Voting Method Field Research November 5, 2024

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[Abstract: It has been known for 240 years that the plurality voting method is seriously flawed. Plurality nevertheless remains in widespread use, largely because of continuing disagreement regarding its best replacement. In 2020, it was argued that the Approve/Approve/Disapprove Voting (AADV) method is very significantly better than other debated methods. An election simulation project was conducted in order to quantify and compare the performance of various methods. The simulation results strongly supported the logic favoring AADV. This project was an attempt to gather data from actual voters during an actual election that could shed further light on this important issue. Within the limitations as discussed, the data do strongly indicate that public elections do not function as they should, and that AADV could achieve the largest improvement of the four methods tested. **]**

Background

Our public elections are not functioning well at all. They have never worked as well as everyone thought they did. There are several (fixable) problems, but the largest single problem is continued use of the plurality voting method (sometimes called first past the post).

Around the time of the American Revolution, two French scholars, Nicolas de Condorcet and Jean-Charles de Borda, pointed out some of the serious problems with plurality. This kicked off a 240-year debate over various alternative voting methods. More recently, it has been realized that plurality is far worse than Condorcet and Borda thought.

In 2020, the Approve/Approve/Disapprove Voting (AADV) method was proposed as a much superior solution to those being debated. (A reference is provided at the end of this paper that provides complete details about AADV.) Two election simulation projects, one in 2019[1] and one in 2020,[2] were carried out as a way to quantify and compare how accurately and consistently AADV, plurality, and other voting methods were able to identify the correct winners in many hundreds of thousands of all kinds of elections. Those results strongly indicated the considerable superiority of AADV.

This project was an effort to have actual voters "test drive" AADV and three other voting methods to see what additional knowledge might be acquired about elections and voters, and to compare the behavior of the voting methods.

Definitions and Terminology

The ***primary and overriding purpose of any and every (public) election*** is to make the "best" choice of the candidates for the office being filled, with the caveat that decision-making power be kept "reasonably dispersed."

A ***voting method*** is the critical mechanism at the heart of an election that performs the function of gathering some specific information from each voter and then processing that information in some manner to select the "best" candidate(s) in each race. Voting methods fall into one of two broad

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[1] Minet, Roy A. 2019, "Election Simulation Sheds New Light on Voting Methods"
[2] Minet, Roy A. 2020, "Follow-on Election Simulation Leads to Definitive Proposal"

categories, ordinal and cardinal. There are hundreds of ordinal methods and hundreds of cardinal methods.

Ordinal voting methods are all those where voters rank some or all of the candidates in the order in which the voter prefers them. Ranked-choice voting (RCV) is a synonym for ordinal voting methods. Only the order of the candidates is used in some way to determine the winner. The best known and simplest ordinal or ranked-choice method is plurality (sometimes called first past the post) which allows voters to rank only their first choice. The second best known ordinal method is Instant Runoff Voting (IRV). IRV is used in ME, AK, France and some other jurisdictions. It might be noted that *every* ordinal method is identical to plurality for one-candidate elections and two-candidate elections.

Cardinal voting methods are all those where voters assign a score to candidates using a scale of two or more values. The scores for each candidate are then used in some way to determine the winner. The best known and simplest cardinal method is Approval Voting (AV) where voters are allowed to score each candidate on a two-valued scale of 0 or 1. AV is used in some smaller jurisdictions.

The best possible choice is that result (chosen candidate) which maximizes voter satisfaction, net of dissatisfaction, when summed over all voters who voted. The candidate with which all voters as a group would be most satisfied is the best and fairest manifestation of their collective opinion.

A simple measure of ***voter polarization*** regarding a candidate or an issue is defined as the quotient of the absolute values of two numbers expressed as a percentage. One number is the total of all voter opinions or satisfactions for those voters who to any degree favor the candidate or issue. The second number is the total of all voter opinions or satisfactions for those voters who oppose the candidate or issue. The smaller of these two numbers is taken as the dividend and the larger of the two is the divisor. If F is the total opinions of voters who favor and O is the total opinions of voters who oppose, this can be more succinctly stated as:

$$\text{Polarization} = 100 \, \text{Min}(|F|, |O|) / \text{Max}(|F|, |O|)$$

Methodology

A team of volunteer researchers worked outside a busy polling place from 7:00am to 7:00pm during the 2024 general election on November 5, 2024. Voters were approached as they were departing, immediately <u>after</u> they had voted. Voters were invited to participate in the testing and evaluation of alternative voting methods.

