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# The Effects of Ballot Position on Election Outcomes

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# The Effects of Ballot Position on Election Outcomes

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This article presents evidence of name-order effects in balloting from a study of the 1998 Democratic primary in New York City, in which the order of candidates' names was rotated by precinct. In 71 of 79 individual nominating contests, candidates received a greater proportion of the vote when listed first than when listed in any other position. In seven of those 71 contests the advantage to first position exceeded the winner's margin of victory, suggesting that ballot position would have determined the election outcomes if one candidate had held the top spot in all precincts.

The 2000 presidential election shone a spotlight on a rarely contemplated aspect of the American political system: ballot design. The format of the ballot in Palm Beach County, Florida appears to have influenced the outcome of the 2000 presidential election, in violation of (at least) two fundamental principles of democracy. First, democracy requires a "level playing field" on which no candidate holds an a priori advantage over others, particularly one conferred by the state. In the words of Wand, Herron, and Brady, "Under any reasonable standard of fairness, ballot format should not determine the outcome of an election" (2000, G3). Second, the candidate preferred by the most people should win an election. It is troubling when a candidate who is favored by a plurality of voters loses an election because the ballot format steers indifferent or confused voters in a particular direction.

These principles have been discussed ad nauseam in relation to the infamous "butterfly ballot" and the 2000 presidential election tally in Florida (e.g., Brady et al. 2001; Wand et al. 2001). They are equally relevant to another aspect of ballot format, the order in which candidates' names are listed. Political professionals have long taken for granted that the top spot on the ballot provides an advantage to the candidate whose name occupies it. In several instances, candidates have brought lawsuits to prevent their incumbent opponents from enjoying this advantage.[1] Still, most states assign one candidate in every primary election

[1] *Holtzman* v. *Power*, 62 Misc. 2d 1020; *Gould* v. *Grubb*, 14 Cal. 3d 661; *Clough* v. *Guzzi*, 416 F. Supp. at 1059.

the top spot instead of rotating the order of candidates' names.[2] If the conventional wisdom of the politerati is correct, this practice creates an obvious inequity in many American elections.

In this article we test the notion that election results are influenced by the order in which candidates' names appear on the ballot. Specifically, we consider whether occupying the first position on a vertical primary ballot adds to candidates' vote tallies. We do this through a quantitative analysis of election results from the 1998 Democratic primary in New York City—a jurisdiction that rotates precinct-by-precinct the order in which candidates' names are listed on the primary ballots.

Our findings differ from the most recent and widely cited article on name-order effects. We strongly disagree with Miller and Krosnick's conclusion that the magnitude of name-order effects are not substantively significant (1998, 291–92). We argue that Miller and Krosnick overstate the implications of their study, which only considers general elections. We find that the effect of name order on primary election outcomes is significantly larger than Miller and Krosnick's estimate for general elections; furthermore, the magnitude of name-order effects is large enough to turn the outcome in some races. This phenomenon may not adversely affect any particular class of citizens, but it undermines equality among individual candidates. This is no less offensive to the democratic principle of fair play than, say, a state program that would provide a single candidate in each election contest—determined by lottery—with a cash grant.

## Previous Studies of Name-Order Effects

The study of name-order effects predates Miller and Krosnick's coining of the term, but most of the earlier studies are methodologically flawed (for a detailed critique of the literature, see Miller and Krosnick 1998, 295–97). Furthermore, the literature is contradictory, with no clear patterns in the findings across studies. The existing work considers a wide variety of electoral contexts, including primaries for several offices in Michigan (Bain and Hecock 1957), Democratic and Republican county central committees in California (Byrne and Pueschel 1974), elections up and down the ballot in two Colorado counties (Darcy 1986), primary contests for local office in Oregon (Elverum 1983), all offices in contention in the 1992 general election in Ohio (Miller and Krosnick 1998), Los Angeles Junior College Board (Mueller 1970), Ohio state senate primaries (White 1950), and, perhaps least significant but most amusing, the election of officers of the American Anthropological Association in 1951 (Gold 1952). (A survey of the

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[2] Only 14 states rotate candidate name order in statewide primary elections; two more (New York and Kentucky) use rotation in some jurisdictions but not others. In the remaining 36 states, the order of candidates' names is uniform on all ballots, determined either by alphabetic ordering or lottery. A complete list of ballot placement methods, with references to the relevant sections of state election codes, is available at http://www2.bc.edu/~steenje/ballot.htm or from the authors upon request.

ballot position literature, including studies of voting in international settings, is presented in Darcy and McAllister 1990.)

