In addition to the historic events surrounding the Florida vote, the outcome of the 2000 US Presidential Election has sparked a widespread discussion of the current electoral system. This discussion is not likely to fade away with a final resolution of the election outcome.

The first part of this note points to some problems surrounding the voting logistics. Problems of this type are in the center of the protests and contests of the presidential election in the state of Florida: old and flawed voting machines; non-uniform procedures on the state level, let alone nation-wide level; timing of the election results release; voter participation and turnout.

The second part discusses some controversial properties of the US electoral system. Examples of such properties are the possibility that the candidate winning the most votes nationwide loses the election, the argument that all votes are not equal, and the possibility that the legislature (and not the votes cast in the presidential election) decides the winner. While some alternatives, like electing nationwide popular vote winner, are not likely to find sufficient support in the legislature, it is possible to fix the system without abolishing the Electoral College. The most radical proposal set in this note would have states distribute their electoral votes proportionally to the statewide popular vote with all non-votes added to the candidate who wins the statewide election.
1. Voting Logistics

Many inefficiencies of the various aspects of the voting process, from the actual vote cast to the regulations describing the vote counts and election result protests and contests, have surfaced during the scrutinizing analyses and challenges of the Florida vote in the presidential election 2000. These inefficiencies include:
- methods of handling absentee ballots,
- non-uniformity of ballots and voting equipment,
- use of antiquated, not properly maintained, voting machines,
- allowing media to project and discuss the election results while polling places are still open,
- lack of realistically implementable procedures for any kind of (automatic or requested) recount,
- non-uniform *ad-hoc* recounting standards.

It is clear that some basic preventive measures could be taken to avoid such inefficiencies in the future. For example, it is beyond discussion that it is simply inexcusable to use 19th century voting machines\(^1\) or rely on ballots recorded on punch cards – a 1960s dinosaur of data management. Also, there is a clear need for clarity and uniformity of rules and regulations dealing with ballot design and counting and recounting procedures statewide (for any election on a state-level), and preferably nation-wide. Such improvements ought to find sufficient support in the legislative bodies on both national and state levels.\(^2\)

The issues of absentee voting procedures and media involvement might be more resistant to any substantial changes. In these cases it is harder to argue that any change will improve the voting process. For example, while one could point out that some aspects of the absentee voting process are prone to election fraud,\(^3\) this is *not per se* an evidence that rule ought to be changed.\(^4\) Similarly, a moratorium on all campaign activities as well as on discussions and/or projections of electoral results while polling places are open could be considered a matter of civility.\(^5\) However, it is hard to make anything more than a speculative argument that, e.g., projecting the election winner in Florida while the polling places in the part of Florida that is in the CST time zone are still open, effects the voter turnout and election outcome.

Possible measures geared towards increasing the voter turnout levels should also be looked at as potential improvements of the voting procedures. These could include simplified procedures for voter registration\(^6\) as well as those for checking the validity of

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1. Mechanical hand lever machine was introduced in 1892.
2. Lack of funds should not be an issue – federal government provides hundreds of millions of dollars to cover campaign expenses and some of that money could, for example, easily be diverted towards urgent improvements of the voting equipment.
3. In the Florida 2000 presidential election, the issue of validity of votes sent from abroad without a valid postmark as well as the issue of possible misconduct of applications of absentee ballots came up.
4. It is worth mentioning that relaxed absentee voting regulations are almost endemic to the US electoral system.
5. In many European countries this is mandated by law.
6. One could argue that registering to vote should not be more complicated than, say, buying a weapon.
registration at the polling places.\textsuperscript{7} Also, scheduling an election on a weekend or making the Election Day a public holiday would most likely result in an increased voter turnout. However, an argument could be brought up that increasing voter turnout, which could likely bring more uncertainty about the electoral body and thus the electoral outcome, might not be in the interest of those who want to avoid any possibility of radical shifts in the balance of power.\textsuperscript{8}

No matter what improvements of the voting logistics and process take place, a small possibility for an error will always exist.\textsuperscript{9} Hence, if the difference within two leading candidates in an election outcome is within the margin of such error, a recount is a possibility.\textsuperscript{10} One might argue that it is very likely that we will encounter more and more close elections in the future regardless of the voting procedures and the electoral system used: the more sophisticated political consultants become, the better they will jockey their candidates towards the positions that will split the voters with amazing precision. This doomsday prediction that controversies similar to those surrounding the 2000 presidential election are likely to occur in the future further emphasizes an urgent need for eliminating as many logistical deficiencies and inefficiencies as possible.

