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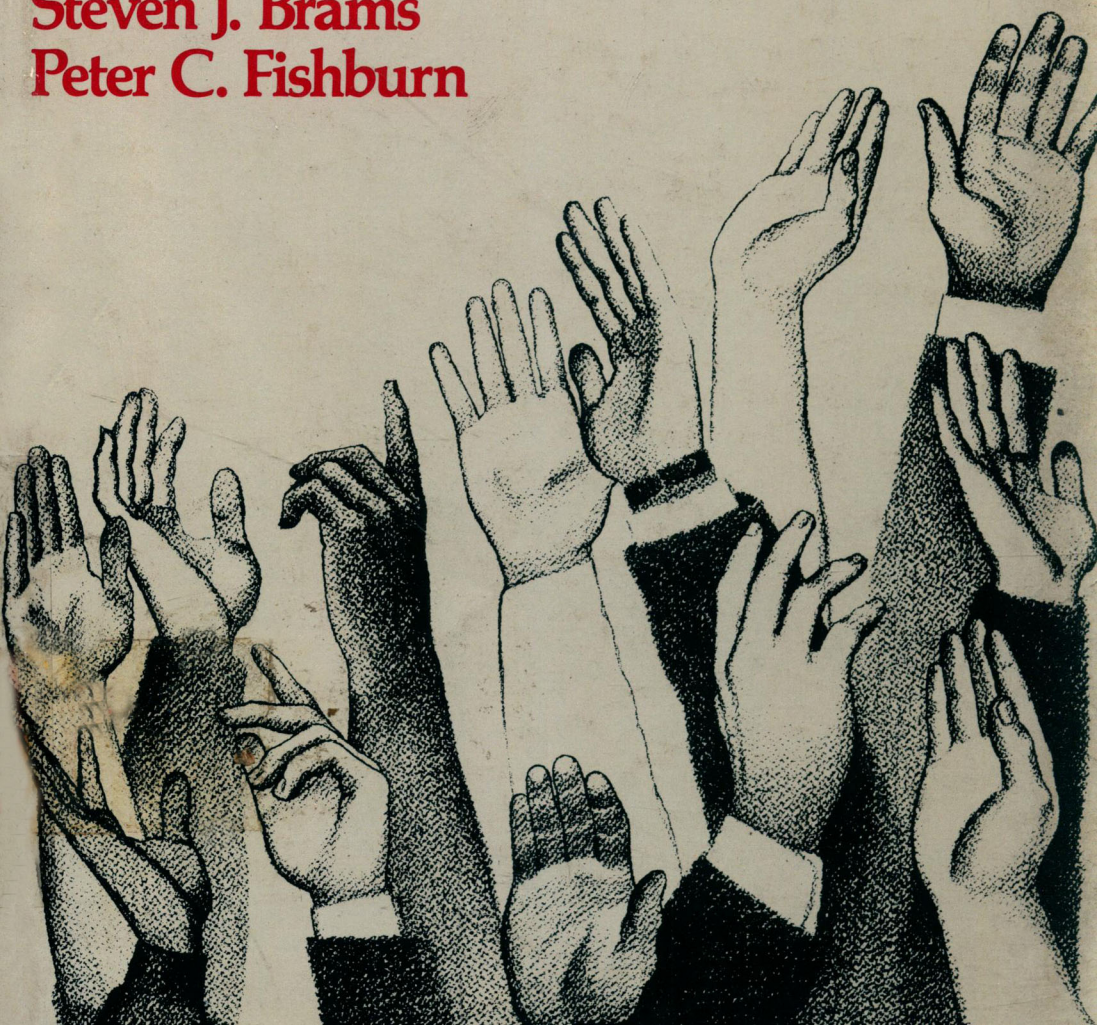

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I am not an advocate for frequent changes in laws and constitutions, but laws and institutions must go hand in hand with the progress of the human mind. As that becomes more developed, more enlightened, as new discoveries are made, new truths discovered and manners and opinions change, with the change of circumstances, institutions must advance also to keep pace with the times.

Thomas Jefferson, Letter to
Samuel Kerchaval, July 12, 1816

The method of choice . . . should be as scientifically framed and as efficiently adapted to its purpose as experience and political wisdom can make it. . . . It is not sufficient for every citizen to have the vote; he should also be assured of the greatest possible freedom and effectiveness in its use.

