

The 2001 Rockville Election

Roald A. Schrack

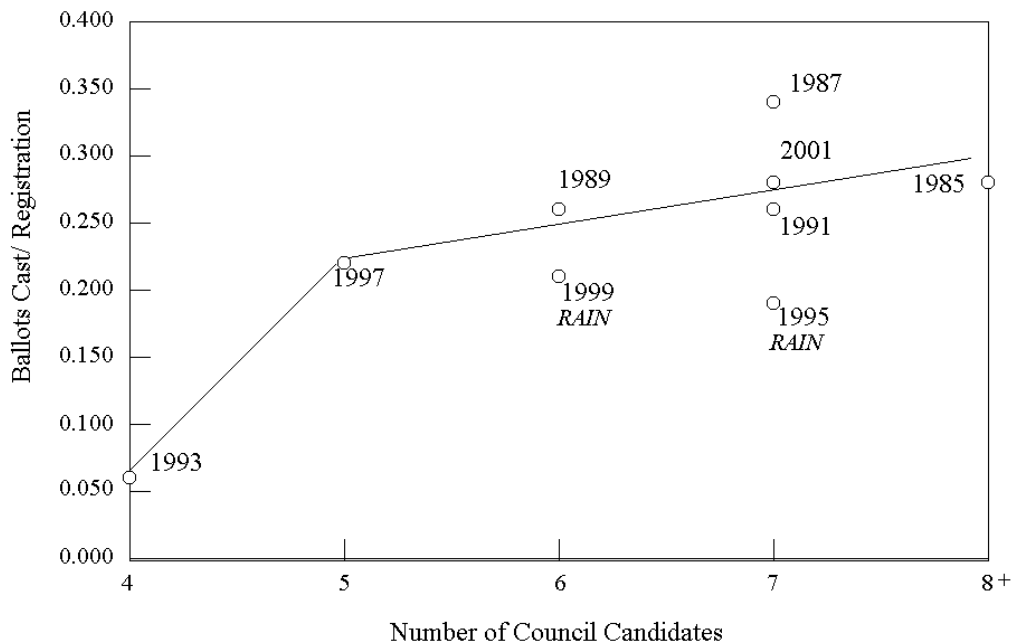
Overview

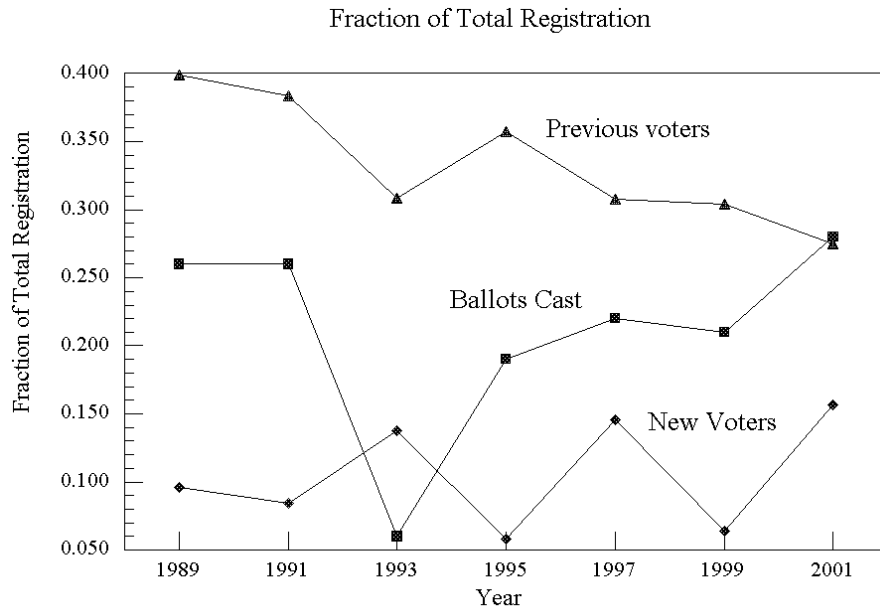
The 2001 Rockville Election has generated more participation than any since 1987. The following table shows registration and the number of ballots cast in the elections since then. Previous Voters are the number of people registered who have voted in some previous election. New Registration is the number of people that have been registered since the 1999 election. The ratio of Ballots to Registration (B/R) is a good indicator of citizen interest and participation in an election.

Year	Ballots	Registration	B/R	Previous Voters	New Registration
1987	8056	23,601	.34		
1989	6206	23,546	.26	9394	2258
1991	5451	20,648	.26	7916	1741
1993	1449	23,077	.06	9889	4409
1995	4323	22,787	.19	8133	1317
1997	5211	22,660	.22	6968	3299
1999	4690	22,676	.21	6898	1451
2001	6967	*24,423	.28	6704	3820

*There is some confusion about the total registration this year. The county, who maintains our Registration lists, has tagged 1820 registrants as inactive. I do not believe that the inactive were included in the registration lists supplied to the city in previous elections. 90% of those marked as inactive had not voted in any city election since 1991. The City list shows 26,530 registered voters. If that number is used the B/R ratio is only .26. The figure below shows the B/R for elections since 1985. Aside from the highly contested 1987 election race between Duncan and Van Grack with a B/R of .34, the B/R ratio shows a weak dependence on the number of council candidates. The 1995 and 1999 data show the damping effect of rain on voter turnout. November 6, 2001 was a very pleasant day in contrast to election day in 1999.

