

First Guys Finish First:
The Effects of Ballot Position on Election Outcomes

by

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This paper presents evidence of name-order effects in balloting and the implications of such “position effects” for American democracy. Previous studies minimized the significance of name-order effects because they have focused on general elections despite the fact that Primary elections are often the only venue open to meaningful competition. Thus our finding -- that jurisdictions using a fixed ballot order benefit candidates listed first at the expense of other competitors -- is important.

We considered data from all 5,616 precincts in New York City's 1998 Democratic primary. In New York City, the order of candidates' names is rotated by precinct, providing the opportunity to assess the performance of candidates in the same contest when listed in different orders.

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 six of the 79 contests the advantage to first position exceeded the winner's margin of victory, suggesting that ballot position can determine election outcomes.

The 2000 presidential election shined 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, by virtue of the placement of his name on the ballot. 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, under first-past-the-post rules, 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 nauseum* in relation to the infamous “butterfly ballot” and the 2000 presidential election tally in Florida. 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. Still, most states randomly assign one candidate in every election the top spot instead of rotating the order of candidates’ names. If the conventional wisdom of the politerati is correct, this practice creates an obvious inequity in most American elections.

In this paper 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 significantly from the most recent and widely cited article on name-order effects (Miller and Krosnick 1998). We strongly disagree with Miller and Krosnick’s conclusion that the magnitude of name-order effects are not substantively significant. We argue that

Miller and Krosnick grossly overstate the implications of their study, which only considers general elections. They offer neither evidence nor analysis of another, equally important stage of the electoral process, namely primary 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, we find that the magnitude of name-order effects is large enough to turn the outcome in some races.

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. Furthermore, the literature is contradictory, with no clear patterns in the findings across studies. These works consider 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 for American Anthropological Association in 1951 (Gold 1952). (A survey of the 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 Jon Krosnick and his collaborators (see Krosnick and Alwin 1987; Miller and Krosnick 1998) that draws upon Herbert Simon's "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 Krosnick and Miller 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.

Miller and Krosnick’s study is not without its own methodological flaws,¹ but the most important shortcoming is their interpretation of their own findings. 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).

Miller and Krosnick dismiss the potential mischiefs of name-order effects solely on the basis of general election returns. This is wrong-headed. Indeed, Miller and Krosnick point out that name-order effects are stronger in non-partisan elections: “these effects were smaller when a cue was available to help people cast substantively meaningful votes” (1998, 312). They do not consider the possibility that name-order effects in primary elections – where partisan cues are unavailable to voters – may be large enough to indeed “undermine the democratic process.”

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. One must understand how ballot position affects outcomes in primary elections to fully judge the extent to which assigning the top slot to a single candidate undermines the democratic process. Miller and Krosnick were thus premature in their optimistic conclusion about the innocuousness of name-order effects in balloting.

¹ Miller and Krosnick correctly criticize Bain and Hecock (1957) for using the number of voters as the “N” in their statistical tests of precinct-level data. However, in using the precinct as the basic unit of analysis Miller and Krosnick 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.

Data and Method

The data for this study consists of precinct-level election results for the 1998 Democratic primary in New York City provided by the New York City Board of Elections.² While candidate name-order is uniform across most of New York State, in New York City, for historical reasons, the names of candidates are rotated by precinct. That is, each candidate for each office is listed first in an 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.³

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 (5 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.⁴ 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 83.⁵

The assignment of precincts to ballot formats is not strictly random. Each Assembly District is divided into geographically contiguous, sequentially numbered precincts. However, it

² 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."

³ 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.

⁴ 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.

⁵ Our data includes 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.

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 characteristic (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.⁶

Our statistical analysis is very simple, but somewhat unconventional. It is customary to consider individual candidates as the recipients of votes; instead, we consider 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 there is no position bias. 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.⁷ The sampling distribution of the vote under the null hypothesis is therefore very straightforward: the expected vote percent for first position (or any other), π , is $1/n$ and the standard error is $\frac{\sqrt{\pi(1-\pi)}}{P}$, where P is the number of observed precincts.⁸ Figure 1 illustrates the sampling distributions of the expected vote for each position in the contests for Governor, Attorney General and U.S. Senator, in which there were four candidates and 5,460 precincts reporting votes. Figure 2 does the same for Lieutenant Governor, for which there were only three candidates and

⁶ 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.

⁷ 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.

⁸ 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.

slightly fewer precincts reporting results ($P=5,442$).⁹ Using these parameters we conducted standard Z-tests on the observed percentages for first position.¹⁰

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 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).

[TABLE 1 ABOUT HERE]

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, there are naturally many fewer observed precincts. Therefore the sampling distribution of the position vote is "flatter" – that is to say, it has a larger standard error. This is illustrated in Figure 3, in which we have plotted the sampling distribution of the position vote for the four-person governor's race and the sampling distribution of a two-person local race (62 of the local 75 races

⁹ There are fewer precincts in analysis of the Lieutenant Governor's race because 16 precincts reported no votes cast at all in that contest.

¹⁰ Note that since our null hypothesis assumes fixed values of π , and, by implication, its standard error, we can assume a normal distribution. One is only required to use Student's T when the distribution parameters are estimated. Furthermore, there are enough observations such that $T \approx Z$.

were two-person contests). We have assumed 83 precincts in the local race, which is the average number of precincts reporting votes in Assembly elections. For the gubernatorial election, the 95% confidence threshold for the alternative hypothesis of primacy effects, or first-position bias, is only 26.0%, or one percent more than the expectation. For the local distribution, the 95% confidence threshold is 59.0%, or 9% more than the expectation. The statistical test for local offices is considerably more powerful, so one would not expect the results to be as dramatic as those in the statewide contests, even if the magnitude of effect is the same or greater.

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.

[TABLE 2 ABOUT HERE]

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). We therefore cannot draw any clear inference about the joint significance of the results in Table 2. That is to say, we'd like to evaluate probability of finding evidence of position effect in multiple contests if there were, in fact, no systematic bias related to ballot position.

