



The Impact of Ranked Choice Voting on the Democratic Primary Elections of 2021

Center for Urban Research
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Authors
John Mollenkopf
Steven Romalewski
Valerie Bauer
Ken Silverman
Laura Tamman
Kenisha White

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Summary of Findings

Ranked Choice Voting (RCV) substantially changed how New Yorkers vote in their local primary elections with potentially long-term implications for electoral competition. Adopted as Proposition 1 in November 2019, RCV allows voters to list up to five candidates in order of preference, thereby minimizing the chance that they would waste their vote on an initial choice that turned out not to be competitive, but rather transferring their ballot to other candidates whom they also preferred, if less so than their initial choice. RCV also avoids the cost of runoff primaries and may better reflect the range of sentiments in the electorate. (It certainly provides more information about their preferences.)

Common Cause New York and Unite Institute commissioned the Center for Urban Research to evaluate the impact of RCV in this path-breaking election. Here, we address a series of key questions, including how different groups of voters used ranked choice voting across different types of campaigns; which higher-ranked candidates benefitted from transfer votes from lower-ranked candidates; and whether these patterns of RCV usage are statistically associated with demographic characteristics, voter preferences, and electoral outcomes. We also interviewed candidates, campaign consultants, and other knowledgeable participants about how they thought RCV had influenced their campaigns (or not).

We find that RCV largely accomplished its goals. Voters understood the process and substantially more of them voted in the June 2021 Democratic Primary than in previous mayoral primary elections, including the open seat in 2013. (Democrats cast 942,031 valid mayoral votes in their primary, for a 28 percent turnout, while only 60,051 Republicans, or 11.7 percent of those registered, voted in that primary.) Of those who cast Democratic primary ballots, 86.6 percent ranked two or more candidates, compared to FairVote's report that about 77 percent of voters in other RCV elections across the nation did so. Only 140,202 voters (14.9 percent) did not have their votes counting for one of the two final candidates.

At first glance, it seems that RCV did not change the broad outcomes of the June primaries because the leading candidate in the first round almost always ultimately won the nomination. Given the quite close margins among the top three mayoral candidates in the final round, however, the mayoral primary could have gone in a different direction had a runoff election been conducted under the previous system. In that alternative scenario, Eric Adams would have faced off against Maya Wiley. While we do not know exactly what would have happened, we do know that Wiley would have won 141,158 RCV votes from those who did not list her or Adams in the top two, while Adams would have won 128,501 votes, closing the initial 88,276 vote gap between them by 12,657 votes, probably not enough for her victory. As it was, the elimination of Wiley in the last round transferred just enough of her votes to Adams to enable him to hold off the challenge from Kathryn Garcia, keeping him 7,197 votes in the lead. This was the closest mayoral primary race in the last 50 years.

One fairly clear aspect of the mayoral primary race is that cross-endorsements or slate-making were not developed to their potential. Had more cross-endorsements had taken place among the leading candidates, or if endorsing groups and individuals had been more aggressive in advocating slates of ranked candidates, this might well have changed the outcome. (As this was the city's first RCV election, endorsing entities had not yet learned the full vote-harvesting of slate-making.) In the event, Mayor Adams owes his election both to Andrew Yang, many of whose votes were redistributed to Adams while also lowering Maya Wiley into third place, thanks to his endorsement of Kathryn Garcia; and also to Wiley's voters, just enough of whom transferred their votes to Adams to keep him ahead of Garcia (even though more of Wiley's votes transferred to Garcia). If Wiley and Garcia had been able to build greater mutual support among their voters, perhaps around the importance of electing the city's first woman mayor, the outcome might well have been different. More broadly, the fragmentation and lack of cross-endorsements among the more liberal or progressive candidates weakened their collective influence on the election.

RCV did decide the outcome in two council districts where an initially trailing candidate ultimately won: Kristin Richardson Jordan surpassed original front-runner Bill Perkins by 54 votes in Manhattan's District 9 and Shekar Krishnan came from behind to beat Andy Chen by 776 in Queens District 25. Both nominees went on to win the general election. (Not all Democratic nominees won. Although Felicia Singh

won the Democratic nomination in District 32, she lost to Republican Joann Areola in the general, while Democrat Tony Avella lost to Republican Vickie Paladino in District 19 and Democrat Steven Saperstein lost to Republican Inna Vernikov in District 48.)

While RCV did not change most Democratic primary outcomes, it did enable groups of voters (identified by ideology, race, ethnic ancestry, or any other shared trait) to support their most-favored candidates without fearing that they were wasting their vote when these candidates were eliminated. While it is hard to measure this, the adoption of RCV may have generated a broader and wider and more inclusive debate than before, given that the press tends to focus mainly on “horse races” between several top candidates, tending to narrow voter attention. At the same time, to the extent that the advent of RCV increased the number of candidates running for local office, it became more cumbersome for voters and the neighborhood press to cover the races. The use of RCV may also have reduced interest in the general election, where turnout was comparatively low, given that the large majority of Democratic voters may have felt satisfied with the choices made in the primary.

While we will have to wait until after several future rounds of RCV for candidates and coalition-builders to learn to use the full potentials of the method, this first experience went well.

This report is presented in two parts. The first part is a quantitative analysis of the Democratic mayoral, comptroller, and council primaries that describes and evaluates how voters deployed their new abilities to express themselves. We examine turnout, the distribution of different patterns of RCV voting (how many candidates were ranked and in which order), the patterns of who voted for whom, including the share of those who voted for candidates who ended up inactive in the final rounds, and the close alignment among different measures of support (#1 votes, any votes for a given candidate, and final rounds votes). We correlate these with each other, noting interesting patterns, including whether the mayoral patterns held for the comptroller, borough president, and city council races.

The second part focuses on what candidates and campaign experts told us. We asked them what motivated them to enter the race, how they thought they were going to win, and how, if at all, RCV influenced their campaign strategy, particularly in terms of “going negative” or forging cross-endorsements with competitors. The main conclusion is that *our informants did not feel that RCV made any game-changing differences in strategy or outcome, although it might have provided an incentive for candidates to be nicer than usual to their competitors and less likely to go negative. As in the mayoral and comptroller race, the person who was ahead on the first round ultimately won the Democratic nomination in all but two cases and most Democratic nominees later won the general election. (Democratic nominees lost to Republican nominees in the three cases noted above, while two incumbent candidates, Robert Holden of District 30 and Kalman Yeger of District 44 ran on both the Democratic and Republican lines in the general election.)*

Not having previous experience with RCV, the campaigns did not feel that RCV had affected how they built support. Few candidates made cross-endorsement agreements with opponents. *At the same time, RCV may have given them less incentive to go negative against competitors and many candidates did some outreach and training on RCV. They did not feel that voters were confused by RCV.*

Section 1: Quantitative Analysis of Election Results

The Mayoral Democratic Primary

New York City Democratic mayoral primary voters embraced RCV. Almost 87 percent of these voters ranked two or more candidates, which exceeded the national average of 77 percent of voters in competitive RCV elections (those with 5 or more candidates) who ranked multiple candidates.¹ Two out of five voters used all five ranking possibilities and three-quarters of mayoral voters ranked at least three candidates, not counting anyone who ranked the same candidate more than once. Table 1 presents these statistics.

¹ FairVote https://www.fairvote.org/data_on_rcv#research_ballotuse

TABLE 1

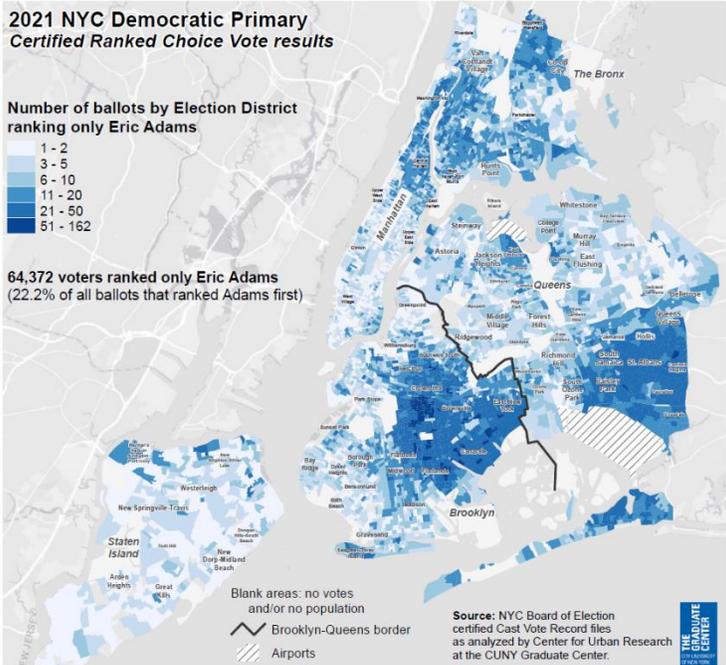
Number of candidates ranked	Ballots	Share of total ballots
1	126,599	13.4%
2	113,977	12.1%
3	164,447	17.5%
4	158,463	16.8%
5	377,833	40.1%
Total	941,319	100.0%

NB: This total differs slightly from certified total due to differences in cast vote record data.