\section{The Electoral System\textsuperscript{11}}

\subsection{Background}

The presidential electoral system can be thought of as a combination of 51 separate elections.\textsuperscript{12} The results of these elections are then combined in the form of the votes cast by 538 electors in the Electoral College – the number of electors from each state equals the number of congressional and senatorial seats belonging to that state.\textsuperscript{13} All states, except Maine and Nebraska, commit all of their electors by the winner-takes-all principle: electors are supposed to vote for the candidate receiving the most votes in the state election. Maine and Nebraska commit two of their electors to the statewide winner, while each of the remaining electors is committed to the winner in one of the state’s congressional districts. The candidate receiving the absolute majority of all 538 electoral

\textsuperscript{7} Some issues regarding these procedures in the Florida election were raised.
\textsuperscript{8} It is not too farfetched to speculate that this view might have considerable support among the major forces in both major parties.
\textsuperscript{9} For example, the error in counting due to either imprecision, now matter how small, of the voting equipment, or due to a possibility of human error.
\textsuperscript{10} Inefficiencies of the voting process would not be under such scrutiny of the public if the presidential election 2000 were not too close to call.
\textsuperscript{11} Parts of this section coincide with the text in “2000 US Presidential Election: Too Close To Call” by Pekec and Regenwetter.
\textsuperscript{12} One for each state and one for the District of Columbia.
\textsuperscript{13} The District of Columbia is entitled to the minimal number of electors that a state is entitled to. In other words, D.C. currently has 3 electors.
votes is declared president. If no candidate receives the absolute majority of electoral votes, the vote goes to the House of Representatives.

2.2 Electoral College vs. popular vote.
Most of the criticism of the Electoral College revolves around the possibility that a candidate who gets most popular votes nationwide loses the election. This has happened three times in history (1824, 1876, 1888) and may again materialize in this election. Because this feature of the system has suddenly become a concrete possibility, there has been a flurry of renewed calls for abolishing the Electoral College and adopting a system in which the candidate winning the popular vote is elected.

There are two factors contributing to the possibility of the nation-wide popular vote winner to lose the election. One is the disproportional electoral vote assignment to the individual states: out of 538 electoral votes, 102 votes result from a fixed number of 2 electoral votes per state regardless of their population, while the remaining 436 votes are divided among the states in a fashion proportional to their populations. The other lies in the double aggregation of the votes: the votes are first aggregated on the statewide level in the form of electoral votes which in turn are then aggregated in the Electoral College vote.

Supporters of the popular vote point out that the described property is an anomaly which directly violates the basic principle of democracy: “one person – one vote”, while its opponents argue that any constitutional change to abolish the Electoral College would violate the rights of small states and thus undermine the federal nature of the system. Abolishing the Electoral College would require the support of three-quarters of all states.