To do so, we created four precinct-level variables, votes for all down-ballot candidates in first position, votes for all such candidates in second position, votes for candidates in third position and votes for candidates in fourth position. For an example using a single precinct (precinct 1 in AD 23), see Table 3. 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:

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

The actual calculation of the expected vote for each position is presented in Table 4. 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. 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 .001.¹¹

[TABLE 3 ABOUT HERE]

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 is not to overlook the fact that the beneficiaries of first-position effect are individual candidates. When we examined the individual candidates’ vote tallies in each position, we found the same pattern. 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.

Table 5, lists the vote tally for all candidates in our dataset, by the order in which their names appeared on the ballot. Among the 180 candidates, 161 received a larger percentage of the vote when listed first. For example, Eliot Spitzer, who won the Democratic nomination for Attorney General and subsequently defeated incumbent Dennis Vacco, received 39.4% of the total vote, but when listed first he captured 41.9%. The boost for individual candidates ranged from –11.6 to 14.5, with an average of 3.4, as depicted in Figure 4.

[TABLE 4 ABOUT HERE]

[FIGURE 4 ABOUT HERE]

¹¹ 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.

Our findings are substantively as well as statistically significant. In six of the 79 contests, we found that 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. Consider, for example, the hotly contested primary to succeed Chuck Schumer in the House of Representatives. The estimated position effect in this contest 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.

The other six contests in which position effect exceeded the margin of victory included the two district-level civil court judge nominations and four elections to Democratic party offices. The details of these six races are presented in Table 6

Variations in name order effect

The effect of ballot position on election outcomes is not uniform across contests or candidates. 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. Their preferences are more likely formed such that they enter the booth with pre-formed intent to vote for one candidate or another.

To test the hypothesis that voter information decreases the ballot position effect, we considered several operationalizations of voter information. They include salience of the office itself, as indicated by the order in which offices are listed on the ballot and size of jurisdiction; presence or absence of an incumbent in the primary; presence of identifiable ethnic or gender cues in candidates' names; and education levels among the citizenry.

Level of Office

One indicator of information level is the prominence of the office sought. Voters are more likely to have some information upon which to base a decision in the more prominent contests either because they sought out information or the contests featured more vigorously waged campaigns that include television commercials, direct mail, street campaigning and greater 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.¹² Figure 5 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 two percent, while in the local party offices it is almost four percent.

Ethnic and gender cues

Some candidates' names confer important information about them by signaling their gender or ethnicity. When at least one candidate has a name that differentiates him or her from all of the other contestants, some voters who would otherwise be indifferent – and therefore susceptible to name-order effects – may use the information in the name to make a choice. Just as higher profile contests are likely to offer voters some bits of information useful in making their decisions, gender, ethnic and racial information might be useful to voters as means of deciding for whom to vote. Unfortunately, there are two contradictory hypotheses regarding the effect of such cues on the magnitude of position effect.

One might argue that in contests that pit two candidates who have names that differentiate their gender or ethnic/ racial identity, the effect of position is lower because voters can decide based on this information. Alternatively, one could hypothesize that voters relying on ethnic information

¹² 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.

as a cue would immediately vote for the candidate with a name indicating their preferred ethnic identity, thus increasing position effect.

Our preliminary investigation of this dimension yielded no conclusive findings. We coded candidates' names as distinctively ethnic (or female) but found no substantive or statistical relationship with ballot position effects. Perhaps both hypotheses are true -- or perhaps neither is.

Voter characteristics

As a final factor we considered the demographic characteristics of the electorate that seemed likely to correlate with political knowledge and interest. We hypothesized that indicators of voters' political knowledge would be negatively correlated with name-order effects, as more knowledgeable voters would be more likely to have made informed choices in advance and therefore less likely to select the first unobjectionable name.

Of the variables we tested the only one that held up in multivariate analysis was education level. Our demographic data only went down to the level of congressional districts so we had but 14 observations. It was therefore impressive that education registered such a strong, negative correlation with position effect. Using the method described earlier, we created variables representing votes-by-position, aggregating up to the congressional district level. We then calculated the expected vote for each position and, from that, the advantage to first position. A scatterplot of position effect and the percentage of college-educated voters in a district is presented in Figure 6. The bivariate correlation between position effect and education is $-.61$ ($p < .01$), confirming our expectation that primacy effects in voting are stronger among less-educated voters.

Conclusion

In this paper, 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. This offends democratic notions that all candidates should compete on a level playing field.

Those who accept lotteries 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 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. The lack of such sample ballots was cited as a factor that aggravated the problems experienced by Florida voters. Indeed, some jurisdictions legally require production of a ballot facsimile that exactly reproduces the actual ballot. 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* which could both eliminate position effect and provide terrific data to political scientists who study this phenomenon in the future.

APPENDIX

For each contest, the rotation of names begins in the lowest-numbered precinct of the lowest-numbered Assembly District in each county with the candidates listed in alphabetical order (by their surnames). So, for example, the gubernatorial candidates were listed in alphabetical order in Queens county starting in the 23rd AD, 1st precinct (Hynes, LaRocca, McCaughey-Ross, Vallone). In the 23rd AD, 2nd precinct the first name was dropped to the last position and each other name moved up one position (LaRocca, McCaughey-Ross, Vallone, Hynes), and so on. Of course, there are many other offices listed on each ballot and for each office the names of the candidates must be rotated as well. The rotation is conducted separately in each county.

In some contests, the first rotation in a particular county is not in the first precinct of the first AD. In such cases, the rotation begins in the lowest-numbered precinct in the lowest-numbered AD that is part of the district. There are also electoral units that include non-consecutive precincts. For example, State Senate districts often include selected precincts from multiple Assembly Districts. In such cases, the rotation proceeds as if the included precincts were numbered consecutively.

Since there are multiple contests in each Assembly District – many of which include only a portion of several Assembly districts – the number of different ballot formats per Assembly District ranges from 12 to 91.¹³ Overall, there were 1,857 unique ballot formats in New York City. The maximum number of precincts with a common ballot format was eleven. Because we consider the data on a contest-by-contest basis, we treat all ballots with the same format for the contest being studied as having the same ballot format even if they have different formats for other contests.

¹³ In AD's 24, 33, 59, 60, 61, 62, 63, 65, 66 and 73 only the statewide nominations were contested, so there are only 12 formats in each of these districts. In AD's 76 and 79 all 13 nominations were contested and, consequently, there were 48 and 43 different formats, respectively. In AD 39, nine nominations were contested but because of the patchwork of congressional and state senate districts, there were 91 unique ballot formats. For an illustration of ballot formats in a single AD see Appendix B.