Willing participants were handed a sheet of instructions (attached Exhibit 1) and a sheet containing four ballots (attached Exhibit 2). Each of the four ballots was for the presidential race only, and each employed a different voting method with its own unique instructions. The four voting methods were plurality (first past the post), instant runoff voting (IRV), approval voting (AV) and approve/approve/disapprove voting (AADV). A volunteer researcher reviewed the instructions, pointing out that each ballot had its own unique instructions. The voters were asked to re-vote the presidential race four times, being careful to follow each ballot's instructions.

There were six different versions of the ballot sheet. The only difference was in the order in which the ballots appeared. The plurality ballot always appeared first. However, the other three ballots

appeared in the 3! = 6 possible permutations of 3 things. These were used in rotation so that substantially equal numbers of each of the six ballot orders were used.

When each voter had completed the four ballots, they were then asked to complete the "Candidate Survey" form (attached Exhibit 3). The volunteer researcher explained that purpose of the survey was to determine how the voter *really* and *sincerely* feels about each of the candidates in some detail; and also, how familiar they are with each of the candidate's positions on the issues that matter most to that voter. It was emphasized that (just as the instructions on the survey form say) they were to answer the two questions about each of the candidates sincerely and without exaggeration.

As each voter completed the survey, the three sheets were stapled together and deposited into the "Ballot Box." After election day, all data were captured in a spreadsheet exactly as provided by each voter, one row per voter.

Limitations and Problems

It was anticipated that obtaining sufficient voter participation by voters would be a problem. That definitely proved to be so. Although turnout at the polling place was an extraordinary 1,610 voters (see chart below), only 184 (11.4%) accepted the invitation to participate.

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Candidate	Election Day Voting	Mail Voting	Provisional Voting	Total Votes
Kamala D Harris Tim Walz Democratic Party	504	250	0	754
Donald J Trump JD Vance Republican Party	1,089	159	0	1,248
Chase Oliver Mike ter Maat Libertarian Party	9	3	0	12
Jill Stein Rudolph Ware Green Party	8	3	0	11
Totals	**1,610**	**415**	**0**	**2,025**

Of course, it was expected that some voters would fail to follow instructions and spoil ballots. However, an unexpectedly large number of them did not read or did not heed the simple, clear, and specific instructions on each ballot. Of the 184 participants, 48 spoiled one or more of their four ballots. Thus, only 136 complete and unspoiled data sets remained. The objective was 300, so this was a significant and disappointing shortfall. Of course, there is no guarantee that all of the 136 voters who did not spoil any ballots understood and followed the instructions, but we will lightheartedly assume that they knew what they were doing. Unless otherwise stated, the results cited are for those 136 voters.

The party affiliations of these voters were:

Republican	67	49.3 %
Democratic	43	31.6 %
Independent	14	10.3 %
Libertarian	7	5.1 %
? (did not say)	5	3.7 %
Green	0	0.0 %

Results and Analysis

What Voters Think — The Candidate Survey was an attempt to obtain voters' sincere opinions about the candidates. One voter marked, "*Very familiar. I have closely followed the candidate.*" for every one of the four candidates. That voter's opinion for their favored candidate was marked as, "*Extremely satisfied*" while all three of the other candidates were marked, "*Extremely dissatisfied*." Although that could be the voter's sincere opinions, almost certainly it is not. Instead, it appears to be an attempt at strategic manipulation of the data. This emphasizes *the extreme difficulty of obtaining <u>sincere</u> opinions about the candidates from voters*. It also suggests that voters probably marked the ballots as strategically as they would in an actual election – a point that was of some concern. The survey results are the best information we have and likely can be relied upon as "somewhat more sincere" than the marking of ballots.

