Make Voting Count: 
an Experiment in Alternative Voting Methods

Our research team – a subcommittee of the Politics and Electoral Reform working group of Occupy Wall Street – has developed an experimental electronic platform that allows us test three alternative voting methods against the traditional voting method employed in the United States. To date, we have conducted two major data collection drives using our program: the first was performed at a number of Occupy Wall Street events in spring 2012, and the second was conducted as an exit poll style survey at voting places in New York City on Election Day 2012.

This report will provide background on the group itself, explaining what motivated us to focus on the development of an experiment investigating alternative voting methods. Next it will describe how the experiment works in some detail, and present the results of our first two data collection drives. Finally, it will relay some of the responses we received from participants in the experiment, and report on our current plans as we move forward with the project.

Background

It is no coincidence that, over the past century, many of the changes to our electoral system implemented by Democratic and Republican party lawmakers serve to maintain, reproduce and strengthen the hegemony of these two particular political factions (ex. highly restrictive ballot access laws, closed partisan primaries, capping the number of representatives in government, and so on). The Politics and Electoral Reform working group was founded in September 2011 – during the second week of the Occupy Wall Street demonstration at Liberty Plaza in downtown Manhattan – in order to brainstorm proposals that would address the myriad forms of systemic political and electoral corruption
that have come to define the Republican-Democrat two-party state. Over the course of the next two months, dozens of individuals participated in the group's near-daily meetings, and many more participated in online discussions, contributing to the development of a document that would eventually become known as *People Before Parties: Recommendations for Electoral Reform*. That document called for a new spirit of experimentation in self-government and identified twelve areas for potential reform of electoral system.

Here it is worth noting that, as the Occupy Wall Street movement spread across the country and around the world, local and national media hysterically demanded to know “what do these protesters want?!” but few took any interest in the proposed reforms that took shape inside this group, though its proposal would eventually be consented upon by the Occupy Wall Street General Assembly in early December 2011. The document reads in part:

> Government of the people, by the people and for the people has been transformed into government of the people, by the parties, for entrenched interests. The centralization of political power in the hands of two narrow political factions at all levels of government is neither democratic nor republican. No party system whatsoever is mandated by the U.S. Constitution. The two-party system is incapable of providing adequate representation for the many diverse interests constitutive of the American electorate. Lawmakers representing these entrenched factions have rigged our electoral system to ensure their continued monopoly on public office . . . Our government does not represent the interests or will of the people. It is time to institute free and fair elections in the United States. In the federal system, the states are the laboratories of democracy. We urge the people of states, localities, and General Assemblies nationwide . . . to deliberate on radical reforms that can help break the ruling political monopoly in government through free and fair elections, and put people before parties.

The proposal then goes on to recommend experimentation with, and the implementation of: alternative voting methods, independent non-partisan redistricting, smaller and more localized districts, proportional representation, the expansion of franchise, term limits, ballot access reform, primary election reform, initiatives and referenda, reform of the vote tabulation and counting process, holiday voting, and fusion voting.

The idea to develop and conduct an experiment in alternative voting methods had been percolating in our group for some time, and, after presenting the *People Before Parties* document to the...
Occupy Wall Street General Assembly in December 2011, a subgroup was formed to bring that idea to fruition. But why focus on voting methods?

**Why Focus on Voting Methods?**

Our electoral system should promote principled, participatory self-government, and provide a level playing field for all voters and all candidates for elected office. Yet, year after year, voters find themselves forced to choose between the lesser of two evils and, as is widely believed, often cast their ballots for candidates they do not support, if they even vote at all. The result is a government in which power is centralized in the hands of two narrow political factions that are incapable of providing adequate representation for the people they ostensibly represent.

The plurality voting method, also known as first-past-the-post, is widely viewed as a major cause of this state of affairs. Plurality voting tends to reduce choice by favoring the development of a two-party system, and this, in turn, has resulted in one-party rule in many states across the country. The observation that plurality voting favors the formation of a two-party state was first made by French sociologist Maurice Duverger in the middle of the 20th century. This effect results from the strategic choices of individual voters acting within the constraints of the plurality system of voting.