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14 The majority of votes of the electors that are present, to be precise. For example, if 25 electors from Florida were not present when the electoral vote is cast, a candidate receiving more than (538-25)/2 = 256.5 votes would be elected president.
15 The House of Representatives votes for one of the top three candidates in the electoral vote of the Electoral College. Representatives of each state cast single collective vote, e.g., Rhode Island gets one vote and California also gets one vote. Interestingly, in 1824, there were four candidates receiving electoral votes, Andrew Jackson (99 electoral votes), John Quincy Adams (84), William H. Crawford (41), Henry Clay (37), none of which secured the majority of then 261 electoral votes. Jackson also won the popular vote and got 40% more votes nationwide than John Quincy Adams. The Congress elected John Quincy Adams.
16 But not in the way that some of the analysts predicted days before the election. Most of these analyses were warning about the possibility of Al Gore winning the majority of electoral votes with George W. Bush winning the popular vote.
17 Plus the District of Columbia.
18 We will refer to these as “congressional” electoral votes.
19 The number being equal to the number of the state’s congressional seats. (The number of the congressional seats is proportional to the population of the state making sure that each state is guaranteed at least one such vote.) The District of Columbia has no congressional representation but one of its three electoral votes could be viewed to be of this type.
20 Smaller states have a disproportional (with respect to population) number of electoral votes. This disproportionality is due to two senatorial seats being guaranteed to each state. (The congressional seats are allocated to states as proportionally to the respective population size as it can mathematically be done.)
and it seems quite unlikely that small states (population-wise) would willingly accept a change that would reduce their strength in the presidential election system.\textsuperscript{21}

In fact, the Electoral College is a compromise system between the one-person-one-vote and the one-state-one-vote\textsuperscript{22} ideals. As already noted, out of 538 electoral votes, 102 votes result from a fixed number of 2 electoral votes per state regardless of the population size. Thus, these 102 votes correspond to one-state-one-vote ideal. The remaining 436 votes, which are divided among the states in a fashion proportional to their populations, could, in principle, very well approximate the popular vote. From this back of the envelope calculation, under the assumption that 436 “congressional” electoral votes well approximate the popular vote, one could conclude that the Electoral College is a hybrid aggregating the popular and the state vote, with the popular vote being \(436/102=4.27\) times more important. Of course, this calculation neglects the fact that the popular vote itself affects the outcomes of state elections, i.e., the very reason why in most of the presidential elections the winner of the popular vote turns out to be the elected president.

Furthermore, the intuition that the 436 “congressional” electoral votes well approximate the popular vote is problematic. The problem is not only in differing voter turnouts across the states, but also in the winner-takes-all nature at the state level. For example, in an extreme situation, it is possible that a candidate wins the majority of these votes by winning by a slim margin in states that combined have slightly over half of these 436 votes, while at the same time experiencing landslide losses in all other states. Formally speaking, (unrealistic) scenarios exist where a candidate wins less than 25\% of the popular vote and gets more than half of the “congressional” electoral votes. The situation is even more extreme in the Electoral College since the 102 “senatorial” votes give extra weight to small states: the percentage of the popular vote needed could be even smaller if a candidate wins most of the small states.\textsuperscript{23} This effect can be observed to some extent in the election 2000. George W. Bush won more states (mainly small ones) than Al Gore who, in turn, appears to be a winner of the nationwide popular vote.

Note that the rules for distributing electoral votes in Maine and Nebraska are also subject to this phenomenon. They simply break down the winner-takes-all statewide election into separate elections, one for each congressional district, and give the remaining two “senatorial” votes to the statewide popular vote winner. The apparent upside of this method is that it eliminates the winner-takes-all effect at the statewide level and relegates it to the level of congressional districts. However, the congressional districts are only temporary units whose boundaries are often redrawn, i.e., they are often results of political battles and sometimes represent nothing more than a compromise partition of a

\textsuperscript{21} Methods of cooperative game theory show that large states have more power in the Electoral College than implied by the actual numbers of electoral votes. However, when these power indices (e.g., the Shapley value, the Banzhaf value) are distributed among all voters in a state, the voters from the smallest states have more voting power than those from the largest states.

\textsuperscript{22} This is a plausible ideal in federate or confederate systems.

\textsuperscript{23} This can be calculated exactly in a straightforward manner by minimizing the total population among all possible sets of states that have a majority of electoral votes. Once such a set is found, a pathological scenario would consist of a candidate winning by a slim majority in all these states and losing in a landslide everywhere else.
state that reflects the balance of power among the two major parties. Basing the electoral system on congressional districts would probably make redistricting an even harder and more contested task.