Voters were asked to indicate their sincere opinions about the candidates on a scale of –3 to +3. They were also asked to say how much they know about each candidate on a 0 to 3 scale:

3	Extremely satisfied	3 Very familiar. I closely follow this candidate.
2	Satisfied	2 Familiar
1	Mildly satisfied	1 Only slightly familiar
0	No opinion one way or the other	0 Not familiar with the candidate at all
– 1	Mildly dissatisfied	
– 2	Dissatisfied	
– 3	Extremely dissatisfied	

The correct winner of an election should be the candidate with which the voters are overall most satisfied. Below are the average satisfactions of voters from the survey:

"Raw" average satisfactions	Satisfactions weighted for knowledge
Oliver + 0.066	Oliver + 0.891
Stein – 0.184	Harris + 0.065
Harris – 0.191	Trump – 0.159
Trump – 0.206	Stein – 0.290

Clearly, voters did not think very highly of any of the candidates. In fact, net satisfactions generally were negative – meaning <u>dis</u>satisfaction! The best was Oliver's weighted satisfaction of 0.891, which is a bit less than "Mildly satisfied" on the –3 to +3 scale! Furthermore, this value derives from a relatively small percentage of voters who had some knowledge of the Libertarian candidate. Here is the knowledge that voters said they had about each of the candidates viewed in two ways:

	Average voter knowledge (0 to 3)		% voters either "familiar" or "very familiar"	
Trump	2.50		Trump	91.2 %
Harris	2.36		Harris	86.8 %
Stein	0.46		Stein	11.8 %
Oliver	0.40		Oliver	11.8 %

Another interesting dimension of voters' opinions is their polarization.

"Raw" voter polarization			Polarization weighted for knowledge	
Harris	84.6 %		Harris	96.3 %
Trump	84.2 %		Trump	88.5 %
Oliver	76.9 %		Oliver	21.0 %
Stein	50.0 %		Stein	56.1 %

Note that polarizations for Stein and Oliver derive from only a handful of voters because voters were so poorly informed about these two candidates. Voters were highly polarized about Harris and Trump; they were noticeably less polarized about Oliver and Stein, to the extent that the Oliver and Stein data can be considered statistically significant.

These results of the Candidate Survey have to be taken as the best representation of the opinions of the particular 136 voter who participated. They are prima facie evidence that this election could not and did not work nearly as well as it should have. There is no way voters could elect a candidate with which they were well satisfied as a body when no such candidate was on the ballot. Another serious problem is that a very large percentage of the voters had essentially no knowledge of half of the candidates that appeared on their ballots. There is no reason to expect that these sad circumstances are unique to this particular election.

Plurality — The plurality voting method restricts voters to indicate only their first choice of the candidates. It is the simplest ordinal voting method.

	First Choices	% of First Choices
Trump	65	49.2 %
Harris	63	47.7 %
Oliver	4	3.0 %
Stein	0	0.0 %

Instant Runoff Voting (IRV) — The instant runoff voting method allows voters to rank up to three of the candidates in the order of each voter's preference. It is another one of the ordinal (or ranked choice) methods. If a candidate receives more than 50% of the first choices, that candidate is crowned the winner. Here were the first choices:

	First Choices	% of First Choices
Trump	65	48.5 %
Harris	64	47.8 %
Oliver	5	3.7 %
Stein	0	0.0 %

Clearly, these first choices are virtually identical to those made with plurality. However, Trump cannot be named the winner as he was with plurality because he did not receive more than 50% of the first choices. Instead, the instant runoff commences. The candidate receiving the fewest first choices is eliminated and the second choices (if any) on those ballots are then counted as first choices. An advertised benefit of this is that voters will vote sincerely for their true first choice instead of for the "lesser evil." Quite obviously, this IRV feature had no effect at all, at least for these voters.

Stein had the fewest first choices (0), and is eliminated. However, since no voter ranked Stein first, there are no second choices to promote to first choices. So, eliminating Stein in this second round results in no change for the remaining three candidates and there still is no winner.

Moving on to the third round, Oliver has the fewest first choices (5) and is the next to be eliminated. Of the five who ranked Oliver first, three had Stein as their second choice. Stein has already been eliminated, so those ballots are exhausted (can have no further impact). One of the five had Harris as the second choice and one had Trump as the second choice. Adding 1 for Trump and 1 for Harris, the third round tally is now:

	First Choices	% of First Choices
Trump	66	50.4 %
Harris	65	49.6 %

Trump now has more than 50% of the remaining ballots (those not exhausted) and is declared the winner.

