Study of Undervotes in Recent Santa Monica Elections

Amy Connolly[1], Julie Walters[2]

March 25, 2004

1   Introduction

Santa Monica currently uses what is known as Block Voting to elect its city council. In this system, each voter gets to cast as many votes as there are seats to be filled, and the winners are the candidates with the most votes. Although this system is better than the single-member district plurality system used in most American elections, it does share some disadvantages with electing councilmembers by district. If Santa Monica were to adopt Choice Voting for its city council elections, these disadvantages would be eliminated, while the most important advantages of the current system, including city-wide representation, would be retained.

One of the potential problems with Block Voting is that voters are compelled to vote strategically. For instance, a voter, having cast one vote for his or her favorite candidate may be reluctant to cast his or her remaining votes, since those votes may decrease the likelihood of their favorite taking office. Thus, voters tend to "undervote," that is, they often do not cast all of their votes.

This study, performed by Santa Monica Ranked Voting, lays out the number of allotted votes that were not cast by Santa Monica voters, and the number of voters that did not cast all of their votes. This study finds that at least a third of Santa Monica voters consistently undervote. This means that voters are not giving a full picture of their political preferences under the current system. Choice Voting would render a more directly proportional result than with the current system, helping ensure that all aspects of our community are fairly represented.

2   How It Works

We obtained the number of ballots cast and number votes cast in the last three city council elections from the city clerk's office. The statistics for the 1998 and 2002 elections may be found on the web at:

http://www.santa-monica.org/cityclerk/council/agendas/2002/20021210/s20021210A-1.htm

http://www.santa-monica.org/cityclerk/council/agendas/1998/s98120803-A.html

The results of the 2000 election were obtained via private communication with the city

---

[1] amyconn@socrates.berkeley.edu

[2] jwalters@pobox.com

clerk's office and may be found at Santa Monica Ranked Voting's website, www.smrankedvoting.org.

For each election, we obtained the number of ballots cast and the number of votes cast. Since each voter is entitled to the same number of votes as there are seats to be filled, the total number of votes that could have been cast is given by:

$$\text{\# possible votes} = \text{\# ballots cast} \times \text{\# seats} \tag{1}$$

Then, the average number of votes cast per ballot is:

$$\text{\# votes per ballot} = \frac{\text{\# votes cast}}{\text{\# ballots cast}} \tag{2}$$

The number of votes that were "missing" when votes were tallied (i.e., the number of allotted votes that were not cast) is:

$$\text{\# missing votes} = \text{\# possible votes} - \text{\# votes cast} \tag{3}$$

Now let's say that all undervoters cast only a single vote. Then each undervoter is responsible for a number of missing votes given by

$$\text{\# missing votes per voter} = \text{\# seats - 1} \tag{4}$$

Then, the number of people that undervoted is:

$$\text{\# undervoters} = \frac{\text{\# missing votes}}{\text{\# missing votes per voter}} \tag{5}$$

Note that this scenario is an extreme case, and gives the *smallest* possible number of under-voters. If anyone who undervotes casts more than one vote, then the missing votes will be distributed among more voters.

3 What We Found

Table 1 and 2 show our results.

year	seats	ballots cast	possible votes	votes cast	votes per ballot
1998	3	33,026	99,081	74,654	2.26 out of 3
2000	4	42,659	170,636	115,800	2.70 out of 4
2002	3	30,853	92,559	70,777	2.29 out of 3

Table 1: This table shows the average number of votes cast per ballot in each of the past three Santa Monica city council elections.

year	seats	missing votes	minimum undervoters	minimum % that undervoted
1998	3	24,427	12,214	37.0
2000	4	54,836	18,279	42.8
2002	3	21,782	10,891	35.3

Table 2: This table shows the minimum number of undervoters in each of the past three Santa Monica city council elections.

4 Conclusions

This report shows that consistently at least one third of Santa Monica voters are undervoting in city council elections. We contend that this is due to the voting system currently in place, and we recommend that Santa Monica consider Choice Voting for its elections. Choice Voting eliminates the need for strategic votes and maximizes the effectiveness of each vote.