2.3 Does every vote count?
The winner-takes-all feature of statewide elections lies in the core of much controversy over the Electoral College system. A voter in a state where one candidate won in a landslide might feel that her vote is irrelevant, while a voter in a state where the winner is determined by a slim margin might feel that her vote matters. This discrepancy is much more than a post-election psychological effect: candidates have less incentives to campaign in states where the election outcome is more or less certain and voters in such states have less incentives to vote. This pattern of campaigning priorities clearly took place, not only in the election 2000, but also in previous presidential elections. On the other hand, the votes in states with slim margins between leading candidates seem to be of crucial importance: Florida is a good example for the election 2000.

Should the importance of an individual vote depend on the closeness of the election in a particular state even though the election is on a national level? If so, should several hundred of votes in, e.g., Florida, affect all of the state’s electoral votes? Given the constitutional constraints of the Electoral College, can anything be done to have a system that is closer to proportional representation, without abolishing the Electoral College?

For example, the assignment of all 25 of Florida’s electoral votes depends on several hundred votes difference. It seems unreasonable that such a small number of votes could affect so many electoral votes, let alone the national presidential election outcome itself. If Florida were using the same rule that Maine and Nebraska use for assigning electoral votes, only 2 out of its 25 electoral votes would be affected by the tightness of the race.

Moreover, it is plausible to expect that such a minuscule number of votes (several hundred out of more than 100 million nationwide and approximately 6 million in Florida) ought not to affect the assignment of more than one electoral vote.

This would exactly be the case if the state’s electoral votes were allocated among candidates proportionally to their popular vote counts in that state. In the case of Florida, both Al Gore and George W. Bush would get 12 electoral votes while the remaining 25th electoral vote would go the winner of Florida’s popular vote. If the electoral votes were

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24 It is common for congressional district borders not to match the county borders even when this is a possibility.
25 As well as New Mexico, Oregon, Iowa, and New Hampshire. Bush and Gore concentrated much of their campaign efforts to such closely contested states and essentially ignored most of the states where there were no indications of a potentially close race.
26 Due to the current standings in the Electoral College, both Bush and Gore need Florida’s electoral votes to ensure the absolute majority.
27 Those for the statewide winner. Races within congressional districts were not close, so several hundred votes and therefore small differences between counts and recounts would not change the outcome.
28 Some proportional appointment methods would assign this vote to Ralph Nader. In other words, Al Gore and George W. Bush would get 12 electoral votes each, regardless of who wins the popular vote! In such
distributed proportionally, voters would feel that their vote counted regardless of who won the popular vote in the state. Also, the remorse effect experienced by some Nader voters who would have voted for Gore in a two-candidate Bush vs. Gore election might be mitigated. Proportional representation is not a novel approach: it is used in elections throughout the world. In fact, proportional representation is not novel in the U.S. either. The congressional seats are allocated to the states after each census according to a proportional rule: here states play the role of the candidates, state populations play the role of the votes cast for the candidates in a state-wide election, and 435 congressional seats play the role of the state’s electoral votes.

There are several potentially undesirable features of proportional representation. It assigns votes to minority candidates. For example, if California’s 54 electoral votes were distributed proportionally to the popular vote counts, a minority candidate would need less than 2% of California vote to gain at least one electoral vote.\(^{29}\) In contrast, a minority candidate would need around one-third, exact percentage depending on the rounding method used for the apportionment, of the South Dakota’s votes to claim one of its three electoral votes. Thus, if all states were to adopt proportional representation, small states would gain additional advantage\(^ {30}\) because the likelihood of assigning any of their electoral votes to a third party candidate would be considerably smaller than such likelihood in large states. In other words, proportional representation on a state-wide level could be a suitable compromise: it mitigates the possibility that the nationwide popular vote winner does not win the majority of electoral votes and ensures that every vote in every state counts regardless of the closeness of the contest, while protecting the federalist features that give disproportionate power to the small states.