Miller and Krosnick offer the most recent addition to the name-order effects literature with their 1998 article on the 1992 general election in Ohio. They outline a compelling theory of name-order effects and find evidence of widespread position effect in the 1992 Ohio general election.

We embrace the theory of name-order effects developed by Krosnick and his collaborators (see Krosnick and Alwin 1987; Miller and Krosnick 1998) that draws upon Simon's (1957) "satisficing" principle and treats voting as a cognitive task. According to the theory, actors faced with a choice among alternatives will conserve resources and select the most accessible satisfactory option presented, even if it is not optimal. If choices are presented orally, as in a telephone interview, the last option presented is most accessible and a "recency effect" is expected; if choices are presented visually, as in an election ballot, the first option presented is most accessible and a "primacy effect" is expected. As Miller and Krosnick note, "if a citizen feels compelled to vote in races regarding which he or she has no substantive bases for choice at all, he or she may simply settle for the first name listed, because no reason is apparent suggesting that the candidate is unacceptable" (1998, 294–95). Thus they predict that the magnitude of position bias depends on how many voters do not have substantive bases for choice.

We see one important shortcoming in Miller and Krosnick's study, their interpretation of their own findings.[3] Miller and Krosnick find that name-order effects are *statistically* significant, but *substantively* insignificant. They conclude, "the magnitude of name-order effects observed here suggests that they have probably done little to undermine the democratic process in contemporary America" (1998, 291–92). We believe that this optimistic conclusion is premature.

Even as they dismiss the potential mischief of name-order effects, Miller and Krosnick point out that name-order effects are stronger in nonpartisan elections: "these effects were smaller when a cue was available to help people cast substantively meaningful votes" (1998, 312). Yet their study does not reveal anything about the magnitude of name-order effects in a large, important class of elections in which partisan cues are unavailable to voters, partisan primaries.

The importance of primary elections for democracy should not be minimized. In many jurisdictions one major party enjoys a clear advantage over the other, so the only potential venue for meaningful competition is the dominant party's primary (Herrnson 2000, 24; Jacobson 2001, 16). Perhaps more significantly, primaries shape the alternatives that will ultimately be presented to the voters in elections for major offices, including, for example, U.S. Senate and Governor in the nation's third most populous state (as in this study).Consequently, one cannot

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[3] Miller and Krosnick also make one methodological error: in their statistical analysis they fail to weight each observation by the size of the precinct. This may not be a serious flaw if the precincts studied were of roughly uniform size, but we cannot judge that since Miller and Krosnick do not report any information about the number of voters represented in their study.

judge the extent to which assigning the top slot to a single candidate undermines the democratic process without determining how ballot position affects outcomes in primary elections.

## Data and Method

For this study we analyzed precinct-level election results from the 1998 Democratic primary in New York City.[4] While candidate name-order is uniform across most of New York State, in New York City the names of candidates are rotated by precinct.[5] That is, each candidate for each office is listed first in a nearly equal number of small precincts. This procedure produces observational data that is as close to experimental as one can get without actually randomizing the assignment of ballot formats, thereby providing an exceptional opportunity to examine the electoral consequences of ballot position.

In 1998, there were 79 contested Democratic primary elections in the City of New York. The contested offices included Governor, Lieutenant Governor, Attorney General, U.S. Senator, U.S. Representative (three districts), New York State Senator (five districts), New York State Assembly (21 districts), and Civil Court Judge (four contests). There were also four Democratic Party offices in contention: Male District Leader (16 districts), Female District Leader (12 districts), State Committeeman (eight districts), and State Committeewoman (six districts).

Election administration is organized around State Assembly districts, each of which is divided into precincts.[6] New York City has, in total, 5,616 precincts distributed across 58 Assembly Districts (ADs). The average number of precincts per Assembly District is 92, and the average number of voters per precinct is about 83.[7]

The assignment of precincts to ballot formats is not strictly random. Each Assembly District is divided into geographically contiguous, sequentially numbered precincts. However, it would be bizarre indeed if the characteristics of a precinct were related to that precinct's number. Precincts reported an average of 81.4 votes in 1998, thus neighborhoods in which voters shared characteristics

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[4] The basic unit of election administration is called an "election district" in New York City, but to avoid confusion with legislative districts we refer to them here as "precincts."

