a follow-up paper, Palfrey and Rosenthal (1985) dropped the assumption of complete information in favor of that of incomplete information about voting costs. They assumed identical voting costs for each voter.

Palfrey and Rosenthal (1985) show the existence of Nash equilibria with high and low turnout. High-turnout equilibria arise in very close elections, in which the probability of pivotality is not negligible. The high-turnout equilibria disappear with rising uncertainty about the closeness of the election and the number of supporters of each candidate. In the presence of uncertainty, the Palfrey and Rosenthal model predicts low turnout rates. It thus suffers from essentially the same problem as the decision-theoretic models of turnout, namely, the inability to explain turnout rates in excess of 70 percent that are typically observed in national elections. Game-theoretic models with private information and costly voting have been further developed, for example, in Campbell (1999), Börgers (2004), Demichelis and Dhillon (2010), and Taylor and Yildirim (2010).

15.4.5.1 Poisson Games

The standard binomial model of voting assumes that the aggregate turnout is fixed and known to the voter, who estimates the probability of being decisive. Game-theoretic models view the aggregate voter turnout as an emerging phenomenon. This leads to the concept of population uncertainty in stochastic game-theoretic models. The Poisson games introduced in Myerson (1998) offer a convenient theoretical setting for modeling aggregate voter turnout. Myerson assumes that the electorate consists of different types of voters. The number of voters of a certain type is given by a realization of a Poisson random variable. Being infinitely divisible, the Poisson distribution allows elegant

solutions to several difficult aggregation problems, provided a stochastic independence assumption is maintained. Numerical examples of the magnitude of the probability when the number of voters is drawn from the Poisson distribution can be found in Myerson (2000), who also confirms the results provided in Ledyard (1984) under a different stochastic setting.

15.4.5.2 Models of Asymmetric Information

The cost of voting is the central cause of abstention in models of the Downsian tradition and the game-theoretic models described previously. Sufficiently high voting costs will keep rational and selfish people away from the polls. Another family of game-theoretic models suggests that rational people might abstain even when voting costs nothing, if they lack the information to decide informatively.

Feddersen and Pesendorfer (1996) consider a model with three groups of citizens: two partisan groups who always support their candidate and a cohort of independent (p. 325) voters who are undecided. Some independents know which candidate should be preferred by all independents, whereas others have no such knowledge. The uninformed realize that abstention is a better way of ensuring that the right candidate wins than casting an ignorant vote that could tip the election outcome for the worse. Feddersen and Pesendorfer (1996) thus show the existence of Bayesian-Nash equilibria in which informed independents and partisans vote, while uninformed independents do not. Although Feddersen and Pesendorfer (1999) show that abstentions almost disappear if one allows for an infinite number of voter types, introducing the cost of voting would again reduce equilibrium turnout rates, for essentially the same cost-benefit reasoning that applies to the decision-theoretic and game-theoretic models discussed earlier. Models of incomplete information have been helpful in understanding voter behavior in small committees such as criminal juries. For jury models see, for example, Austen-Smith and Banks (1996) and Feddersen and Pesendorfer (1996).

15.5 The Empirical Evidence

“Why vote?” is foremost a question about human motives and their underlying values. The relevance of electoral motives can be directly queried in surveys and interviews. Pre-election opinion polls are regularly conducted by polling institutions using methods detailed in Voss, Gelman, and King (1995). Descriptive statistics usually suffice to convey the results of a poll.

The aim of academic empirical research is to establish empirical regularities that validate existing causal explanations or refute them in favor of new ones. The following brief overview focuses on testing main theories of voter turnout, starting with the rational voter hypothesis. Surveys of empirical tests of the rational voter hypothesis can be found in Aldrich (1997), Matsusaka and Palda (1999), Blais (2000), and Mueller (2003). For a general survey of the empirical literature on voter turnout and a meta-analysis, see Geys (2006).