It is important to note that if only some states were to adopt the proportional distribution of their electoral votes, the impact of the states keeping the winner-takes-all system on turnout and campaigning would be further enhanced. Take Florida as an example: if it were distributing electoral votes proportionally, the prize for all the campaign efforts in a close race would be at most one electoral vote (since both leading candidates would secure 12 electoral votes each provided they keep the race close). In contrast, if, say, New Mexico kept the winner-takes-all system, a close race in New Mexico would likely witness much more serious campaign efforts given the potential of winning all 5 of its electoral votes regardless of the margin of victory. Thus, a win in New Mexico would yield a net gain of 5 electoral votes while the win in Florida would yield a net gain of a single electoral vote. Even though states that would keep winner-takes-all system would benefit\(^ {31}\) from other states that would move towards proportional representation, the voters in the winner-takes-all states might not care about this type of benefit. A voter is likely to primarily care about the impact of her vote rather than the power of the state’s slate of electors in the Electoral College.\(^ {32}\) Thus, if an aspiration is to empower all voters

\(^{29}\) In the election 2000, Ralph Nader would win at least two of California’s electoral votes.

\(^{30}\) And additional attention from the major party candidates.

\(^{31}\) In terms of the importance of winning the state-wide election

\(^{32}\) For example, wouldn’t George W. Bush’s supporters in New Mexico prefer that he got two out of five state’s electoral votes? (George W. Bush got 48% of the votes in New Mexico but lost to Al Gore by a
in the state, whether they support the winner or not, proportional representation could be the system of choice.

Since proportional representation increases the likelihood of some electoral votes being assigned to minority candidates,\textsuperscript{33} the situation in which no candidate secures an absolute majority of the 538 electoral votes would become more likely. A modification to proportional allocation of electoral votes on the statewide level would be a system that would require that electoral votes be distributed only between the top two candidates in the nationwide popular vote count. Such a modification would likely be favored by both major parties since it would further mitigate the potential emergence of a strong third party candidate in the future.\textsuperscript{34} At the same time, this would ensure that the only way the president is not elected by the Electoral College is if two candidates receive exactly half of the electoral votes each.

Allocating state’s electoral votes according to proportional representation would likely have a positive impact on the voter turnout.\textsuperscript{35} The voter turnout could be further enhanced by the following modification: let the statewide popular vote winner get the votes of all registered (or eligible) voters who did not cast their vote in the election. The rationale being that non-vote implies that such person in essence supports the election winner in the state. A low voter turnout would favor the winning candidate, so the underdog would have to make every effort to animate his own supporters, which will result in tightening the race and forcing the favorite to follow the suit by further campaigning in that state. In other words, enhancing the voter turnout would be a necessary part of successful strategies for the candidates. Even though it seems that such a system is tailor-made to solve several inefficiencies of the current electoral systems in statewide elections, it is untested in practice and, thus, unlikely to stand a realistic chance of implementation.

The final remark in this note briefly points out the electoral rules that one could characterize as outdated, inappropriate and undemocratic. These are the rules that allow electors, state legislatures and the House of Representatives to ignore the votes cast in a presidential election. In particular, the electors should be legally bound to vote for the candidate they represent, state legislatures should not be given the right to select their own slate of electors if they choose to do so, and the House of Representatives should have minimal say, if any at all, in determining the winner in the case that no candidate secures the majority of electoral votes.\textsuperscript{36} If there is any aspiration to go beyond

\textsuperscript{33} The possible emergence of strong third-party candidates would not find support within the major parties.
\textsuperscript{34} Potentially, such a change could be imposed by state legislatures instead of on the federal level. However, if applied independently from state to state, this rule could still produce three or more candidates receiving electoral votes. For example, in a three-candidate race in which each of the candidates wins in at least one state.
\textsuperscript{35} E.g., as already noted, the value of the vote would not depend on the closeness of the contest.
\textsuperscript{36} For example, if no candidate secures the majority of the electoral votes, why not elect the candidate who won the nationwide popular vote. Also, a possibility of a run-off if no candidate wins the majority of the popular vote (or close to the majority, say 45%) should be looked at. The drawbacks of run-offs such as
democratic standards of the 18th and 19th century, such changes of the electoral system are urgently needed.

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