[5] The peculiar dual system resulted from a political compromise that stemmed out a court decision invalidating a 1970 statute that had granted the first ballot position to incumbent office holders (*Holtzman v. Power*, Court of Appeals of New York, 27 N.Y.2d 628; 261 N.E.2d 666; 1970). In its place, the state legislature imposed the rotation system. But since the "incumbent-first" rule applied only in New York City, the change to the rotation system was applied only in New York City. As a result, all primary elections conducted in New York City—even those for statewide office—rotate the order in which candidates' names are listed.

[6] Each of the five boroughs of New York City (Queens, Brooklyn, Staten Island, Manhattan, and the Bronx) is a distinct county; the Assembly Districts do not cross county lines.

[7] Our data include neither total registered voters nor total ballots cast in each ED, so we approximate the number of "voters" as the maximum number of individual ballots cast for any single office. For 70% of precincts, that office is U.S. Senate.

(e.g., race, ethnicity) were never presented a single ballot format. Furthermore, if some characteristic is shared by the population of, say, every third precinct in a given Assembly district, that characteristic would only confound results for races with three candidates. Only the rotation of candidates in a three-person race would align with the mysterious characteristic associated with every third precinct.[8]

Our statistical analysis is very simple, but somewhat unconventional. It is customary to consider individual *candidates* as the recipients of votes; instead, we considered *ballot positions* as recipients of votes, regardless of whose name appears in them. When candidate names are rotated, each slot on the ballot (the first, second, third, or fourth position) is occupied by each candidate in the same number of precincts. Each slot should therefore receive one **n**th of the votes in an **n**-candidate primary if ballot placement exerts no effect on candidate performance. For example, in a four-person contest, such as the race for Attorney General, each position should receive 25% of the vote in the absence of position effect.[9] The sampling distribution of the vote under the null hypothesis is therefore very straightforward: the expected vote percent for first position (or any other), $\pi$, is 1/n and the standard error is $\sqrt{\dfrac{\pi(1-\pi)}{P}}$, where $P$ is the number of observed precincts.[10] Using these parameters we conducted standard Z-tests on the observed percentages for first position.

## Findings

We found compelling evidence that ballot position affects candidates' vote tallies. Our findings also confirm that several variables contribute to the magnitude of position effect.

Table 1 presents the tallies for each statewide office by ballot position. For all three statewide races with four candidates, the first position received significantly more than 25% of the votes. In the Governor's race, the first position took 27.3% of the vote. In the Attorney General's race, the first position received 27.2%, and in the U.S. Senate campaign the first position received 26.8%. In the Lieutenant

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[8] It would be desirable to use demographic variables to test for qualitative differences among the groups of precincts sharing ballot formats. Unfortunately, the only level for which we have demographic data is congressional district, and there is insufficient covariation between congressional district and ballot format to use census variables to evaluate differences between formats.

[9] There are slight variations in the proportion of precincts with each ballot format when one ballot format appeared in extra precincts, as when the number of precincts is not a whole multiple of the number of candidates or when a district lies in two counties. There are also slight variations in the proportion of total voters with each format, since the number of voters per precinct is not uniform. However, when we accounted for these variations our results were nearly identical to those presented here.

[10] Since precincts contain varying numbers of voters (the mean is 76 and standard deviation is 54), we weighted each observation by the number of total votes cast in the precinct.

TABLE 1

Percentage of vote for candidates in each position, statewide primaries

| | Ballot Position | | | | Total votes cast for this office | Number of precincts with votes for this office | Advantage to first position |
|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | | | |
| Governor | 27.3% | 24.0% | 23.5% | 25.3% | 427,871 | 5,460 | 2.3%*** |
| U.S. Senator | 26.8% | 25.1% | 24.0% | 24.0% | 444,410 | 5,460 | 1.8%** |
| Lt. Governor | 34.9% | 33.3% | 31.8% | | 305,331 | 5,442 | 1.6%** |
| Atty. General | 27.2% | 25.2% | 23.9% | 23.7% | 395,820 | 5,456 | 2.2%*** |

**$p < .01$.
***$p < .001$.

Governor's race, with only three candidates, the first position took 34.9% of the vote. In all four primaries, the vote for candidates in the first position significantly exceeded the position-neutral expectation of $1/n$, with p-values less than .001 in two cases (Governor and Attorney General) and less than .01 in two (Lieutenant Governor and U.S. Senator).