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

Table 2. Percentage of vote for candidates in each position, local offices

(Note: Table 2 continues on three additional pages)

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%

Office	District	Ballot Position				Total votes cast for this office	Number of precincts	Advantage to first position
		1	2	3	4			
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%
	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	Bronx	48.6%	51.4%			42,332	877	-1.4%
(Countywide)	Brooklyn	51.5%	48.5%			100,006	1,875	1.5%
Civil Court Judge	1	39.0%	30.2%	30.8%		16,886	269	5.6% *
(District)	2	52.9%	47.1%			19,685	420	2.9%

Office	District	Ballot Position				Total votes cast for this office	Number of precincts	Advantage to first position
		1	2	3	4			
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%

Office	District	Ballot Position				Total votes cast for this office	Number of precincts	Advantage to first position
		1	2	3	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

Table 3. Example of method for calculating observed vote for each position

23rd AD, 1st precinct

Office	Candidate	Position	Votes	Votes for 1st	Votes for 2nd	Votes for 3rd	Votes for 4th
Governor	Charles J Hynes	1	13				
	James L Larocca	2	2				
	Betsy Mccaughey Ross	3	9				
	Peter F Vallone	4	37				
Lt. Governor	Sandra Frankel	1	26				
	Charles King	2	10				
	Clyde Rabideau	3	6				
Attorney General	Catherine Abate	1	22				
	Evan A Davis	2	1				
	G Oliver Koppell	3	8				
	Eliot Spitzer	4	24				
U.S. Senator	Geraldine A Ferraro	1	13				
	Mark Green	2	8				
	Eric Ruano Melendez	3	3				
	Charles E Schumer	4	38				
U.S. House, District 9	Noach Dear	1	12				
	Daniel L Feldman	2	8				
	Melinda R Katz	3	15				
	Anthony Weiner	4	13				
		TOTAL			86	29	41

Table 4. Calculation of expected vote for each position.

		Total votes cast	Expected Vote			
			Position 1	Position 2	Position 3	Position 4
Number of candidates	2	513,520	256,760	256,760		
	3	104,941	34,980.33	34,980.33	34,980.33	
	4	54,929	13,732.25	13,732.25	13,732.25	13,732.25
	Total	673,390	305,472.58	305,472.58	48,712.58	13,732.25
	Expected Vote/Total		45.4%	45.4%	7.2%	2.0%

2 candidates: House 17; St. Sen. 17, 19, 30,32; Assembly 29, 31, 34, 36, 43, 51, 52, 55, 56, 58, 68, 69, 72, 75, 76, 78, 79; MDL 29, 31, 36, 37, 41, 46, 51, 55, 56, 68, 76, 78, 79, 82; FDL 29, 31, 36, 41, 46, 68, 72, 76, 78, 79, 82; SCM 29, 36, 74, 75, 76, 78, 79; SCW 29, 31, 75, 76, 78, 79

3 candidates: House 10; St. Sen. 14; Assembly 42, 46, 54, 79; MDL 42, 54; FDL 54; SCM 31

4 candidates: House 9, Assembly 45.

Table 5. Position advantage for individual candidates

(Note: Table 5 continues on six additional pages.)

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%	2.00%
		James L Larocca	7.3%	5.0%	4.8%	6.0%	5.8%	1.50%
		Peter F Vallone	63.7%	59.8%	59.3%	61.1%	61.0%	2.70%
Lieutenant Governor		Charles King	38.5%	36.3%	35.0%		36.6%	1.90%
		Clyde Rabideau	17.4%	16.3%	15.2%		16.3%	1.10%
		Sandra Frankel	48.6%	47.6%	45.3%		47.1%	1.50%
Attorney General		Catherine Abate	29.3%	27.2%	25.8%	25.9%	27.1%	2.20%
		Eliot Spitzer	41.9%	39.3%	38.6%	38.0%	39.4%	2.50%
		Evan A Davis	10.9%	9.8%	8.5%	8.5%	9.4%	1.50%
		G Oliver Koppell	26.3%	24.6%	23.0%	22.4%	24.1%	2.20%
U.S. Senator		Charles E Schumer	55.6%	53.9%	51.9%	51.8%	53.3%	2.30%
		Eric Ruano Melendez	6.6%	5.9%	4.4%	3.9%	5.2%	1.40%
		Geraldine A Ferraro	20.5%	17.5%	17.1%	18.1%	18.3%	2.20%
		Mark Green	24.1%	23.2%	23.0%	22.4%	23.2%	0.90%
U.S. Representative		9 Anthony Weiner	32.6%	27.2%	27.9%	27.9%	28.9%	3.70%
		Daniel L Feldman	24.1%	23.0%	19.3%	19.3%	21.3%	2.80%
		Melinda R Katz	29.7%	26.9%	27.4%	27.2%	27.8%	1.90%
		Noach Dear	21.7%	21.0%	23.8%	21.1%	21.9%	-0.20%
		10 Barry D Ford	38.9%	33.4%	34.5%		35.7%	3.20%
		Edolphus Towns	57.6%	52.4%	54.0%		54.6%	3.00%
		Kenneth Diamondstone	12.7%	7.9%	8.7%		9.7%	3.00%
		17 Eliot L Engel	79.6%	80.2%			79.9%	-0.30%
		Herbert Moreira-Brown	19.8%	20.4%			20.1%	-0.30%

OFFICE	DIST	NAME	POSITION				Total	1st - Total
			1	2	3	4		
State Senate	14	Edward P Sedarbaum	26.4%	20.1%	21.7%		22.7%	3.70%
		George Delis	31.8%	27.9%	27.9%		29.2%	2.60%
		George Onorato	52.0%	46.5%	45.8%		48.1%	3.90%
	17	Francisco Rodriguez	30.6%	20.4%			25.2%	5.40%
		Nellie R Santiago	79.6%	69.4%			74.8%	4.80%
	19	John Sampson	76.0%	70.8%			73.6%	2.40%
		S Kenneth Evans	29.2%	24.0%			26.4%	2.80%
	30	Daniel J Odonnell	33.7%	31.0%			32.3%	1.40%
		Eric T Schneiderman	69.0%	66.3%			67.7%	1.30%
	32	David Rosado	52.4%	52.0%			52.2%	0.20%
		Pedro Espada Jr	48.0%	47.6%			47.8%	0.20%

