Instant Runoff Elections for Oklahoma

R. DARCY
Oklahoma State University

Instant runoff ballots record all the voter's preferences rather than just the first as do current ballots. As such, instant runoff ballots can be used to avoid choosing winners through system quirks. Further, the instant runoff allows eliminating the cost and bother of runoff elections. Opportunities for, and obstacles against, Oklahoma using the instant runoff in municipal and other Oklahoma elections are explored.

In the nineteenth century the Hare system or the single transferrable vote, a proportional representation voting system, was developed in Europe and quickly spread to Australia where it came to be known as the Hare-Clark system (Farrell, 2001). Ballots using the system require voters to number their first, second and subsequent choices among candidates rather than to just pick one candidate as is typical in the United States. The system's purpose was to achieve proportional representation among political parties. In the United States, a variant of that system is the instant runoff. With the instant runoff, the voter is given a ballot and asked to number their first choice candidate "1", their second choice candidate "2" and so on. Ballots are then sorted into stacks based on the first choice and counted. If first choices yield

no majority, the candidate with the fewest first choices is eliminated and that candidate's ballots are transferred to the second choice candidate. This is repeated until one candidate gets a majority.

Today, Oklahoma uses runoff elections in partisan primaries and for non-partisan races. The instant runoff can save money by eliminating a second round of voting, or 'runoff." An additional benefit of instant runoff is an anticipated increase in turnout due to a reduced number of elections (Boyd, 1986; 1989).

Current Oklahoma elections ask voters to indicate only their first choice. If there is a majority behind one choice, that candidate is elected or nominated. If there is not a majority for a candidate, then for some municipal elections and all partisan contests, the winner is just the candidate who received more votes than anyone else. In some municipal elections, and all partisan and non-partisan primaries (district judges, for example), there is a runoff in which the top two candidates compete. The three-stage "primary – runoff – general" election is expensive and reduces voter participation. Oklahoma has long had the reputation of having more election days than any other state. The 2011 election schedule for Tulsa County, for example, has one Tuesday each of eleven months reserved for elections (Tulsa County Election Board, 2011). Logan County has a Tuesday in every month reserved for elections (Logan County Election Board, 2011).

Figure 1

Example of Paper Instant Runoff Ballot

Instructions: Write "1" in the box next to your first choice, "2" next to your second choice and so on.

Candidate for Mayor	Choice
Dominique Straus-Kahn	
Arnold Schwarzenegger	
John Ensign	
John Edwards	

Source: author.

Instant runoff elections ask voters to list all their preferences, first to last, rather than indicate only their first preference. Thus, the instant runoff ballot gathers more information than the current ballot. The additional information is used to determine what the voter prefers if his or her first (or second, etc.) choice cannot win. This enables election officials to *estimate* the outcome of a runoff or even a general election *if* the voter preferences do not change and the same voters participate in all elections.

Figure 2

Example of Optical Scan Instant Runoff Ballot

Instructions: Fill in the box next to your first choice, the box next to your second choice and so on.

Candidate for Mayor	First Choice	Second Choice	Third Choice	Fourth Choice
Dominique Straus-Kahn				
Arnold Schwarzenegger				
John Ensign				
John Edwards				

Source: author.

INSTANT RUNOFF VERSUS TWO STAGE RUNOFF

It must be noted the instant runoff does not always yield the same result as the two stage runoff, even if we assume the same voters with the same preferences at both stages.

Imagine fifteen voters and five candidates. Five voters prefer candidates in the order: A, B, C, D, and E. Ten other voters have different preference orders.

Table 1

Fifteen Voters with Preferences Among Five Candidates

Preference	5 voters	4 voters	3 voters	2 voters	1 voter
First	A	B	C	D	E
Second	E	E	E	E	C
Third	B	C	D	C	D
Fourth	C	D	B	B	B
Fifth	D	A	A	A	A

Majority = 8 votes; A (5 votes) is plurality winner

Source: author's calculations.

Table 2

Two Stage Runoff

Primary	
Candidate	Votes
A	5
B	4
C	3
D	2
E	1
Candidates C, D, and E eliminated	

General Election	
Candidate	Votes
A	5
B	10
B wins	

Source: author's calculations.