The results of our analysis leave no room for doubt regarding the existence of position effect. In all four of the statewide contests, the first position fared better than the other ballot positions. We can very confidently reject the null hypothesis of no position bias in primaries for statewide office.

In elections for local office, including Congress, state legislature, judgeships, and four party positions, the primacy effect is substantively larger, although in many cases not statistically significant.[11] Table 2 lists the vote percentage by position for the 75 contested primary elections at the local level. In 67 of the 75, the first position received more than its expected percentage of the vote. The median advantage to first position in down-ballot elections was 3.6%; the first-position effect ranged from −10.6% to 11.4%. Despite the high threshold for statistical significance, we found that in 17 of the 75 local races the first position vote was significantly higher than the expectation.

These observations are not mutually independent because there are many instances of overlapping districts. We only have one unique observation per precinct, but, for example, in the 54th Assembly district, precincts 30 and 31 contributed to the tallies in the contest primaries for two judgeships, U.S. House (10th CD), State Senate (17th SD), Assembly, Male District Leader, and Female District Leader (all AD 54). To evaluate the *joint* significance of these findings, we created four precinct-level variables, votes for *all* down-ballot candidates in

[11] Because there are fewer observations per contest in local nominations the sampling distribution of the position vote is "flatter"—that is to say, it has a larger standard error. The statistical test for local offices is considerably more powerful, so one would not expect the results to be as dramatic, in terms of p-values, as those in the statewide contests, even if the magnitude of effect is the same or greater.

TABLE 2

Percentage of vote for candidates in each position, local offices

| Office | District | Ballot Position | | | | Total votes cast for this office | Number of precincts | Advantage to first position |
|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | | | |
| **U.S. Representative** | | | | | | | | |
| | 9 | 27.1% | 24.5% | 24.5% | 23.8% | 45,113 | 498 | 2.1% |
| | 10 | 37.1% | 31.6% | 31.4% | | 33,477 | 514 | 3.7%* |
| | 17 | 50.0% | 50.0% | | | 23,267 | 348 | 0.0% |
| **State Senator** | | | | | | | | |
| | 17 | 56.6% | 43.4% | | | 9,209 | 251 | 6.6%* |
| | 14 | 36.8% | 31.4% | 31.8% | | 17,657 | 208 | 3.5% |
| | 19 | 54.1% | 45.9% | | | 14,647 | 213 | 4.1% |
| | 30 | 51.6% | 48.4% | | | 28,071 | 240 | 1.6% |
| | 32 | 50.3% | 49.7% | | | 17,119 | 216 | 0.3% |
| **State Assemblymember** | | | | | | | | |
| | 29 | 55.5% | 44.5% | | | 5,833 | 85 | 5.5% |
| | 31 | 53.3% | 46.7% | | | 4,368 | 75 | 3.3% |
| | 34 | 51.5% | 48.5% | | | 3,761 | 77 | 1.5% |
| | 36 | 53.3% | 46.7% | | | 8,627 | 75 | 3.3% |
| | 42 | 35.5% | 34.3% | 30.1% | | 5,774 | 54 | 2.2% |
| | 43 | 53.7% | 46.3% | | | 6,531 | 62 | 3.7% |
| | 45 | 24.5% | 24.3% | 26.8% | 24.5% | 9,816 | 103 | −0.5% |
| | 46 | 38.3% | 30.0% | 31.7% | | 6,802 | 84 | 4.9% |
| | 51 | 54.5% | 45.5% | | | 4,549 | 93 | 4.5% |
| | 52 | 51.3% | 48.7% | | | 7,787 | 108 | 1.3% |
| | 54 | 39.5% | 30.9% | 29.6% | | 4,303 | 102 | 6.2%+ |
| | 55 | 50.8% | 49.2% | | | 5,632 | 104 | 0.8% |
| | 56 | 52.3% | 47.7% | | | 6,465 | 89 | 2.3% |
| | 58 | 53.3% | 46.7% | | | 6,157 | 64 | 3.3% |
| | 68 | 53.6% | 46.4% | | | 6,571 | 99 | 3.6% |
| | 69 | 51.7% | 48.3% | | | 10,606 | 95 | 1.7% |