Enid Lakeman and James D. Lambert,
Voting in Democracies, 1955

The way we pick our presidents should not be fraught with danger and uncertainty. It should be a clear, secure, sensible procedure in which we can have confidence. . . .

Terry Sanford,
A Danger of Democracy, 1981

During lunch, a show of hands was taken, and the '47 [wine] received more first-place votes than any other wine. Because of more numerous second- and third-place votes, the '49 [wine] was judged the group's favorite, although this method of scoring caused controversy.

Terry Robards, "Wine Talk,"
New York Times, April 28, 1982

Preface

This book is about an election procedure called approval voting that appeared *de novo* about five years ago. As far as we can determine, five sets of people hit upon the idea of approval voting independently and deserve credit for recognizing its potential.[1] It seems like such a reasonable idea that we suspect other people thought of it earlier, but, for reasons best left to historians of science, only recently has it received general recognition.[2] At the time of this writing (June 1982), there are no extant uses of approval voting in public elections, but bills to implement this reform have been introduced in two state legislatures (New York and Vermont; for the text of the New York bill, see the Appendix).[3]

The idea behind approval voting is straightforward. In an election among three or more candidates for a single office, voters are not restricted to voting for just one candidate. Instead, each voter can vote for, or "approve of," as many candidates as he or she wishes. (Henceforth, we shall use only the masculine pronoun for convenience, but voting—at least in recent times—is not a subject with sexist overtones, and we intend none.) Each candidate gets a full vote from each voter who votes for him. The candidate with the most votes, and presumably acceptable to the most voters, wins the election. Thus, the winner is simply the candidate approved of by the largest number of voters.

Our research on election procedures over the past several years has led us to believe that approval voting is superior in many ways to commonly used procedures for determining a winner in elections with more than two candidates, including plurality voting (vote for one) and plurality voting with a runoff between the top two vote-getters. The purpose of the book is to explain our reasons for this conclusion.

We shall do this with a blend of theoretical analysis and case studies based on actual elections. Although we shall consider a variety of

alternative election procedures, our comparisons will focus on the simpler procedures that are easy for voters to understand and hence are good candidates for adoption if they are not already widely used.

The book's analysis is fairly rigorous and will not be easy going for many readers. Accordingly, the first chapter gives an overview of what we think, from a normative perspective, are the main advantages of approval voting. This will allow practitioners and others who prefer not to involve themselves in technical details to gain a quick grasp of its essential features. The technical details are, however, the backbone of our work, and we have tried to present them in a clear and systematic manner. With a few exceptions that serve to illustrate the deductive method, proofs of theorems are omitted since they can be found elsewhere and would impede the present exposition.

It seems fair to us to characterize approval voting as a reform in the best sense of that word. It will, we think, improve the conduct of elections generally—including the manner in which campaigns are run—and, more specifically, lead to the selection of candidates with the most widespread support among voters. We readily admit that it will not solve all problems of public choice; indeed, one of the lessons of this books is that every practicable voting system suffers certain deficiencies, and good public policy rests on scrupulous comparisons that identify that system that best satisfies criteria one thinks important. Without downplaying what we consider to be the advantages of approval voting, we have attempted to present a balanced analysis of this and other election procedures, based on a number of criteria for the democratic selection of candidates. We see no incompatibility between the role of analysis and that of advocacy where the former supports the latter.

We are reasonably confident that the theoretical foundations developed in this book for analyzing and comparing voting systems will stand up over time. On the other hand, it must be conceded that because approval voting has not been used on any substantial scale (see Chapter 1, note 7, for nonpublic elections where it has been used), we lack the kind of empirical data that are needed to make informed judgments of how it works in practice. We do, of course, hope that this will change in the near future. In the meantime, we try here to give an idea of the probable effects approval voting would have had in several recent elections conducted by other procedures. Since our reconstructions and analyses of these elections are mixed with the more theoretical arguments, readers are cautioned not to confuse the two strands. They complement each other, we believe, in giving answers to certain questions that common sense alone cannot provide.

