

# Introduction

---

The Constitution of the United States of America vests the executive power “... in a President of the United States of America” [19], and Article 2 and Amendment 12 determine how a President is elected. All the discussions of the Constitution in the media are usually held with the participation of the experts in the field of constitutional law. However, the Constitution was written for ordinary citizens and residents of the country rather than only for the experts. So it seems natural that different citizens and residents perceive rules that govern presidential election differently. It is obvious that the logical analysis of these rules should detect those provisions of the Constitution relating, in particular, to presidential elections that could be construed differently. Such provisions should be analyzed by constitutional lawyers, and the analysis results should form the basis for the explanations of how the provisions should be interpreted. Such explanations can be either provided by the Supreme Court or eventually be part of new constitutional amendments.

Presidential election rules affect more than 200,000,000 eligible American voters of all walks of life. So the explanation of ambiguous clauses of constitutional provisions and those of Federal statutes relating to presidential elections should be made available to all interested constituencies. Currently, it seems that only the author’s books [20, 21] can be considered as those on the logical analysis of some provisions of the Constitution and Federal statutes relating to presidential elections. The present book should be considered as the next step in this analysis in which more constitutional provisions are logically analyzed, and some regularities of this system are analyzed quantitatively.

The first stage of the three-stage process of electing a President at which eligible voters cast their ballots for state presidential electors in 50 states and in D.C. has many times been described in books on the Electoral College. In contrast, the second stage—at which the Electoral College votes—and the third one at which Congress counts the electoral votes cast by presidential electors and either proclaims one of the presidential candidates a President-elect and one of the vice presidential candidates a Vice President-elect or elects either or both executives, remain “off radar” of presidential election specialists. This takes place despite the fact that as shown in [20] and in [21], some rules governing

these two stages of the election process are fuzzy. The widely proliferated belief that the emergence of extreme situations and the appearance of weird election outcomes as a result of their emerging are low probability events causes those specialists to take this unbalanced approach to studying the election system.

However, if extreme situations emerge in a presidential election, they will most probably be dealt with by the Supreme Court, as happened in the 2000 election. Should they happen, the Supreme Court decisions rather than constitutional provisions will become the determining factor in considering similar situations in future elections. The intervention of the Supreme Court in the course of the 2000 election polarized society and caused negative consequences. It is clear that the use of fuzzy election rules may lead to further possible interventions of the Supreme Court in the course of future elections. Yet, the feeling that undesirable election outcomes are low probability events prevails over common sense, continuing to underlie the approach of the authors of publications on presidential election rules and reporters spotlighting presidential elections. As a result, only limited information on the logical analysis of presidential election rules, especially on those governing the last two stages of the election process, is available to American voters and interested residents, and the American media remain reluctant to discuss even this limited information. This contributes to holding any discussions of the presidential election system only at the level of opinion exchanges on how the election system and its key element, the Electoral College, were designed, and how they may eventually work.

All this contributes to creating the illusion in many Americans that they vote for President and Vice President in November of each election year. One of the consequences of this illusion is the belief that if a candidate whose presidential electors received a plurality (or even a majority) of votes cast in favor of all state and D.C. presidential electors loses the election in the Electoral College, there is something wrong with the system. It is this illusion that the authors of the National Popular Vote plan—who attempt to introduce direct popular elections in the U.S. *de facto*, without amending the Constitution—try to exploit.

The readers of this book will have a chance to be certain that the following statements on the current election system are correct:

1. The election system was not designed to elect the Chief Executive of the Union depending on the popular will.
2. The existing election system does not follow some basic ideas of the Founding Fathers.
3. The Twelfth Amendment contains at least four puzzles relating to presidential elections, and answers to these puzzles have remained unknown for more than 200 years.
4. Some of the election rules are such that if they were to be applied, the intervention of the Supreme Court in the election process would be inevitable.