OFFICE	DIST	NAME	POSITION				Total	1st - Total
			1	2	3	4		
State Assembly member	29	William J Smith	28.2%	20.0%			23.9%	4.30%
		William Scarborough	80.0%	71.8%			76.1%	3.90%
	31	Evan D Gray	41.4%	36.5%			38.7%	2.70%
		Pauline Rhodd-Cummings	63.5%	58.6%			61.3%	2.20%
	34	Ivan C Lafayette	73.8%	69.3%			71.4%	2.40%
		William H Salgado	30.7%	26.2%			28.6%	2.10%
	36	Denis J Butler	54.7%	48.1%			51.5%	3.20%
		Kimon C Thermos	51.9%	45.3%			48.5%	3.40%
	42	Rhoda S Jacobs	60.4%	61.4%	53.7%		58.5%	1.90%
		Rock H Hackshaw	14.1%	11.9%	11.0%		12.4%	1.70%
		Samuel Nicolas	34.4%	28.6%	24.5%		29.2%	5.20%
	43	Clarence Norman Jr	58.2%	51.6%			55.2%	3.00%
		James E Davis	48.4%	41.8%			44.8%	3.60%
	45	Alan M Sclar	35.9%	33.9%	37.5%	34.0%	35.3%	0.60%
		Arnold Wolsky	8.6%	7.4%	7.8%	7.4%	7.8%	0.80%
		Joel F Garson	15.3%	17.7%	17.9%	14.3%	16.3%	-1.00%
		Lena Cymbrowitz	37.4%	39.5%	42.4%	43.0%	40.6%	-3.20%
	46	Adele H Cohen	51.9%	39.6%	45.5%		45.9%	6.00%
		Martin L Levine	45.2%	38.6%	33.9%		39.0%	6.20%
		Rodney Knight	15.9%	14.2%	15.2%		15.1%	0.80%
	51	Felix W Ortiz	76.6%	69.3%			73.1%	3.50%
		Javier A Nieves	30.7%	23.4%			26.9%	3.80%
	52	Joan L Millman	75.3%	75.0%			75.2%	0.10%
		Kenneth J Baer	25.0%	24.7%			24.8%	0.20%
	54	Darryl C Towns	60.2%	57.5%	54.2%		57.3%	2.90%
		Jose L Muniz	19.3%	9.3%	10.6%		12.8%	6.50%
		Martin Malave-Dilan	36.5%	29.2%	23.3%		29.9%	6.60%
	55	Stanley Kinard	28.1%	22.3%			25.4%	2.70%
		William F Boyland	77.7%	71.9%			74.6%	3.10%
57	Albert Vann	81.0%	73.8%			77.3%	3.70%	
	Richard Taylor	26.2%	19.0%			22.7%	3.50%	
58	Abu Aq Abu	28.7%	22.5%			25.6%	3.10%	
	N Nick Perry	77.5%	71.3%			74.4%	3.10%	
68	Frank Acosta	35.4%	25.2%			30.7%	4.70%	

OFFICE	DIST	NAME	POSITION				Total	1st - Total
			1	2	3	4		
		Nelson Antonio Denis	74.8%	64.6%			69.3%	5.50%
	69	Edward C Sullivan	86.2%	82.9%			84.5%	1.70%
		Francisco A Spies	17.1%	13.8%			15.5%	1.60%
	72	Adriano Espaillat	55.3%	72.4%			64.4%	-9.10%
		Isabel Evangelista	27.6%	44.7%			35.6%	-8.00%
	75	Jose R Espada	35.1%	24.0%			29.7%	5.40%
		Ruben Diaz Jr	76.0%	64.9%			70.3%	5.70%
	76	Charles R Serrano	27.9%	45.7%			37.1%	-9.20%
		Peter M Rivera	54.3%	72.1%			62.9%	-8.60%
	78	Richard Soto	25.0%	16.3%			20.6%	4.40%
		Roberto Ramirez	83.7%	75.0%			79.4%	4.30%
	79	Edwin O Ortiz Jr	14.7%	8.0%	5.7%		9.5%	5.20%
		Frankie Cruz	34.9%	23.5%	17.9%		25.6%	9.30%
		Gloria Davis	74.1%	59.4%	61.8%		64.9%	9.20%
Civil Court Judge								
	Bronx	Alan Drezin	39.6%	36.6%			38.1%	1.5
		Loren B Schiffman	63.4%	60.4%			61.9%	1.5
	Brooklyn	Anthony Chiofalo	24.2%	25.9%			25.0%	-0.80%
		Wilma Guzman	74.1%	75.8%			75.0%	-0.90%
Civil Court Judge								
	1	Bernadette F Bayne	44.1%	33.3%	35.5%		37.7%	6.40%
		Dolores Waltrous-Joseph	47.9%	39.4%	37.8%		41.6%	6.30%
		Edward A Roberts	25.1%	18.1%	18.7%		20.6%	4.50%
	2	La Tia W Martin	54.6%	48.9%			51.7%	2.90%
		Phillip A Werbel	51.1%	45.4%			48.3%	2.80%