Approval Voting (AV) — Voters may approve as many candidates as they think would be acceptable for the office. This more obviously removes or reduces the motivation to vote for the lesser evil instead of voting for the true first choice. However, when approving of more than one, there is then no way to indicate which one is the first choice. The candidate receiving the most approvals is declared the winner. Here are the AV results:

	Approvals	% of Approvals
Harris	68	39.1 %
Trump	66	37.9 %
Oliver	21	12.1 %
Stein	19	10.9 %

Harris is the winner with 39.1% of approvals. AV appears to more successfully suppress vote-for-the-lesser-evil pressure; about ten times as many voters registered an approval for either Oliver or Stein (compared to either plurality or IRV). As the simplest cardinal method, AV is far simpler than IRV as well.

Approve/Approve/Disapprove Voting (AADV) — Each voter may approve of either 0, 1, or 2 of the candidates. In addition, each voter also has the option to disapprove of either 0 or 1 of the candidates. Each candidate's disapprovals subtract from that candidate's approvals leaving net approvals. The candidate with the largest number of net approvals is the winner. A candidate *must* have more approvals than disapprovals to win! Here are the AADV results:

	Net Approvals	% of Net Approvals
Oliver	18	33.3 %
Harris	16	29.6 %
Stein	14	25.9 %
Trump	6	11.1 %

It is immediately apparent that AADV results are significantly different from those of the other three methods. First and foremost, AADV is the only voting method of the four which identifies the same winner that the voters said they would be most satisfied with in the Candidate Survey. The other methods limit voters to only expressing satisfaction with some candidates. A voting method's ability to identify the best candidate (in accordance with the definition given above) has to be severely crippled if it ignores voters' dissatisfactions.

Since AADV allows both approvals and disapprovals, it provides some insight into polarization, which is not possible with the other methods.

	Approvals	Disapprovals	Net Approvals	Polarization
Oliver	20	- 2	18	10.0 %
Harris	68	- 52	16	76.5 %
Stein	14	- 0	14	0.0 %
Trump	67	- 61	6	91.0 %

Clearly, highly polarizing candidates do not fare well because offsetting approvals and disapprovals result in greatly reduced net approvals. This is altogether fitting and proper and is a more accurate reflection of voters' low net satisfactions. In extreme cases, candidates could even be disqualified by negative net satisfactions (more disapprovals than approvals). Thus, divisive candidates would be less likely to win primary elections and are less likely to be nominated. Winning candidates are more likely to be those with broad appeal and few negatives. Instead of being in the position of having to vote for the lesser evil, voters would instead be voting for the better good — much healthier!

There are quite a number of public elections where only a single candidate appears on the ballot. These are sham elections over which voters have zero control — the candidate always wins. Employing AADV puts voters in the driver's seat and gives them the power to either accept or reject that candidate.

AADV is a cardinal method which can be viewed as an improved version of AV. Complete descriptions, rules, and notes for the AADV method, along with GADV (a generalized form to be used for multi-winner races), are provided in Exhibit 4.