Voters whose first preferences are candidates C, D, or E, given a choice between A and B would all vote for B. Against A, B would win with two-thirds of the 15 votes (ten voters rank B over A).

With instant runoff the results would be different.

Table 3

Instant Runoff

First Count	
Candidate	Votes
A	5
B	4
C	3
D	2
E	1
Total	15
E is eliminated, votes pass to C	

Second Count	
Candidate	Votes
A	5
B	4
C	4
D	2
Total	15
D is eliminated, votes pass to C	

Third Count	
Candidate	Votes
A	5
B	4
C	6
Total	15
B is eliminated, votes pass to C	

Fourth Count	
Candidate	Votes
A	5
C	10
Total	15
C wins	

Source: author's calculations.

In this group of voters, six (6) voters prefer any of C, D, or E to either of A or B and an additional four (4) prefer C, D, or E to A. B is eliminated in the third count leaving C the winner.

We can notice here when there is no majority, voting system makes a difference. With the same voter preferences among the candidates, A, B, or C emerge as the winner – depending on whether plurality, runoff or instant runoff is used.

If there are either one, two or three candidates, preferences orders remain constant, and the same voters vote in each two-stage election, the results will be the same as with the instant runoff. If there are more than three candidates, the results *may* be the same, but they also may not.

Looking only at the election system as a means of translating voter preferences into a single choice, which system is superior? There are two strong criteria used to evaluate election systems. If a majority prefers a candidate, the system should select that candidate (Majority Criterion). If there is no majority and a candidate can defeat every other candidate in single pair-wise elections, the election system should select that candidate (Condorcet winner criterion). Any candidate favored by a majority will also defeat all other alternatives in single pair-wise votes. Therefore, the Condorcet criterion applies where there is no majority. With any of the three voting systems: Plurality, Plurality with a runoff and the Instant runoff do not guarantee a Condorcet winner will be selected. Most would agree that if there was no majority favoring any candidate but there was a candidate able to defeat all other alternatives in pair-wise (majority) votes, an election system should select that candidate (Black, 1958). Put another way, if plurality voting selects A and a two-stage election selects B and the instant runoff selects C – if E can defeat A or B (or C or D) in pair-wise elections E has a stronger claim than A or B (or C or D) whose claim is a function, not of the voter preferences alone, but arbitrarily of the election system itself. The instant runoff takes into consideration more of voter preference orders than the two stage election. In that sense it is superior.

Table 4
Pair-wise Elections

	Winner
A v B	B (10 votes)
A v C	C (10 votes)
A v D	D (10 votes)
A v E	E (10 votes)

	Winner
B v C	B (9 votes)
B v D	B (9 votes)
B v E	E (11 votes)

	Winner
C v D	C (13 votes)
C v E	E (12 votes)

	Winner
D v E	E (13 votes)

E defeats all other alternatives in pair-wise elections (E is a Condorcet Winner)

Source: author's calculations.

In this case, neither the two stages, nor the instant runoff, selected the Condorcet winner. Short of actually using voter preference orders to determine if there is a candidate able to defeat all others in single pair-wise votes, no election system guarantees such a candidate will be a winner. With modern electronic voting machines and computers, however, it is possible with instant runoff ballots to determine if there is a majority or Condorcet winner and, if there is such, make that candidate the winner. Such is possible only with the information available from the preference orders. Therefore, absent a majority, an election system should determine if there is a Condorcet winner before proceeding further.

INSTANT RUNOFF VERSUS THE SYSTEMS KNOWN IN IRELAND AND AUSTRALIA AND THE UK

Because ballots would be similar, it is tempting to confuse instant voting with the systems used in Ireland and Australia or the system recently defeated in the United Kingdom. This is a mistake. The electoral context and political system will cause the instant runoff to work very differently than the systems in Ireland and Australia and the system proposed for the United Kingdom.

The United States has a two-party system while most other democratic nations have multi-party systems. The Single Transferable Vote as used in Ireland and Australia is essentially an attempt to make party proportions in a legislature approximate the party proportions in nationwide voting.