OFFICE	DIST	NAME	POSITION				Total	1st - Total
			1	2	3	4		
Male District Leader	29	Charles Williams	67.8%	60.2%			63.8%	4.00%
		Edgar L Grove	39.8%	32.2%			36.2%	3.60%
	31	John Tilley	62.9%	54.8%			59.4%	3.50%
		Vance Caines	45.2%	37.1%			40.6%	4.60%
	36	Constantinos Prentzas	54.4%	47.2%			50.7%	3.70%
		Rosario P Drago	52.8%	45.6%			49.3%	3.50%
	37	Frank A Graham	53.4%	39.4%			46.8%	2.60%
		Santiago Vargas Jr	60.6%	46.6%			53.2%	2.70%
	41	Alan M Rocoff	38.0%	32.7%			35.4%	4.50%
		Lewis A Fidler	67.3%	62.0%			64.6%	4.20%
	42	Booker T Ingram	49.9%	45.5%	41.0%		45.4%	6.20%
		Rock H Hackshaw	32.1%	26.1%	25.4%		27.9%	3.50%
		Zacary Lareche	33.0%	24.7%	22.5%		26.8%	3.70%
	46	Martin J Bromberger	45.9%	38.7%			42.4%	2.50%
		Paul Podhaizer	61.3%	54.1%			57.6%	2.60%
	51	Angel Rodriguez	77.3%	72.2%			74.8%	10.60%
		Eddie Moran	27.8%	22.7%			25.2%	2.50%
	54	Charles Garcia	42.9%	33.6%	21.7%		32.3%	11.50%
		Hector Cortes	19.0%	15.6%	14.6%		16.5%	3.70%
		Martin Malave-Dilan	62.7%	42.5%	47.4%		51.2%	4.30%
55	Stanley Kinard	31.6%	23.6%			27.9%	4.10%	
	William F Boyland	76.4%	68.4%			72.1%	3.70%	
56	Albert Vann	79.1%	71.3%			75.0%	6.90%	
	Richard Taylor	28.7%	20.9%			25.0%	8.20%	
68	Bill Perkins	60.1%	45.0%			53.2%	8.30%	
	Felix Rosado	55.0%	39.9%			46.8%	7.50%	
76	Hector Torres	82.6%	66.8%			74.3%	2.80%	
	Miguelino Soto	33.2%	17.4%			25.7%	2.80%	
78	Jose Serrano	76.9%	71.3%			74.1%	8.00%	
	Rafael Ruiz	28.7%	23.1%			25.9%	9.10%	
79	Hector Garciani	46.8%	29.7%			38.8%	6.60%	
	James Burt Oliver	70.3%	53.2%			61.2%	7.40%	
82	Bynum Terry	41.5%	29.9%			36.0%	5.50%	
	Lewis H Goldstein	70.1%	58.5%			64.0%	6.10%	

OFFICE	DIST	NAME	POSITION				Total	1st - Total
			1	2	3	4		
Female District Leader	29	Dorita L Clarke	65.3%	55.2%			60.4%	4.90%
		Margaret A-Spears	44.8%	34.7%			39.6%	5.20%
	31	Jacqueline G Boyce	78.6%	67.7%			72.6%	6.00%
		Sharon Petillo	32.3%	21.4%			27.4%	4.90%
	36	Gemma Soviero	53.4%	40.8%			46.9%	6.50%
		Norma Nieves	59.2%	46.6%			53.1%	6.10%
	41	Renee Hauser	59.4%	53.3%			56.4%	3.00%
		Tara H Ebbin	46.7%	40.6%			43.6%	3.10%
	46	Gloria Hacken	46.7%	44.7%			45.8%	0.90%
		Marsha Rapaport	55.3%	53.3%			54.2%	1.10%
	54	Gladys Santiago	28.1%	18.4%	11.7%		19.0%	9.10%
		Judith M Rodriguez	36.0%	20.8%	27.2%		28.0%	8.00%
		Nellie Santiago	67.5%	44.7%	45.6%		53.0%	14.50%
	68	Carmen Quinones	59.6%	47.1%			53.9%	5.70%
		Wilma J Sena	52.9%	40.4%			46.1%	6.80%
	72	Joan Serrano Laufer	44.9%	66.8%			55.2%	10.30%
		Judith H Freeman	33.2%	55.1%			44.8%	11.60%
	77	Jessie Ripley	35.5%	18.0%			26.5%	9.00%
		Roselyn Johnson	82.0%	64.5%			73.5%	8.50%
	78	Marsha Carrington	72.1%	63.9%			67.9%	4.20%
	Pernal Lewis	36.1%	27.9%			32.1%	4.00%	
79	Rose E Santiago	45.5%	32.0%			38.3%	7.20%	
	Shirley Jackson	68.0%	54.5%			61.7%	6.30%	
82	Helena Robles	51.6%	42.5%			47.3%	4.30%	
	Sylvia Lask Hershkowitz	57.5%	48.4%			52.7%	4.80%	

OFFICE	DIST	NAME	POSITION				Total	1st - Total
			1	2	3	4		
State Committee eman	29	Elmer H Blackburne	76.3%	71.2%			73.8%	2.50%
		Neville A Facey	28.8%	23.7%			26.2%	2.60%
	31	Allan W Jennings Jr	66.9%	54.0%	58.4%		59.1%	7.80%
		Derrick G Warmington	17.4%	10.7%	12.4%		13.4%	4.00%
		James C Gadsden	33.6%	24.1%	22.4%		27.6%	6.00%
	36	George Onorato	64.0%	53.8%			58.9%	5.10%
		John J Ciafone	46.2%	36.0%			41.1%	5.10%
	74	David Rosado	70.8%	48.6%			60.0%	-6.60%
		Pedro G Espada	51.4%	29.2%			40.0%	-6.30%
	75	Jose R Espada	52.0%	64.9%			58.6%	8.90%
		Luis R Sepulveda	35.1%	48.0%			41.4%	9.50%
	76	Luis M Diaz	86.2%	67.8%			77.3%	-6.10%
		Pedro Paul Segui	32.2%	13.8%			22.7%	-6.20%
	78	Jose Rivera	65.3%	77.6%			71.4%	7.50%
		Ricardo F Martinez Jr	22.4%	34.7%			28.6%	8.90%
79	Gary Coleman	64.6%	48.2%			57.1%	10.80%	
	Wilbert Tee Lawton	51.8%	35.4%			42.9%	11.40%	
State Committee ewoman	29	Bessie G Debetham	39.7%	29.7%			34.8%	4.90%
		Cynthia Jenkins	70.3%	60.3%			65.2%	5.10%
	31	Lucille P Smith	50.6%	42.0%			46.0%	4.60%
		Michele R Titus	58.0%	49.4%			54.0%	4.00%
	75	Bertha Evans	49.5%	30.1%			39.5%	10.00%
		Nilsa V Moreno	69.9%	50.5%			60.5%	9.40%
	76	Barbara Jones	64.9%	54.5%			59.4%	5.50%
		Eugenia E Irizarry	45.5%	35.1%			40.6%	4.90%
	78	Edith B Bryant	29.6%	42.2%			36.0%	-6.40%
		Elsie Martinez	57.8%	70.4%			64.0%	-6.20%
	79	Carridad Ramirez	53.1%	36.8%			44.2%	8.90%
		Cynthia English	63.2%	46.9%			55.8%	7.40%