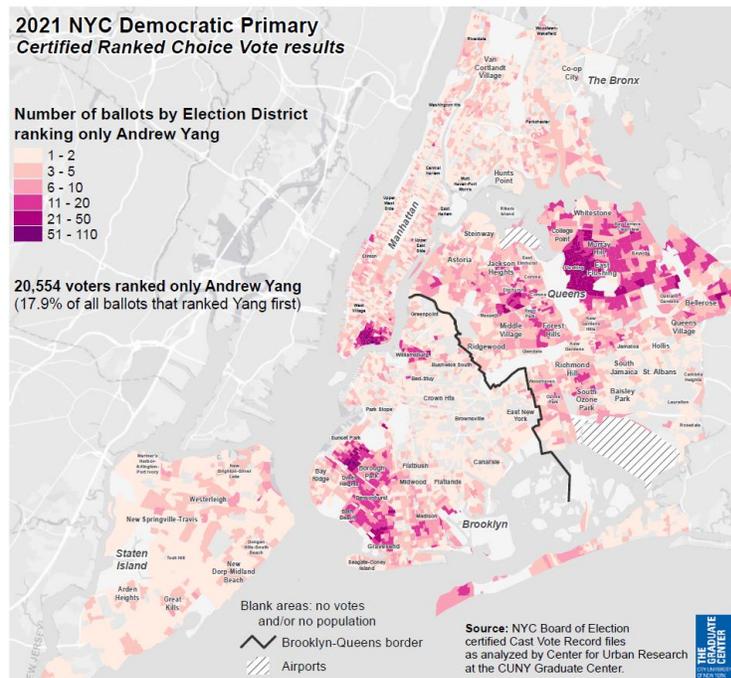
It would not be appropriate to say that those who ranked fewer candidates did not understand or did not appreciate the possibility of ranking more. Fewer rankings may simply have reflected their preferences accurately, particularly those who favored Eric Adams and only Eric Adams. For example, of the voters who ranked only one Democratic mayoral candidate:

- 64,372 ranked only Eric Adams (22.2% of all ballots that ranked Adams first)
- 20,554 ranked only Andrew Yang (17.9% of all ballots that ranked Yang first)
- 12,688 ranked only Maya Wiley (6.3% of all ballots that ranked Wiley first)
- 10,207 ranked only Kathryn Garcia (5.5% of all ballots that ranked Garcia first)

MAP 1 Adams-only Voters



MAP 2 Yang-Only Voters

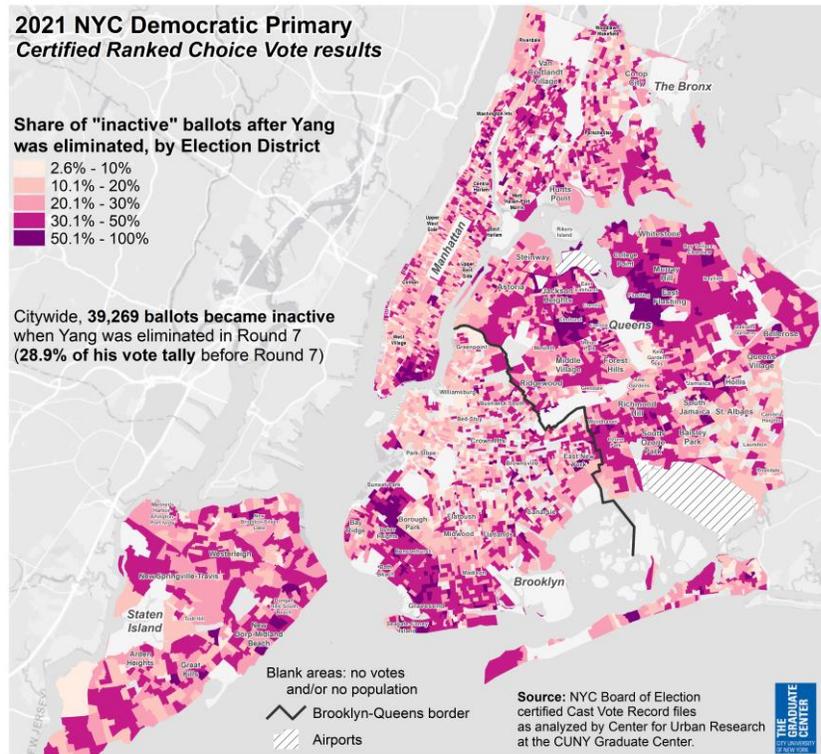


After Adams (Adams-only voters depicted in Map 1), Yang also clearly had a higher share of supporters who were particularly enthusiastic about him and voted only for him (Map 2). It is not surprising that other candidates had singular supporters as well.

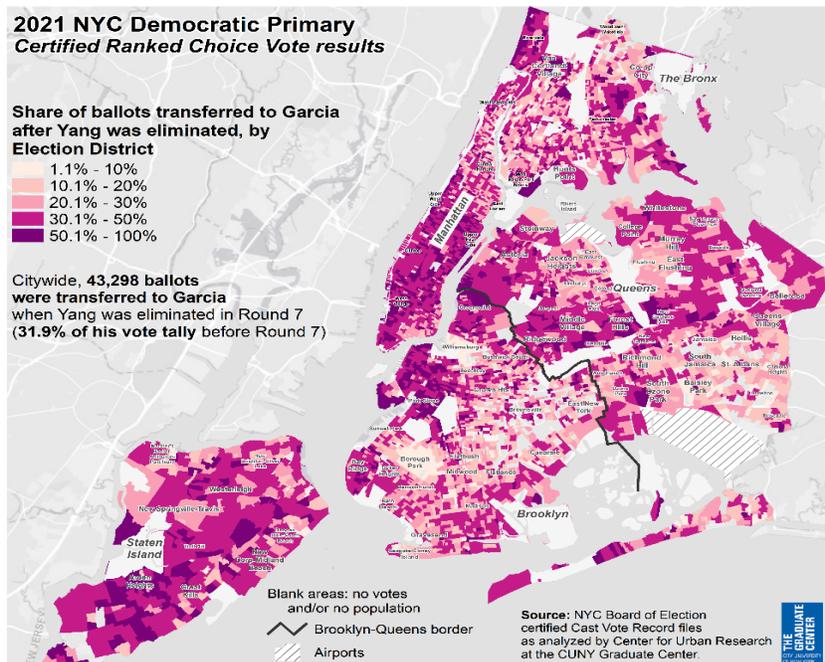
The number of votes rendered inactive gradually increased as candidates were eliminated across the rounds, culminating with Yang and Wiley in rounds 7 and 8, with each of them having 29 percent of their ballots rendered inactive. For Yang, those inactive ballots were concentrated where he did best in the first-round tally, as shown in Map 3. In other words, many voters in the areas that most strongly supported Yang either did not rank anyone else or did not rank any of the other final three candidates. Toward the end of the campaign, Yang and Garcia campaigned together and Yang urged his supporters to rank Garcia as their number 2 choice. In many neighborhoods, 30 percent or more of Yang's votes transferred to Garcia, meaning that Yang's endorsement clearly had positive benefits for Garcia. She benefitted from these transfer votes not only where she already had done well, but received a quarter of her Yang transfer votes from areas where he did well initially but she had fared poorly (see Map 4 below). Garcia, however, received almost no transfer votes from Yang supporters in the Hasidic areas of Borough Park and Williamsburg, where more than 50 percent of Yang's ballots transferred to Adams instead. Few Yang votes transferred to Wiley, thus moving Garcia ahead of Wiley and positioning Wiley for elimination.

The greatest share of voters who ranked two or more candidates put Garcia first and at least one other candidate (174,365 ballots, or 94.5 percent of her first-round ballots), while Adams had the least share of ballots ranking him first and any other candidate second, but that share was still substantial (225,233 ballots, or 77.8 percent of his first-round ballots). The two candidates most frequently paired in first-and-second ranks were Wiley first and Garcia second (61,322 ballots), followed by Adams first and Wiley second (58,851 ballots). Her supporters clearly favored Garcia more than Adams, with only 25,502 voters ranking Adams after Wiley. (Appendix A gives the complete rankings of pairings.)