**TABLE 2** *continued*

| Office | District | Ballot Position | | | | Total votes cast for this office | Number of precincts | Advantage to first position |
|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | | | |
| | 72 | 40.5% | 59.5% | | | 6,977 | 55 | −9.5% |
| | 75 | 55.2% | 44.8% | | | 7,311 | 71 | 5.2% |
| | 76 | 41.6% | 58.4% | | | 4,692 | 85 | −8.4% |
| | 78 | 54.2% | 45.8% | | | 4,234 | 68 | 4.2% |
| | 79 | 40.6% | 30.7% | 28.7% | | 6,416 | 95 | 7.3%⁺ |
| **Civil Court Judge (Countywide)** | Bronx | 48.6% | 51.4% | | | 42,332 | 877 | −1.4% |
| | Brooklyn | 51.5% | 48.5% | | | 100,006 | 1,875 | 1.5% |
| **Civil Court Judge (District)** | 1 | 39.0% | 30.2% | 30.8% | | 16,886 | 269 | 5.6%* |
| | 2 | 52.9% | 47.1% | | | 19,685 | 420 | 2.9% |
| **Male District Leader** | 29 | 53.0% | 47.0% | | | 4,575 | 85 | 3.0% |
| | 31 | 55.2% | 44.8% | | | 2,360 | 75 | 5.2% |
| | 36 | 53.6% | 46.4% | | | 5,229 | 75 | 3.6% |
| | 37 | 56.8% | 43.2% | | | 2,815 | 81 | 6.8% |
| | 41 | 52.4% | 47.6% | | | 7,810 | 110 | 2.4% |
| | 42 | 38.1% | 32.2% | 29.7% | | 4,293 | 54 | 4.7% |
| | 46 | 53.3% | 46.7% | | | 5,200 | 82 | 3.3% |
| | 51 | 53.2% | 46.8% | | | 3,848 | 93 | 3.2% |
| | 54 | 41.2% | 30.1% | 28.7% | | 3,750 | 101 | 7.8%* |
| | 55 | 52.0% | 48.0% | | | 5,399 | 104 | 2.0% |
| | 56 | 52.5% | 47.5% | | | 6,181 | 89 | 2.5% |
| | 68 | 57.8% | 42.2% | | | 5,267 | 99 | 7.8%⁺ |
| | 76 | 56.7% | 43.3% | | | 3,269 | 85 | 6.7% |
| | 78 | 52.7% | 47.3% | | | 3,634 | 68 | 2.7% |
| | 79 | 57.8% | 42.2% | | | 3,271 | 93 | 7.8%⁺ |
| | 82 | 55.1% | 44.9% | | | 4,115 | 116 | 5.1% |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Female District Leader** | | | | | | |
| 29 | 55.4% | 44.6% | | 4,789 | 85 | 5.4% |
| 31 | 53.2% | 46.8% | | 2,584 | 75 | 3.2% |
| 36 | 56.5% | 43.5% | | 4,209 | 75 | 6.5% |
| 41 | 53.2% | 46.8% | | 7,809 | 110 | 3.2% |
| 46 | 50.9% | 49.1% | | 5,696 | 83 | 0.9% |
| 54 | 44.7% | 27.2% | 28.1% | 3,812 | 102 | 11.4%** |
| 68 | 56.5% | 43.5% | | 4,975 | 99 | 6.5%+ |
| 72 | 39.4% | 60.6% | | 3,521 | 55 | −10.6% |
| 76 | 59.3% | 40.7% | | 3,135 | 85 | 9.3%* |
| 78 | 53.4% | 46.6% | | 2,187 | 67 | 3.4% |
| 79 | 57.6% | 42.4% | | 3,999 | 95 | 7.6%+ |
| 82 | 54.4% | 45.6% | | 4,469 | 116 | 4.4% |
| **State Committeeman** | | | | | | |
| 29 | 53.1% | 46.9% | | 2,976 | 41 | 3.1% |
| 31 | 38.5% | 32.6% | 28.9% | 1,771 | 38 | 5.2% |
| 36 | 55.1% | 44.9% | | 4,348 | 39 | 5.1% |
| 74 | 61.3% | 38.7% | | 5,317 | 76 | 11.3%* |
| 75 | 43.4% | 56.6% | | 5,695 | 71 | −6.6% |
| 76 | 60.0% | 40.0% | | 3,421 | 85 | 10.0%* |
| 78 | 44.1% | 55.9% | | 3,132 | 68 | −5.9% |
| 79 | 58.7% | 41.3% | | 3,699 | 94 | 8.7%* |
| **State Committeewoman** | | | | | | |
| 29 | 54.6% | 45.4% | | 3,506 | 41 | 4.6% |
| 31 | 54.5% | 45.5% | | 1,530 | 38 | 4.5% |
| 75 | 60.0% | 40.0% | | 5,168 | 71 | 10.0%* |
| 76 | 54.6% | 45.4% | | 3,591 | 85 | 4.6% |
| 78 | 44.0% | 56.0% | | 2,668 | 68 | −6.0% |
| 79 | 58.6% | 41.4% | | 3,686 | 94 | 8.6%* |