The Irish Single Transferrable Vote is used in multi-member districts of between three and five members. Voter preference orders and transfers guarantee each representative is elected with close to an equal number of votes. Candidates with an excessive vote over that needed have the excess votes transferred to the ballots' second (or subsequent) preference. If not enough candidates are elected, the candidate with the fewest ballots is eliminated and the votes transferred. In a five member constituency a candidate is elected with roughly $1/5^{th}$ of the vote or 20 percent. A party with 20 percent of the vote is guaranteed representation (O'Leary, 1979). The Australian Single Transferrable Vote and the United Kingdom's Alterative Vote are designed for single

member constituencies (McAllister et al., 1990; Electoral Commission, 2011).

In partisan single member constituency plurality or two-stage elections there is a strong tendency for the party with the most votes to get an exaggerated legislative majority. The mathematics of this tendency had been known for about a century as the cube law (Taagepera, 1973). For example, in the 2010 U.S. House of Representatives elections Republicans gained 51.6% of the popular vote and 55.6% of the seats. Minor party candidates gained only 3.6% of the vote and no seats. Thus, a popular vote gap between the Democrats and Republicans of 6.8% yielded an 11.2% gap in the House of Representatives.

Table 5

2010 U.S. House of Representatives Election

Party	Vote	Vote %	Seats	Seats %
Republican	45,253,462	51.6	242	55.6
Democrats	39,337,908	44.8	193	44.4
Other	3,045,289	3.6	0	0
Total	87,636,659	100	435	100

Source: Author's calculations from
http://en.wikipedia.org/wiki/2010_House_elections accessed 20 May 2011.

In a two party system, plurality voting, as we have in the U.S., allows for strong governing majorities. It also discourages small parties. Voters have to consider not only who they want – the Green or Libertarian parties, for example, but also who they do not want, the Republican or the Democrat. The voter calculates there is little chance the minor party will win but a big chance that if too many vote for the minor party the party the voter does not want will win. Therefore,

most voters select the least dreadful major party rather than the most preferred minor party.

Now consider the United Kingdom. In the May 6, 2010 National Election, eleven parties gained seats (the Speaker was automatically elected and one seat was left undecided).

Table 6

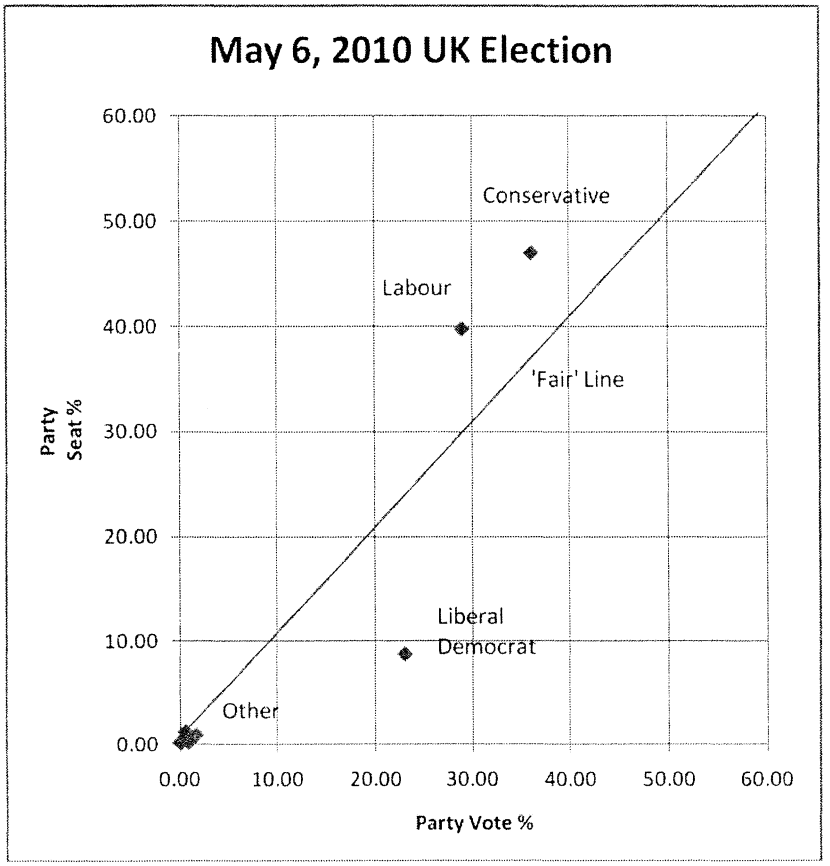
United Kingdom General Election 6 May 2010