Instrumental reasoning leads to a paradox of voting. Equally puzzling is the success of the turnout regression as an empirical test of the rational voter hypothesis. The probability of a vote being decisive in a two-way election depends on the size of the electorate and the fractions of voters who support each candidate, which reflect the closeness of the election. Since the probability is very small, it is common to enter closeness and size separately into turnout regressions. Such turnout regression often produces a positive coefficient for the closeness and negative coefficient for the size. Ex ante expected closeness measured by, for example, using pre-election polls performs better than the realized closeness (Geys 2006).

The formal models that impute voters with expressive motivations or social preferences do not predict a clear relationship between closeness, size, and turnout. For example, Schuessler (2000) shows trade-offs between expressive and instrumental benefits in large electorates. Empirical evidence on the prevalence of expressive (p. 326) motivations can be found in Copeland and Laband (2002) and Laband et al. (2009). Whereas the rational voter in the namesake hypothesis is entirely selfish, the utility of a social voter contains a social component that depends on the utility of other voters. Edlin et al. (2007) argue that in a large electorate the social component dominates the individual component, rendering the total utility of voting nearly independent of the electorate size.

It is important to emphasize that despite the paradoxical empirical success of the turnout regression, direct survey evidence is not in line with the Downsian model. Typical answers in surveys that tap reasons to vote reveal noninstrumental motives. Dowding (2005, 442) summarizes: “People vote in order to express their preference for their preferred candidate, increase his or her chances of winning and because they feel they ought to.” Voters act instrumentally in making a small contribution to the victory of the preferred candidate, rather than tipping the balance in favor of one candidate in the very unlikely case of such an opportunity presenting itself (Mackie 2015).

The literature on the determinants of voter turnout has established empirical regularities pertaining to the personal characteristics of the citizens, the social and economic realities of their communities, and the political system and electoral competition of their country. Most of the evidence is obtained by using a regression analysis of data on citizens and their embedding social environment.

15.5.1 Personal Characteristics

The empirical evidence shows that partisans and better-educated citizens show a stronger interest in local and national politics. They enjoy better access to political information and are more likely to vote in elections (Aldrich 1997). Other relevant personal characteristics include demographic factors such as age, gender, race, or marital status, or economic characteristics such as home ownership or occupational prestige. In the industrialized countries, the poor are less likely to vote than the rich. In the developing countries, the opposite can be the case when income distribution defines the agenda (Kasara and Suryanarayan 2015). The low participation rates among the

young are of concern since the habit of voting appears to develop at a younger age. People who voted in the past are more likely to vote in the future. Past turnout rates appear to be good predictors of current turnout rates, also at an aggregate level. An intriguing piece of evidence suggests that the propensity to vote may be influenced by the same genetic factors that are found to be associated with prosocial behavior (Fowler and Dawes 2008).

15.5.2 Political Competition and Institutions

The second category consists of the traditional determinants of turnout related to the mobilization effort of political campaigning, the intensity of political competition, and the institutions. Substantial differences in turnout rates between countries motivate a (p. 327) comparative analysis of the political, social, and institutional realities of each country. Beyond the effect of closeness, high turnout is often associated with high campaign spending, high salience of the election, and intense media coverage. Rosenstone and Hanson (1993) and Aldrich (1995) offer comprehensive studies of voter mobilization in the United States. Other factors may include political fragmentation measured, in the simplest case, by the number of parties running for an election. A high number of parties is characteristic of proportional representation systems prevalent in continental Europe. On the other hand, political attachment and the willingness to vote in elections declines with a growing distrust of politicians and the media and a general disenchantment with politics (Putnam 2002; Eder, Mochmann, and Quandt 2014).

The empirical evidence shows that countries with proportional representation tend to have higher turnout rates in parliamentary elections than countries with other types of electoral systems, such as first past the post or mixed-member proportional representation. The IDEA election data reveal that, on average, Western European countries with proportional representation enjoyed higher turnout rates than other countries in the region. The multitude of political parties typically present in systems with proportional representations makes it easier for the prospective votes to find a match, thereby increasing the incentive to vote. Turnout in presidential elections in Western Europe has traditionally been lower than that in parliamentary elections, reflecting a lower political weight of the president relative to parliament.