Table 6. Elections whose outcomes depended on ballot position

Male District Leader 36th Assembly district		BALLOT FORMAT		
		A	B	TOTAL
CONSTANTINOS PRENTZAS	Candidate's position	2	1	
	Votes for candidate in this format	1,274	1,376	2,650
	Candidate's % of total vote, this format	47.2%	54.4%	50.7%
ROSARIO P DRAGO	Candidate's position	1	2	
	Votes for candidate in this format	1,427	1,152	2,579
	Candidate's % of total vote, this format	52.8%	45.6%	49.3%

Male District Leader 37th Assembly district		BALLOT FORMAT		
		A	B	TOTAL
FRANK A GRAHAM	Candidate's position	1	2	
	Votes for candidate in this format	792	525	1,317
	Candidate's % of total vote, this format	53.4%	39.4%	46.8%
SANTIAGO VARGAS JR	Candidate's position	2	1	
	Votes for candidate in this format	691	807	1,498
	Candidate's % of total vote, this format	46.6%	60.6%	53.2%

(continued, next page)

State Committeeman 74th Assembly district		BALLOT FORMAT		
		A	B	TOTAL
DAVID ROSADO	Candidate's position	2	1	
	Votes for candidate in this format	1,264	1,924	3,188
	Candidate's % of total vote, this format	48.6%	70.8%	60.0%
PEDRO G ESPADA	Candidate's position	1	2	
	Votes for candidate in this format	1,336	793	2,129
	Candidate's % of total vote, this format	51.4%	29.2%	40.0%

State Committeewoman 31st Assembly district		BALLOT FORMAT		
		A	B	TOTAL
LUCILLE P SMITH	Candidate's position	1	2	
	Votes for candidate in this format	365	339	704
	Candidate's % of total vote, this format	50.6%	42.0%	46.0%
MICHELE R TITUS	Candidate's position	2	1	
	Votes for candidate in this format	357	469	826
	Candidate's % of total vote, this format	49.4%	58.0%	54.0%

(continued, next page)

BALLOT FORMAT

Civil Court Judge (A)		A	B	TOTAL
LA TIA W MARTIN	Candidate's position	1	2	
	Votes for candidate in this format	5,319	4,859	10,178
	Candidate's % of total vote, this format	54.6%	48.9%	51.7%
PHILLIP A WERBEL	Candidate's position	2	1	
	Votes for candidate in this format	4,422	5,085	9,507
	Candidate's % of total vote, this format	45.4%	51.1%	

BALLOT FORMAT

Civil Court Judge (B)		A	B	C	TOTAL
BERNADETTE BAYNE	Candidate's position	1	2	3	
	Votes for candidate in this format	2,525	2,012	1,834	6,371
	Candidate's % of total vote, this format	44.1%	35.5%	33.3%	37.7%
EDWARD ROBERTS	Candidate's position	2	1	3	
	Votes for candidate in this format	1,034	1,421	1,030	3,485
	Candidate's % of total vote, this format	18.1%	25.1%	18.7%	20.6%
DOLORES WALTROUS-JOSEPH	Candidate's position	3	2	1	
	Votes for candidate in this format	2,165	2,229	2,636	7,030
	Candidate's % of total vote, this format	37.8%	39.4%	47.9%	41.6%

Figure 1. Sampling distribution of vote percent, Governor/Attorney General/U.S. Senator

$E(\pi)=1/4$, $N=5460$ Election Districts

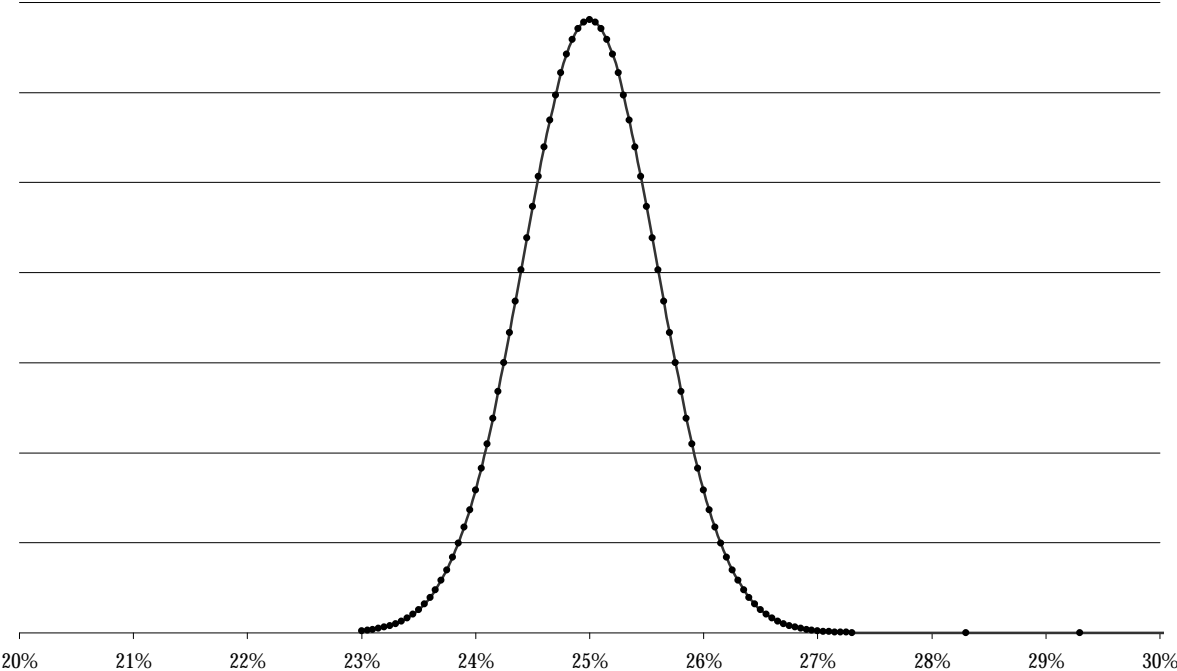


Figure 2. Sampling Distribution of Vote Percent (by Position) in Lieutenant Governor primary

