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Ballot Paper Design, Evidence From an Experimental Study at the 2009 Local Elections

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ABSTRACT *The overriding principle of ballot design is that it should not confer any a priori advantage to one candidate over another. Ballot format should not determine or condition an election outcome. Yet, there is a sizeable body of evidence which demonstrates that in many circumstances the design of ballot papers and voting machines contravenes the normative assumption of electoral neutrality. In this article, we look at the impact of ballot paper design at local elections in the Republic of Ireland (hereafter Ireland). The article uses data from an experimental election study conducted at the local elections in Ireland in 2009. Overall the study finds some evidence of a primacy effect and it also demonstrates that candidates located in the middle of the ballot face a challenge as they receive the lowest vote shares of all candidates across the four replica ballots. This mid-table obscurity remains even when party affiliation is known. Thus, it can be argued that candidates placed in such positions incur a disadvantage. To neutralise this effect, the article concludes with a recommendation that a system of random ordering of ballot positions across ballot papers should be implemented so as to ensure that each candidate appears at each ballot position on an equal number of times.*

Keywords: Ballot paper design, Ballot position, Irish elections, PR-STV

1. Introduction

The 2000 US Presidential election resurrected ballot paper design as a crucial aspect of the mechanics of voting. Hanging chads and butterfly ballots entered mainstream discussion of elections in a way that had not been expected. The overriding principle of ballot design is that it should not confer any *a priori* advantage to one candidate over another. Ballot format should not determine or condition an election outcome. There must be a level playing field. Yet, there is strong evidence to suggest that in many circumstances, the design of ballot papers and the operation of voting machines contravenes the normative assumption of electoral neutrality.

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The research discussed in this article underscores the fact that ballot position effects exist and they are especially prominent under certain types of electoral systems and types of ballot structure. This is not just a technical observation to be consigned to the pages of election mechanics literature. Ballot paper effects raise important questions about political representation. Some systems provide a strategic bias in favour of particular candidates and this can result in distortions of representative democracy. Edwards (2015) argued that US states which use alphabetical ballots select candidates with surnames from the start of the alphabet in far greater numbers and he suggests that this can have substantial outcomes for political representation. Kimball and Kropf (2005) concluded that ballot design exacerbated racial disparity in US voting patterns with some types far more likely to result in unrecorded votes. Similarly, Carman et al (2008) found that the combination of poor ballot design and social deprivation led to unusually high levels of spoilt votes at the 2007 Scottish Parliamentary elections. Ballot design matters and it can have important consequences for the political system.

In this article, we look at the impact of ballot paper design at local elections in Ireland. Election management is relatively moribund in Ireland but elections work reasonably well and there is a high degree of trust in the process (Sinnott et al., 2008; Buckley et al., 2015). However, resistance to change and suspicion of innovation often greet attempts to modify electoral practices. This theme emerges in a number of the contributions to this special issue (Coakley, 2015; Murphy, 2015; Farrell, 2015).

In Ireland, ballot paper design procedures are set out in electoral law and are common across all candidate based elections; local, European, Dáil, Seanad and Presidential. Candidates are listed on ballot papers in alphabetical order and are accompanied by photographs of the candidates, party emblems, occupational information and residential or professional address. Research from the late 1970s and 1980s indicated that there were important advantages for candidates placed at the top of Irish ballot papers, a phenomenon often referred to as the primacy effect. The conclusions were clear but no action was taken at an administrative level to address this *a priori* advantage. This article returns to the question of whether the design of ballot papers has a conditioning effect on election outcomes. Coming nearly forty years after the original work, it is timely to re-evaluate the extent of the primacy effect at Irish

elections. Ballot paper design has changed in the intervening period and further questions have been raised about whether the inclusion of photographs and party emblems have added new dynamics to the decision making of voters (Buckley et al., 2007). Although these issues are outside the scope of this article, it is important to note that the design of the ballot paper has evolved albeit with the alphabetical core still intact.