Region	Party	Vote	Seats	Vote %	Seats%
All	Conservative	10,683,787	305	36.05	47.00
	Labour	8,604,358	258	29.04	39.75
	Liberal Democrat	6,827,938	57	23.04	8.78
	Green	258,954	1	0.87	0.15
Wales	Plaid Cymru	165,394	3	0.56	0.46
Scotland	Scottish Nationalist	491,386	6	1.66	0.92
Northern Ireland	Democratic Unionist	168,216	8	0.57	1.23
	Sinn Fein	171,942	5	0.58	0.77
	Social Democrat and Labour Party	110,970	3	0.37	0.46
	Alliance	42,762	1	0.14	0.15
	Sylvia Hermon	21,181	1	0.07	0.15
	Speaker	22,860	1	0.08	0.15
	Total	29,633,638	649		100

Source: Author's calculations from http://en.wikipedia.org/wiki/2010_UK_General_Election accessed 20 May 2011.

Figure 3

May 6, 2010 United Kingdom Election



Source: Author's calculations from http://en.wikipedia.org/wiki/2010_UK_General_Election accessed 20 May 2011.

The Conservatives gained 47% of the seats with 36% of the vote. Liberal Democrats got 23% of the vote but less than 9% of the seats. Liberal Democrats had felt cheated for almost a century but could do nothing. They, like the Greens and Libertarians in the U.S., felt that if

they ever got the seat percent merrited by their vote more people would vote for them and they would become a major party.

In 2010 no UK party had a majority either in votes or seats. The Conservatives needed to bring a minimum of 20 additional seats into a coalition to govern. Their choices were Labour; Liberal Democrats; or a minimum of 4 smaller parties. Labour, as the party that was just booted from government was out of the question if the Conservatives wanted a direction change. A group of minor parties would put the government hostage to fringe members able to bring the government down. That left the Liberal Democrats. Their price to join the coalition was a national vote on the alternative election system. The Liberal Democrats felt (correctly) that they would be the second choice of Labor and Conservative voters and where there was no majority in a district they would win by transfers – much as candidate C in Table 3. If voters felt the Liberal Democrats had a realistic chance additional voters would list them first. Thus, the UK alternative vote had as its goal a shift toward proportional or more fair representation.

As it happened, the vote was held May 5, 2011 and the alternative vote was defeated more than two to one. Why? One argument against the Alternative Vote was, like the euro, it was un-British and the old system had served Britain well. A second argument was the Alternative Vote was 'too complicated', too foreign, not "British straightforward". This is despite the system being devised in the 19th Century by an Englishman (see, Electoral Commission 2011). A more realistic explanation is that Conservative and Labour national leaders opposed the change because it would weaken their hold on British politics. Their voters turned out and followed their leaders recommendation. We can notice the "Yes" vote was approximately the minor party vote in the 2010 election and the "No" vote was approximately the sum of the Conservative and Labour vote.

Table 7

UK May 5, 2011 Alternative Vote Referendum

Alternative Vote:	Votes	Percent
Yes:	6,152,607	32.10%
No:	13,013,123	67.90%
Valid Votes:	19,279,022	99.41%
Invalid:		113,292
Voter Turnout		42.20%
Electorate:	45,684,501	

Source:
http://en.wikipedia.org/wiki/United_Kingdom_Alternative_Vote_referendum,_2011 accessed 20 May 2011.

What the Irish, Australians and British call the single-transferrable vote, or the alternative vote, has a ballot that resembles the instant-runoff ballot. American voters would rank candidates just as in Ireland and Australia and as proposed in the United Kingdom. Votes would be tabulated and transferred here as they are there. The difference lies in ours is a two-party system unlikely to change in the near future, while overseas there are multiple-party systems seeking, through electoral design, partisan proportionality and partisan fairness.