MAP 3 Inactive Ballots after Yang Elimination

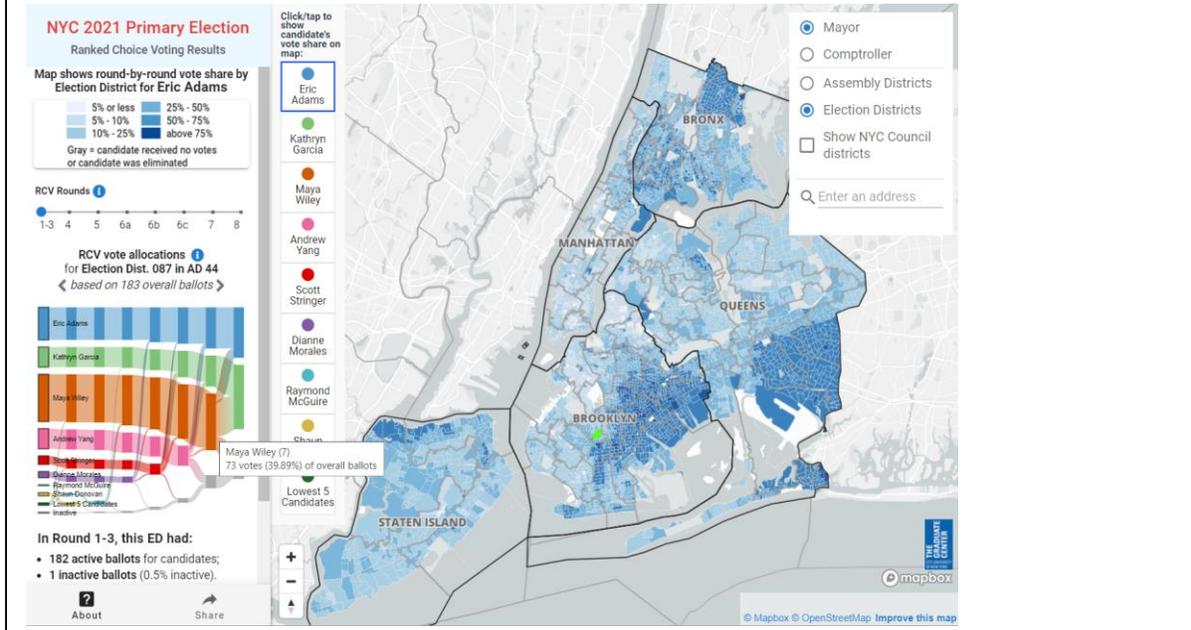


MAP 4 Yang Transfer Ballots to Garcia



The share of votes Adams received during the process of eliminations and transfers was lower than his share of first place votes. He got 30.7 percent of the first round votes, but received only about 20 percent of the transfer votes from candidates eliminated before Yang, which gradually narrowed his lead. The Yang vote elimination and transfer was pivotal in moving Garcia ahead of Wiley and increasing his lead once more, since he got 39 percent of the votes transferred in Round 7. (Garcia got 44.9 percent of Yang’s transferred votes and Wiley only 16.1 percent.) The resulting elimination of Wiley and transfer of her votes helped Garcia gain on Adams and almost close his lead over her, but the fact that 27.7 percent of her transferred votes went to Adams was sufficient to keep him narrowly ahead. The transfer patterns of Yang voters to Adams, Wiley, and Garcia and the transfer of Wiley votes to Garcia and Adams thus determined the final outcome of the mayoral primary.

The reader can find voting patterns for the June 2021 Mayoral and Comptroller Democratic Primary races at <https://www.urbanresearchmaps.org/nycrcv2021/>. The interactive map allows the viewer to see the ranked choice voting patterns by election district or by Assembly district in both races. At either geographic level, the map shows both the initial vote share for each candidate and how the votes of eliminated candidates in each round were distributed. It uses a color-coded flow diagram for each election district and Assembly district to provide a powerful visual display of the vote transfers during the RCV tallies for each candidate, detailing the exact number of votes at each stage. The map updates the flow diagram instantly as you hover over or click on any of the 5,600 election districts or 65 State Assembly districts. The diagram also highlights where votes were rendered inactive in each RCV round so you can see whether a candidate’s inactive votes are concentrated by neighborhood, and locally how much of each eliminated candidate’s votes were rendered inactive. The screen image below illustrates the interactive map’s features.



The Comptroller Democratic Primary

Although it is the second most important elected office in New York City, the comptroller’s race got much less press and public attention, fewer prominent candidates ran for the office, and 72,747 fewer voters ranked candidates in the race than in the mayoral race and far more voters either ranked only one candidate or ranked all five. In this sense, the race was far more similar to the old system than the new.

Table 2 presents the share of ballots by number of comptroller candidates ranked in the primary.

TABLE 2

Number ranked	Ballots	Share of ballots
1	277567	32.0
2	157457	18.1
3	124465	14.3
4	61036	7.0
5	248047	28.6
Total	868572	100.0

As in the mayoral race, many voters supporting the leading candidates saw them as the only valid choice:

- 88,687 voters ranked only Brad Lander (33.2% of all ballots that ranked him first)
- 63,042 Voters ranked only Corey Johnson (32.5% of all ballots ranking him first)
- 36,419 voters ranked only Michelle Caruso-Cabrera (31.5% of all ballots ranking her first)
- 15,663 voters ranked only Brian Benjamin (23.8% of all ballots ranking him first)
- 20,677 voters ranked only David Weprin (33.2% of all ballots ranking him first)

Brad Lander began the RCV process with a substantial 73,000 vote lead over the second place candidate, Corey Johnson, and kept that lead through the elimination of the five lowest-ranked candidates. However, the elimination of the other four trailing candidates, Kevin Parker, David Weprin, Brian Benjamin, and Michelle Caruso-Cabrera, steadily narrowed that lead as their supporters favored Johnson more than Lander. This was particularly the case for the transferred votes from Caruso-Cabrera, who had registered as a Republican through 2016 and who had previously posed a primary challenge to U.S. Congress member Alexandria Ocasio-Cortez. Elimination of Caruso-Cabrera reduced Lander's lead by 22,161 votes, while Weprin's elimination reduced Lander's lead by 10,842 votes. Clearly, in this race, different blocks of voters were more committed to specific candidates compared to the mayoral race.

City Council Primaries

Thirty-seven incumbent Council members (35 Democrats and 2 Republicans) were term-limited from running again in the June primaries and one Democratic incumbent eligible to run for reelection chose not to do so, creating an unusually large number of open seats. Of the 12 seats with Democratic incumbents who could run for reelection, only two contests proved competitive, with Kristin Richardson Jordan prevailing over Bill Perkins in Manhattan's District 9 and Darlene Mealy over Alicka Ampry-Samuel in Brooklyn's District 41. In the other ten, the incumbent candidate won more than half the votes in the first round. (Even so, a candidate challenged the incumbent in seven of these races.) The only Republican incumbent running for reelection in Staten Island's District 51 did not draw a primary challenger and soundly beat his Democratic opponent who, as the only candidate, did not face a Democratic primary. Thus only two of the 13 council races featuring incumbents had quite close outcomes.

The other 38 open seat council races ranged widely in the number of candidates they attracted, whether or not one candidate emerged to dominate the race, and how many rounds it took to determine the winner. Of the two Republican open seats, the Republican primary in Staten Island District 50 was hotly contested, with the winner trouncing the sole Democratic candidate, nominated without a primary, in the general election. In Queens District 32, one candidate dominated the Republican primary, while a number of candidates competed in the Democratic primary to challenge him. In the end, the Republican nominee solidly won the general election, so this race could not be considered particularly competitive.

The number of primary candidates in the 36 Democratic open seats ranged from 3 to 15, but one dominant candidate won more than half the first round votes in 6 of them, leaving 30 Democratic open seats featured competitive primaries. The ultimate winner's share of the first round vote in these

competitive contests ranged from 18.5 to 49.9, with an average of 36.2 percent. These races went through many rounds and their voters ranked a higher average number of candidates (2.74) than in all Democratic council primaries taken together (2.58), in part because they featured more candidates. Democrats cast a total of 783,607 votes in their council primaries, or 157,712 fewer than in the mayoral primary, but this decrease (known as “roll-off”) is a normal feature of elections and some Democratic council races were not competitive. Indeed, the roll-off was probably less than normal because so many Democratic council primaries were competitive. RCV, along with public campaign financing and the large number of open seats, promoted this grassroots electoral competition and engagement. Although 34 of the Democratic nominees in these 36 open seats won the general election, Republicans prevailed in two: Vicky Paladino narrowly won over Democrat Tony Avella in Queens District 19 and Inna Vernikov more convincingly defeated Democrat Steven Saperstein in Brooklyn District 48.

In short, the 2021 council elections featured a great deal of competition and produced considerable change, including making women a majority of council members for the first time and representing previously unrepresented groups, with the election of the first Korean, South Asian, and Colombian members (although the new council also lost Mexican-origin representation). Remarkably for such a heavily Democratic city, Republican representation expanded to 5 members (from 3) and two Democrats also ran with Republican nominations, giving that party’s council delegation parity with its share of the registered voters.

Demographic Correlates of RCV Voting Patterns

The Center for Urban Research cleaned and organized the cast vote record for various offices released by the New York City Board of Elections to account for skips and duplications, creating a data set of individual RCV rankings which could range from one to five candidates. This allowed us to determine the frequency of each specific RCV pattern. Only 13.5 percent of the cast ballots ranked just one candidate in the first round of the Democratic mayoral primary, with Adams-only voters accounting for more than half of them. This means that almost 87 percent of the voters used RCV to rank more than one candidate, ultimately employing 21,000 different kinds of rankings, only two of which (Adams-Wiley only and Adams-Yang only) accounted for even one percent of the total vote. RCV thus permitted voters in the New York City Democratic primary to express a tremendous array of preferences.

We also analyzed these patterns by summing the number of voters who gave any ranking to a given candidate by election district and then comparing the prevalence of these aggregated rankings across election districts with the variation in key demographic characteristics (as measured from the census tract in which the geographic center of the election district is located).² We took a similar approach to the average number of rankings made by voters in each election district.