Summary Chart — The chart below graphically compares the results of the four voting methods. Note that the results shown for IRV are the first choices from the first round.
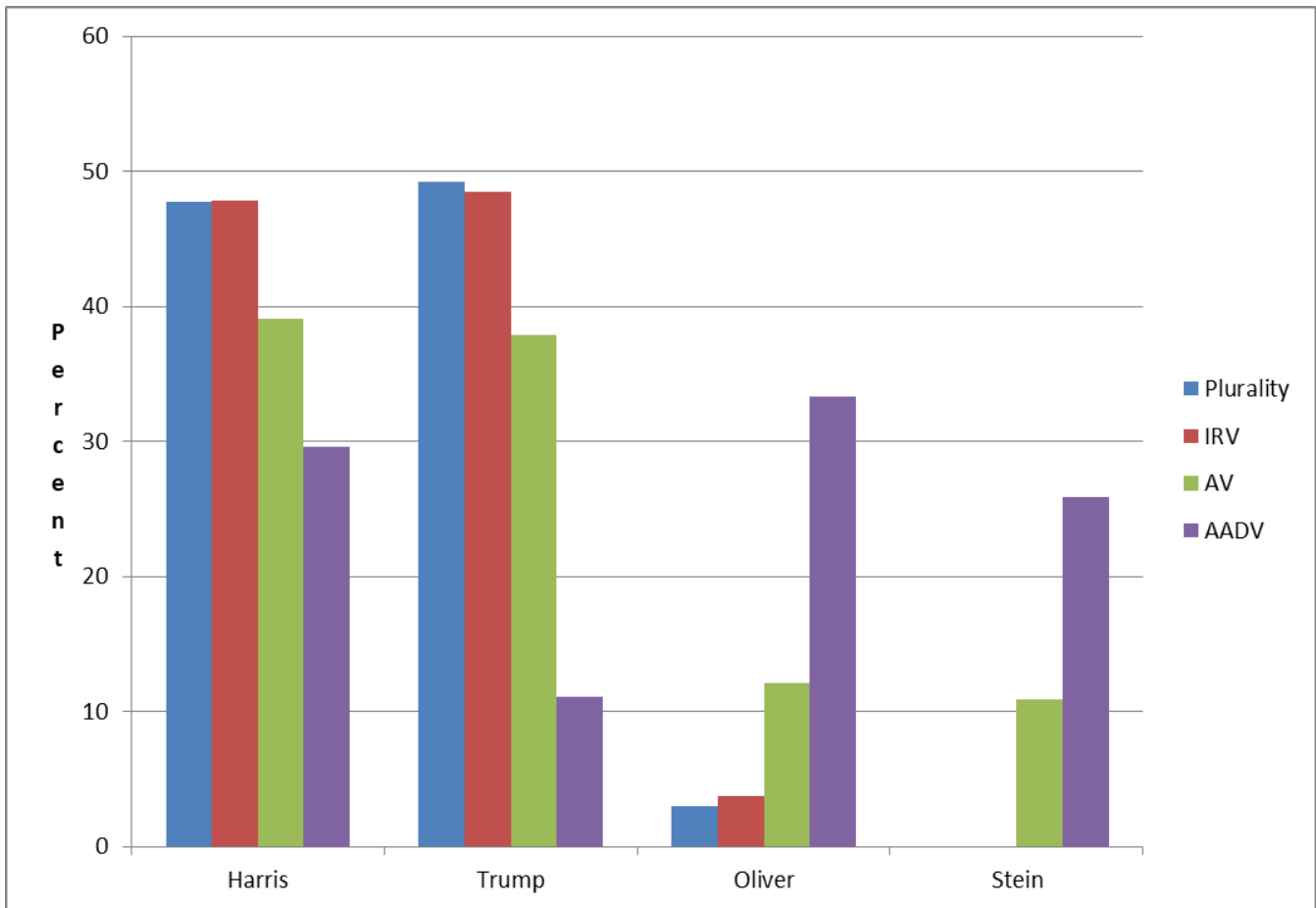
Conclusions

Replacing plurality with a very much better voting method definitely could improve the functioning of public elections. Indications are that the improvement would be so dramatic as to be qualitative.

It is important to always bear in mind that *the best choice of the candidates in any election is the one which maximizes the satisfaction, net of dissatisfaction, of the voters who voted*. The results demonstrated that the real-world voters who participated in this research project did an exceptionally awful job of selecting the correct winner in the 2024 presidential election using plurality when compared to the winner indicated by those same voters in the Candidate Survey. The survey certainly is not perfect, but must be considered the best determinant of the correct winner that could be obtained within the scope of this project.

The IRV method offered substantially no improvement over plurality. Results were virtually identical.

The AV method did provide a significant improvement over plurality and over IRV. AV results were more closely in line with the survey results.

The AADV method was better still. It made a dramatic improvement and its results were fairly closely in accord with the survey.

There were no inconsistencies between the real-world results obtained by this (unfortunately rather limited) project and the theoretical results obtained in the referenced election simulation projects of

2019 and 2020. The relative performance of the four methods tested was very much the same as predicted by the simulations and was confirmatory of those results.

The Candidate Survey starkly revealed that, in addition to not liking any of the candidates, voters were familiar with only two of the candidates and were predominantly ignorant of the other two. These facts are further evidence of how poorly elections function.

The best strategy to win a plurality election is to nominate the most divisive candidate in order to motivate a party's base voters to get out to the polls. The vote-for-the-lesser-evil pressure is so strong that substantially all voters do vote for the lesser evil. Thus, one of the divisive candidates always wins. That being true, why would anyone need to know anything about any other candidates? The media don't cover such candidates and they are barred from debates, so voters would be lucky to even realize there are any other candidates until they see them on their ballots. That toxic, degenerative situation would change quickly if AADV were correctly revealing that divisive, polarizing candidates actually have very low net voter satisfactions.

For those interested in more information, an in-depth treatment of these and other election problems can be found in chapters 8 and 9 of *Everything* by Roy A. Minet, ©2024, available at Amazon, Barnes & Noble, etc.