+ $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$.

first position, votes for all such candidates in second position, votes for candidates in third position and votes for candidates in fourth position. We then created four more variables, the expected votes for each position given no positional effect. For each ballot position, this benchmark was calculated as:

$$Expected\ vote = \sum_i \frac{Total\ votes\ cast\ for\ all\ candidates\ in\ contest\ \textbf{\textit{i}}}{Number\ of\ candidates\ in\ contest\ \textbf{\textit{i}}}.$$

Using these computed figures, we were able to calculate both an observed and an expected vote percent, assume a sampling distribution for each ballot slot, and test whether the observed percent were significantly greater than the expected percent. The benchmark expectation is that 45.4% of all votes in down-ballot races should be cast for first position.[12] In reality, 47.9% of all votes were cast for first position. Given the expectation of 45.4% and 3,836 individual precincts, the probability of observing 47.9% or more is less than .001.[13]

## Position Effect and Candidate Advantage

We have discussed name-order bias in the abstract, referring to positions instead of candidates, for the sake of quantitative analysis but this should not obscure the fact that the beneficiaries of first-position effect are individual candidates. All 12 statewide candidates received "extra" votes when listed first. The political implications of position effect may be more vividly demonstrated by shifting our attention briefly to results by candidate.

Among the 180 candidates in contested primaries, 161 received a larger percentage of the vote when listed first. Table 3 lists the vote tally for the statewide candidates in our dataset, by the order in which their names appeared on the ballot.[14] For example, Catherine Abate, a Democratic candidate for Attorney General, received 27.1% of the total vote, but when listed first she captured 29.3%. The boost for individual candidates ranged from −11.6% to 14.5%, with an average of 3.4%, as depicted in Figure 1.

Inspecting the by-candidate results revealed one of the most important aspects of our findings: in seven of the 79 contests, the first-position advantage *exceeded* the margin of victory. That is to say, the first-position effect was large enough to change the outcome of the election. One of those elections was the hotly contested primary to succeed Chuck Schumer in the U.S. House of Representatives.[15]

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[12] More details about how we calculated the observed and expected votes are available at http://www2.bc.edu/~steenje/ballot.htm, or from the authors upon request.

[13] N = 3,836 instead of 5,616 (the total number of precincts in New York City) because there were no contested Democratic primaries below the statewide offices in 1,780 precincts.