Table 3 below shows strong patterns of correlation between socio-economic differences and patterns of candidate support. Adams demonstrated that he was indeed the blue collar candidate, strongly attracting voters in census tracts with more residents in blue collar occupations (correlation .222), residents who are Black (.691), and to some extent Latino neighborhoods (.095).³ His share of the vote was much lower in neighborhoods (i.e., census tracts) with more college educated adults (-.495), while Garcia did best in neighborhoods with more adults with college degrees (.779) and Wiley also did well (.207). Associational patterns for Garcia’s vote share represent a mirror image of Adams’s votes: her support was strongly associated with upper income (.694), white (.708), and even Asian neighborhoods (.057). Wiley’s support patterns fell between the two, with less strong than Garcia’s but still significant appeal in educated,

² Since New York City has about 5,600 election districts and 2,100 inhabited census tracts, this procedure applies tract characteristics to the election districts it wholly or mostly contains. However, since tract boundaries sometimes cut across election district boundaries, the match is not perfect. Tract data are drawn from the 2015-2019 American Community Survey combined file.

³ Correlation coefficients measure closeness of association, ranging from -1.00 (perfectly negatively related) to 0 (perfectly unrelated) to 1.00 (perfectly positively related). Significance indicates the degree to which the relationship might have happened by chance, with .01 significance meaning that the relationship might have happened by chance in only 1 out of 100 instances.

affluent, professional neighborhoods, but also drawing well from Black neighborhoods (.351) and more modestly from Latino neighborhoods (.035). Yang’s share of the vote had no significant relationship to education, income, or occupation, but drew very strongly from Asian (.467) and white neighborhoods (.357) and was minimal in Black (-.524) and Latino (-.179) neighborhoods.

Tract characteristic	Adams	Wiley	Garcia	Yang
Share of population age 25+ with college education or more	-.495**	.207**	.779**	.012
Household income per capita	-.370**	.107**	.694**	.024
Share of workers with professional occupations	-.409**	.227**	.655**	-.024
Share of workers with blue collar occupations	.222**	-.146**	-.568**	.002
Black share of voting age citizens	.691**	.351**	-.633**	-.524**
Asian share of voting age citizens	-.393**	-.296**	.057**	.467**
Non-Hispanic white share of voting age citizens	-.481**	-.205**	.708**	.357**
Hispanic share of voting age citizens	.095**	.035**	-.268**	-.179**

** Correlation is significant at the 0.01 level * significant at the .05 level.

Table 4 presents the correlations between the average number of rankings in selected races and the same demographic characteristics as Table 1. (Average rankings are analyzed for Democratic primaries for mayor, comptroller, borough president races in Manhattan, Bronx, and Brooklyn – where there were competitive primaries – and 30 open and competitive city council seats.) Given the demographic correlations with patterns of support for the different candidates and knowing that Adams and Yang were far more likely than other candidates to attract “bullet” voters (someone who only ranks one candidate), it is not surprising that higher average number of candidate rankings in the Democratic mayoral primary are positively associated with higher shares of college education, income, and professional occupations as are the associations with tract racial composition. What is unexpected, perhaps, is that the patterns of usage of RCV differ so strongly depending on the specific race being examined.

	Mayoral rankings	Comptroller rankings	Borough President Rankings***	City Council Rankings***
Share of population age 25+ with a college education or more	.483**	-.159**	-.070	.074**
Household income per capita	.427**	-.116**	-.399**	-.060**
Share of workers with professional occupations	.412**	-.196**	-.298**	-.045**
Share of workers with blue collar occupations	-.378**	.138**	.285**	.030
Black share of voting age citizens	-.052**	.299**	.474**	.349**
Asian share of voting age citizens	-.198**	-.091**	-.069	-.440**
Non-Hispanic white share of voting age citizens	.214**	-.331**	-.499**	-.199**
Hispanic share of voting age citizens	-.125**	.160**	.481**	.229**

*** For competitive races only: BP in Manhattan, Bronx, and Brooklyn; 30 competitive Dem open CC seats

(where at least a second round of RCV vote distribution took place.

At the same time, Table 4 has surprises that warn us against drawing conclusions solely based on the mayoral primary. The relationships between RCV utilization patterns, as measured by the average number of rankings in a given race, and demographic characteristics change considerably depending on the offices being analyzed. RCV utilization in the mayoral and comptroller primaries, for example, had quite different demographic associations. And both differed from patterns for borough president and the competitive Democratic council primaries. For instance, the share of the Black voting age citizen population and the average number of rankings which was modestly negative for mayor and strongly positive for comptroller, was even more strongly associated with the borough president and council races, indicating an interest in a broader range of candidates at those levels. Voters in more highly educated tracts were highly disposed to rank candidates in the mayoral election, ill-disposed in the comptroller election, and only weakly associated at the other levels.

In addition to reorganizing the raw cast vote record data from the NYC Board of Elections into candidate vote tallies by election district for each ranked choice voting round, the Center for Urban Research also calculated RCV metrics by election district for each June 2021 race (across the Democratic, Republican, and Conservative primaries). It tallied the number of ballots with the following characteristics and reduced them all to their logical equivalents.⁴

- fully ranked (ballots ranking five unique candidates depending on the race);
- same candidate ranked for multiple choices;
- average number of unique candidates ranked;
- included two or more valid candidate rankings;
- ranked only one candidate but multiple times;
- ranked only one candidate once;
- ranked only one candidate once or multiple times;
- did not include any ranked choices though the voter was eligible to vote in this race based on ballot style and council district;
- ranked at least one candidate;
- overvoted as first choice (i.e., no other rankings for these ballots were counted);
- overvoted anywhere in the ballot choices (this also immediately exhausts the ballot);
- undervotes (ballots that had skipped rankings; unlike overvotes, these are valid ballots); and
- had at least one candidate ranked or an overvote as the first ranking.

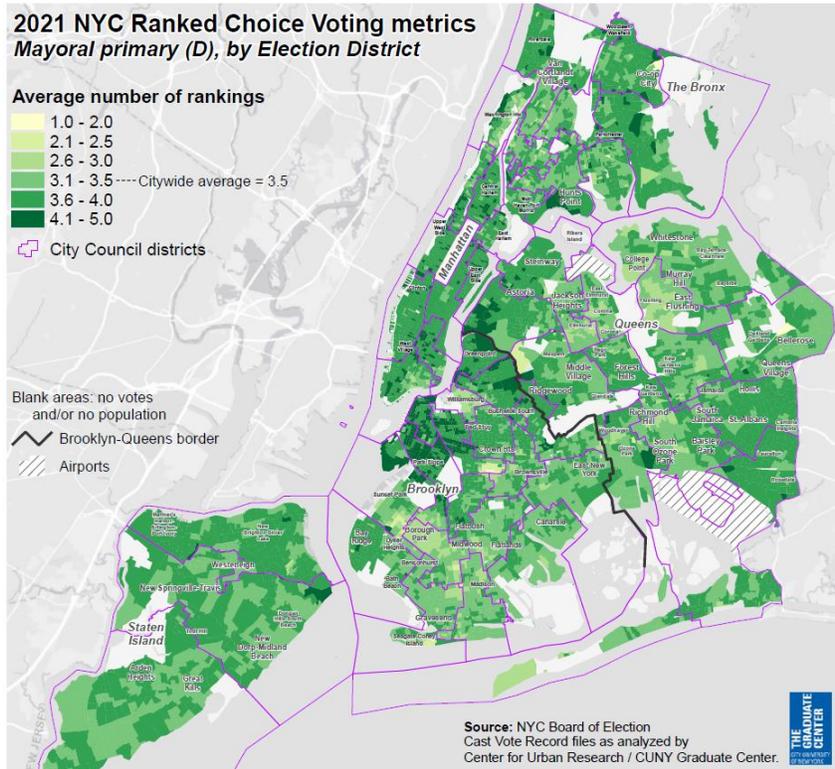
Analyzing and visualizing these RCV metrics by election district can provide detailed insights regarding voter behavior at a very local level as well as revealing citywide patterns.

For example, Map 5 below presents the pattern of average rankings in the Democratic mayoral primary, showing some concentrations of election districts where voters on average ranked fewer than three candidates (such as Borough Park and parts of Williamsburg and Crown Heights in Brooklyn, Flushing in Queens, and upper Manhattan along the Harlem River) compared with other concentrations where voters ranked 4 or 5 candidates (such as Park Slope, Brooklyn Heights, and Greenpoint in Brooklyn and Long Island City in Queens). Overall, though, the map shows the widespread extent of voters who ranked multiple candidates across the city.