Several instructional factors related to the conduct of elections are associated with higher turnouts. In some countries, voting in elections is compulsory by law. Even though this law is not always strictly enforced, turnout rates are typically higher in countries with such regulations. Opponents of these measures argue that legal compulsion does not square well with liberal democratic values, and that participation should be voluntary. Among the first countries to introduce legal compulsion were Belgium (1894), Argentina (1912) and Australia (1924). In today’s world, a few dozen countries prescribe electoral participation. Many of these countries are in South America and Western Europe.

Compulsory voting increases the cost of nonvoting by threat of legal sanction. Fortunately, most institutional factors tend to lower the cost of voting, rather than

increase the cost of nonvoting. It has long been noted that holding elections on weekends is a simple measure for increasing participation by making it more convenient. To make voting even more convenient, many countries allow remote voting in addition to the classic ballot box. Whereas elections are typically held on a single day, postal voting is available for an extended period before the day of the election. Classic absentee voting transmits votes by means of the conventional mail service. Several countries have experimented with remote electronic voting to make electoral participation even more convenient and, specifically, to make voting more attractive to young voters. E-voting can be on-site or the electronic ballot can be transmitted via the internet. The voting environment can also be supplemented with information for the undecided voter. Use of e-voting would improve vote counting and generally increase the efficiency of electoral administration.

(p. 328) The main argument put forth by proponents of e-voting is the increased engagement of young voters, while critics of e-voting tend to focus on the integrity of the electoral process, as well as the social exclusion that may ensue if e-voting completely replaced the physical ballot box. There are reasonable doubts that an e-voting system can guarantee total anonymity and security of the vote, and daily experience with cyber-criminality substantiates these concerns. There are also doubts that the new technology will be equally accessible to all members of society in view of the “digital divide” between young and old, and in some countries between rich and poor (Norris 2001). The prerequisite of access to the internet can be relaxed by supplementing remote e-voting with all-postal voting or phone voting.

Remote e-voting and all-postal voting was tested at local elections in the United Kingdom in 2003, during which a substantial increase in turnout of all age cohorts was observed. The elderly benefited from the convenience of voting by mail, while the young made use of the internet. Part of the success can be attributed to the novelty of the systems and related campaigns ahead of the local elections. Whether e-voting can ultimately replace the polling stations remains the subject of debate.

Technological innovation in relation to the process of vote casting is an issue actively debated in industrialized countries, where it could serve as a measure to counter the negative trend in turnout. One of the most persistent challenges faced by developing countries, especially young democracies in Africa, is the provision of an adequate voter registration process (IDEA 2002). In defining turnout we noted that the number of registered voters eligible to vote in an election may be lower than the number of potentially eligible voters given the voting-age population. Nowhere is the discrepancy between the two figures larger than in Africa, where average registration rates in presidential and parliamentary elections since 2000 are at about 45 percent. This means that less than half of the number of people eligible to vote did not vote because they were not registered. By comparison, the all-term average is about 75 percent in Europe and 55 percent in Asia. On a positive note, measures have been proposed and undertaken to improve voter registration rates in Africa.

Tighter registration requirements thus tend to reduce turnout, whereas making registration or voting more convenient tends to increase turnout, as does holding several elections on the same day. Improving access to polling locations and removing barriers to registration can be simple measures for raising turnout.

15.5.3 Social Factors

The empirical evidence shows that participation depends on the local social environment. The contextual influences constitute the third category of factors that are known to influence the willingness to vote in elections, but also the willingness to participate in communal and social affairs such as local town and school meetings, professional associations, and social clubs, or to attend a church. Much of the existing empirical research conducted in the past thirty years addresses the role of contextual influences in (p. 329) the form of social capital and trust in individual behavior. One finding is that heterogeneity reduces the level of trust in the community and leads to the erosion of social capital (Costa and Kahn 2003). The social capital literature shows group identification and trust to be important determinants of social behavior, and that many factors associated with low levels of social engagement might also be responsible for low levels of electoral participation (Putnam 2002; Field 2008).

References

Aldrich, John H. 1995. *Why Parties? The Origin and Transformation of Party Politics in America.* Chicago: University of Chicago Press.