Among political pundits, it is widely asserted that in the U.S. political system a candidate need only garner 50% +1 votes in order to win an election. Yet, like so many of the so-called facts bandied about by the political press, this is entirely false. Under the plurality method of voting, a candidate only needs to secure a plurality of the votes in order to win the election, hence the name of the system. In a competitive three person race, a candidate could conceivably win an election with 34% of the vote, assuming that the other two candidates received upwards of 30% support from the electorate. For example, in Maine's gubernatorial election in 2010, Republican Paul LePage won with 38.33% support, followed by Independent Eliot Cutler with 36.5%, and Democrat Libby Mitchell with 19% and Independent Shawn Moody with 5%. In the winner-takes-all plurality system, there is no effective
difference between a candidate who wins with 76% support and one who wins with 25% support.

It is for this reason that many voters engage in so-called strategic voting. So, for example, progressive-leaning Independents may cast their ballots for a Democrat they do not support, rather than a Green whom they do support, in order to prevent the election of a Republican whom they dislike more than the Democrat. Similarly, libertarian-leaning Independents may cast their ballots for a Republican they do not support rather than for a Libertarian whom they do support in order to prevent the election of a Democrat whom they dislike more than the Republican. In other words, many voters do not cast their ballots for candidates they support, but rather against the major party candidate they dislike more: they support the lesser of two evils between Tweedle Dumb and Tweedle Dumber in the Democratic and Republican parties. Given the fact that so many people do not cast their ballots for the candidates who best represent their views and interests, it should be no surprise that the result is a government that does not represent the views and interests of the people. Fortunately, however, there are viable alternatives to plurality voting which can be implemented at the local, state and federal level, that do not as easily lend themselves to this form of strategic voting.

Beyond this motivation, there were a number of other reasons why we decided to develop an experiment that would allow us to compare alternative voting methods with the traditional method employed in U.S. elections. First, it is constitutionally mandated that the manner of holding elections is controlled by states and localities. States can implement alternative voting methods independently of one another and the federal government, and localities can do the same independently of their state's government. A city, town or county need not go through the federal or state government to implement changes to its own voting methods, and this thus represents a reasonable, executable, electoral reform that can empower people at the local level. Indeed, there are a number of cities and towns around the country that already use alternative voting methods, the largest being San Francisco, which utilizes instant runoff voting in its elections.

Secondly, to the best of our knowledge, no similar experiment has been conducted to date.
There are studies of how individual alternative voting methods might compare with the traditional method using simulations and mathematical models – and, as already mentioned, one of the alternative methods we tested (Instant Runoff Voting) is already used in a number of municipalities in the United States –, but there appear to be few, if any, studies that investigate how the same sample of individuals behaves, both at the individual level and in the aggregate, under a number of different voting methods. Finally, our experiment serves a significant educational function by providing participants with a concrete, practical experience of a number of alternative voting methods side by side with the traditional plurality system.

At the outset, there were a number of questions which we sought to answer: how do individual and aggregate voting behaviors change when not constrained by the strategic logic of the plurality system? What can we conclude about plurality voting when we compare it to the alternatives? On the assumption that there is no ideal voting method, can we say that some are better than others? If so, which are superior to plurality? What, then, does our model test and how does it work?

The Model

For the sake of simplicity, we chose to focus on a discrete number of alternative voting methods that can be implemented under single winner electoral systems, thus, systems such as proportional representation were excluded from the present test. On our model, each participant in the test answers the same ballot style question four times, under four different voting methods. Research into the most prominent alternative voting methods suggested a test comparing plurality voting with score voting (sometimes called range voting), approval voting and instant runoff (i.e. ranked choice) voting.

Under **plurality voting**, each voter casts a ballot for one and only one candidate. The candidate with the most votes wins. Under **ranked choice voting**, respondents rank their top three choices in their order of preference and the results are calculated as an instant runoff. Under **score voting**, each voter rates each candidate on a scale from 0 to 5. The candidate with the most cumulative points wins.
Under **approval voting**, participants indicate whether or not they approve or disapprove of each candidate, and may approve of multiple candidates. The candidate who receives the most approvals wins.

The software program used to conduct the experiment was developed by the group and coded by one of our members. The application is uploaded onto an iPad and this device serves as our mobile voting station when conducting the experiment. When conducting the experiment, potential participants are approached by a member of our survey team, asked if they would like to participate in the experimental survey, and then they are handed the device, and the program guides them through the test.