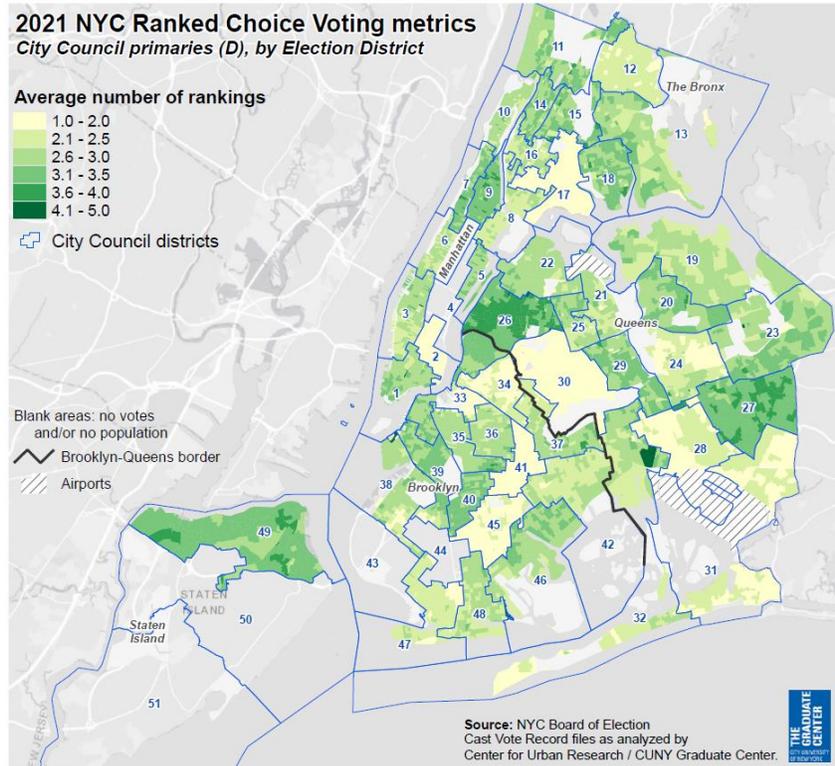
In comparison, Map 6 shows the average rankings by election districting for Democratic city council races, underscoring the correlation between highly competitive council primaries and voters making fuller use of the RCV ballot. Council districts 26 and 27, for example, each had a dozen or more candidates, and voters across those districts tended to rank as many as 4 candidates on the RCV ballot. (Election districts not shaded on the map are in council districts that either had no Democratic primary or where a Democratic candidate ran uncontested.)

⁴ For example, any ballot is a bullet vote for Adams if it ranked only him, regardless of whether the rank was one or five. A Wiley blank blank blank Adams vote is the same as a Wiley Adams vote.

MAP 5 Average Rankings for Mayor

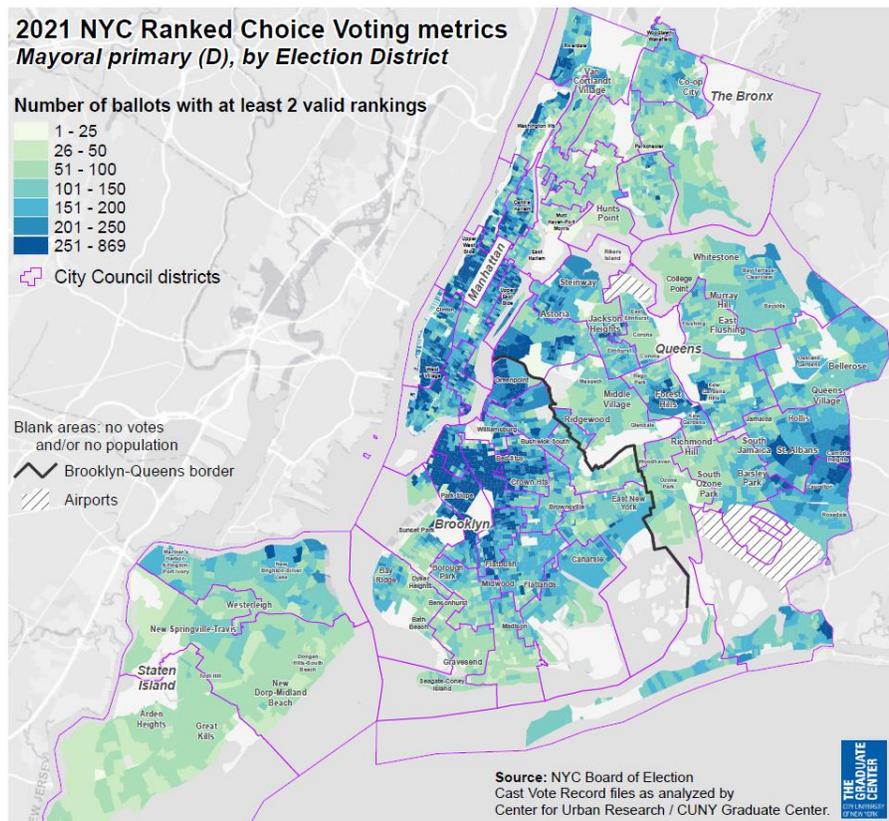


MAP 6 Average Rankings for City Council

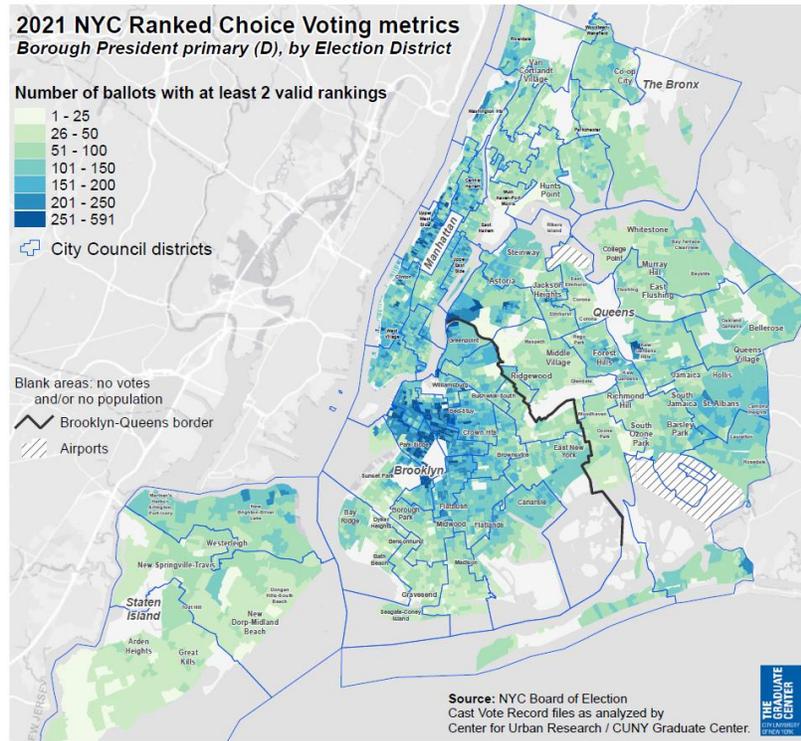


The following three maps (Maps 7, 8, and 9) show a slightly different view of the patterns of how voters ranked multiple candidates, one each for the Democratic mayoral, city council, and borough president races. Each map shows the number of voters by election district who ranked at least two candidates. Election districts with the most voters ranking multiple candidates in each of the three maps are concentrated consistently in Park Slope and Brooklyn Heights, Long Island City, and the upper East Side of Manhattan – neighborhoods where Kathryn Garcia ultimately did well. But election districts with relatively large numbers of voters ranking multiple candidates in the mayoral race are also concentrated in southeast Queens, central and southeast Brooklyn, and Harlem in Manhattan – all areas where Eric Adams received strong vote support.

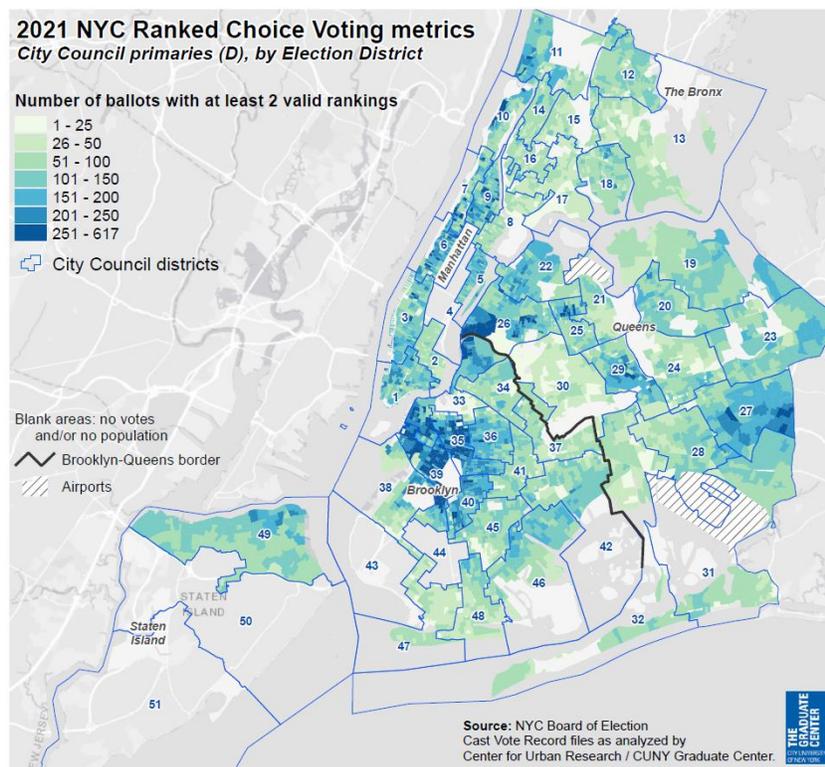
MAP 7 Ballots with Multiple Rankings in Democratic Mayoral Primary



MAP 8 Ballots with Multiple Rankings in Democratic Borough President Primary



MAP 9 Ballots with Multiple Rankings in Competitive Democratic City Council Primaries



The Center for Urban Research has posted its cast vote record data files online through its interactive ranked choice voting map at <https://www.urbanresearchmaps.org/nycrcv2021/>. Visitors to the site can download the round-by-round vote tallies for each candidate for mayor, comptroller, borough president, and city council in each primary race, aggregated by election district from the Board of Election's cast vote record files. Special thanks are due to the Ranked Choice Voting Resource Center, which created the open source "RCV Tabulator" software which CUR used to convert cast vote record data to round-by-round vote counts by election district. Tables of the RCV metrics described above on average rankings, ballots with multiple rankings, and ballots that only ranked single candidates are also available aggregated by election district for each primary race. Finally, CUR provides data on the frequency of rankings received by each Democratic mayoral candidate. A description of the methodology used to convert the cast vote record data for each of these tables is also available online at the interactive RCV map.