INSTANT RUNOFF FOR OKLAHOMA

Oklahoma conducts partisan Federal, state-wide, legislative and county elections. It conducts judicial retention elections, non-partisan district and associate district judge elections and there are partisan and non-partisan municipal elections. Each type of election has aspects that, at present, would allow, inhibit or prevent use of the instant runoff.

Oklahoma has uniform balloting. All elections must be conducted by county election boards using equipment provided by the state. There is one exception. Chartered municipalities have the option of arranging their own elections (Oklahoma Statutes, 2011: §11-16-102; §26-6-102.1; §26-7-120; §26-13-101; §26-13-105; §26-21-101). The state currently uses fill in the arrow ballots read by optical scan equipment. In 2012 new optical scan equipment will have been purchased and deployed. This equipment will use fill in the box ballots. While it is theoretically possible for the new machines to be programmed for instant runoff ballots, the expense of doing so is considered prohibitive according to Election Board Secretary Paul Ziriax and Assistant Secretary Frances Roach (Ziriax and Roach, 2011). Thus, except for election for chartered municipality offices, instant runoff will not be realistic until after 2022, the projected life of the newly purchased Hart InterCivic machines. The one exception to the requirement that state machines be used is charted municipality elections contracted with a 'turn-key' election vender or conducted by the municipality itself.

Since at least 1932 Mangum, in Greer County, has conducted its own municipal elections rather than using the county election board. The entire city constitutes one precinct for municipal election purposes. Commissioners have paper ballots printed, and hire clerks, counters and a judge for the election (City Charter, 2011: Article 2 Sections 5, 8, 12, 15). Clerks and counters are paid $67 each and the judge $77. An election costs $335 in salaries and, in the case of the most recent election, $192 to print the ballots for a total of $607. Other costs are nominal. According to City Clerk Shelly Davis, the two most recent elections were for Police Chief November, 2010, 651 voters, and Mayor March 2011, 303 voters (Davis, 2011). If the Greer County Election Board conducted the elections they would have to open and staff five Mangum precincts, print ballots on more costly stock, open the polls for in-person absentee voting and do other things to comply with state law and practice. According to Greer County Election Board Secretary Claudia Boyle, the cost would be approximately $3,000, still nominal but about five times Mangum's cost (Boyle, 2011).

The 2011 Sand Springs municipal election saw no majority in the first round, requiring a second round in April. The March primary was a stand-alone election (which cost $9,869.36) while the April runoff was held in conjunction with local school elections. Because of this combined election, the Sand Springs runoff portion of the April

election cost was lower than expected (Rea, 2011). The Stillwater April 2011 cost was $10,302.25 (Payne County Election Board, 2011). Broken Arrow also had an at-large council seat to fill in 2011. Unlike Sand Springs, Broken Arrow does not require a majority to elect. Therefore, its election was held in April with the school votes. The winner, Jonnie D. Parks, gained a seat with 44.34 percent of the vote.

By not holding a runoff, Broken Arrow traded off the cost and bother of a second election for the risk of electing officials without majority support. In 2011 the Creek, Payne and Tulsa county election boards conducted elections for nineteen municipal offices in Broken Arrow, Glenpool, Jenks, Sand Springs, Owasso, Stillwater, Cushing, Yale, Depew, Kiefer, Mounds and Oilton. In thirteen of these races the winner had a majority because there were only two candidates. In the six races with more than two candidates, the winner in two races had a majority while in four the winner did not. Only Sand Springs held a runoff when there was no majority.

Given the nominal cost to a municipality for an election and the small proportion of municipal elections where the winning candidate failed to gain a majority, there seems little advantage to municipalities exercising their right to adopt instant runoff. Except, possibly this: if there are more than two candidates and no runoff, it is possible the plurality winner will be the candidate that could be defeated by each of the other candidates in pair wise elections.