Aldrich, John H. 1997. “When Is It Rational to Vote?” In *Perspectives on Public Choice*, edited by Dennis C. Mueller, 373–390. Cambridge: Cambridge University Press.

Austen-Smith, David, and Jeffrey S. Banks. 1996. “Information Aggregation, Rationality and the Condorcet Jury Theorem.” *American Political Science Review* 90(1): 34–45.

Barry, Brian M. 1988. *Sociologists, Economists, and Democracy*. Chicago: University of Chicago Press.

Bartels, Larry M. 2010. “The Study of Electoral Behavior.” In *The Oxford Handbook of American Elections and Political Behavior*, edited by Jan E. Leighley, 239–262. Oxford: Oxford University Press.

Barzel, Yoram, and Eugene Silberberg. 1973. “Is the Act of Voting Rational?” *Public Choice* 16(1): 51–58.

Blais, Andre. 2000. *To Vote or Not to Vote?: The Merits and Limits of Rational Choice Theory*. Pittsburgh: University of Pittsburgh Press.

Börgers, Tilman. 2004. “Costly Voting.” *American Economic Review* 94(1): 57–66.

Brennan, H. Geoffrey, and Alan Hamlin. 2000. *Democratic Devices and Desires*. Cambridge: Cambridge University Press.

Brennan, H. Geoffrey, and Loren E. Lomasky. 1993. *Democracy and Decision*. Cambridge: Cambridge University Press.

Brennan, Jason F. 2011. *The Ethics of Voting*. Princeton: Princeton University Press.

Campbell, Angus, Philip E. Converse, Warren E. Miller, and Donald E. Stokes. 1960. *The American Voter.* New York: John Wiley & Sons.

Campbell, Colin M. 1999. "Large Electorates and Decisive Minorities." *Journal of Political Economy* 107(6): 1199–1217.

Caplan, Brian D. 2007. *The Myth of the Rational Voter: Why Democracies Choose Bad Policies.* Princeton: Princeton University Press.

Chamberlain, Gary, and Michael Rothschild. 1981. "A Note on the Probability of Casting a Decisive Vote." *Journal of Economic Theory* 25(1): 152–162.

Coate, Stephen, and Michael Conlin. 2004. "A Group Rule-Utilitarian Approach to Voter Turnout: Theory and Evidence." *American Economic Review* 94(5): 1476–1504.

Copeland, Cassandra, and David Laband. 2002. "Expressiveness and Voting." *Public Choice* 110(3/4): 351–363.

Costa, Dora L., and Matthew E. Kahn. 2003. "Civic Engagement and Community Heterogeneity: An Economist's Perspective." *Perspectives on Politics* 1(1): 103–111.

Demichelis, Stefano, and Amrita Dhillon. 2010. "Learning in Elections and Voter Turnout." *Journal of Public Economic Theory* 12(5): 871–896.

(p. 330) Diamond, Larry J. 2002. "Thinking about Hybrid Regimes." *Journal of Democracy* 13(2): 21–35.

Dowding, Keith. 2005. "Is It Rational to Vote? Five Types of Answer and a Suggestion." *British Journal of Politics and International Relations* 7(3): 442–459.

Downs, Anthony. 1957. *An Economic Theory of Democracy*. New York: Harper & Brothers.

Eder, Christina, Ingvill C. Mochmann, and Markus Quandt, eds. 2014. *Political Trust and Disenchantment with Politics: International Perspectives.* Leiden: Brill.

Edlin, Aaron, Andrew Gelman, and Noah Kaplan. 2007. "Voting as a Rational Choice: Why and How People Vote to Improve the Well-Being of Others." *Rationality and Society* 19: 293–314.

Ekman, Joakim. 2009. "Political Participation and Regime Stability: A Framework for Analyzing Hybrid Regimes." *International Political Science Review* 30(1): 7–31.

Feddersen, Timothy J., and Wolfgang Pesendorfer. 1996. “The Swing Voter’s Curse.” *American Economic Review* 86(3): 408–424.

Feddersen, Timothy J., and Wolfgang Pesendorfer. 1999. “Abstention in Elections with Asymmetric Information and Diverse Preferences.” *American Political Science Review* 93(2): 381–398.