5. The text of Article 2 of the Constitution contains an incorrect requirement, which might not have been met in the 1792, 1796, and 1800 elections.
6. Skillfully exploiting the election system may allow one of the two major party presidential candidates to be elected President with less than 20% of the votes received by presidential electors of this candidate, even if more than 80% of all the votes cast were received by presidential electors of his or her opponent from the other major party.
7. The use of some election rules can cause a constitutional crisis in the country.
8. Many statements regarding some features of the Electoral College, both justifying its presence in the election system and justifying its abolishing, are no more than wishful thinking of their authors, no matter how plausible those statements may seem.
9. If several presidential candidates are recipients of the same highest number of electoral votes in the Electoral College, a candidate who has support from a majority of the states in the House of Representatives—i.e., from at least 26 state delegations—may not necessarily become the next President.
10. The abolition of the Electoral College is not necessary to make every vote count.

At the same time, the author would like to outline topics that are not covered in the book and to explain why these topics, relating to the presidential election system, have been left outside the scope of the book.

1. The author neither analyzes nor refers to historical materials relating to the creation of the Electoral College and other parts of the presidential election system. In particular, the author does not analyze the Federalist papers in which some of the Founding Fathers shared their views on the matters discussed at the 1787 Constitutional Convention. While these materials are certainly helpful for understanding the atmosphere in which the Convention worked, they reflect no more than the personal viewpoints of their authors on the discussed matters, rather than a collectively signed opinion of a majority of the convention participants. Though historical materials may help understand the logic underlying particular decisions made by the Constitutional Convention participants, they cannot strengthen any particular viewpoint in the framework of the logical analysis of the system requiring that all logically reasonable viewpoints should be considered.
2. Though the author criticizes some of the plans to improve the election system and offers one of his own, he does not try to convince the reader that a particular plan is better than the others. Instead, he tries to spotlight only flaws and inconsistencies in the plans (since the accolades relating to them can be found in the publications of the authors of the plans.) The author believes that any particular plan to reform the election system that has a chance to be introduced should be voted on by the American people (either nationally

or by states). Moreover, this should be done only after the explanation to the country of a) what both the pros and cons of the proposed plan are, b) why this plan will make the election system better than the system that is currently in use, and what voters gain and what they lose by abolishing the existing election system and adopting a new one, and c) why this plan is better than the other plans.

The author hopes that the book will help interested individuals become better acquainted with some such plans and make their minds up regarding the pros and cons of each of them. However, the book does not review all the proposals to change the election system that have so far been made.

3. The author did not include in the book descriptions of such well-researched schemes of voting as approval voting, preferential voting, the Borda count, etc. [8] for several reasons.

First, the present book is about a) the analysis of constitutional provisions and those of Federal statutes that concern presidential elections and b) the mathematics that services these provisions and statutes or explains their use. American voters do not have the constitutionally guaranteed right to vote directly for President and for Vice President. So any voting schemes other than the plurality rule without run-offs, which is currently used in presidential elections, have a chance to be implemented in practice only within a state. However, even within a state, a) the use of a particular method for determining the winning slate of presidential electors depends on the state legislature, and b) the introduction of a new such method that is based on a particular voting scheme may cause both constitutional and technological problems.

Second, the readers interested in getting acquainted with both the fundamentals of the voting schemes and the state-of-the-art in the field can turn to numerous monographs and articles on the subject, for instance, to [22, 23].

Third, from the author's viewpoint, the introduction of any voting scheme for determining the public preference among the candidates based upon the so-called voting profiles offered by individual voters in presidential elections even within a state seems to be at best a quite remote prospective in the years to come, taking into account numerous constitutional requirements that must be met.

4. The author does not address any issues relating to such elements of voting technologies affecting the count of cast votes as voting equipment and ballot design; interested readers can turn to numerous published materials, including those published in the framework of the MIT-Caltech project [24]. The present book deals with the "rules of the game"—i.e., election rules—which should not depend on or be affected by particular voting technologies that are used for casting and canvassing votes. However, the author considers the issue of the deployment of voting machines in precincts, since this issue may affect the voter turnout. From the author's viewpoint, this issue should concern both

state and Federal election officials, and may eventually be scrutinized in courts in the framework of possible violations of the Equal Protection Clause from the Fourteenth Amendment.