In the hypothetical Broken Arrow voter preference, example noted in Table 8, Parks wins with a plurality of 2008 votes yet either Fagundes or Heisten would defeat Parks with 2265 votes. Parks is a Condorcet loser, a candidate who can be defeated, in the hypothetical example, by every other candidate (Black, 1958). Fagundes is the Condorcet winner, defeating Heisten (2957 – 1572) and Parks (2521 – 2008). She would have been eliminated, however, in a conventional runoff as she had the fewest first preference votes. Only a test for a Condorcet winner using voter preference orders available on instant-runoff ballots would select Fagundes as winner.

Table 8
Broken Arrow and Sand Springs 2011 Elections

Councilmember At-Large Sand Springs	March 1, 2011 Primary	April 5, 2011 Runoff/School/ Municipal
Troy Zickefosse	127	
Ann M. Been	53	
Sam Childers	157	331
James D. Rankin	171	357
Over	0	
Under	1	1
Total	509	689

Council Member At-Large Broken Arrow	
Linda C. Fagundes	949
Michael Heisten	1,572
Johnnie D. Parks	2,008
Over	1
Under	325
Total	4,855

Source:
http://www.tulsacounty.org/electionboard/EB_PDF/Election_Results/Official%20Election%20Results%20March%201,%202011%20(Summary).pdf ;

http://www.tulsacounty.org/electionboard/EB_PDF/Election_Results/Official%20Election%20Results%20April%205,%202011(Summary).pdf accessed 15 July 2011

Table 9

Hypothetical Broken Arrow Preferences

Preference	949 voters	1572 Voters	2008 Voters
First	Fagundes	Heisten	Parks
Second	Heisten	Fagundes	Fagundes
Third	Parks	Parks	Heisten

Majority = 2265; Parks (2008 votes) is plurality winner.

Source: author's calculations

CONCLUSION

Oklahoma has non-partisan school board and district and associate district judge elections. All use runoffs. Oklahoma partisan primaries also use runoffs. The cost of these elections is significant and the voter's stake in fair, efficient and accurate voting and counting is high. Experimentation with instant- runoff voting at the municipal level could help Oklahoma determine the future direction of its election system.

REFERENCES:

Black, Duncan. 1958. *The Theory of Committees and Elections* (Cambridge: Cambridge University Press).

Boyd, Richard W. 1986. "Election Calendars and Voter Turnout." *American Politics Research* 14 (January):89-104.

Boyd, Richard W. 1989. "The Effects of Primaries and Statewide Races on Voter Turnout." *Journal of Politics* 51 (August):730-739.

Boyle, Claudia. 2011. Conversation with author 15 July.

City Charter. 2011. http://www.cityofmangum.com/Documents/CityCharter.pdf accessed 15 July.

Davis, Shelly. 2011. Conversation with author 15 July.

Dawson, Alyson. 2011. Payne County Election Board. Conversation with author July 19.

Electoral Commission. 2011. "Referendum on the voting system for the UK Parliament." http://www.electoralcommission.org.uk/elections/referendums/referendum accessed 17 July.

Farrell, David M. 2001. Electoral Systems: A Comparative Introduction. Houndmills, Basingstoke, Hampshire.

Logan County Election Board. 2011. 2009 and 2010 Election Schedules. http://www.logancountyok.com/Election_Board.php accessed 19 July 20911.

McAllister, Ian, Malcolm Mackerras, Alvaro Ascui and Susan Moss. 1990. *Australian Political Facts.* (Melbourne: Longman Cheshire).

Oklahoma Statutes. 2011. http://www.oklegislature.gov/osstatuestitle.html accessed 20 May.

O'Leary, Cornelius. 1979. *Irish Elections 1918 – 1977: Parties, Voters and Proportional Representation.* (Dublin: Gill and Macmillan).

Rea, Sheryl. 2011. Tulsa County Election Board. Conversation with author July 18.

Taagepera, Rein. 1973. "Seats and votes: A generalization of the cube law of elections." *Social Science Research* 2 (September):257-275.

Tulsa County Election Board. 2011. 2011 Election Schedule. http://www.tulsacounty.org/documents/2011Electioncal.pdf accessed July 18.

Ziriax, Paul and Frances Roach. 2011. Conversation with author March 24.