Feddersen, Timothy J., and Alvaro Sandroni. 2006. “A Theory of Participation in Elections.” *American Economic Review* 96(4): 1271–1282.

Field, John. 2008. *Social Capital*. Abingdon: Routledge.

Finer, Samuel E. 1999. *The History of Government from the Earliest Times: Ancient Monarchies and Empires; The Intermediate Ages; Empires, Monarchies and the Modern State*. 3 Vols. Oxford: Oxford University Press.

Fiorina, Morris P. 1976. “The Voting Decision: Instrumental and Expressive Aspects.” *Journal of Politics* 38(2): 390–413.

Fowler, James H. 2006. “Altruism and Political Participation.” *Journal of Politics* 68(3): 674–683.

Fowler, James H., and Christopher T. Dawes. 2008. “Two Genes Predict Voter Turnout.” *Journal of Politics* 70(3): 579–594.

Franklin, Mark N. 2004. *Voter Turnout and the Dynamics of Electoral Competition in Established Democracies since 1945*. Cambridge: Cambridge University Press.

Gelman, Andrew, Jonathan N. Katz, and Francis Tuerlinckx. 2002. “The Mathematics and Statistics of Voting Power.” *Statistical Science* 17(4): 420–435.

Gelman, Andrew, Gary King, and W. John Boscardin. 1998. “Estimating the Probability of Events That Have Never Occurred: When Is Your Vote Decisive.” *American Journal of Political Science* 93(441): 1–9.

Geys, Benny. 2006. “Explaining Voter Turnout: A Review of Aggregate-Level Research.” *Electoral Studies* 25(4): 637–663.

Good, Irving J., and Lawrence S. Mayer. 1975. “Estimating the Efficacy of a Vote.” *Behavioral Science* 20(1): 25–33.

Goodin, Robert E., and Kevin W. S. Roberts. 1975. “The Ethical Voter.” *American Political Science Review* 69: 926–928.

Grofman, Bernard. 1993. “Is Turnout the Paradox That Ate Rational Choice Theory? ‘An Economic Theory of Democracy’ in Perspective.” In *Perspectives on Public Choice*, edited by Bernhard Grofman, 93–103. Ann Arbor: University of Michigan Press.

Hamlin, Alan, and Colin Jennings. 2011. “Expressive Political Behaviour: Foundations, Scope and Implications.” *British Journal of Political Science* 41(3): 645–670.

Hillman, Arye L. 2010. “Expressive Behavior in Economics and Politics.” *European Journal of Political Economy* 26(4): 403–418.

(p. 331) Hillman, Arye L. 2011. “Expressive Voting and Identity: Evidence from a Case Study of a Group of U.S. Voters.” *Public Choice* 148(1): 249–257.

International Institute for Democracy and Electoral Assistance (IDEA). 2002. *Voter Turnout since 1945: A Global Report.* Stockholm: IDEA.

International Institute for Democracy and Electoral Assistance (IDEA). 2004. *Voter Turnout in Western Europe since 1945: A Regional Report*. Stockholm: IDEA.

Isakhan, Benjamin, and Stephen Stockwell, eds. 2012. *The Edinburgh Companion to the History of Democracy. From Pre-History to Future Possibilities.* Edinburgh: Edinburgh University Press.

Jankowski, Richard. 2002. “Buying a Lottery Ticket to Help the Poor: Altruism, Civic Duty and Self-interest in the Decision to Vote.” *Rationality and Society* 14(1): 55–77.

Kasara, Kimuli, and Pavithra Suryanarayan. 2015. “When Do the Rich Vote Less Than the Poor and Why? Explaining Turnout Inequality across the World.” *American Journal of Political Science* 59(3): 613–627.

Kirchgässner, Gebhard, and Werner W. Pommerehne. 1993. “Low-Cost Decisions as a Challenge to Public Choice.” *Public Choice* 77(1): 107–115.

Laband, David, Ram Pandit, John P. Sophocleus, and Anne Laband. 2009. “Patriotism, Pigskins, and Politics: An Empirical Examination of Expressive Behavior and Voting.” *Public Choice* 138(1/2): 97–108.