[14] Vote tallies for local candidates are available at http://www2.bc.edu/~steenje/ballot.htm or from the authors upon request.
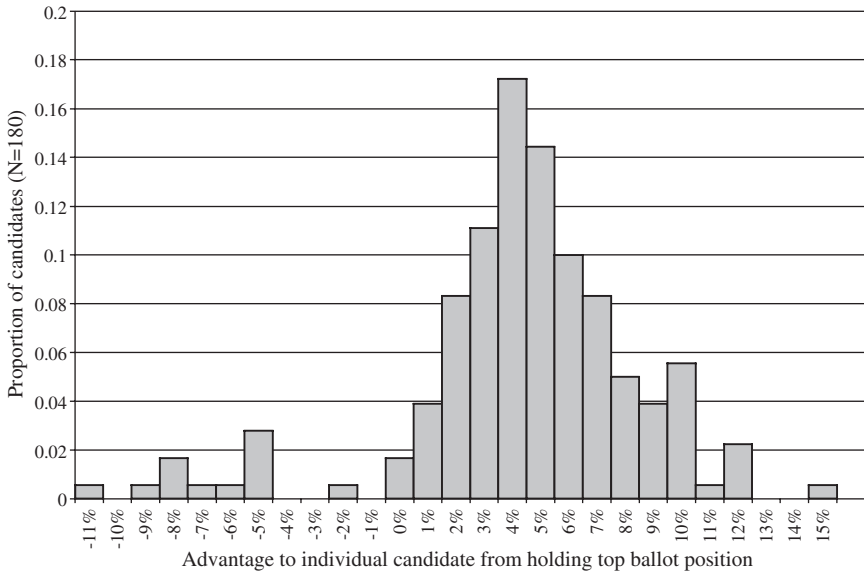
[15] The others were both district-level civil court judge nominations and four elections to Democratic party offices (Male District Leader for the 36th Assembly district, Male District Leader for the 37th Assembly district, State Committeeman from the 74th Assembly district, and State Committeewoman from the 31st Assembly district).

TABLE 3

Position advantage for individual candidates in statewide contests

| Office Dist | Name | Position | | | | Total | 1st–Total |
|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | | |
| **Governor** | Betsy McCaughey Ross | 18.3% | 15.4% | 14.8% | 15.9% | 16.1% | 2.2% |
| | Charles J Hynes | 19.1% | 15.7% | 15.9% | 18.0% | 17.1% | 2.0% |
| | James L Larocca | 7.3% | 5.0% | 4.8% | 6.0% | 5.8% | 1.5% |
| | Peter F Vallone | 63.7% | 59.8% | 59.3% | 61.1% | 61.0% | 2.7% |
| **Lieutenant Governor** | Charles King | 38.5% | 36.3% | 35.0% | | 36.6% | 1.9% |
| | Clyde Rabideau | 17.4% | 16.3% | 15.2% | | 16.3% | 1.1% |
| | Sandra Frankel | 48.6% | 47.6% | 45.3% | | 47.1% | 1.5% |
| **Attorney General** | Catherine Abate | 29.3% | 27.2% | 25.8% | 25.9% | 27.1% | 2.2% |
| | Eliot Spitzer | 41.9% | 39.3% | 38.6% | 38.0% | 39.4% | 2.5% |
| | Evan A Davis | 10.9% | 9.8% | 8.5% | 8.5% | 9.4% | 1.5% |
| | G Oliver Koppell | 26.3% | 24.6% | 23.0% | 22.4% | 24.1% | 2.2% |
| **U.S. Senator** | Charles E Schumer | 55.6% | 53.9% | 51.9% | 51.8% | 53.3% | 2.3% |
| | Eric Ruano Melendez | 6.6% | 5.9% | 4.4% | 3.9% | 5.2% | 1.4% |
| | Geraldine A Ferraro | 20.5% | 17.5% | 17.1% | 18.1% | 18.3% | 2.2% |
| | Mark Green | 24.1% | 23.2% | 23.0% | 22.4% | 23.2% | 0.9% |

## Histogram of individual candidates' position advantage

Proportion of candidates (N=180)

Advantage to individual candidate from holding top ballot position

The estimated position effect was 2.1%, and the winner's margin of victory was just 1.1%. On ballots on which Melinda Katz was listed first, Katz prevailed with 3,575 votes and her nearest opponent, Anthony Weiner, received 3,282. When Weiner was listed first, he received 3,729 votes to Katz' 3,110. Weiner won the primary (with a margin of less than 500 votes out of 45,113 cast), but if the ballots had not been rotated *and* Katz had drawn the top slot, it is probable that she, not Weiner, would now be a Member of Congress.