Section 2: Qualitative Analysis of Election Results

Our qualitative interviews were conducted with candidates, campaign managers, and paid advisors (consultants). The goals of these one-on-one interviews were to gather candid perspectives on whether or not RCV influenced candidate's decisions to run, and how RCV influenced the strategic decisions made by the campaigns.⁵

We generated a list of potential expert informants, including candidates and campaign managers from the competitive city and borough-wide races, as well as a diverse cross section of City Council candidates from the five boroughs. Outreach was conducted to nearly a hundred potential subjects, of whom we ultimately completed nineteen expert informant interviews. Recorded via video conference, the interviews were subsequently transcribed. The questions used to guide the discussion included:

- How, if at all, did RCV affect your campaign's strategy in the 2021 primary?
- Did RCV affect whether you were more or less likely to run?
- Did RCV prompt you to reach out to different groups than you would have under the old system?
- Did RCV affect whether or not your campaign decided to "go negative"?
- Did your campaign conduct any RCV education efforts?

The research team sought and obtained a set of participants who reflect the diversity of the 2021 election cycle in the types of offices sought, geography represented, as well as the demographic traits of race and gender. A list of interview subject is in Appendix B, alongside the key characteristics of each participant. Four of the nineteen interviews were conducted with mayoral campaigns, two with comptroller campaigns, three with borough president campaigns, and 10 with city council candidates.

Our informant shared important insights about if, or how, RCV influenced their campaign's strategic decisions, broadly categorized as involving:

(1) Tone: did RCV affect the tone of the campaigns? Were they more positive and less likely to "go negative" than they would have been in a winner takes all system?

(2) Spending: did RCV affect the forms of voter contact campaigns used, for example, did it encourage the use of more consensus and community focused outreach such as canvassing, phone calls and peer to peer texting? And did it discourage spending on paid media which is the most common vehicle for negative messages?

(3) Electorate Engagement: did campaigns target small demographic subsets of the population or did RCV push them to attempt to appeal to broader swaths of voters? Did RCV affect the breadth of the campaigns' message? Were campaigns more or less likely to take a stand on specific issues? Did campaigns pursue a wider range of endorsers than they would have otherwise?

⁵ These procedures were reviewed and approved by our Institutional Review Board.

(4) RCV Education: to what extent was RCV promoted and reinforced by campaigns?

Tone

While our respondents agreed that their campaign strategy was to focus on positive messages, this decision appeared to be driven by the fact that campaigns were competing with multiple opponents, many of whom had minimal name recognition, so negativity did not seem to provide gains:

Well, we never planned to go negative right because you have nine people in a race, nine people in a race. When you go negative all you did is just give somebody free publicity. (Amoy Barnes, Former City Council Candidate)

Positivity was what was going to be the best position to take as opposed to getting into little spats with lots of other candidates. That was also the position it seemed like the Adams campaign took and it was very beneficial for them and I think it was smart. (Rick Fromberg, Campaign Strategist for Mayoral Candidate Shaun Donovan)

While RCV does not appear to have been a primary reason for this decision, it seems to have reinforced the strategic predisposition to avoid “going negative.”

We weren't ever going to go negative, but I would say [RCV] definitely reaffirmed our work and approach of we are going to talk to everybody. (Sandy Nurse, City Council Member, District 37)

We heard some instances in which respondents and their campaigns weighed the possibility of running negative or contrasting campaigns, but ultimately decided that RCV made that choice too risky:

[RCV] made negative seemed like not the right thing to do. I don't think we would have otherwise but it definitely made it a bad move. Although, there were candidates working behind the scenes to damage my ability to win. (Brandon West, City Council Candidate)

At various times we considered negative or contrast advertising in this race, and at each moment of consideration, we decided against it for a few reasons. (Alex Navarro-McKay, Campaign Consultant for Comptroller Brad Lander)

Most campaigns did not view “going negative” as consistent with their candidate's nature, which suggests that these candidates might have felt more comfortable running in the RCV context than they would have in the old first past the post system, in which observers might feel that negative campaigning is effective.

What you hear from RCV is that it makes people less divisive, [but] if I had been running in a non-RCV campaign I still would have run a positive, inclusive, get-to-know the other candidates campaign. It's just literally how I am and who I am. (Justin Krebs, City Council Candidate)

We don't do political boiler room campaign. I did get attacked. I got attacked for everything, I'm used to it. I got very thick skin [...] but no, we would never go negative. (Gale Brewer, City Council Member, District 6)

I don't believe in negative campaigning. I am very Michelle Obama – when they go low you go high. It didn't really impact me either way because that's just how I operate, regardless of ranked choice voting. (Nantasha Williams, City Council Member, District 27)

Campaigns that did engage in negative campaigning did so for a limited period of time out of strategic necessity because their opponents were in such a strong position:

Our [negative campaigning] was a little bit at the end. In the last days we did some negative ads against Eric [Adams], not a ton and not in an RCV calculation. (Chris Coffey, Co-Campaign

Manager for Former Mayoral Candidate Andrew Yang)

I don't think I would say negative, but I did let Queens know that Donovan [Richards] was raising significant funds from big real estate interests, and I was not taking any. (Elizabeth Crowley, Former Queens Borough President Candidate)

Spending

Overall, interview respondents concluded that the COVID-19 pandemic had much more impact of an on their campaign decision-making process than did RCV. COVID precluded candidates from mounting the large-scale canvassing operations which were typically a large part of political campaigns in the pre-COVID era, leaving candidates with few tools outside of paid media to convey their message:

In terms of where to put resources, we put more resources into [mailing] earlier on than say into a paid canvass, figuring volunteers could canvass later on and that we weren't just sure what we were going to do. (Justin Krebs, City Council Candidate)

Yeah, I know the campaign did a lot of not quite door-to-door, right, because [of] the pandemic, but a lot of sort of tabling I guess where they would be out and have a visible presence and people would come up and talk to folks and learn more about Mark [Levine] and learn more about the campaign. (Walter Swett, Campaign Advisor for Manhattan Borough President Mark Levine)

Respondents universally felt that COVID limited their ability to engage in in-person contact with potential voters, which had major repercussions for their overall strategies. For example, Alison Hirsh, Senior Advisor to Former Mayoral Candidate Maya Wiley, explained:

I think having to run the campaign on Zoom for so long is one of [the biggest obstacles] because the experience people tend to have with Maya [in person] did not come across over Zoom.

Such challenges were voiced by other respondents as well. For example, when asked about voter contact difficulties, Comptroller Brad Lander's Campaign Consultant, Alex Navarro-McKay, lamented that:

You can't talk to the voters you needed to win in a sort of one-on-one a couple of times and there was absolutely no way to do that.

Former City Council candidate Caesar Zuniga shared that the lack of in-person interaction likely influenced his voter contact strategy. He explained that:

[a]s a candidate I have to be in front of you to do well. I vibe off your energy and so that whole phone thing just killed me.

Some respondents found time-honored voter contact strategies did not work in the COVID era:

I bought the list from the Democratic Party—VAN, that system. Through VAN we analyzed it basically in the traditional way, you know, who are the people who regularly vote, and also tried to register voters, which is not very successful for any campaign because of the pandemic. (Fernando Aquino, City Council Candidate)

We did no mail because it is inefficient. It would cost \$1 per mailing for an electorate of 1 million. TV and digital are simply way more efficient. We pulled money out of digital and put it into TV because other teams were putting money into digital, driving up rates, leaving TV less utilized and relatively cheaper. (Chris Walsh, Campaign Manager for Comptroller Brad Lander)

Most respondents conducted outreach through all available forms of voter contact. Chris Coffey, Co-Campaign Manager for Former Mayoral Candidate Andrew Yang, elaborated on how the campaign spent its funds as it related to voter contact strategies:

We spent a lot of money on digital, probably too much. People spend 80 percent of their [campaign] budgets in the last six weeks. That used to be the rule, but we were spending a lot of money early. Our digital people would say that was a good strategy because it helps solidify [Yang's] name early. I don't know how you show that. He had name ID early. I'm not sure that the digital meant anything, and then it put us a little bit in the hole in June.

Most respondents were uncertain about which forms of communication would prove to be most effective. Several campaigns cited the efficiency of paid advertising.

