Approval Voting : An Experiment during the French 2002 Presidential Election*

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Abstract

This paper is based on a field experiment that took place during the 2002 French presidential election, about the Approval Voting rule. We describe the experiment, its main results, and some analysis that use a behavioral model to link the individual approval vote with his or her first round vote. The main findings are as follows: (i) Such an experiment is feasable, and is very well accepted by the voters. (ii) The principle of approval voting is easily understood and accepted. (iii) The candidates Le Pen and Chirac, more than the others, were able to convert the individuals' approvals into a first round vote. (iv) Within the observed political context, and compared to the first round, approval voting modifies the overall ranking of candidates.

Keywords: Approval Voting, French Politics, Experiments.

JEL Classification: C93, D70, D72

1 Approval Voting and the Experimental Design

Approval voting is a system in which voters can vote for, or approve of, as many candidates as they want (Brams and Fishburn 1982). When elections are held to select one single candidate, the candidate receiving the largest number of votes is elected. Although some scientific and engineering societies have adopted this system, it is not currently used in any mass elections. During the French 2002 presidential election, a field experiment was conducted[1] over 5000 voters, to collect evidence concerning the properties of approval voting in public elections.

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*This is essentially an extended abtract of the paper [9] available in french at: http://ceco.polytechnique.fr/CAHIERS/index.html

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[1]This experiment was conducted by the Laboratoire d'Econométrie with the support of the Ecole Polytechnique and the CNRS [1, 7, 8, 9].

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The French presidential election is a two-round vote. If a candidate gets at least 50% of the votes in the first round, she gets elected. If no candidate gets at least 50% of the score, the first two candidates meet in a second round. Who gets the majority of the votes is elected. For this election16 candidates were vying. Jacques Chirac (Conservative) came first, unexpectedly followed by Jean-Marie Le Pen (Front National, nationalistic law-and-order movement). Lionel Jospin (Democrat) came third.

We run the experiment on the day of the first round. We selected and contacted two towns (Gy les Nonains, 482 registered voters, and Orsay. In fact, in Orsay, the experiment was only conducted on some voting posts in the town, that is, 4719 registered voters). One week before the election, we sent a letter to each registered voter in these two towns, explaining the principle of approval voting with no runoff and requiring his/her participation in the experiment. On the day of the official election, April 21 2002, we set experimental voting booths, were voters – once they had voted for the official vote - were requested to proceed, fill and cast their approval voting ballot.

2 Participation and Candidate Scores

2.1 Participation

The experimental design was such that only voters who turned up in the official vote could take part in the experiment. Therefore, we define the participation rate in the experiment as the ratio of the number of participants over the number of voters who turned out. The participation rate was unexpectedly high: above 75% in Orsay, and above 90% in Gy. Participants comments and reactions were usually quite enthusiastic and supportive.

Voters official: 3246	(spoiled: 65)
Participants to the experiment: 2597	(spoiled: 10)
Participation rate: 2597/3246 = 80%	

Table 1: Participation at the experiment

2.2 Number of approvals

On average, the voters approved of 3.15 candidates (in accordance to anterior observations, see Brams 2002), the distribution around this value being rather smooth (in particular, one name- ballot are not very numerous). See the distribution in Table 2. This observation is in line with what is known from other experiments of approval voting, even in quite different contexts (Brams, 2002).

Average number : 3,15 out of 16											
0	1	2	3	4	5	6	7	8	9	10	>10
36	287	569	783	492	258	94	40	16	6	1	5

Table 2: Number of approved candidates

2.3 Candidate scores

The candidates' scores under the two systems (approval voting versus official vote) were quite different. See Table 3 below.

A few salient facts are worth noting:

(1) No candidate attracted a majority of voters on his/her name.

(2) Centrist candidates (François Bayrou) seem to benefit the most from approval voting.