5. The Electoral College is often considered by critics of the existing election system to be an unfair election mechanism. They base their criticism on the fact that this mechanism does not provide equality for voters in the states and D.C. from the viewpoint of the voter's ability to affect outcomes in presidential elections [25]. Some critics believe that this election mechanism advantages small states due to the two "senatorial" electoral votes that each state is entitled to in the Electoral College. The others believe that it advantages large states mostly due to the large numbers of electoral votes, which reflect the size of the population in these states.

The so-called *a priori* voting power of the states in the Electoral College, the ability of a state to change the election outcome by changing its decision in voting for President and Vice President, is often used for numerically evaluating the degree of influence that the states and D.C. have in presidential elections. Moreover, this concept is applicable to numerically evaluating the *a priori* voting power of a voter from a state or D.C.—which is the ability of an individual voter to change the election outcome in the Electoral College, provided all presidential electors from all the states and D.C. vote faithfully, i.e., in line with the popular vote results in their respective states. In both cases, this ability is measured by the so-called power indices, in particular, the Banzhaf-Pelrose and Shapley-Shubik indices, the most known and used in conformity to two-party presidential elections.

In a two-party presidential election, the Banzhaf-Pelrose power index (often called the Banzhaf power index) of a state in the Electoral College is the probability of the state to cast a decisive vote in electing a President. Here, every state (and D.C.) are considered as a bloc of the state (and D.C.) electoral votes in a hypothetical election in which each state can cast its bloc of votes independently of the decision of the state to favor particular presidential and vice presidential candidates. Moreover, it is assumed that in this hypothetical election, each state and D.C. favor each candidate with equal probability, which can be easily calculated for a two-party presidential election [26].

The Banzhaf power index of a voter in a state in a two-party election is calculated as follows: It equals a) half of the probability to cast a decisive vote in an election in which all the other voters are tied in their support of the candidates if the number of voting voters is odd, and b) half of the probability to create a tie by casting a decisive vote if the number of voting voters is even. The large states have more *a priori* voting power in the Electoral College than the other states [27], and voters in large states also have more *a priori* voting power in any two-party election [25]. As a result of these regularities, voters from large states in hypothetical two-party presidential elections have a larger *a priori* voting power than voters in small and medium-size states and D.C.

Interesting computational results on changing the Banzhaf voting power index in hypothetical two-party presidential elections under different schemes of allocating electoral votes (for instance, under the National Bonus Plan) and under different schemes of awarding state electoral votes are presented in [26].

The author does not address the voting power issues for the following reason: Even if the results of the voting power analysis were applicable in real elections (which they certainly are not [26, 27]), they would not contribute much to the logical analysis of the Electoral College mechanism and to the mathematical analysis of its quantitative features determined by the Constitution, Federal statutes and Supreme Court decisions relating to presidential elections. Indeed, unequal voting powers of the states in the Electoral College are a consequence of the Great Compromise in the framework of which states have unequal representation in the House of Representatives and equal representation in the Senate.

As for the *a priori* voting power of a state voter, one should remember that under the existing election system, its calculation does not have any constitutional status. So any disparity of the *a priori* voting power among voters in different states cannot be considered a deficiency of the Electoral College, a mechanism that has never been created to elect a President by the popular vote of the nation. To blame the Electoral College for not equally representing the voting power of different voters from different states is the same as to blame a train that it does not fly. As mentioned earlier, and as the readers will have a chance to be certain of by reading this book, the author believes that the Electoral College has served the purpose for which it has been created. Moreover, once society decides to replace this election mechanism with any other one, for instance, with a mechanism servicing the equality of the weight of every vote in the country, there is a constitutional way to do it.