We did a couple of million dollars on TV ads and we spent a lot of money on digital ads. So that's doing digital ads, that's doing promoting digital stories. It would be the cost of buying the digital space everywhere. We spent a lot of money on that as well. (Basil Smikle, Campaign Manager for Mayoral Candidate Ray McGuire)

We worked with a number of organizations, did more forums than I can possibly remember, and we certainly did have paid media advertising, direct voter contact work. (Rick Fromberg, Campaign Strategist for Former Mayoral Candidate Shaun Donovan)

Ultimately, the effect of RCV on spending decisions is unclear both because COVID reshaped what campaigns could do and because campaigns did not have good evidence for the effectiveness of any particular mode of campaign persuasion. As City Council Member Nantasha Williams observed,

Even the smallest thing is helpful because it's so hard to quantify what gets someone to vote for you.

Electoral Engagement

Many informants would initially respond that RCV had not affected their engagement strategy, but upon further reflection they would also recount how they took RCV into consideration. For example:

I don't think there was a significant impact on his strategy with ranked choice voting. There's one way actually I think that—and again, this is something I think Mark probably would have done anyway, [because it's] just the kind of guy he is, but we did push it—even though we knew that, you know, to the extent there's a block of LGBT voters out there, you know, we knew we weren't gonna win, right, because they would perhaps go with the LGBT candidate, you know, still [we] like fought hard to get as many of those thinking, partially, oh well we'll be second choice there. (Walter Swett, Campaign Advisor for Manhattan Borough President Mark Levine)

Several respondents noted that RCV gave their campaigns an opportunity to talk with potential voters about how to maximize impact of the RCV process. However, most responded that they proceeded just as they would have under the traditional system:

I wasn't aware of ranked choice voting when I ran. When I started that was not part of the conversation... I didn't think it was going to be such a big factor. I didn't think that will change the outcome of the election. And it didn't. Pierina [Sanchez] was on top and continued to be on top when all the votes were counted. (Fernando Aquino, City Council Candidate)

RCV had little impact on how campaigns struggled to establish an initial base of support:

RCV didn't inform our campaign strategy because we were always trying to get people to vote for Ray [McGuire] number one. (Basil Smikle, Campaign Manager for Former Mayoral Candidate Ray McGuire)

Ranked choice voting made it super clear that candidates have to focus on their base... [I]f you are disciplined, ranked choice forced you to really know where your vote was going to come from. So, to the benefit of the community, it forced you to work. (Prisca Salazar-Rodriguez, Campaign

Advisor for Bronx Borough President Vanessa Gibson)

Moreover, many city council candidates who engaged in one-on-one voter contact felt that RCV enabled them to “continue the conversation” with voters whose first choice was another candidate in efforts to secure their support on a potential second or third ranking from those voters. It led some to target voting blocs they otherwise might not have considered:

We were aiming at this sort of progressive slice, but we know that we could not ignore another group of somewhat less-liberal voters. [RCV] pushed us towards a broader targeting and ... we are really aiming at the full swath of the electorate. (Alex Navarro-McKay, Campaign Consultant for Comptroller Brad Lander)

RCV encouraged us to talk to a wider subset of people because I think with the results we didn't know what it was going to be like, we didn't know how many people were going to fill out five candidates in a ballot. (Brandon West, City Council Candidate)

It was a mix. My goal was always to focus on building good relationships with all the other candidates. ... It was just kind of this thing where it didn't end the conversation. You want to be, if not number one, then number two, or number three. (Sandy Nurse, City Council Member, District 37)

RCV also may have affected some candidates' decisions about whether to run. Several respondents felt that an RCV election suited their positive and inclusive temperament.

RCV didn't fully influence the campaign strategy, but we did think my candidacy was a good one because of RCV. (Justin Krebs, City Council Candidate)

Ranked choice voting affected my campaign... I think it was a positive [impact] because it allowed me to continue the conversation because before it was a zero sum game – either you support me or you do not. With ranked choice voting, we didn't completely discard people out of the universe that said they were going to rank me number two, for example. (Nantasha Williams, City Council Member, District 27)

Most respondents also agreed that their campaigns talked about a larger and broader number of issues because of the RCV process. As Chris Coffey, the Campaign Manager for Andrew Yang explained:

It puts more issues on the table, it like broadens the fields. You're talking to more people because you're trying to fight for more votes. You're not just staying in your lane. You're, like, trying to get second and third place votes in every place.

Elizabeth Crowley, candidate for Queens Borough President, explained that RCV led her to address issues that were important to supporters of Jimmy Van Bramer:

For my poll, I looked at the people who gravitated towards Jimmy what was important to them. So, I ran a campaign that was micro targeted too. I campaigned a different message of accomplishments that I've worked on as a council member that were more progressive to the more progressive voters, and the work that I've done in those communities. I was able to just communicate that. (Elizabeth Crowley, Queens Borough President Candidate)

Respondents also commented on the difficulty they faced in transitioning their focus from recovering from the COVID-19 pandemic to addressing the issue of crime and public safety.

One of the things that I think caught us by surprise: one is the speed with which the vaccine came out and people started getting it and then life started to come back to normal and two, how big crime became... and it basically took the idea of the economy and getting back to work off the table. So we lost our narratives. [Crime] was Eric Adams's strength as a former police officer, so

we all needed, every campaign needed, to pivot, and none of us pivoted quickly enough and in the right direction. (Basil Smikle, Campaign Manager for Mayoral Candidate Ray McGuire)

I think we very differently messaged on safety just because there is this huge backlash to anything that criticizes the scale of policing in our city right now and that's part of the Mayor. I mean this is the same cycle that made Eric Adams won. (Brandon West, City Council Candidate)

To his credit, I think Eric Adams ran a very disciplined, smart campaign... he kept his nose to the ground and was in communities all day, every day and was really focused on local media and not as focused on mainstream media. There was a period of time when it felt like Eric was nowhere and under the radar and not getting any press but if you got the critical mention media clips he was actually getting more press than anyone else... I think we really missed an opportunity maybe to focus on that. (Alison Hirsch, Senior Advisor to Mayoral Candidate Maya Wiley)

The strategic impact of RCV on endorsements was evident both in pursuing endorsers (including individuals, organizations, and media) and cross-endorsing other candidates. While a non-RCV counterfactual scenario remains unknowable, respondents pursued all possible endorsements without knowing whether the endorsing entities might choose to rank multiple candidates. Alluded to as "ranked choice support," some respondents were surprised that it was not more widely practiced:

Most organizations only endorse one. Some said we are going to endorse several because this is RCV so why not. And I actually think that's like a really interesting approach to reflect the RCV moment that not a lot of groups did. (Justin Krebs, City Council Candidate)

That was kind of the strategy, to go with any areas that you were either trying to get if they were going to do a ranked choice support, try to get 1199 [SEIU healthcare workers' union] to do a ranked choice support, which they did not do. (Kenya Handy, City Council Candidate)

During the campaign, certain high-profile individuals also offered multiple candidate endorsements. One respondent only later discovered that he was part of a dual endorsement after first believing he was the lone recipient:

We had AOC [U.S. Congress member Alexandria Ocasio-Cortes] was going to endorse us singularly and then it became a dual endorsement and that was mainly because I think our opponents were good at pressuring to get that to happen. (Brandon West, City Council Candidate)

A not fully developed facet of RCV is whether and how to offer or seek cross-endorsements with other candidates with whom one is competing. Most respondents did not actively seek to cross-endorse with other candidates in their own race, probably because it would require them to accept a lesser ranking:

There was not a lot of interest in doing that. The only one that actually expressed interest in doing that was [New York State Assembly Member] Yudelka [Tapia], and she wanted to do it with her on top. The condition was that, you know, I'm on top, you're going to be second and, you know, it was always like that, so nobody was going to do that. (Fernando Aquino, City Council Candidate)

Other respondents confronted challenges around whether inter-racial cross-endorsements might be perceived as undermining their messaging among core supporters. This was especially evident for an African American candidate who contemplated forming an alliance with a white candidate in the same race. As respondents for two mayoral campaigns explain:

There were one or two others on the campaign that did not feel good about making that determination [to cross-endorse with Kathryn Garcia] in part because they were concerned about Ray's standing in the black community if he endorsed a white woman. (Basil Smikle, Campaign Manager for Mayoral Candidate Ray McGuire)

Kathryn expressed some interest but there were a lot of problems. The challenge with Maya's coalition is [that] it is so broad that partnering and creating an alliance with Kathryn probably would have alienated Black voters. (Alison Hirsh, Senior Advisor to Mayoral Candidate Maya Wiley)

Nonetheless, other respondents found cross-endorsements to be a particularly useful strategy for reaching out to voters in specific areas where their candidate's name recognition might be weaker. Although this strategy did not result in an electoral victory for this particular candidate, such tactics may help to establish voter contacts for future elections:

[We cross-endorsed] with the candidate who was from the Red Hook part of the district which naturally wasn't our strongest part of the district because of my work here in the Sunset Park part of the district... she made some inroads for us in Red Hook and [we] made some inroads for her here in Sunset. (Caesar Zuniga, City Council Candidate)

RCV Education

While RCV may have provided candidates with an opportunity to talk to more voters, many candidates were frustrated with the limited public education available around RCV and felt that educating voters about RCV took time away from discussing their campaign issues:

I was disappointed by how little the city did to inform the community [about ranked choice voting]. And so I know I spent a lot of time explaining at the doors what RCV was, time that I didn't use to talk about me and to talk about my campaign. (Caesar Zuniga, City Council Candidate)

I mean, RCV is complicated because it was the first time we used it. Nobody knew what the hell they were doing. Let's just be clear, there was no real structure, there was no real training, [and] most of these candidates had to go out there and train people on RCV as best as we could train the voter. (Amoy Barnes, City Council Candidate)

Most candidates nonetheless devoted some campaign efforts at educating voters about RCV. One respondent explained how he used RCV education to attract media coverage and because it left open the possibility of a cross endorsement:

We always dominated [media] coverage. And we used ranked choice voting to do that. So, we appeared at a joint event with Maya Wiley to accept the Freelancers Union endorsement, and it was like packed with reporters because we put out a release. And we were like, joint event, Maya Wiley. And no one knew what the joint event was. And reporters who all like want to put everything into a box, like, maybe they're going to joint endorse each other? Like in March, or whatever the fuck that was? Which would be insane, but they were always looking for stories about ranked choice voting. So, if you gave them the ability to write about ranked choice voting, they wanted to write about it anyway, if that makes sense. So, we did a bunch of gimmicky stuff like that. (Chris Coffey, Campaign Manager for Yang for Mayor)

Not all respondents saw the impact of RCV in their race because they or the winning candidate had passed the vote threshold after the first count. For example, former Manhattan Borough President and City Councilmember Gale Brewer won her race before the RCV ballot redistribution process even began. As Brewer says,

It was my bill. RCV wasn't used in my race because in the end I won with 51 percent. But I think in most cases, it seemed like it worked.