As an election reform, approval voting could have major policy consequences, for it may well affect the kinds of political leaders who

are elected and who, in turn, influence public policy in many different areas. Judging from the interest and not infrequent apprehension that the idea has aroused, this viewpoint is shared by a growing number of people who range from professionals in various political arenas to analytical theorists. Approval voting, however, will probably never be the burning issue of the day, though this study shows, we think, that its impact could be more significant than many burning issues and that it has much to recommend it. But perhaps what is most important, and could make approval voting in the final analysis acceptable to both citizens and policy makers, is that it really is a very simple and logical idea.

Footnotes to Preface

1. Guy Ottewell, "The Arithmetic of Voting," *In Defense of Variety* **4** (July-August 1977), 42–44; John Kellett and Kenneth Mott, "Presidential Primaries: Measuring Popular Choice," *Polity* **11,** 4 (Summer 1977), 528–537; Robert J. Weber, "Comparison of Voting Systems" (mimeographed, 1977); Steven J. Brams and Peter C. Fishburn, "Approval Voting," *American Political Science Review* **72,** 3 (September 1978), 831–847; and Richard A. Morin, *Structural Reform: Ballots* (New York: Vantage Press, 1980). Weber, who coined the term "approval voting," and Brams discovered their common interest in this subject at a workshop at Cornell University, under the direction of William F. Lucas, in the summer of 1976. Brams had earlier been attracted by the concept of "negative voting," proposed in a brief essay by George A. W. Boehm, "One Fervent Vote against Wintergreen" (mimeographed, 1976), passed on to him by the late Oskar Morgenstern. He first analyzed this kind of voting, as well as approval voting, in "One Man, n Votes," Module in Applied Mathematics, Mathematical Association of America (Ithaca, NY: Cornell University, 1976) and S. J. Brams, "When Is It Advantageous to Cast a Negative Vote?" in *Mathematical Economics and Game Theory: Essays in Honor of Oskar Morgenstern,* edited by R. Henn and O. Moeschlin, Lecture Notes in Economics and Mathematical Systems, Vol. 141 (Berlin: Springer-Verlag, 1977), pp. 564–572. Later Brams made more detailed comparisons of negative and approval voting in S. J. Brams, *Comparison Voting,* Innovational Instructional Unit (Washington, DC: American Political Science Association, 1978), which will appear in slightly revised form in *Modules in Applied Mathematics: Political and Related Models,* Vol. 2, edited by Steven J. Brams, William F. Lucas, and Philip D. Straffin, Jr. (New York: Springer-Verlag, 1982); and S. J. Brams, *The Presidential Election Game* (New Haven: Yale University Press, 1978), Ch. 6, which also reports on results developed in Brams and Fishburn, "Approval Voting." Ottewell (personal communication to Brams, November 17, 1980) first thought of the idea of approval voting in 1967–1968, and Morin (personal communication to Brams, September 21, 1980), who refers to the reform as "direct approval voting," first wrote about it in 1977. Morin's book, *Structural Reform: Ballots,* deserves special notice because, as a nonacademic with little contact with the professional literature, Morin offers a substantial

and lucid analysis of approval voting, some dubious claims (e.g., that the paradox of voting cannot exist under approval voting) notwithstanding.

2. Approval voting has recently been discussed in a number of texts and monographs, including Dennis C. Mueller, *Public Choice* (Cambridge: Cambridge University Press, 1979), pp. 60–64; K. H. Kim and Fred W. Roush, *Introduction to Mathematical Consensus Theory,* Lecture Notes in Pure and Applied Mathematics, Vol. 59 (New York: Marcel Dekker, 1980), pp. 94–102; Philip D. Straffin, Jr., *Topics in the Theory of Voting,* UMAP Expository Monograph (Boston: Birkhäuser, 1980), pp. 49–50; Thomas E. Cronin, *The State of the Presidency,* 2d Ed. (Boston: Little, Brown, 1980), pp. 65–66; Alan L. Clem, *American Electoral Politics: Strategies for Renewal* (New York: D. Van Nostrand, 1981), pp. 146–147; Peter H. Aranson, *American Government: Strategy and Choice* (Cambridge, MA: Winthrop, 1980), pp. 600–601; and William H. Riker, *Liberalism against Populism: A Confrontation between the Theory of Democracy and the Theory of Social Choice* (San Francisco: W. H. Freeman, 1982), pp. 88–90, 91–94, 101, 105–110, 113, and 293. Riker says (p. 113), "In primary elections, I would use approval voting," though he would eschew it in a general election because he thinks it would destroy the two-party system. In *A Danger of Democracy: The Presidential Nominating Process* (Boulder, CO: Westview, 1981), Terry Sanford says (p. 119), "It is not my recommendation at this time that this system [approval voting] be generally adopted, but it is promising enough for the parties to encourage several states to act as public laboratories by trying it." A similar position has been taken in a Position Statement on approval voting (September 1981) by the Council on International and Public Affairs in New York for their Project on Political Change. Ward Morehouse, president of the Council, is author of the Position Statement; the Statement has also been endorsed by Robin J. Arzt, Steven J. Brams, William Cowan, Curtis B. Gans, Donald Harrington, Betty G. Lall, and Henry Teune. Others who have been instrumental in developing legislative support for approval voting are Daniel Feldman in New York, Dick Bennett in New Hampshire, and Frank Bryan, Norris Hoyt, and Mary Barbara Maher in Vermont.