Exhibit 1

Thank You for Volunteering to

Help Evaluate New and Better Voting Methods!

It has been known for 240 years that the plurality voting method (the voting method you just used to vote in this election) does not work well. In recent decades, it has become clear that plurality is much worse than previously thought. In addition to other serious problems, it is a significant cause of the increasing polarization we are suffering in our country.

One of the main reasons plurality is still being used is that there has been much confusion as to which of many other voting methods is the best replacement. Today, we need your help to test and evaluate three of the possible replacements for plurality: Instant Runoff Voting (IRV), Approval Voting (AV), and Approve/Approve/Disapprove Voting (AADV).

Attached to this sheet is a sheet containing four different ballots for just the 2024 presidential race. **Each ballot uses a different voting method and has its own instructions.** The first ballot is a plurality ballot. We ask that you fill that in the same way that you just voted. This is important as it is what will enable us to compile statistics comparing the performance of the three new methods to plurality. The remaining three ballots are for IRV, AV and AADV. ***Please read and <u>follow the instructions on each ballot carefully </u>and mark each of the ballots as though it is your vote in the 2024 presidential race***.

Please leave this sheet and the sheet with the four ballots stapled together. After marking all four ballots, hand these two sheets to the person at the ballot box on your way toward the rear exit.

If you have any questions, one of our researchers will be very glad to help you.

This information will be used *only* to compile statistics to evaluate the behavior of the voting methods being tested.

Please indicate your voter registration so we will be better able to compare results with those for all voters voting at this polling place.

☐ Democrat ☐ Green ☐ Libertarian ☐ Republican ☐ Other/Independent

Optional: If you would like to receive information regarding the results of this research, please legibly provide your name and e-mail address below.

Name_____ Email_____

Exhibit 2

Plurality Ballot

Note: This is the same voting method you just used to vote in the 2024 election. Please vote the same way.

Instructions: Vote for one candidate by marking an X in the corresponding box.

For President of the United States

☐ Kamala D. Harris   Democratic

☐ Donald J. Trump   Republican

☐ Chase Oliver   Libertarian

☐ Jill Stein   Green Party

☐ Write-in _____

Instant Runoff Ballot

Instructions: Mark an X in the appropriate boxes to indicate the order in which you prefer up to three of the candidates.

For President of the United States

1st   2nd   3rd

☐   ☐   ☐   Kamala D. Harris   Democratic

☐   ☐   ☐   Donald J. Trump   Republican

☐   ☐   ☐   Chase Oliver   Libertarian

☐   ☐   ☐   Jill Stein   Green Party

☐   ☐   ☐   Write-in _____

Approval Ballot

Instructions: Mark an X in the box beside any candidate or candidates with which you would be satisfied to hold the office.

For President of the United States

Approve

☐ Kamala D. Harris   Democratic

☐ Donald J. Trump   Republican

☐ Chase Oliver   Libertarian

☐ Jill Stein   Green Party

☐ Write-in _____

Approve/Approve/Disapprove Ballot

Instructions: Mark an X in the "Appr." box to approve either 0, 1, or 2 of the candidates. Also mark an X in the "Disappr." box to disapprove either 0 or 1 of the candidates.

For President of the United States

Appr. Disappr.

☐   ☐   Kamala D. Harris   Democratic

☐   ☐   Donald J. Trump   Republican

☐   ☐   Chase R. Oliver   Libertarian

☐   ☐   Jill E. Stein   Green Party

☐   ☐   Write-in _____

Exhibit 3
Candidate Survey

Thank you <u>very</u> much for helping with this important election research! This is the last thing we ask of you. Please answer the two questions below about each candidate. This information will be used ONLY for research purposes. Only statistics (totals and averages of the data) may be made public.

First Question: Please assume that each candidate has actually been elected as our next president. How satisfied or dissatisfied would you be? Please try to answer honestly and without exaggeration. Write an A, B, C, D, E, F, or G on the line before each candidate's name.

- A. Extremely satisfied.
- B. Satisfied.
- C. Mildly satisfied.
- D. No significant feeling one way or the other.
- E. Mildly dissatisfied.
- F. Dissatisfied.
- G. Extremely dissatisfied.

_____ Kamala D. Harris

_____ Chase R. Oliver

_____ Jill E. Stein

_____ Donald J. Trump

Second Question: How familiar are you with the candidate's positions on the issues that matter to you? Please write an A, B, C, or D on the line before each candidate's name.