Relative Participation vs. Number of Council Candidates





This graph shows the participation (B/R), previous voters, and new registrants. Note the 4-year period in new registrants caused by the intervening presidential elections. The gradual drop in previous voters is probably due to the decline in B/R.

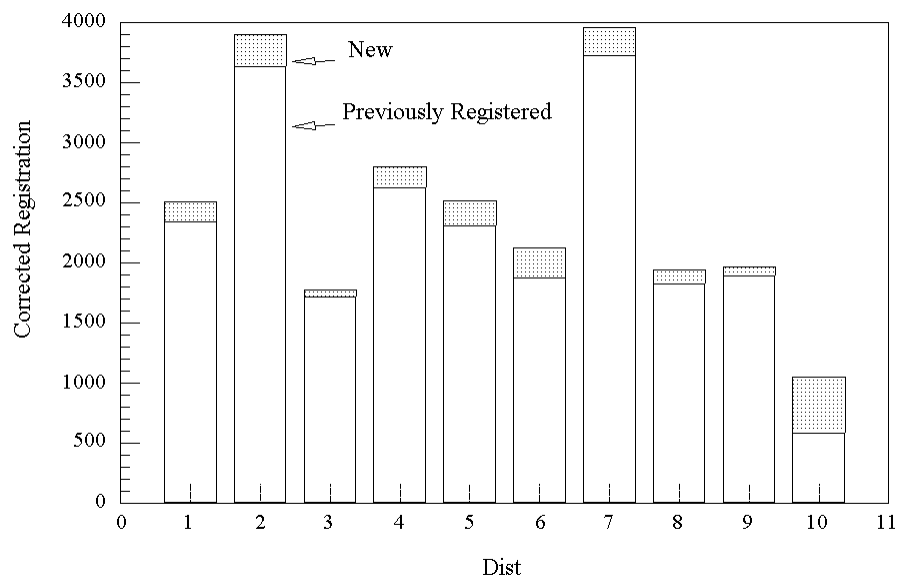
This is a self-reinforcing trend. Experienced voters are more likely to vote in any election, as their number declines then the B/R for an election will tend to decline.

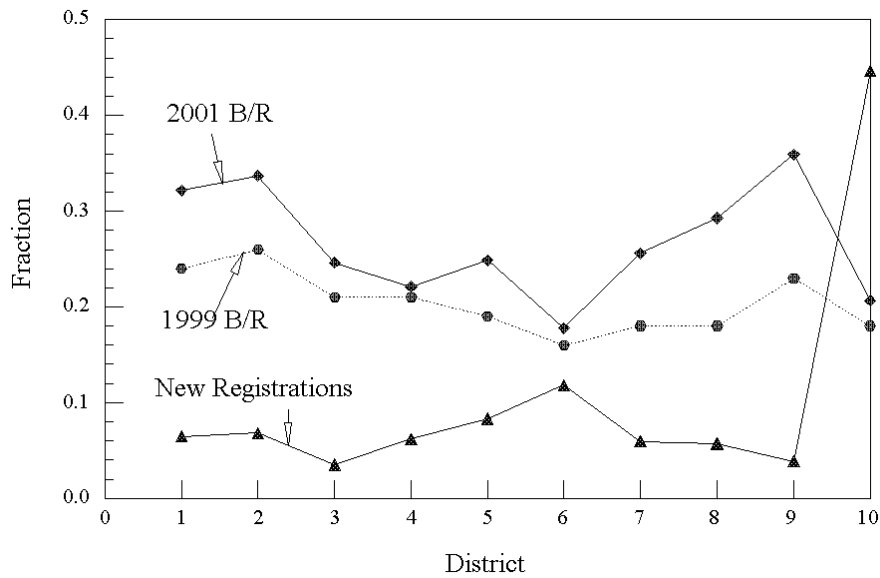
The following table shows the relation of absentee ballots cast to polling place ballots for the past several elections.

Year	Absentee Ballots	Absentee ballots/ Polling Place ballots
1989	175	.028
1991	168	.032
1993	48	.033
1995	180	.042
1997	156	.031
1999	171	.038
2001	213	.030

The relative number of absentee ballots is a good indication of the interest in an election. Since most absentee ballots are obtained and cast several days before an election, their number can be used to predict the turnout on election day. On good weather election days the average ratio is about .03, if there is rain the ratio raises to about .04.

The corrected registration of the separate voting districts is shown with those registered since the last election shown in grey. In the recent change from 12 to 10 election districts only district 5 (which was district 6) remained the same in size. District 2 is a combination of old district 1 and half of old district 11. District 7 is a combination of old districts 8 and 9. A map of the current election districts is included in this report.





