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Now More Than Ever, Your Vote Doesn't Matter

A Reconsideration

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JAC C. HECKELMAN

In the spring 2002 issue of *The Independent Review*, Cecil E. Bohanon and T. Norman Van Cott properly dispel the notion that every person's vote matters—an idea that many pundits stated again and again during the controversy over counting ballots in the last presidential election. Bohanon and Van Cott err, however, by stating that “only *Florida's* twenty-five electoral votes and *its* six million voters might be said to have been decisive to the outcome of the U.S. presidential election of 2000. The votes of the other ninety-nine million voters were *not* decisive” (591, emphasis in original). Although George W. Bush eventually was awarded Florida's electoral votes and needed every one of them to be declared the winner, every state with a plurality of votes in favor of Bush was equally decisive. If any of the other states Bush won, even the least-populated state (Wyoming), had favored Al Gore, then Florida's votes would not have mattered at all, in the same way that none of the states favoring Gore was decisive. In general, a state is decisive if switching its electoral-college vote changes the winner. Thus, no state on the losing side is decisive. On the winning side, only those states with fewer electoral votes than the plurality difference of the electoral college vote would not be decisive. Because Bush received only one more electoral college vote than the 270 (or more precisely, one more than

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half of all electoral-college votes) required by the Constitution, every state on Bush's side was equally decisive.

None of this contradicts Bohanon and Van Cott's assertion that no *individual* voter was decisive. It does raise, perhaps, an interesting secondary question not dealt with in their article. For a voter, the relevant issue is the likelihood, evaluated before the votes are tallied, that he or she will affect the election's outcome. In general, did a voter in Florida have a greater chance of affecting the outcome than a voter from another state? As formulated by James Kau and Paul Rubin (1976), the efficacy of voting in a presidential election is the probability that the voter is decisive in his own state multiplied by the probability that the state is decisive. A voter from a small state is more likely to be decisive in a state election, such as a gubernatorial or senate election, compared to a voter from a larger state, but this fact does not necessarily translate into greater efficacy in presidential elections. Because electoral college votes are directly proportional to state population, voters in less-populous states have a greater probability of being decisive in their own state but a smaller probability of their state's being decisive in the election outcome. Bohanon and Van Cott use Gordon Tullock's simple $1/N$ probability function to estimate the likelihood of a tie in the state, which suggests that the efficacies in a presidential election will be approximately equal for voters in every state. Most other probability functions, however, including those referenced but not described in their article, are far more complicated and can alter this conclusion.

Bohanon and Van Cott focus on the use of recounts, however, implying that no voter can be decisive because recounts will be made whenever the election is "close" and noting that votes might not be counted at all because of fraud or mistakes. This issue, however, was not new in the 2000 election. Errors, both fraudulent and unintentional, have always occurred, but previous elections were rarely close enough to warrant concern about a small percentage of miscounts. Mail-in votes, for example, typically are not counted unless the total number of mail-in ballots exceeds the plurality differentials in the state—that is, they are counted only if all the mail-in votes together have the potential to be decisive.

Bohanon and Van Cott argue that the relevant calculus for an individual voter pertains not to the likelihood that all the other voters will split their votes exactly, as usually stipulated, but rather to the likelihood that the other voters will produce a plurality differential that falls exactly one vote short of triggering a recount. Thus, the voter's efficacy of voting is not in breaking a tie, but in bringing about a recount. Bohanon and Van Cott suggest that the probability of this event's occurrence is the same as the probability of breaking a tie, but actually it is even lower. Following their notation, let m be the plurality differential necessary for one voter to affect the outcome, which in their case is the threshold to trigger a recount. In their example, $m = 1,000$. Without recounts, voters would need to determine the likelihood of an exact tie, or $m = 0$. Although decisiveness still rests on a single specific numerical difference, the number of potential voting combinations of all voters that leads to a specific plurality differential is related inversely to the value of m .

Note that in the mathematical formula for the number of combinations of size x (in this case, voters casting their votes for the Democrat) that can be formed from N things (total votes cast), $x = (N + m)/2$, so that the number of possible combinations leading to a plurality of size m is $2(N! / [(N + m)/2]!)$. (In the present application, the number of possible combinations leading to a plurality of size m is doubled because the same plurality differential can be achieved with a plurality in favor of either the Democrats or the Republicans.) Therefore, the greater the value of m , the smaller is the overall number of possible combinations leading to a plurality exactly of size m . Thus, the more skewed the voting distribution needs to be (while the plurality differential is still an exact number), the fewer the voting combinations that can lead to this result for a given population of size N . In other words, the purely symmetric case of an exact tie ($m = 0$) has the greatest possible number of potential voting combinations of any specific plurality differential and consequently is more likely to occur than any other *specific* plurality differential. Therefore, recounts do lower the efficacy of voting, but not for the reasons Bohanon and Van Cott suggest.

The controversy over recounts does lead to one additional insight. A vote matters only if it affects the outcome, whether it does so by breaking a tie or, as Bohanon and Van Cott argue, by triggering a recount. Thus, a vote matters only in very close elections. Although the 2000 election was very close by historical standards, the outcome, however measured, did not turn on a single vote in any state. Yet an election this “close” generated heated debate. Many people still believe Gore should have been declared the winner, and they consider the Bush presidency in some sense illegitimate. Bush’s supporters probably would have reacted the same way if certain court decisions had been reversed, making Gore the winner. This outcome suggests that because of concerns about errors, as Bohanon and Van Cott note, the closer the election, the greater will be the ensuing controversy. Thus, strange to say, if individual votes matter at all, they do so only in those elections the voters don’t accept.

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