$E(\pi)=1/3$, $N=5442$ Election Districts

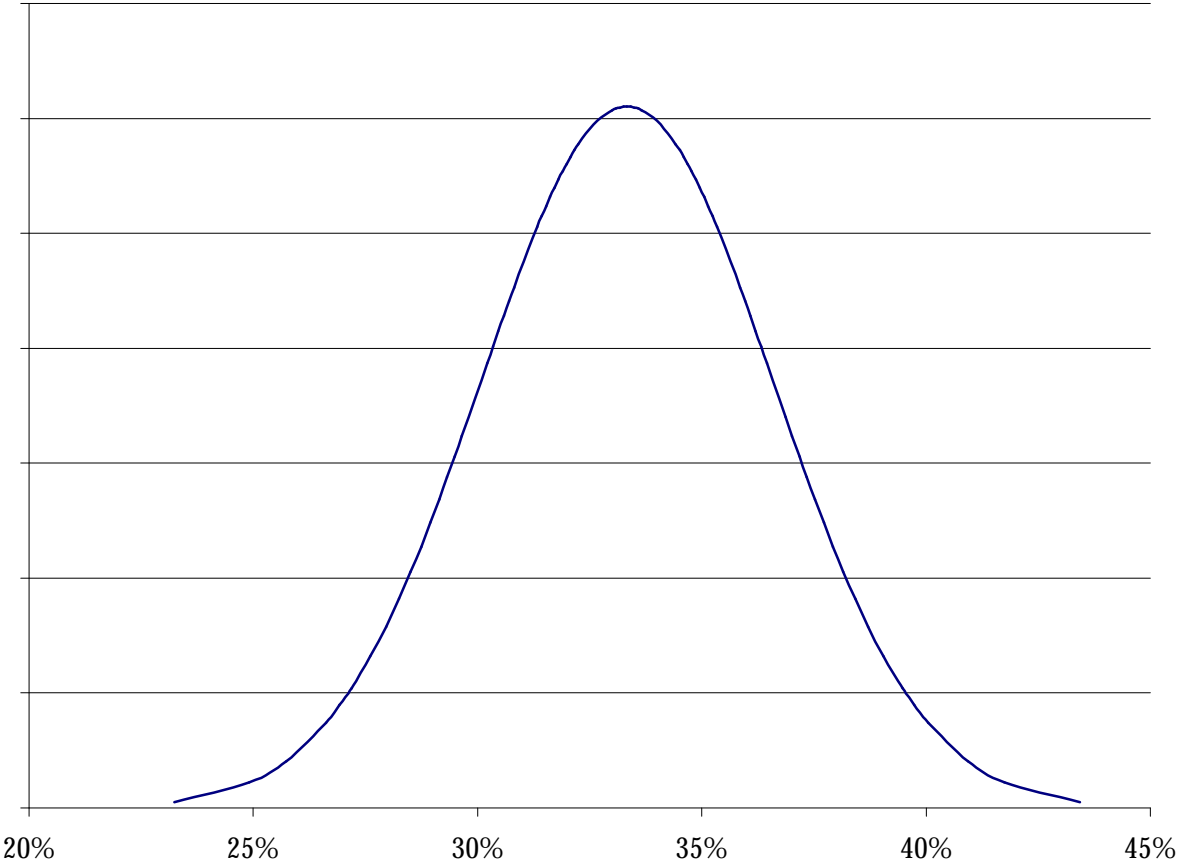


Figure 3. Sampling Distributions Compared
Four-person statewide contest and two-person local contest