The research uses data from an experimental election study conducted on the day of the local and European Parliament elections in Ireland in 2009. The experiment deployed sample ballot papers with actual candidates, and interviewed actual voters from a different local electoral area at four polling stations. The research design is unusual and while it presents some limitations on the extent of the statistical analysis of the data, it is unusual to collect data in a manner so proximate to actual election conditions and we see this as an important strength of the contribution.

The article is structured as follows; in section two we look to the international research on ballot paper design to refine the hypotheses for the paper. Section three provides a brief contextual overview of local elections in Ireland. Section four outlines the details of the election experiment and the methods used in this paper. The results are presented in section five. Section six discusses the results and recommends the introduction of randomly order ballots to alleviate any potential for disadvantage that candidates may incur under the alphabetical (ordinal) system of candidate listing.

2. Ballot Paper Design

Models of ballot paper design abound. Some, or all, of the following may appear on the ballot; candidate names and personal information; party names, information and logos; candidate photographs; party symbols or images; a single language or multiple languages. Reynolds and Steenberger (2006) trace the evolution of the design of ballot papers over the centuries and provide insights into the varied and unique formats that can be found across the world. At its core, the work on ballot paper design is interested in questions around how the structure, information, quality and colour of ballot papers may influence voters in their decision making processes. An important normative question dominates, do ballot paper designs deliver different outcomes.

Reynolds and Steenberger (2006) provide a useful starting point for studies of ballot paper design. They address four important questions; how are changes in the design of the ballot processed within the political and administrative system; are ballot types related to the type of political regime, can ballot design assist voters with literacy problems and finally does ballot design affect the outcome of an election. Grounded in a political psychology framework, their findings are particularly interesting. They conclude that elaborate ballots are more common where literacy levels are low but there is little evidence that the ballots assist voters with literacy problems. Indeed, they demonstrate that levels of spoiled votes are higher in places with complex ballots. In their final point, they conclude that ballots are a highly manipulative tool which can influence election outcomes. While some of the elements of manipulation they document might be more likely in emerging democracies, it is clear that ballot design in established democracies also raises interesting and potentially serious questions.

The work on ballot design in established democracies can be organised into a number of strands. We provide an overview of the main points but the focus of our review is on ballot position effects.

Candidate Photographs

Candidate photographs are placed on the ballot in many developing world countries. They are generally introduced to ameliorate the effects of high levels of illiteracy and as Reynolds and Steenburger (2006) have argued when combined with other information on the ballot, candidate photographs can lead to a complex ballot. Interestingly, candidate ballot paper photographs are used in a small number of established democracies, Ireland and Portugal being examples of these. A central objective of the work on ballot paper photographs has been to examine the ways in which voters can use candidate photos as a type of shortcut to infer certain characteristics or traits about the candidates (Rosenburg et al., 1986; Todorov et al., 2005; Oliviola et al, 2012). Hermann and Shikano (2014) found that impressions of attractiveness and competence influenced the political traits which participants inferred from candidate photos and Johns and Shephard (2011) concluded that the addition of photographs to the ballot for British elections could impact outcomes in

marginal constituencies (see also Shephard and Johns, 2008). With a focus on low information elections, Banducci et al. (2008) concluded that voters include the attractiveness of candidates as a factor in their decision-making. Ballot paper photographs are used at Irish elections and they provided the conduit through which this study was conducted.

Ballot Position

The central focus of this article is ballot paper positional effects. Generally, this work confirms a tendency among voters to prefer candidates whose names appear at the top of the ballot, compared with lower placed candidates. However, within that overall picture, there are a number of factors which can influence the scale of the positional effects. First we look at the general findings on positional effects before going on to discuss the electoral context and the electoral system.

Koppell and Steen, in a study of the New York 1998 Democratic primaries, showed that candidates received a greater proportion of the vote when listed first than when listed in any other position. Strikingly, they found that in seven of those 71 contests the advantage to first position exceeded the winner's margin of victory (Koppell and Steen 2004: 267). Koppel and Steen treat voting as a cognitive task. "When voters are faced with a choice among alternatives, they will conserve resources and select the most accessible satisfactory option presented, even if it is not optimal…if choices are presented visually, as in an election ballot, the first option presented is most accessible and a "primacy effect" is expected…the magnitude of position bias depends on how many voters do not have substantive bases for choice" (Koppell and Steen 2004). This is consistent with psychological research on positional effects which has shown that if a list of random words is flashed briefly on a screen, the first is more often perceived correctly and more often recalled subsequently (Kelley and McAllister 1984: 454).