The graph shows the fraction of new voters in a district and the relative participation given by the ratio of ballots cast to registration (B/R) for that district. The relationship between the two curves is not what one might expect. While there is a positive correlation for districts 1,2, and 3, the negative correlation for the rest of the districts is quite clear. The overall correlation coefficient for the graph is -0.44 (showing a slight negative correlation). The graph also shows the

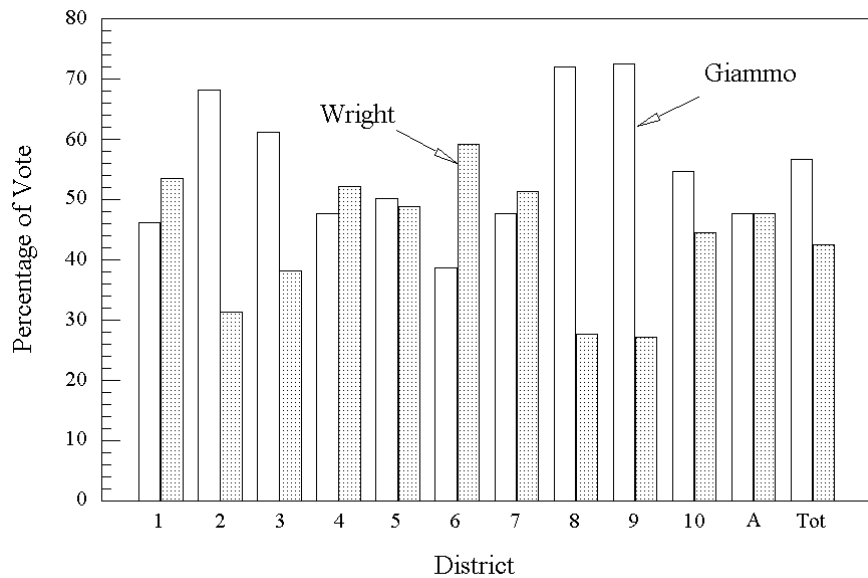
participation (B/R) for 1999 for the same districts. There is an obvious overall increase in participation from 1999 to 2001. There are two additional things to look for here in comparison to the 1999 data:

1) Did the realignment of districts affect the participation? If one considers the relative impact of changes in district number and changes in polling place location, a relative larger impact should be felt on those areas that experienced both changes. Starting with the largest impact, the expected rank would be: 8,4,7,1,2,3,6,5,9,10. There is no indication of such an effect.

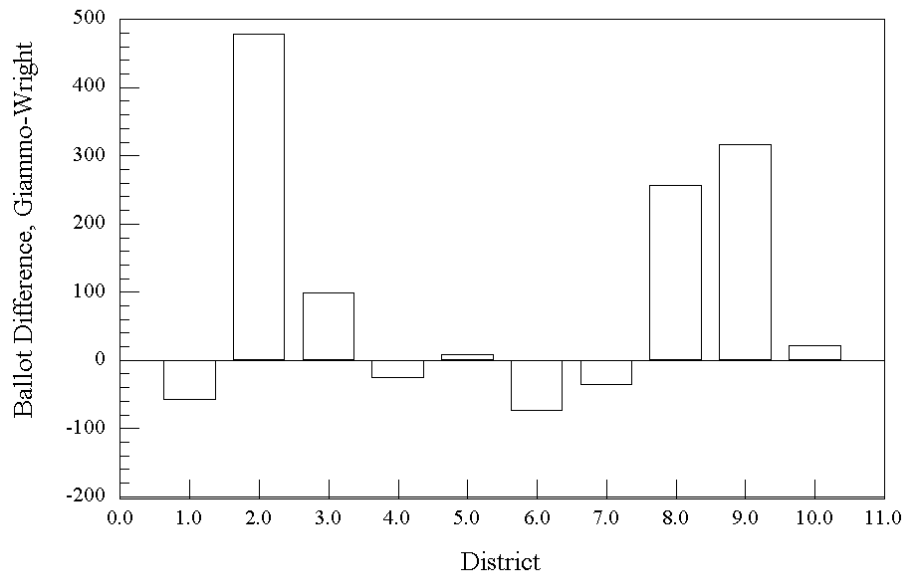
2) Was the support for Giammo correlated to a corresponding increase in participation in those Districts where he did well? Although it is difficult to separate the two effects on participation there is an indication that the participation was not as high in districts 4 and 6 where Giammo did not do as well and higher in 8 and 9 where Giammo did better.

The Mayoral Race

The graph shows the percentage of the vote the candidates obtained in the districts, absentee ballots (A), and total. The large variation is striking. In the four districts 2,3,8, and 9 Giammo led by a large amount but in the others the race was close. To see the importance of district size on the outcome it is instructive to plot the vote difference rather than the percentages.



This graph shows the vote difference between Giammo and Wright. Bars above zero show the districts where Giammo had more votes than Wright, those below zero show districts where Wright had more votes than Giammo. The highly structured distribution of the vote difference shows the success of a strategy based on selected areas rather than the whole city. In 1999 Wright had a total vote of 3478. His vote in 2001 was 2936, a loss of 542 votes.