3. One exception, perhaps, is its use in elections in the United Nations, wherein members of the Security Council can vote for more than one candidate for the post of Secretary General. For reports on such voting in fall 1981, see Bernard D. Nossiter, "U.N. Security Council Fails to Agree on Waldheim," *New York Times,* October 28, 1981, p. A14; B. D. Nossiter, "China Continues to Bar Waldheim Nomination," *New York Times,* October 29, 1981, p. A9; B. D. Nossiter, "Someone Is Trying to Fire Waldheim," *New York Times,* November 1, 1981, p. E5; and B. D. Nossiter, "Security Council Elects a Peruvian Secretary General," *New York Times,* December 12, 1981, pp. 1, 6.

Acknowledgments

During the short time that approval voting has been a research topic, we have benefited greatly from the ideas of a number of scholars and practitioners, whose writings and other contributions are cited in the footnotes. Extra thanks go to Samuel Merrill, III, Nicholas R. Miller, Hannu Nurmi, Jeffrey T. Richelson, Duff Spafford, and anonymous reviewers who read the manuscript and gave us valuable criticism and advice.

Most of the book is based on our joint papers, several of which have appeared or are forthcoming in academic journals acknowledged in the footnotes. We are grateful for permission to use this material, which in some instances includes technical arguments, omitted here, that specialists may want to consult.

Brams's work was partially supported by grant DAR-8011823 from the National Science Foundation to New York University for applied research in approval voting, beginning July 1980. Fishburn's research on approval voting began when he was at The Pennsylvania State University and has continued part time since he joined Bell Laboratories in 1978. While we have enjoyed and deeply appreciate the support of our sponsoring institutions, the views expressed in this book are our own and in no way reflect the policies of these institutions.

Our wives, Eva Brams and Jan Fishburn, liked the idea of approval voting from the start. In contrast to some of the esoteric ideas that we often work with, we view their approval of approval voting as recognition of a sound practical idea that can benefit a society which elects its political leaders. Their support and encouragement have been splendid. Similar reactions from friends, who represent a variety of interests and professional fields, strengthen our feeling that approval voting has a promising future.

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Chapter 1
Introduction: Overview of the Problem and Its Solution

This chapter is deliberately written to provide a stark contrast with the formality of much of the rest of the book. It could well be the last chapter, offering a wrap-up summary and some examples that illustrate the main points of the analysis. (Several of these examples are analyzed in greater detail later.) We might say these things in a lecture or conversation about approval voting, and some people will have no need or desire to hear more.[1] Those who do can go on, but those who do not will be able to get the gist of our general arguments in the next few pages.

We shall begin by commenting on the problem posed by multicandidate elections (those with more than two candidates), suggest how approval voting would ameliorate this and related problems of elections, mention and briefly comment on several criticisms of approval voting, show, as an illustration of its effects, how the results of New Hampshire's 1980 presidential primaries probably would have changed under approval voting, and finally indicate the reform's prospects for adoption. Although we shall devote a good deal of space to presidential elections, the problem of selecting a winner in multicandidate elections is a general one, which we shall illustrate with several examples from nonpresidential elections.