The advantage of being placed in the first position on the ballot has been confirmed in a series of papers (Faas and Schoen, 2006; Lutz, 2010; Meredith and Salant, 2013; Marcinkiewicz and Stegmaier, 2015) although there is some variation in the extent of the advantage. Lutz (2010) examined Swiss elections using an open PR ballot and his results demonstrated that the ballot effect was quite strong and eclipsed incumbency.

He demonstrated that being at the top of the list was most significant and that by position three, the effect had fallen off quite a bit. The primacy effect is also confirmed by Meredith and Salant (2013) and they demonstrated that candidates listed first on the ballot win elections between four and five per cent more often than those placed in other positions on the ballot, all other things being equal. They also added that the primacy effect is more pronounced in contests with more candidates on the ballot paper. Looking at California, Ho and Imai (2008) reported that in primaries major party candidates gained three points while minor party candidates could actually double their vote share however, they found that at general elections only minor parties benefited from being placed first on the ballot.

The type of electoral system in operation is an important consideration in studying positional effects. Pilet et al. (2012) discussed the impact that ballot structure can have on the constituency workload of members of parliament. However, Faas and Schoen (2006) pointed out that candidate position is pre-determined through party label in many systems so there is little that candidates can do to respond to the primacy advantage. However, in preferential voting systems where voters may rank their preferred candidate, 1,2,3, it should be expected that positional voting bias is a feature but furthermore, parties and candidates might be expected to respond to the incentives provided.

The ballot paper at Irish elections is structured by candidate alphabetical order. This is important as it avoids some of the endogeneity problems identified by Lutz (2010) and found in studies using list systems where pre-determined assessments of a candidates' electoral success play an important part on the decisions made by parties on where candidates are ranked on the ballot. PR-STV offers a pure example of alphabetical order where voters are in control. In their study of the 1973 Irish general election, Robson and Walsh (1974: 191-203) found that candidates placed higher on the ballot enjoyed a "distinct advantage" over their fellow candidates. They analysed the number of votes gained by candidates of the same parties according to their position on the ballot, and found that candidates placed at the top of the ballot received more votes than their party colleagues. Their study also showed that position effects were more prominent among non-incumbents than among incumbents.

Subsequent research has confirmed the findings of Robson and Walsh. Marsh (1987: 65-76) examined the impact of ballot position on election outcomes in the seven Irish elections held between 1948 and 1982 and concluded that ballot structure was important - candidates placed higher on the ballot had a clear advantage over their co-partisans listed in subsequent positions. Bowler and Farrell (1991) presented evidence of positional effects in the 1989 general and European elections demonstrating that when given a choice, voters seemed to prefer to vote a party ticket. They found that the amount of the preference schedule given over to preferences in favour of Fianna Fail is much higher for those who place a Fianna Fail candidate first than for voters in general. They demonstrated that this was also true for Fine Gael voters (Bowler and Farrell, 1991).

The political context is an important consideration and provides the framework within which voters make their decision. Following the adoption of PR-STV in Scotland for the Scottish local elections, Curtice and Marsh (2014) compared the operation of the PR-STV ballot structure at elections in Scotland and Ireland. They found strong evidence of alphabetical bias in the Scottish data but in contrast to other studies of Ireland, they reported weak positional effects from the Irish data. Still, the balance of academic research is persuasive. There are strong indications that ballot position has an impact. It follows directly then that candidates and parties might be likely to take advantage of these effects.