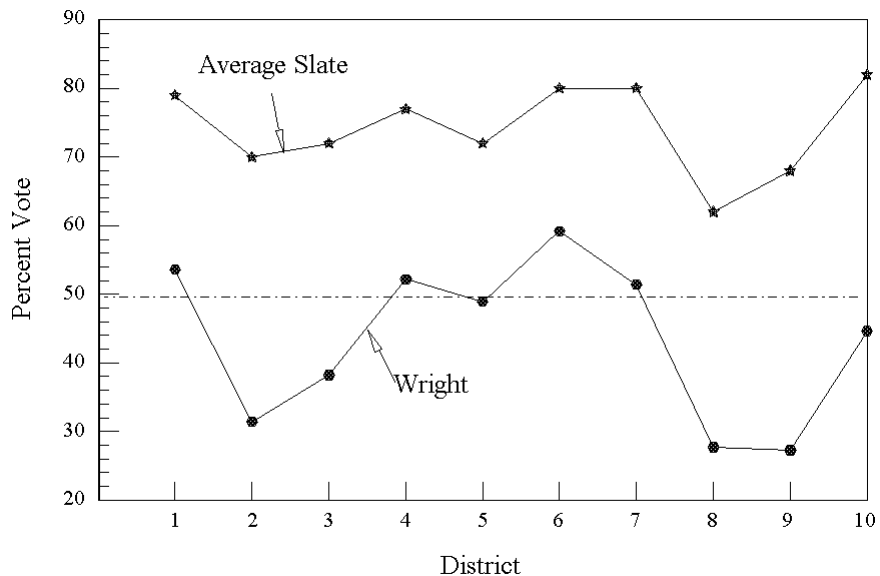


The following table compares the fraction of the vote Wright and Dorsey received in 1999 and 2001.

District	Wright 1999	Dorsey 1999	Wright 2001	Dorsey 2001
2	.72	.74	.32	.69
7	.82	.75	.52	.83
8	.72	.67	.28	.61
9	.59	.65	.27	.70

The Council Races

The graph shows the fraction of the votes in each district for Wright and for the average of the three council candidates running with him. Normally the Mayoral candidate and the Council candidates on a slate running together and endorsing each other have very similar vote patterns. Although the shapes are the same it is clear that many people who voted for the slate council candidates also voted for Giammo.

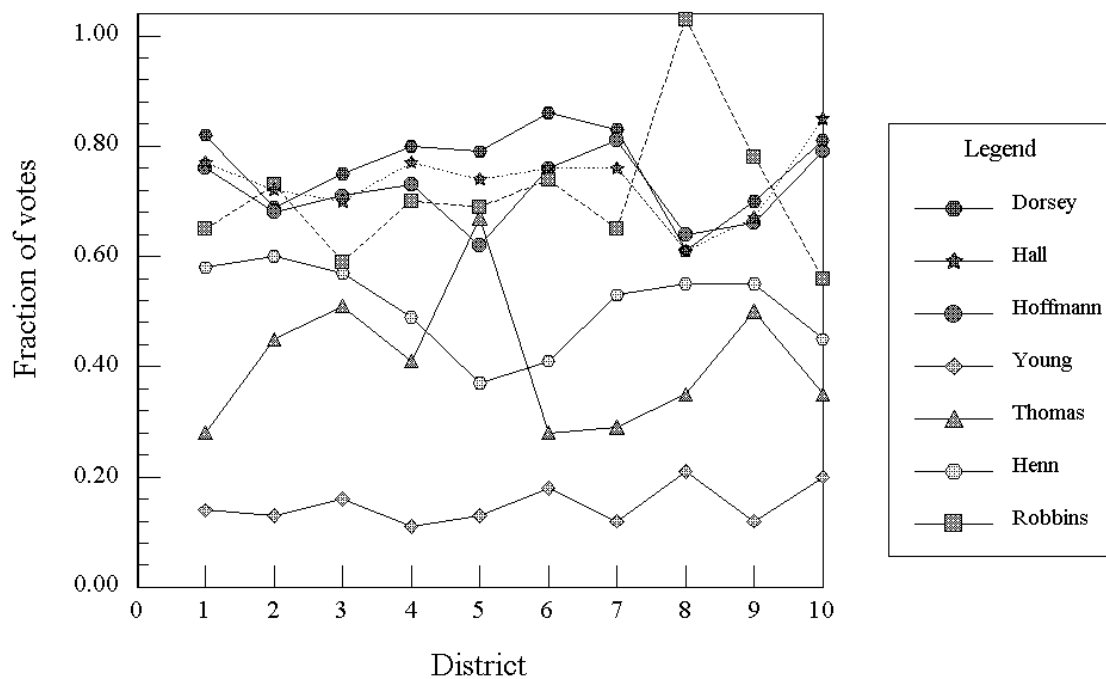


The vote for Wright was from 20% to 40% lower than the Average Council Slate vote. The table above comparing the vote fractions of Wright and Dorsey illustrates the same effect. It is particularly interesting to compare Wright and Dorsey because they both served together as Councilmen during the 1999-2001 term and had very similar voting records.

A short note on the Vote Fraction shown for the Council in the above graph. When the City reports on a vote percentage they show what fraction a candidate got of the total votes for Council in that district. If all seven candidates got the same number of votes then each candidate would get 14% of the vote. In such an evenly matched race a candidate could win getting 15% of the vote. Since there are 4 seats open the most needed to win is 25%. Thus, to win, one needs to get between 15% and 25% of the vote (depending on how strong the other candidates are). This seems odd as most people think in terms of more than 50% as a win.