1.1. The Multicandidate Problem

Elections under plurality voting often seem rigged against majority candidates. For example, James Buckley was elected a United States Senator from New York in 1970 with only 39 percent of the vote. Buckley, a conservative, was probably no more representative of New York state voters than John Lindsay, a liberal, was representative of New York City voters when he was reelected to a second term as

mayor of New York in 1969 with 42 percent of the vote. The 61-percent majority that voted for Buckley's two opponents, and the 58-percent majority that voted for Lindsay's two opponents, were effectively denied representation, at least in terms of their apparent ideological preferences, for six and four years, respectively. Moreover, as these examples indicate, the apparent bias of plurality voting toward the strongest minority candidate is not ideological: either liberals or conservatives may be aggrieved by the results.

One can think of many examples in which three or more candidates in a plurality contest divided the total vote such that no candidate received a majority. A dramatic recent example is the 1977 New York City mayoral election, in which six candidates got between 10 and 20 percent of the votes in the Democratic primary. This contest was followed by a runoff between the top two vote-getters, Edward Koch (19.8 percent in the plurality election) and Mario Cuomo (18.6 percent), which Koch won.

The runoff, however, offered no assurance that one of the four other candidates in the 10–20-percent range could not have beaten Koch. Koch may well have been the strongest candidate in the Democratic field, but the plurality election, even followed by a runoff, did not offer incontrovertible evidence that he was.

Neither did the three-way United States Senate election in New York in 1980 prove that Alphonse D'Amato was a stronger candidate than Elizabeth Holtzman and Jacob Javits, whom D'Amato defeated with a 45-percent plurality to 44 percent for Holtzman and 11 percent for Javits. In fact, an ABC News exit poll of voters (taken as they left the polling booths) revealed that if Javits had not been in the race, twice as many of his supporters would have opted for Holtzman as for D'Amato, easily making Holtzman the winner in a two-candidate contest. Ironically, the Liberal Party nominee (Javits) helped defeat the most liberal of the three Senate candidates (Holtzman).

The problem in all these cases is that a candidate, with support from a relatively small percentage of the electorate, can either win a plurality election outright or qualify for a runoff. When four-fifths of the electorate vote for other candidates, as happened in the 1977 New York mayoral race, the winner can hardly claim a great popular mandate. Worse, if there is another candidate whom a majority would actually prefer, the election system, in our opinion, is working perniciously in depriving the electorate of its rightful public choice.

This was probably the case in the elections that Buckley and Lindsay won in 1970 and 1969, respectively (as well as in the most recent Senate election in which Javits played the spoiler role). If either Buckley or Lindsay had been in a head-to-head contest with just one of his opponents, he almost surely would have lost to him.

It is indeed unfortunate for the voters when the winner in an election is in fact a weaker candidate than one or more of the losers! This paradoxical result most often occurs when two or more moderate candidates split the centrist vote, allowing a more extremist candidate to eke out a victory with only minority support. It is precisely this shortcoming of our system that seems in part responsible for the presidential nomination of Barry Goldwater by the Republican Party in 1964, and the nomination of George McGovern by the Democratic Party in 1972. Although each nominee had vociferous minority support within his party, each was a disaster to his party in the general election.

1.2. A Solution: Approval Voting

We believe there is a simple, practicable solution to this defect in our election system. It is a new voting system called approval voting, which allows a voter to vote for, or approve of, as many candidates as he wishes in a multicandidate race.

Thus, if there were five candidates, voters would not be restricted to voting for just one candidate. They could vote for two or more candidates if they had no clear favorite. However, only one vote could be cast for every approved candidate—that is, votes could not be cumulated and several cast for one candidate. The candidate with the most approval votes would win.

Approval voting has several striking advantages over plurality voting, or plurality voting with a runoff.

1. It gives voters more flexible options. They can do everything they can under the present system—vote for a single favorite—but if they have no strong preference for one candidate, they can express this fact by voting for all candidates they find acceptable. On the other hand, voters who do have a clear favorite, but one who does not appear to have a good chance of winning, would not have to despair about wasting their votes but could also vote for a more viable candidate whom they considered acceptable.

Consider what might have happened if voters had had this option in 1980. A *Time* poll in mid-October, approximately three weeks before the presidential election, showed that 49 percent found independent candidate John Anderson "acceptable"—and presumably would have voted for him under approval voting. This compares with acceptability figures of 57 percent for Jimmy Carter and 61 percent for Ronald Reagan. In other words, John Anderson would have been almost competitive with the major-party nominees under approval voting; had he been perceived as such, he surely would not have been as severely hurt by the wasted-vote phenomenon. (Anderson actually received 7 per-