## Variations in Name Order Effect

The effect of ballot position on election outcomes is not uniform across contests. According to Miller and Krosnick's theory, these variations may be explained in part by variations in voters' information about the candidates, *ergo* their substantive bases for choosing among options. With more information regarding the candidates, voters are less likely to be influenced by the position of the names because they are more likely to enter the booth with preformed intent to vote for one candidate or another.

Voters are more likely to have some information upon which to base a decision in the more prominent contests either because they seek out information or the contests feature more vigorously waged campaigns that include television

FIGURE 2

Average bonus to first position, by office
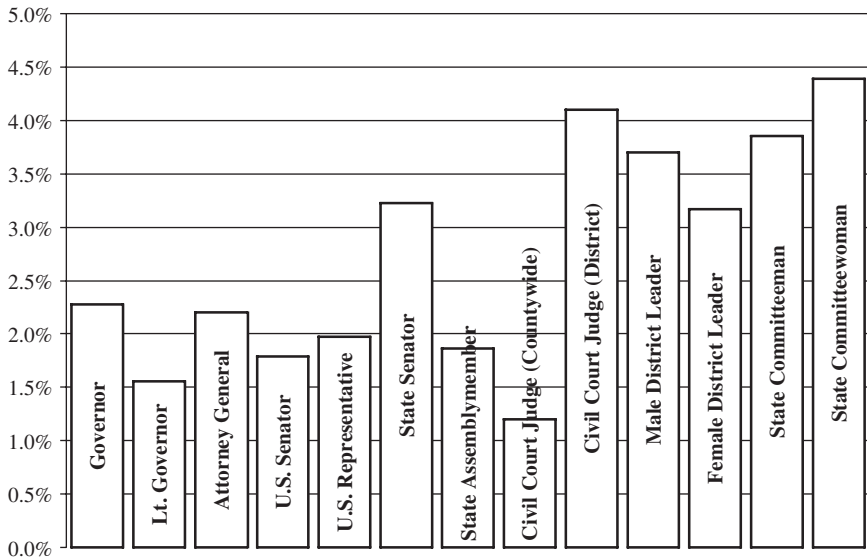


commercials, direct mail, street campaigning, and significant news coverage. Candidates for Governor and U.S. Senator naturally receive much more media attention and advertise themselves more than do candidates for state central committee. Voters may also seek out information about the top-of-the-ticket races because they perceive these contests as more important.

As an indirect indicator of salience we use the relative ballot placement of blocks of candidates for the same office.[16] Figure 2 presents the average position effect by office, depicting a clear trend of increasing position effect with decreasing prominence of the office sought. In the four statewide primaries position bias is roughly 2%, while in the local party offices it is almost 4%.

## Conclusion

In this article, we have clearly demonstrated the existence of position effect on a wide range of contests in the 1998 Democratic primary in New York City. The evidence leaves little doubt regarding this phenomenon. Moreover, we conclude the effect—while it may appear small—can be determinative in close contests.

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[16] Furthermore, offices are listed in the ballot in roughly the order of salience to the electorate, so if cognitive fatigue is a factor in position effect, the down-ballot races would be more susceptible.

This offends democratic notions that all candidates should compete on a level playing field.

Those who accept lotteries or alphabetic ordering for ballot position as an unavoidable part of our election system should reconsider this acceptance of the *status quo*. If a jurisdiction with as many simultaneously contested elections as New York City—and 14 states—can successfully carry out rotation, there is no reason other election officials could not do the same across the country.

Of course, the problem of position effect does not exist in a vacuum. While rotation of candidate names would certainly solve the position effect problem, it could frustrate some other practices intended to make voting easier. Most obvious, printing accurate sample ballots for each voter would be almost impossible. Congress is encouraging states to provide sample ballots to reduce the likelihood of problems such as those experienced by Florida voters in 2000 (Seelye 2001). Indeed, some jurisdictions legally require production of a ballot facsimile that exactly reproduces the actual ballot (e.g., Fla. Stat. §101.20 (2001)). This could prove challenging were rotation also implemented.

Some of the proposed changes that have emerged in the wake of the 2000 election would, however, be entirely consistent with rotation. Electronic voting technologies—especially those that employ a screen-based display of candidate names—would, in fact, make rotation much easier. Such a device could rotate candidate names *by voter*. That could eliminate position effect *and* provide terrific data to political scientists who study this phenomenon in the future.

## Acknowledgements

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