To make a comparison to the Mayoral race where 50% is the amount needed to win, the fraction shown in the graph above is the ratio of average votes for the three slate council candidates divided by the total vote for all council candidates / four. The vote fractions for the graph below are calculated in the same way. With this system the sum of the vote fractions in any district for all council candidates is 4, as a consequence it is possible for a candidate to have a vote fraction greater than one as shown below for Robbins in the plot of the Council Races. There is good evidence that will be discussed later that this was achieved by bullet balloting, that is, voting only for one council candidate instead of 4. All winning Council Candidates received more votes than either mayoral candidate in every district. In the past several elections the mayoral candidate usually got more votes than any council candidate because there was no substantial opposition in the mayoral race.

The Slate Council candidates, Dorsey, Hall, and Hoffmann show the same pattern and were the top vote getters in 6 of the districts. Despite the negative statements about slates by their opponents they appear to have carried out a successful campaign showing the value of slates. There was an unspoken working affiliation between Giammo, Robbins and Thomas but the correlation analysis to be discussed later shows that there was no consistent benefit from it. Thomas and Robbins did very well in their respective home districts but the substantial vote for one did not benefit the other. Dorsey and Robbins were the only incumbents in the race. It is interesting to note that they both increased their vote over 1999 by the same amount, 31%.



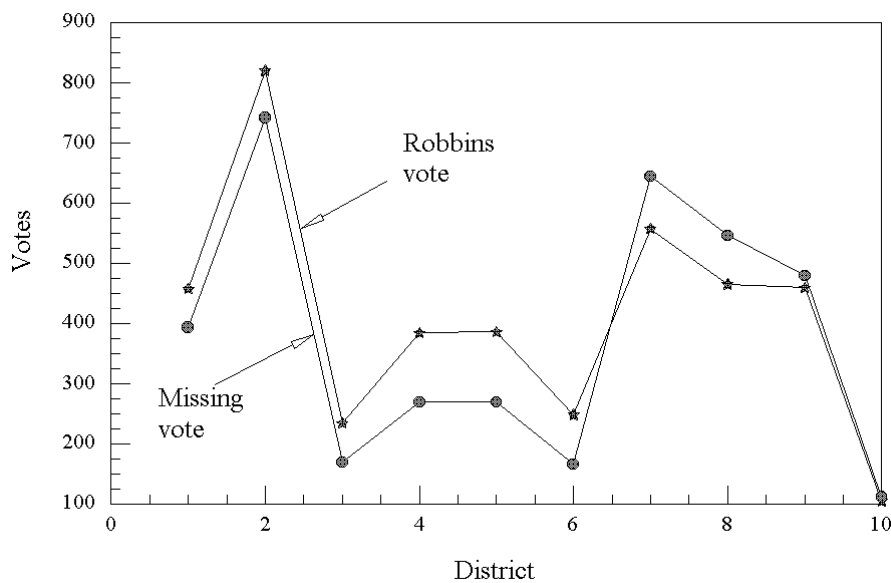
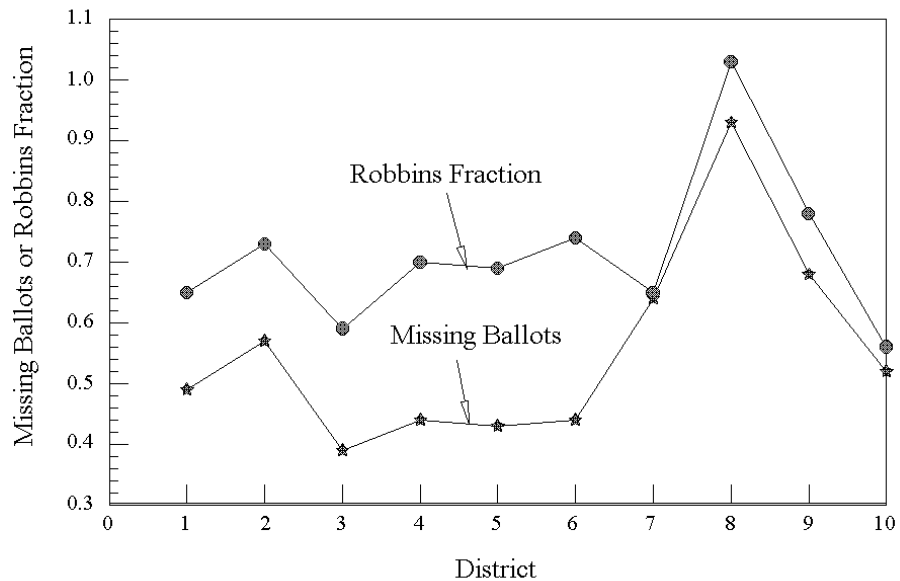
As a newcomer with no support group, Henn presented a strong ideological message with which many disagreed. However he did surprisingly well. Lih Young's vote seems to be pretty constant averaging about 12%. This is the first time she has run for council. In 1999 she got about 8% of the vote running for Mayor. The spreadsheet shows the numerical vote totals for the candidates.