The program has undergone a number of changes over the last year. In its first iteration, we were concerned about the amount of time it would take to complete the test. Thus we decided that each participant would only answer the single ballot style question under three of the four methods the program tests: the plurality method, and then two of the three alternative methods, randomly determined by a program algorithm. However, after our first large scale data collection drive we found that participants were happy to take the test and were often disappointed that it was over so quickly. Thus in the second iteration of the program, it was changed so that all participants answer the prompt under all four of the methods under consideration.

**The First Major Test**

The sample from our first major test includes the responses of roughly 315 individuals who agreed to participate in the survey. These individuals were approached by a survey team member at Occupy Wall Street events between April and May 2012. Test sites included Liberty Plaza, Union Square, Bryant Park, Times Square, and Central Park. We relied on the honor code to ensure that no individual provided more than one response to the test, and, based on the team's experience, we are confident that there were few, if any, double votes.
For this test, participants were asked to respond to one question, which polling organizations call the “generic ballot”: if this year's elections were held today, what party's candidates would you favor? Six choices were listed on our electronic ballot in a randomly determined order (Democratic Party, Green Party, Independent candidates, Republican Party, Libertarian Party, and the Socialist Party) and a write-in option was provided under each of the four methods.

Since the experiment was conducted at Occupy Wall Street-related events in New York City, the sample contains a great many responses from Occupy Wall Street supporters, but also includes those of interested passers-by, whether locals or tourists. We did not collect information from any individuals other than their responses to the single survey question, and hence we do not have a demographic profile of the overall sample of this test.

Our intention in this study was not to collect a statistically random sampling of the country's overall population. Limited resources put such an effort beyond our reach. Given our site selection, however, we may well have something approaching a statistically random sampling of individuals who visited or participated in Occupy Wall Street events last spring. Indeed, this project represents one of the largest samplings of Occupy Wall Street demonstrators to date. A Fordham University survey of Occupy Wall Street demonstrators from October 2011 obtained 301 responses. That same month, a similar survey performed by Douglas Schoen's polling firm relied on a sample of 198 respondents.

As previously stated, on this iteration of our program, every respondent answered the generic ballot question under three of the four voting methods we tested: plurality and two of the three alternatives, the latter determined randomly by a program algorithm. We thus obtained 316 responses to the question under the plurality method, 216 under range voting, 208 for approval voting and 208 under the instant runoff.

The findings of the test suggest that plurality voting results in anomalous outcomes which are not representative of the overall sample. Simply put: the outcome of the plurality system was not reproduced by any other method, but the results of the three alternative methods converged with and
substantiated one another. Plurality was the only method under which the Democratic Party came out on top among the individuals in our sample, though its support was quite shallow, winning with a plurality of 34.8%. On the other hand, when not constrained by the strategic logic of the plurality vote, respondents were capable of broad consensus in favor of a number of alternatives to the Democrats. Under all three of the other methods, the Green Party was the overall favorite, with the support of 74% of respondents under approval, 68.9% support under score, and a 46.6% plurality victory in the instant runoff. Furthermore, Independent candidates and the Socialist Party bested the Democrats under approval and score. On the ranked choice ballot, the Democrats came in second place with 41.3%.

Under the plurality method, we collected 316 responses to the survey prompt. On our model, every respondent answered the poll question under the plurality method, and the plurality prompt was the first tested for every response. As stated above, the question we employed was a variation of what polling organizations call the “generic ballot”: If this year's elections were held today what party's candidate's would you favor? Participants were provided with a choice of the Democratic Party, Green Party, Independent candidates, Socialist Party, Republican Party and Libertarian Party. There was also a write-in option.
The plurality vote resulted in a clear outcome, but with very shallow support for the top vote-getter. Of those polled, 34.8%, or 110 respondents, opted for the Democratic Party, which was followed by the Green Party, which was chosen by 23.1%. Independent candidates took the third spot with 16.5%. The Socialist Party was chosen by 7.6%, while 3.16% preferred the Libertarian Party and 2.53% opted for the Republican Party. The write-in option was utilized by 12.34% of respondents, among whom a variation of “none” or “none of the above” was the most common choice at 6.33%. The remaining write-ins, 6.01%, were spread out over a variety of options, which we grouped as Miscellaneous. Among these were the names of other third parties such as the Freedom Party and the Revolutionary Communist party, the term Anarchist, Occupy Wall Street and the names of individuals such as Vermin Supreme.