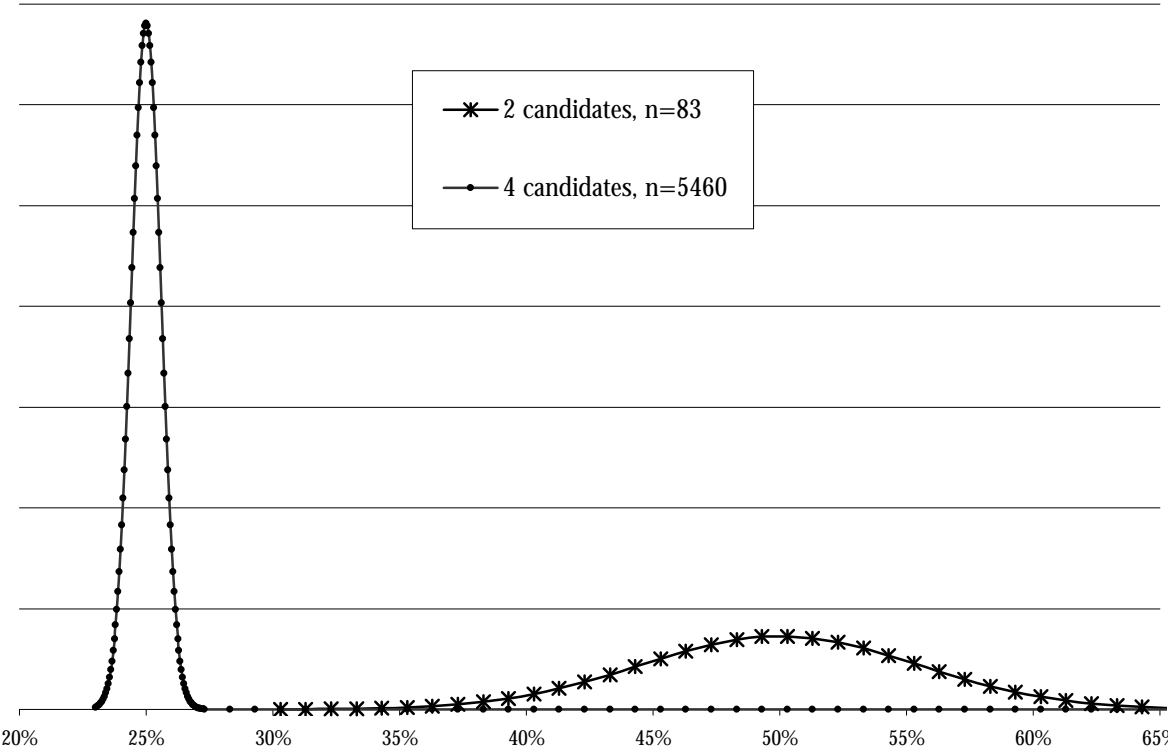


Figure 4. Histogram of individual candidates' position advantage

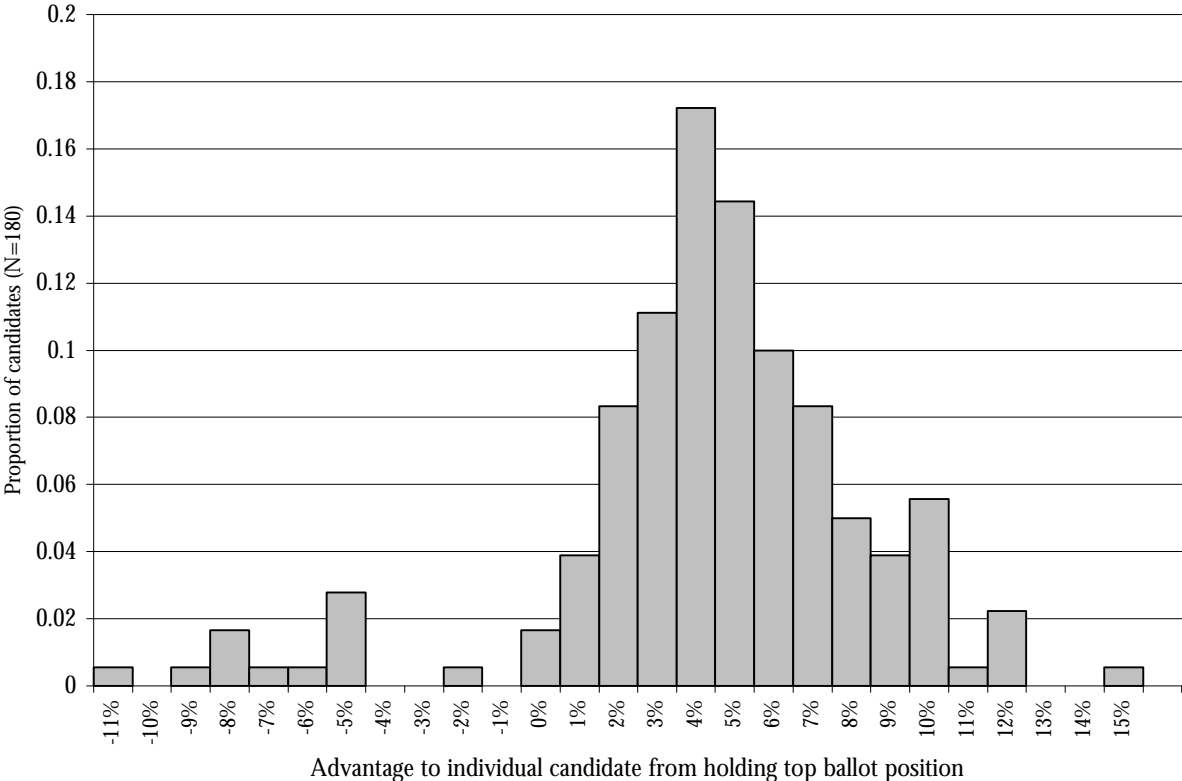
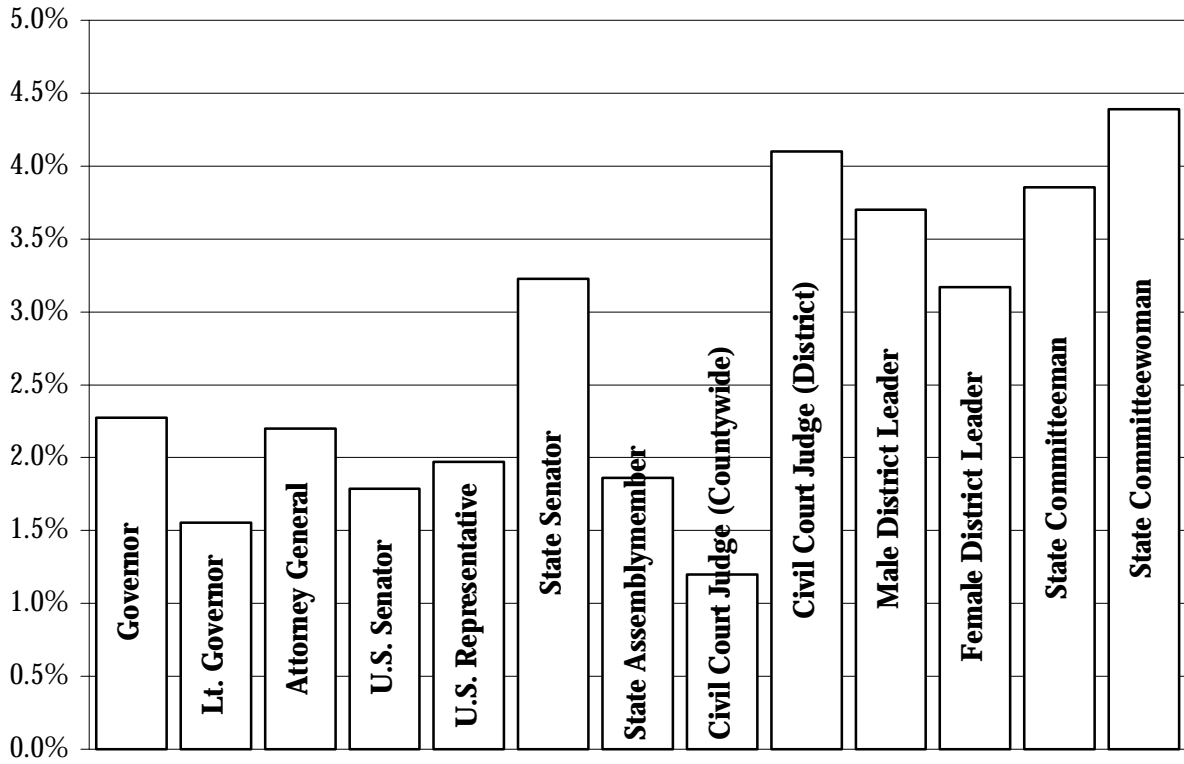


Figure 5. Average bonus to first position, by office



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