Bullet Balloting

When a council candidate asks supporters to vote only for them and not vote for all or some of their other council choices it is called bullet balloting. It can be easily shown that when running as an independent against a full slate that it is almost impossible to win unless some strategy such as bullet balloting or targeting a particular person on the opposition slate is used.

There are several clues that bullet balloting was employed by Robbins. The first clue is that in the graph above Robbins makes a very strong showing in district 8 at the same time that the three members of the slate simultaneously go down by the same amount and none of the other candidates show a compensating increase. The second clue is that Robbins got a vote fraction greater than one. That is only possible if there is bullet balloting

when the total vote count is 4 in calculating the vote fractions. The final clue is the missing ballots. If all voters use their full 4 votes for council then the sum of the votes obtained by the 7 candidates should add up to 4 times the number of ballots cast. The figure shows the average number of missing ballots in each district and the Robbins vote fraction. The shape similarity of the two curves shows that Robbins initiated bullet balloting in all districts



This curve shows the actual Robbins vote and the number of missing ballots in each district. This figure can be explained by either: 1) only 1/3 of the people who voted for Robbins dropped 3 votes or 2) all of Robbins voters dropped only one vote or 3) some combination of the above. It is impossible to tell from the data which of the above is the more correct explanation of the missing votes.

Correlation Coefficients

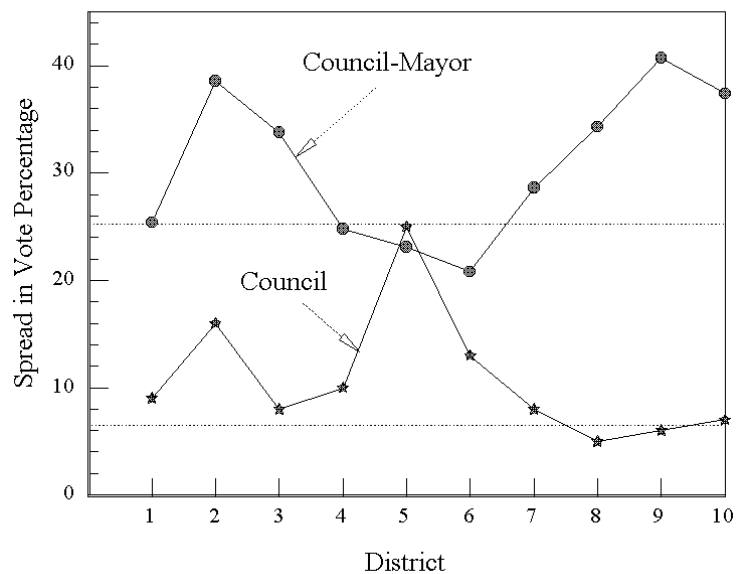
Correlation coefficients (CC) are a mathematical tool for showing the similarity of different sets of data. If the two sets of data are exactly alike then the correlation coefficient is unity. If the two sets of data are completely unrelated then the CC is zero. The more values in the data sets to be compared, the better the chance that the CC has some significance. In analyzing the Rockville election we can use the vote fractions in each district as a data set with ten values and calculate the CC between the vote patterns of different candidates to give us an indication of how much of the time voters chose both of them. If we compared candidates A and B and got a CC of 0.3 that would imply that about 30% of the time a voter chose A they would also choose B (and vice versa). The following table shows the CC of the candidates.

	Giammo	Wright	Dorsey	Hall	Henn	Hoffmann	Robbins	Thomas	Young
Giammo	1	0	0	0	.35	0	.4	.26	.05
Wright	0	1	.9	.75	0	.75	0	0	0
Dorsey	0	.9	1	.92	0	.85	0	0	0
Hall	0	.75	.92	1	0	.83	0	0	0
Henn	.35	0	0	0	1	.09	0	0	0
Hoffmann	0	.75	.85	.83	.09	1	0	0	.04
Robbins	.4	0	0	0	0	0	1	0	.05
Thomas	.26	0	0	0	0	0	0	1	0
Young	.05	0	0	.01	0	.04	.05	0	1

Relationships between candidates that have no dependence on district will not show up in a CC analysis. For instance if 25% of the voters in every district that voted for Hall also voted for Giammo that fact would not show up in the CC analysis.

Slate Splitting

A major effort was made in forums during the campaign to separate the mayoral race from the Council race. It was successful in splitting off the mayoral race from the council race to Wright's disadvantage. However, the slate Council candidates maintained their identity as a slate with a small spread in the votes between the three candidates. This figure shows a comparison of Mayor- Council difference and differences between members of the slate running for Council. The average gap between Mayoral and Council shown by the upper dashed line was 26%, the average difference between maximum and minimum Council vote of slate candidates, shown by the lower dashed line, was 7%.



While Giammo profited from the splitting of the slate, the non-slate Council candidates, in general, did not. On average 38% of those that voted for Giammo also voted for the slate Council candidates giving them a substantial margin of victory. Vote Splitting

Vote Splitting

How did the voters decide to divide their vote between the 7 Council candidates after they made their choice for mayor? The following table shows the fraction of the vote given to each council candidate. The fractions should add up to 4 because each voter had 4 votes for council candidates. This analysis is facilitated by the large fluctuation in candidate preference from one district to another.