Ledyard, John O. 1982. “The Paradox of Voting and Candidate Competition: A General Equilibrium Analysis.” In *Essays in Contemporary Fields of Economics*, edited by George Hoorwich and James P. Quick, 57–80. Lafayette: Purdue University Press.

Ledyard, John O. 1984. “The Pure Theory of Two-Candidate Elections.” *Public Choice* 44(1): 7–41.

Lomasky, Loren E., and Geoffrey Brennan. 2000. “Is there a Duty to Vote?” *Social Philosophy and Policy* 17(17): 62–86.

Mackie, Gerry. 2011. “An Examination of the Expressive Theory of Voting.” Mimeo, University of California, San Diego.

Mackie, Gerry. 2015. “Why It’s Rational to Vote.” In *Rationality, Democracy, and Justice. The Legacy of Jon Elster*, edited by Claudio López-Guerra and Julia Maskivker, 21–49. New York: Cambridge University Press.

Matsusaka, John G., and Filip Palda. 1999. “Voter Turnout. How Much Can We Explain?” *Public Choice* 98(3/4): 431–446.

Merriam, Charles, and Harold Gosnell. 1924. *Non-Voting: Causes and Methods of Control*. Chicago: University of Chicago Press.

Mueller, Dennis C. 2003. *Public Choice III*. Cambridge: Cambridge University Press.

Myerson, Roger B. 1998. “Population Uncertainty and Poisson Games.” *International Journal of Game Theory* 27(3): 375–392.

Myerson, Roger B. 2000. “Large Poisson Games.” *Journal of Economic Theory* 94(1): 7–45.

Norris, Pippa. 2001. *Digital Divide: Civic Engagement, Information Poverty, and the Internet Worldwide*. Cambridge: Cambridge University Press.

Norris, Pippa. 2002. *Democratic Phoenix: Reinventing Political Activism*. Cambridge: Cambridge University Press.

Palfrey, Tom, and Howard Rosenthal. 1983. “A Strategic Calculus of Voting.” *Public Choice* 41(1): 7–53.

Palfrey, Tom, and Howard Rosenthal. 1985. “Voter Participation and Strategic Uncertainty.” *American Political Science Review* 79(1): 62–78.

(p. 332) Plutzer, Eric. 2002. “Becoming a Habitual Voter: Inertia, Resources, and Growth in Young Adulthood.” *American Political Science Review* 96(1): 41–56.

Putnam, Robert D. 2002. *Democracies in Flux: The Evolution of Social Capital in Contemporary Society*. New York: Oxford University Press.

Riker, William H., and Peter C. Ordeshook. 1968. “A Theory of the Calculus of Voting.” *American Political Science Review* 62(1): 25–42.

Rosenstone, Steven J., and John M. Hansen. 1993. *Mobilization, Participation, and Democracy in America*. New York: MacMillan.

Schuessler, Alexander A. 2000. *A Logic of Expressive Choice*. Princeton: Princeton University Press.

Shenkman, Rick. 2008. *Just How Stupid Are We?: Facing the Truth About the American Voter*. New York: Basic Books.

Taylor, Brad. 2015. “Strategic and Expressive Voting.” *Constitutional Political Economy* 26(2): 159–170.

Taylor, Curtis R., and Huseyin Yildirim. 2010. “A Unified Analysis of Rational Voting with Private Values and Group-Specific Costs.” *Games and Economic Behavior* 70(2): 457–471.

Teixeira, Ruy A. 1992. *The Disappearing American Voter*. Washington: Brookings Institution.

Tingsten, Herbert. 1937. *Political Behavior: Studies in Election Statistics*. London: P. S. King and Son.

Tullock, Gordon. 1967. *Toward a Mathematics of Politics*. Ann Arbor: University of Michigan Press.

Voss, Stephen D., Andrew Gelman, and Gary King. 1995. “The Polls - A Review. Preelection Survey Methodology: Details From Eight Polling Organizations, 1988 and 1992.” *Public Opinion Quarterly* 59(1): 98–132.

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