Under the plurality voting system, the winner need not garner any specific threshold of support, but must only receive more support than any other option. In other words, the winner needs only to obtain the support of a plurality of respondents, not a majority. Thus even though a significant majority of respondents – 65% – did not support the Democratic Party in the plurality vote, the Democratic Party nonetheless took the top spot in the poll as the non-Democratic Party majority was split between the other options.

To remedy this defect, some polities require that a runoff election between the top two plurality vote-getters must follow the general election to ensure a majoritarian outcome. For the same reason, the supporters of the plurality method and self-described pragmatists urge the electorate to engage in strategic, lesser of two evils, voting to avoid vote splitting. This problem, however, can also be addressed by employing alternative voting methods.

The shallowness of the support for the Democratic Party in this sample under the plurality method was underscored by the outcomes of the three other systems we tested. Plurality was the only method in which the Democratic Party prevailed. In all three other methods, the Green Party was the favorite.
Let's take a look at the results for the **approval** vote. Under approval voting, voters indicate whether they approve or disapprove of each candidate and may approve of multiple candidates. The candidate who is approved by the largest number of voters wins. Unlike the plurality system, approval voting does not resemble a zero-sum game.

In our sample, 208 individuals participated in the approval vote. A valid response required that at least one of the values submitted by respondents differed from the others. Participants were not able to submit a ballot on which they approved or disapproved of all available options. The result was a fairly close contest between the Green Party option and Independent candidates, but the Green Party was the most preferred choice. 74% of all respondents approved of the Green Party. They were followed by the non-partisan option, Independent candidates, which received the approval of 72.1% of all participants. The Socialist Party came in third with 60.57%. They were followed, in fourth place, by the winner of the plurality vote. The Democratic Party was approved by fewer than half of all respondents at 48.07%. Support for the remaining options then drops off significantly. The Libertarian Party was approved by 27.88% of respondents and the Republican Party was approved by just 4.33%.
The write-in option was utilized by 10.58% of those polled, with the largest share going to some variation of “none” or “none of the above,” which received an approval from 4.33% of all participants. 6.25% of respondents wrote in miscellaneous options.

Let's consider now the **score voting** test. Under range-based systems, voters rate each candidate individually on a predetermined scale, for example, from 1 to 10. The candidate with the most total points wins. In our model, respondents were asked to rate each option on a scale from 0 to 5, with 5 being the most favorable. 216 individuals participated in our range voting test. Thus the most points any option could have received was 1,080.

![Range Voting Results](image)

The overall results from the score voting variation closely approximated those of the approval vote, at least in terms of the order of favorability. The Green Party received the most points, totaling 68.88% of the total possible, followed by Independent candidates 59.9%, the Socialist Party 58.51%, the Democratic Party 51.01%, the Libertarian Party 34.17%, and the Republican Party at 12.31%. Among write-ins, many cast their ballots for some variation of “none” among other miscellaneous
options, respectively totaling 4.81% and 6.39% of the total points possible.

Under the **instant runoff method**, also known as ranked choice, voters rank candidates in order of their favorability. In our model, participants were asked to rank their top three choices in order of preference. The instant runoff test was the only alternative method in which the winner of the plurality vote was among the top two vote-getters. Though the Democratic Party received the largest amount of top choice votes, the Green Party came out in first place after the final elimination round. As in the range voting test, 208 individuals participated in the instant runoff simulation.

On the initial count, the Democratic Party was the most common first choice option, but received only 31.25% support. They were followed by the Green Party at 26.92%, Independent candidates with 17.78%, the Socialist Party at 11.53%, the Libertarian Party at 2.88%, and the Republican Party (.01%). 8.17% wrote in an option of their own. After the twelfth elimination round the three remaining options were the Green Party (35.6%), the Democratic Party (34.13%) and Independent candidates (23.5%). Following the elimination of the Independent candidates option, the Green Party led with 46.6% support, followed by the Democratic Party at 41.3%. That concludes the report on the topline results from the first full test and survey.
Instant Run-off Voting Results
Number of Votes After 12th Elimination Round

Instant Run-off Voting Results
Final Number of Votes After 13th Elimination Round
The Second Major Test

Following this first major data collection drive we tweaked our program in a number of ways. As mentioned previously, all participants now answer the test question under all four of the voting methods, rather than just three. We also added a demographic data collection page at the end of the test, which asks participants to voluntarily provide some basic demographic information about themselves, so that it is possible to ensure that the sample is in fact representative of the overall population.