Candidate	Giammo	Wright
Dorsey	.39	1.00
Hall	.47	.86
Henn	.55	.36
Hoffmann	.43	.89
Robbins	.75	.43
Thomas	.49	.16
Young	.13	.09
Missing Ballots	.80	.26

Note that Giammo voters gave 1.3 of their 4 votes to the slate council candidates. Wright voters gave divided their fourth vote , giving 43% to Robbins, 36% to Henn, and 16% to Thomas. The Wright voters only gave .25 of a vote to non-slate candidates.

It is interesting to note that Giammo voters gave five times as many votes to slate candidates than Wright voters gave to non-slate candidates.

Conclusions

- 1) The actual voting records of incumbent candidates have little impact on election results
- 2) The participation was higher than the past five elections because there was no opposition in those elections but was only slightly higher than the elections of 1989 (Duncan vs. Johnson)
- 3) Slates are effective, even when the leader of the slate does not win; the Council candidates are aided by the loyalty of voters to the slate.
- 4) Incumbents are usually reelected.
- 5) The number of absentee ballot requests can accurately predict the level of voting on election day.
- 6) Bullet balloting can be easily detected and associated with supporters of a candidate.
- 7) The redistricting had no noticeable effect on participation.
- 8) A candidate can win by concentrating on a couple of large districts, doing well in them and either losing or doing relatively poorly in the rest.

The accompanying spreadsheet showing the data used in this analysis. Also included is a map of the new election districts.