For similar reasons, the author does not consider issues relating to evaluating the voting power of states and individual voters based upon more realistic assumptions than those underlying the calculation of the Banzhaf and Shapley-Shubik indices. In particular, the author does not consider, for instance, voting patterns in different groups of voters in different states, correlations among the voting behavior of groups of voters, etc., which are analyzed in [28]. Nor does he discuss any issues relating to the evaluating of potential “biases” of the Electoral College towards one of the major political parties, which are considered, for instance, in [29]. Though results of the statistical analysis of the impact that the above-mentioned factors have on the voting power matters undoubtedly seem interesting, those results are obtained under quite unrealistic assumptions though these assumptions seem less restrictive than those under which the *a priori* voting power is studied.

But most importantly, the available data on election outcomes that has been used (and can be used in principle) for such “statistical considerations” reflect not only what “the rules of the game” are. Indeed, the data reflects a) how

the preferences of voters for presidential electors in their respective states are transformed into the election outcome according to the election rules, and b) the way the candidates use these rules in designing and conducting their election campaigns, their abilities to campaign, their personal qualities, etc.

Thus, from the author's viewpoint, all the results reflecting the research of the voting power of voters under a) the idealistic (flip coin) model of voting behavior of each voter in a hypothetical (see above) two-party election, and b) the models that take into account connections between different voters and correlations in voting behavior of voters from different states lie outside logical and mathematical studies of regularities embedded in the election mechanisms comprising the presidential election system.

A few brief remarks on the presentation of the material in the book are in order.

1. Throughout the book the author uses the apportionment of the electoral votes among the states and D.C. as they were determined by the 2000 census, i.e., those that were valid in the 2000, 2004, and 2008 presidential elections.
2. The author sometimes does not adhere to the traditional terminology that is used in publications on the Electoral College. For instance, he sometimes calls states and D.C. places, meaning parts of the country eligible to appoint presidential electors. He always makes a distinction between the states and the District of Columbia and never calls D.C. a state. Such an approach underscores the difference, for instance, in deciding the outcome in presidential elections in which electing a President is thrown into the House of Representatives, where D.C. does not have Representatives. Also, he does not use the terminology that is traditional in publications on American presidential elections but may look confusing to some meticulous readers. For instance, instead of the quite commonly used phrase "the number of the received electoral votes is a majority of all the appointed electors" (see similar phrases in [1]), he uses the phrase "electoral votes received from electors who constitute a majority of all the appointed electors" and "a majority of the electoral votes that are in play in the election."
3. All the mathematical considerations relating to the topics comprising the subject of the book are presented in the appendices to the book. In addition, there is a supplement to the book which presents basic mathematical concepts and facts sufficient for understanding the mathematical part of the book. The supplement has the form of an introductory guide to the mathematics of U.S. presidential elections. The guide presents the description, explanation, and illustrative examples of basic concepts and facts from several divisions of contemporary applied mathematics, including classic probability theory and theory of matrix games. Studying the guide does not require any specific mathematical knowledge beyond school arithmetic and is accessible to interested people of all walks of life.

4. To emphasize the difference between statements about the Electoral College and the other parts of the presidential election system, including those made by the author, that have not been proven or officially accepted as parts of the Federal statutes or Supreme Court decisions (no matter how plausible such statements may seem), the author extensively uses the words “seems,” “apparently,” and “may” throughout the book. This approach helps avoid unjustified criticism of opinionated opponents in discussions of the subject of presidential elections when such discussions are conducted at the level of subjectivity and personal preferences of the participants. Also, by attempting to make each chapter and each appendix as independent a part of the book as possible while referring the reader to those parts of the book in which particular statements or assumptions were made first, the author extensively uses the phrases “as mentioned earlier” or “as mentioned in (a particular) chapter.”

5. The Index covers only the entries from the main body of the book, since the appendices use mostly mathematical terms; the reader interested in the mathematics of presidential elections is either familiar or can get acquainted with them by reading the Supplement, where the explanations of these terms are provided.



Understanding the Fundamentals of the U.S.  
Presidential Election System

Belenky, A.S.

2012, XVIII, 426 p., Hardcover

ISBN: 978-3-642-23818-5