	Gy		Orsay	
	approval	official vote	approval	official vote
Chirac	38.19 %	19.64 %	36.21 %	18.80 %
Le Pen	32.69 %	19.64 %	11.65 %	8.71 %
Jospin	23.90 %	11.11 %	43.23 %	20.66 %
Bayrou	23.35 %	6.72 %	35.18 %	10.30 %
Laguiller	17.58 %	13 %	15.07 %	3.70 %
Chevènement	18.41 %	4.65 %	32.30 %	8.57 %
Mamère	18.41 %	4.65 %	30.63 %	8.29 %
Besancenot	17.03 %	2.84 %	17.68 %	3.14 %
Saint-Josse	20.33 %	9.56 %	5.76 %	0.69 %
Madelin	21.16 %	5.17 %	21.32 %	4.94 %
Hue	10.16 %	3.10 %	11.70 %	2.63 %
Mégret	17.03 %	2.84 %	6.12 %	1.14 %
Taubira	9.07 %	0.52 %	20.56 %	3.56 %
Lepage	9.89 %	2.84 %	19.25 %	2.80 %
Boutin	5.76 %	0.78 %	8.10 %	1.42 %
Gluckstein	7.14 %	1.81 %	3.82 %	0.66 %
Total	290.11 %	100 %	318.58 %	100 %

Table 3: Results in Gy-les-Nonains and Orsay

3 A behavioral model

The various models for approval voting that have been proposed in the literature (Falmagne and Regenwetter 1996, Regenwetter 1997, Brams and Fishburn 2001, Saari 2001, Regenwetter and Tsetlin 2002) are not perfectly suited for the present context. We needed a behavioral model that links approval voting with first-round vote. We estimated such a simple behavioral model. The model is

the following: To each candidate $c = 1, ..., 16$ we associate a parameter $\lambda_c > 0$ such that, for any voter v, if v has appoved the subset $B \neq \emptyset$ of the set of candidates, the probability that v votes, in the first round, for candidate c is 0 if $c \notin B$ and is equal to:

$$\frac{\lambda_c}{\sum_{d \in B} \lambda_d}$$

if $c \in B$.

Given that we have data from rather different places, the model works surprisingly well. Table 4 shows estimates for the levers (normalized to 1 for Chirac).

The candidates' levers are quite different the ones from the others, showing how some candidates, in particular Jacques Chirac and Jean-Marie Le Pen, did, more than the others, convert the voters' approval to a first round vote.

The same Table shows extrapolations of the results from Gy and Orsay to France, and the comparison with the candidates' national scores. Recall that the main political event of the actual election was the fact that the Extreme Right candiate Le Pen defeated the former prime minister Jospin. The striking observation in Table 4 is that the extrapolation predicts that, under approval voting, Le Pen would have fallen from the second place to the third or fourth place.

		France	
	Levers	approval	first round
Chirac	1	36.7%	19.9%
Le Pen	1.16	25.1%	16.9%
Jospin	.73	32.9%	16.2%
Bayrou	.49	27.1%	6.8%
Laguiller	.38	16.8%	5.7%
Chevènement	.43	22.4%	5.3%
Mamère	.39	24.3%	5.2%
Besancenot	.19	17.6%	4.2%
Saint-Josse	.88	13.5%	4.2%
Madelin	.36	20.4%	3.9%
Hue	.53	11.3%	3.4%
Mégret	.28	13.8%	2.3%
Taubira	.08	12.6%	2.3%
Lepage	.52	13.4%	1.9%
Boutin	.17	6.7%	1.2%
Gluckstein	.16	5.5%	0.4%

Table 4: France: Candidate first round levers and estimated approvals

4 Another Picture of Politics

Approval voting is not only a device to select candidates, it is also an interesting way to have a more precise and faithful description of voters' preferences. Indeed, if one think that elections do not only serve the purpose of selecting representatives, but should also be viewed as devices to get more information about what citizens want in terms of politics, then Approval Voting might appear as an attractive system. Indeed, the information to be found in approval ballots is very rich: for each set of candidates, we know the number of voters who have approved of them. This can be used to explore how close to one another the different candidates are, in the eye of the voters. Or to assess the potential voters of different candidates.

We use several methods to explore these questions: data analysis provides a map presenting "closeness" between candidates (Laslier and Van der Straeten, 2002, Laslier 2003a, Laslier 2003b); with the behavioral model of approval voting presented above, we can derive some political insights about the connections between the supporters of the various candidates.

These analysis provide arguments in favor of the often heard thesis according to which the two-round runoff system used in France is particularly vulnerable to mistaken anticipations from the side of the voters and to manipulation by the medias.

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