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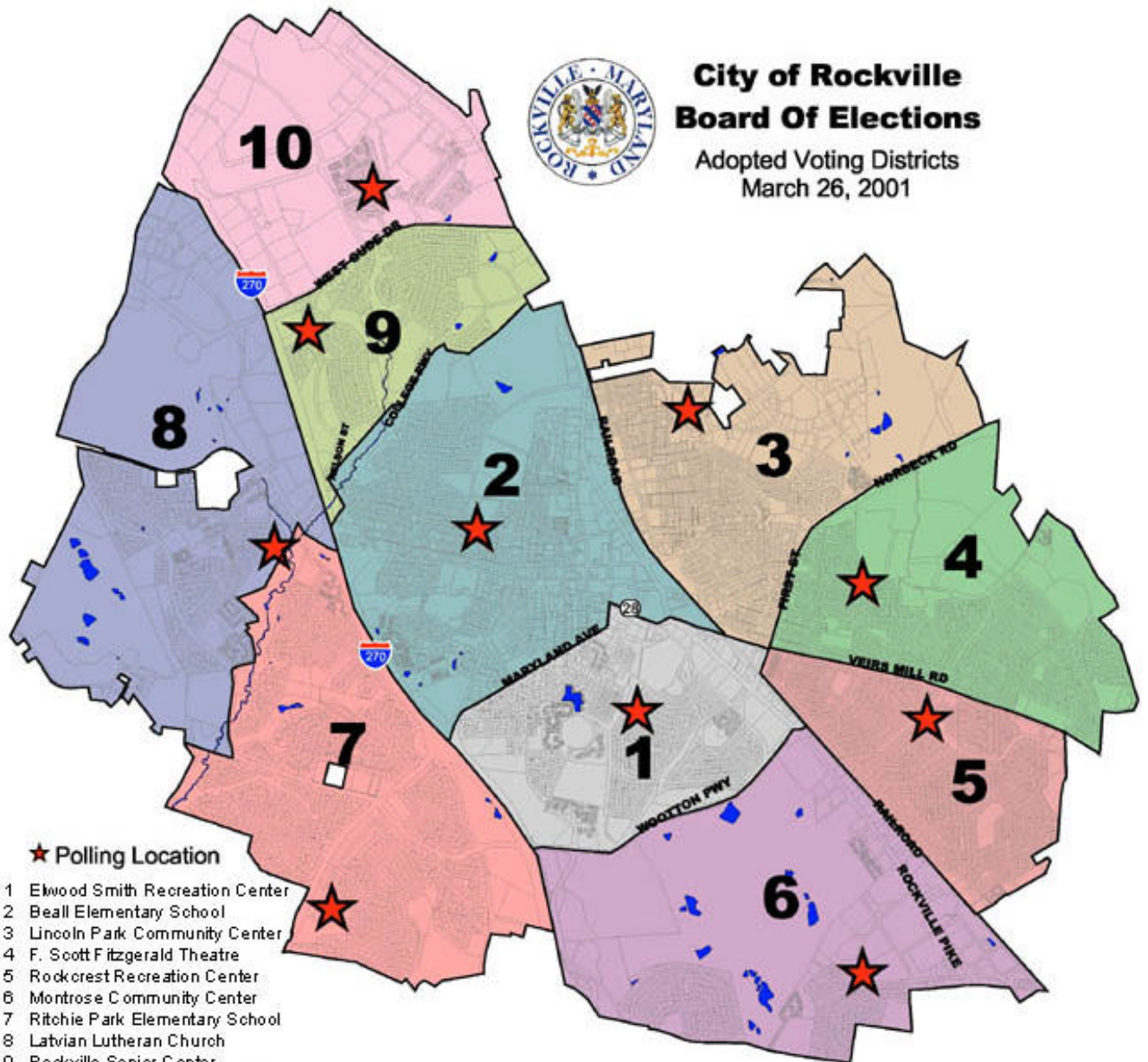
	1	2	3	4	5	6	7	8	9	10	Abs	CH	Total
Giammo	369	889	264	291	311	142	484	418	509	118	100	31	3926
Wright	428	410	165	318	303	217	520	161	192	96	100	26	2936
Dorsey	582	781	298	443	439	290	709	276	412	153	161	44	4588
Hall	544	810	276	423	414	256	648	274	392	159	148	30	4374
Henn	407	678	225	269	204	139	453	248	324	85	87	27	3146
Hoffmann	540	763	279	401	347	256	691	287	388	148	155	36	4291
Robbins	457	820	234	384	386	248	557	465	459	105	117	28	4260
Thomas	198	502	202	225	372	94	244	156	295	65	51	17	2421
Young	99	152	65	58	73	59	106	96	71	37	9	15	840
Registration	2748	4183	1964	3014	2638	2292	4112	2074	2153	1065	229	58	26530
No Inactives Reg	2503	3893	1774	2794	2517	2122	3956	1937	1963	1046			24508
Ballots cast	805	1312	437	618	626	377	1013	587	705	216	213	58	6967
Mayor Sum	797	1299	429	609	614	359	1004	579	701	214	200	57	6862
Council Sum/4	706.75	1126.5	394.75	550.75	558.75	335.5	852	450.5	585.25	188	182	49.25	5980
Frac Miss Mayor	0.01	0.01	0.02	0.01	0.02	0.05	0.01	0.01	0.01	0.01	0.06	0.02	0.02
Average Slate Council vote	555.33	784.67	284.33	422.33	400.00	267.33	682.67	279.00	397.33	153.33	154.67	36.67	
Average Slate Council frac.	0.79	0.70	0.72	0.77	0.72	0.80	0.80	0.62	0.68	0.82	0.85	0.74	0.00
Miss Council votes	393	742	169	269	269	166	644	546	479	112	124	35	3948
Council Slots dropped	0.49	0.57	0.39	0.44	0.43	0.44	0.64	0.93	0.68	0.52	0.58	0.60	0.57
Voter participation	0.29	0.31	0.22	0.21	0.24	0.16	0.25	0.28	0.33	0.20	0.93	1.00	0.26
Corrected Voter Part.	0.32	0.34	0.25	0.22	0.25	0.18	0.26	0.30	0.36	0.21			0.28
Giammo-Wright	-59	479	99	-27	8	-75	-36	257	317	22	0	5	990
Ballot Fraction:													
Giammo	0.46	0.68	0.62	0.48	0.51	0.40	0.48	0.72	0.73	0.55	0.50	0.54	0.57
Wright	0.54	0.32	0.38	0.52	0.49	0.60	0.52	0.28	0.27	0.45	0.50	0.46	0.43
Dorsey	0.82	0.69	0.75	0.80	0.79	0.86	0.83	0.61	0.70	0.81	0.88	0.89	0.77
Hall	0.77	0.72	0.70	0.77	0.74	0.76	0.76	0.61	0.67	0.85	0.81	0.61	0.73
Henn	0.58	0.60	0.57	0.49	0.37	0.41	0.53	0.55	0.55	0.45	0.48	0.55	0.53
Hoffmann	0.76	0.68	0.71	0.73	0.62	0.76	0.81	0.64	0.66	0.79	0.85	0.73	0.72
Robbins	0.65	0.73	0.59	0.70	0.69	0.74	0.65	1.03	0.78	0.56	0.64	0.57	0.71
Thomas	0.28	0.45	0.51	0.41	0.67	0.28	0.29	0.35	0.50	0.35	0.28	0.35	0.40
Young	0.14	0.13	0.16	0.11	0.13	0.18	0.12	0.21	0.12	0.20	0.05	0.30	0.14
Council (team/all others)	1.43	1.09	1.17	1.35	1.16	1.49	1.51	0.87	1.04	1.58	1.76	1.26	1.24
C Team STD	0.03	0.02	0.02	0.03	0.07	0.05	0.03	0.01	0.02	0.02	0.03	0.12	0.02
C Team AVE	0.79	0.70	0.72	0.77	0.72	0.80	0.80	0.62	0.68	0.82	0.85	0.74	0.74

Abs = Absentee Ballots
 CH = Election Day Registration at City Hall



City of Rockville Board Of Elections

Adopted Voting Districts
March 26, 2001



★ Polling Location

- 1 Elwood Smith Recreation Center
- 2 Beall Elementary School
- 3 Lincoln Park Community Center
- 4 F. Scott Fitzgerald Theatre
- 5 Rockcrest Recreation Center
- 6 Montrose Community Center
- 7 Ritchie Park Elementary School
- 8 Latvian Lutheran Church
- 9 Rockville Senior Center
- 10 King Farm Community Center