For the second big test, we decided that, rather than approach people on the street, we would conduct an exit-poll style survey on election day among voters as they left the voting booths, and we obtained a permit from the New York City Board of Election to conduct the survey inside polling places. For the test, we reproduced the presidential portion of the New York State ballot, which included six candidates for the office: Democrat Barack Obama, Republican Mitt Romney, Green Party candidate Jill Stein, Libertarian Party candidate Gary Johnson, Socialism and Liberation Party candidate Peta Lindsay, and Constitution Party candidate Virgil Goode. There was also a write-in option under each of the four methods. Over the course of the day, our survey teams collected 507 valid responses to our test from voters as they exited their polling places.

The survey was conducted in Manhattan's 69th Assembly District, which stretches from 80th Street to 125th Street on the west side. Among all of the state assembly districts in Manhattan, the demographic breakdown of the 69th district most closely approximates that of the country at large. Over the course of the day, nearly twenty volunteers working in teams of two canvassed voters as they left polling places throughout the district.

Plurality Voting Results

Under plurality voting, the traditional method, each voter casts a ballot for one and only one candidate, and the candidate with the most votes wins. The findings for the plurality portion of our test
are consistent with the official results returned in that district. In the 69th Assembly District, 57,952 votes were cast, according to the numbers from the NYC Board of Elections. Obama received 88.9% of the vote, followed by Mitt Romney at 9.6%, Stein at .81%, Johnson at .48%, Lindsay at .04%, and Goode at .03%. Write-ins accounted for .13% of votes cast. In our survey, President Obama came out on top with a total of 431 votes, a full 85% of all valid ballots cast in our poll. He was followed by Mitt Romney, who came in a distant second, with 42 votes, or 8.3% of the total. Jill Stein came in third with 16 votes, 3.2% of the total. Gary Johnson took the fourth place with 9 votes at 1.8%. Next came Peta Lindsay, who had the support of 5 participants in our poll, 0.99% of all valid ballots. Virgil Goode received 2 votes, and Justice Party candidate Rocky Anderson received 1 write-in vote.
Approval Voting Results

Under approval voting, participants indicate whether they approve or disapprove of each candidate, and may approve of multiple candidates. The candidate who receives the most approvals wins. Barack Obama took the first place spot, garnering the approval of 89.9% of all participants. Jill Stein came in second place with approvals from 51.9% of all participants. She was followed by Peta Lindsay, who received a 31.2% approval rating. Gary Johnson placed fourth with 26.8% support. Virgil Goode won the approval of 16.6% of those polled; and Mitt Romney came in last among the ballot qualified candidates, with the support of 13% of all participants. Write-in votes accounted for 2.2% of the total.
Score Voting Results

In the score voting method (sometimes called range voting), voters rate each candidate on a given scale and the candidate who receives the most cumulative points wins. In our experiment, the scale was from 0 to 5, with 5 being the most favorable. Given that there were 507 valid responses to our poll, the most points any candidate could have received was 2535. Once again Barack Obama took the first place spot, receiving 2188 points, or 86.3% of the total possible. He was followed, in second place, by Jill Stein with 1367 points, 53.9%. Peta Lindsay came in third with 1076 points, 42.1% of the total. Gary Johnson took fourth place with 987 points, 38.9% of the total. Virgil Goode followed with 33.5% support, and Mitt Romney came in last place among all ballot-qualified candidates with 24.9% support. Write-ins amounted to 1.7%.
Ranked Choice Voting Results