Section 3: Conclusion

The June 2021 Democratic mayoral primary generated new currents under the surface of the lake in which New York City's candidates – and those who would like to influence election outcomes – must

learn to swim. Many of the wind and wave contours of the election above the surface resembled what might have happened if it had been run by the old rules. Some voters continued to rank only one favored candidate. RCV changed few of the electoral outcomes that might have happened under a single vote, leader take all system. Campaigns were uncertain as to how to use RCV to their advantage. Organizations that wished to endorse candidates were uncertain as to whether and how to use their capacity to support more than one candidate for a given race and had yet to learn how to pool endorsements for trailing candidates to reinforce the ultimate advantage for their top endorsee.

At the same time, the election held some tantalizing hints of what might have been in this mayoral race and what may come in future RCV elections. The final round of the Democratic mayoral primary was extremely close and Wiley might have won if her campaign had enjoyed the kinds of cross-endorsements that benefited the Garcia campaign from working with the Yang campaign. Garcia (or Wiley) might have won if they had been more willing to cross-endorse each other around the importance of electing the first woman mayor. While politically active trade unions made many successful endorsements at the city council level, progressive organizations more broadly were unable or unwilling to use the potential of cross-endorsements to consolidate city-wide support for a progressive mayoral candidate. In part this reflected divisions within and across the organizations about whom to endorse and also reflected the candidates' disinclination to concede they might be eliminated and therefore seek to direct their votes to a higher-ranked competitor. The election was full of "might-have-been's" that reflect the learning curve facing candidates and endorsing organizations around using the full powers of RCV.

If the initial impact of RCV on primary elections was modest, it was nonetheless positive, by all measures. Voters understood the process and deployed it in ways that reflected their actual preferences. Most of those voters who initially favored candidates who were eliminated in early rounds nevertheless had their votes register for another – albeit less-so – favored candidate at the end. In a stunning victory, an African American candidate who self-identified as blue collar, won the narrowly-divided primary election, overcoming the strong association between turnout and education and income. He prevailed again in the general election in an impressive landslide victory. In past mayoral elections, the mostly-white Democrats who were dismayed that their party had nominated someone strongly favored by Black voters defected to the Republican candidate, putting Rudy Giuliani and Mike Bloomberg into office for many terms. This did not happen in 2021. The outcome could reflect that fewer such voters still live in New York City, or it may indicate that Democratic voters felt RCV had given them ample chance to choose their nominee in a full and fair way – and that the primary yielded a winner that spoke best to the concerns of the electorate.

Appendix A

Rank 1 and 2	Ballots	Share of ballots with 2 or more ranks
Adams-Wiley	58,851	7.2%
Adams-Garcia	33,754	4.1%
Adams-Yang	44,970	5.5%
Adams-Stringer	22,207	2.7%
Adams-Morales	8,272	1.0%
Adams-McGuire	26,307	3.2%
Adams-Donovan	20,234	2.5%
Adams-Other five	10,638	1.3%
Wiley-Adams	25,502	3.1%
Wiley-Garcia	61,322	7.5%
Wiley-Yang	9,931	1.2%
Wiley-Stringer	21,640	2.7%
Wiley-Morales	39,901	4.9%
Wiley-McGuire	4,907	0.6%
Wiley-Donovan	8,783	1.1%
Wiley-Other five	16,523	2.0%
Garcia-Adams	27,973	3.4%
Garcia-Wiley	49,361	6.1%
Garcia-Yang	26,626	3.3%
Garcia-Stringer	30,627	3.8%
Garcia-Morales	5,506	0.7%
Garcia-McGuire	12,865	1.6%
Garcia-Donovan	18,143	2.2%
Garcia-Other five	3,264	0.4%
Yang-Adams	26,447	3.2%
Yang-Wiley	8,526	1.0%
Yang-Garcia	28,455	3.5%
Yang-Stringer	6,693	0.8%
Yang-Morales	3,126	0.4%
Yang-McGuire	4,353	0.5%
Yang-Donovan	5,287	0.6%
Yang-Other five	11,868	1.5%
Stringer-Adams	7,657	0.9%
Stringer-Wiley	8,836	1.1%
Stringer-Garcia	14,408	1.8%
Stringer-Yang	4,500	0.6%
Stringer-Morales	1,958	0.2%
Stringer-McGuire	1,976	0.2%
Stringer-Donovan	4,532	0.6%
Stringer-Other five	1,656	0.2%

Morales-Adams	1,894	0.2%
Morales-Wiley	9,951	1.2%
Morales-Garcia	4,213	0.5%
Morales-Yang	1,253	0.2%
Morales-Stringer	1,821	0.2%
Morales-McGuire	1,040	0.1%
Morales-Donovan	517	0.1%
Morales-Other five	2,583	0.3%
McGuire-Adams	6,514	0.8%
McGuire-Wiley	2,703	0.3%
McGuire-Garcia	5,100	0.6%
McGuire-Yang	3,783	0.5%
McGuire-Stringer	1,503	0.2%
McGuire-Morales	779	0.1%
McGuire-Donovan	1,806	0.2%
McGuire-Low five	837	0.1%
Donovan-Adams	3,792	0.5%
Donovan-Wiley	2,829	0.3%
Donovan-Garcia	4,843	0.6%
Donovan-Yang	3,332	0.4%
Donovan-Stringer	2,926	0.4%
Donovan-Morales	608	0.1%
Donovan-McGuire	1,449	0.2%
Donovan-Other five	955	0.1%
Low five-Adams	2,212	0.3%
Low five-Wiley	4,838	0.6%
Low five-Garcia	2,171	0.3%
Low five-Yang	2,714	0.3%
Low five-Stringer	1,763	0.2%
Low five-Morales	3,643	0.4%
Low five-McGuire	1,102	0.1%
Low five-Donovan	861	0.1%
Ballots with at least two ranks	814,720	100%
<hr/>		
Only one rank	126,599	
Total ballots	941,319	

Appendix B

Office	Candidate	District	Borough	First Name	Last Name	Race	Gender	Position
Mayor	Andrew Yang		NA	Chris	Coffey	White	Male	Co-Campaign Manager
Mayor	Ray Maguire		NA	Basil	Smikle	Black	Male	Campaign Manager
Mayor	Shaun Donovan		NA	Rick	Fromberg	White	Male	Advisor
Mayor	Maya Wiley		NA	Alison	Hirsch	White	Female	Advisor
Comptroller	Brad Lander		NA	Chris	Walsh	White	Male	Campaign Manager
Comptroller	Brad Lander		NA	Alex	Navarro-McKay	White	Male	Advisor
Borough President	Vanessa Gibson		Bronx	Prisca	Salazar-Rodriguez	Hispanic	Female	Advisor
Borough President	Mark Levine		Manhattan	Walter	Swett	White	Male	Advisor
Borough President	Elizabeth Crowley		Queens	Elizabeth	Crowley	White	Female	Candidate
City Council	Gale Brewer	6	Manhattan	Gale	Brewer	White	Female	Candidate
City Council	Fernando Aquino	14	Bronx	Fernando	Aquino	Hispanic	Male	Candidate
City Council	Pierina Sanchez	14	Bronx	Pierina	Sanchez	Hispanic	Female	Candidate
City Council	Nantasha Williams	27	Queens	Nantasha	Williams	Black	Female	Candidate
City Council	Sandy Nurse	37	Brooklyn	Sandy	Nurse	Hispanic	Female	Candidate
City Council	Cesar Zuniga	38	Brooklyn	Cesar	Zuniga	Hispanic	Male	Candidate
City Council	Justin Krebs	39	Brooklyn	Justin	Krebs	White	Male	Candidate
City Council	Brandon West	39	Brooklyn	Brandon	West	Black	Male	Candidate
City Council	Kenya Handy	40	Brooklyn	Kenya	Handy	Black	Female	Candidate
City Council	Amoy Barnes	49	Staten Island	Amoy	Barnes	Black	Female	Candidate