- A. Very familiar. I have closely followed the candidate.
- B. Familiar.
- C. Only slightly familiar.
- D. I am not familiar with the candidate at all.

_____ Kamala D. Harris

_____ Chase R. Oliver

_____ Jill E. Stein

_____ Donald J. Trump

Optional comments on the alternate voting methods:

_____

_____

Thank you again for your tremendous help. Have a nice day, and may the best candidate win!

Exhibit 4

AADV Instructions for Voters and Election Officials

Because of its simplicity, AADV is normally the recommended voting method (rather than BAWV). It is directly scored and also has a generalized form which enables it to be used both for single-winner and multiple-winner contests.

AADV Ballot

	Approve	Disapprove
Candidate A	☐	☐
Candidate B	☐	☐
Candidate C	☐	☐
Candidate D	☐	☐

AADV Instructions for Voters: Mark an "**X**" in the "**Approved**" box for any one or two candidate(s) (if any) that you really like and believe would be the best one(s) to win this race. Mark an "**X**" in the "**Disapproved**" box for any one candidate (if any) that you strongly believe would be the worst choice and which you would not want to win this race. If you do not know enough about a candidate or do not have a strong opinion one way or the other, leave both boxes unmarked. Do not mark more than one box for any single candidate.

AADV Instructions for Election Officials: Disqualify any ballots which have more than two candidates marked "Approved." Disqualify any ballots which have more than one candidate marked "Disapproved." Disqualify any ballots which have more than one box marked for the same candidate. Total the "Approved" votes for each candidate; call this total "A." Total the "Disapproved" votes for each candidate; call this total "D." Add "A" and "D" for each candidate; call this sum "V." Eliminate any candidate whose "V" is less than one plus two percent of the largest "V" of any single candidate (rounded to the nearest number of voters). Subtract "D" from "A" for each remaining candidate; call this difference "N." Eliminate any candidate which has a zero or negative "N." The remaining candidate (if any) that has the largest positive "N" is the winner.

GADV (Generalized Approve/Approve/Disapprove Voting): Generalized Approve/Disapprove Voting provides for races which have any number of winners (e.g. electing multiple school board members). When electing n winners, voters may approve up to n + 1 candidates and disapprove of (n + 1)/2 candidates (use integer division or round down). The instructions to voters and for election officials are basically the same as above except for the number of candidates voters may approve and disapprove. The winners then are simply the candidates having the top n positive net scores.

NOTES:

1. User-friendly electronic voting supervision could easily prevent spoiled ballots and therefore eliminate the need to check for and disqualify these during the tally process. Software (called Election Manager) is available which can completely automate and run elections (including touch screen voting) using either the AADV or Plurality voting methods. The tally process for AADV is completely automated.

2. It is possible, though unlikely, that there could be no winner; that is, no remaining candidate with a positive "N". (Candidates with such "high negatives" would simply not be nominated, especially if AADV were used during the nominating process.) It would, of course, be easy to provide a rule to crown the "least awful" candidate the winner. But it does not seem wise to elect a candidate that more people dislike than like. Therefore, if there should be no winner, another election should be held. No candidate that received a zero or negative "N" should be allowed to run again. This is a refinement of the common practice of always having the option to vote for NOTA (None Of The Above). It is a defect of Plurality, IRV, Approval, STAR, Score and virtually all other voting methods that they are unable to sensibly handle this situation (they can easily force the election of a candidate disliked by a majority of voters).

3. Because it is at least a possibility that all candidates on the ballot could be pretty "lackluster," the winning net vote total could be fairly low. Conceivably, a write-in (or other obscure) candidate could then achieve a winning score with a very few voters. That might very well be the best outcome, but many people would find it disquieting. To keep a virtually unknown candidate from winning with a very small number of votes, it is required that a candidate must have received at least a "reasonable" amount of voter interest in order to qualify. Therefore, the total number of voters weighing in on each candidate (either for or against) is totaled to obtain "V." Any candidate is eliminated that has a "V" less than one voter plus two percent of the largest "V" of any single candidate (rounded to the nearest voter). (See the specific tally instructions for AADV for greater clarity.) Results should be displayed showing "A," "D" and "N" in order of descending "N," followed last by any candidates disqualified for low voter interest in order of descending "V."