Under ranked choice voting, also known as instant runoff, respondents rank their candidates in their order of preference and the results are calculated as an instant runoff. Our test allowed participants to rank up to three candidates from among those listed, and also provided a write-in option. In our test, the ranked choice method would not have led to an instant runoff as Barack Obama received well over 50% of the top choice votes from all participants. There were 507 individuals who made a first place choice under this method; there were 359 who ranked two choices; and there were 296 who listed three candidates on their ballots. In the first round vote, Barack Obama came in first place with 83.8% support. He was followed by Mitt Romney who garnered 8.5% of the votes. Jill Stein took the third place spot with 3.9% support. Gary Johnson received 1.4% of the first choice votes, Virgil Goode received 1.2% of all first choice votes and Peta Lindsay had the support of 1.2% of participants. The remaining vote was a write-in for Rocky Anderson.
In the second round, Jill Stein led with 172 votes, or 47.9% of all those who listed at least two candidates on their ballot. She was followed by Gary Johnson who came in second with 15%. Peta Lindsay took the third spot with 12.3% support. Barack Obama, who won the top choice vote, was the fourth place candidate in the second round, with 8.4% of those polled. Virgil Goode and Mitt Romney each received 26 second choice votes, 7.2% of the total. The remaining votes were spread out among a number of write-ins.

Overall there were 296 individuals who listed three candidates on their instant runoff ballot. In the third round vote, Peta Lindsay took the top spot with 103 votes, 34.8% of the total. Lindsay was followed by Gary Johnson with 24% support. Jill Stein took fourth place with 23%. She was followed by Virgil Goode who received 12.2% support. Barack Obama received 2.6% of the third round votes and Republican Mitt Romney came in last among ballot qualified candidates with 1.7% support. The remaining votes were spread out over a number of write-in candidates.
Analysis

Given the highly overdetermined character of the presidential election contest, and the left-liberal leanings of the electorate in New York City, and especially in the 69th Assembly District on the Upper West Side, Morning Side Heights and West Harlem, we were not surprised by the fact that Barack Obama came out on top under all the voting methods included in our test. However, the variations in the results for the runner up are arguably of more interest in our findings. While Mitt Romney took the second place spot under the traditional plurality method, as he did in the official results in the district, Jill Stein of the Green Party was by far the favored second choice candidate, coming in second under all the alternative methods. On the other hand, Mitt Romney came in last among all listed candidates under all three alternative methods. Support for Stein's candidacy jumped from 3.2% under plurality to over 50% in the approval and score voting variants, and she was the most
favored second choice candidate under instant runoff. This, we believe, clearly suggests that alternative voting methods provide a more accurate reflection of a given sample of the electorate than is possible under the plurality system.

While Duverger's Law states that single winner election systems tend to favor the development of a two-party system, it obviously does not state that the two dominant parties should be the Democrats and Republicans, or that the two dominant parties must be everywhere the same. Were they to be widely implemented in the United States, alternative voting methods would disrupt traditional campaign strategies, defy conventional political wisdom, and result in outcomes that are more representative of the voting public than is possible under plurality. How could it be otherwise, given the fact that alternative methods elicit more information from the voter?

Response from Participants

While conducting our data collection drives, participants provided our survey teams with all sorts of feedback, both positive and negative. Many people were intrigued by the alternative voting methods presented to them in the test. Others provided suggestions on how to improve the interface or tweak the survey in some way. But two other common responses reveal the importance of improving basic civic literacy in the United States. First, there was a distinct group of people who did not know what a voting method is, confusing it, for instance, with the medium of the process, ex. paper vs. electronic ballots. Secondly, despite the fact that national polls show that the Democrats and Republicans in Congress are less popular than cockroaches and lice, there were many people who were simply not aware of the fact that there are alternatives to the Democratic and Republican parties and their candidates for elected office. These responses demonstrate the extent to which the media and educational systems have failed the American people and also reveal the educational potentials inherent in the experiment and electronic platform we have developed.
Moving Forward

Given the success of our first two data collection drives, we are planning to conduct another round of tests this year, potentially revolving around the New York City mayoral election. We are also in the process of developing a software and information package that will allow others to download the program and perform similar experiments themselves, as well as a web-based app that will introduce alternative voting methods to a wider public.

Conclusion

Our political system is not broken, it has been fixed by the collusion of the duopoly factions, their mouthpieces in the media and the academy, and the financial interests that fund them. Simple electoral reforms, such as the implementation of alternative voting methods, have the potential to facilitate significant institutional and political change in the United States by empowering people in the struggle against ossified structures of power.