Recognising the impact of name order in election outcomes, Ortega Villodres and Garcia de la Puerta (2004: 3-14) highlighted consequences for the working of the political system 'it can affect party nomination strategies, and the conduct of electoral campaigns; and it can be important in influencing the composition and behaviour of deputies in Parliament'. Discussing the Australian case, Kelley and McAllister noted that in the 1960s, the Democratic Labour Party was well known for regularly nominating candidates with names at the start of the alphabet and they argued that there is reason to believe that some of the other parties were also engaged in this tactic (Kelley and McAllister, 1984). Spanish parties have also been known to embrace the benefits of name order by manipulating the ballot papers for Senate elections "to favour incumbents by placing their names first on the list" (Pereira and Villodres, 2002: 246). Hamilton and Ladd (1996) went further and suggested that Republicans

on North Carolina election boards in 1992 strategically chose the ballot form expecting it to deliver positional advantages to their candidates.

It is entirely logical that political parties and candidates will alter their direct behaviours in response to the clear evidence of primacy effects. Irish election lore is littered with examples of candidates changing their names to get a position higher up the ballot. Beverly Cooper Flynn (Mayo TD 1997-2011) is a recent example. She opted for a double barrelled name upon marriage but unusually decided to put her own surname last as her husband's surname placed her on a higher point on the ballot. Nicknames have been incorporated into family names such as in the case of Pat 'the Cope' Gallagher and Sean 'Dublin Bay Rockall' Loftus. Loftus was a Dublin based councillor who changed his name to highlight political causes but the change had the added advantage of raising his position on the ballot paper. Changing surnames from English to Irish language versions and vice versa for ballot position advantage is also present in popular memory of Irish politics.

Tying the strands of the literature together, the first hypothesis that we aim to test is *candidates placed at the top of the ballot will receive more first preference votes than those placed those lower down on the ballot* (H1).

Candidate Information

McDermott (2005: 201) suggested voters use shortcuts when making their decisions on whom they will support in an election. She argued that voters economise, using political and social stereotypes to judge candidates. Voters can use basic information about candidates available on the ballot paper (or in election literature) - party affiliation, incumbent/challenger status -. She goes on to point out that the voter "can associate a candidate with a political and/or social group and project onto the candidate such things as issue positions they believe the group holds" (McDermott, 1998:898). Popkin (1991) and McDermott (1998) examined the importance of demographic cues on voter decision making in low information contexts and found that candidate demographic cues are readily available to voters. McDermott noted that a name on a ballot paper can indicate gender while a picture can inform a voter of a candidate's gender, race, age and physical attractiveness. Using this information, voters "are provided with stereotypical information that can help them choose

between candidates" (McDermott, 1998: 912) and McDermott concluded that voters did use the available candidate information to make electoral decisions.

Incumbency is one of the more critical pieces of information which can be provided on a ballot paper. In a number of jurisdictions (Switzerland, Ireland) candidate occupation is listed on the ballot paper. In the Irish case, incumbents can list their occupation as public representative giving a clear indication of incumbency. Incumbency is a factor to which the literature on elections pays a considerable amount of attention. The evidence is mixed. Incumbency remains an advantage in the Irish political context (Benoit and Marsh 2008). In Ireland turnover rates for politicians are low by international comparisons with more than 80 per cent of incumbents returned but in Britain, Norris et al. (1992) suggested that the electoral boost is so small as to be significant in only the most marginal of contests. Indeed, Murray (2005) argued that far from providing an electoral boost, incumbents may actually be an electoral liability, especially if they are associated with an unpopular government. Thus, the literature on incumbency is somewhat mixed indicating that the effect of the ballot paper information might vary and could be dependent upon the political context.

Party information is a vital cue for voters and it is probably the least controversial piece of information placed on the ballot paper. In many systems, voters' ballot choice is entirely restricted to a party ticket. When choice is available, there are many variables which can influence a voter's decision and Campbell and Miller (1957) were among the earliest who demonstrated that the type of ballot influenced the extent of split ticket voting by voters. Several studies point towards increased participation when voters have political party cues on the ballot (Bonneau and Loepp, 2014). Partisanship is low in Ireland by international standards but it is still an important feature to consider (Marsh, 2007).

Due to the design of the experiment used in this study, it is not possible to consider incumbency effects but the role of partisanship is included and is the basis of the second hypothesis which proposes that *party affiliation moderates primacy effects* (H2).

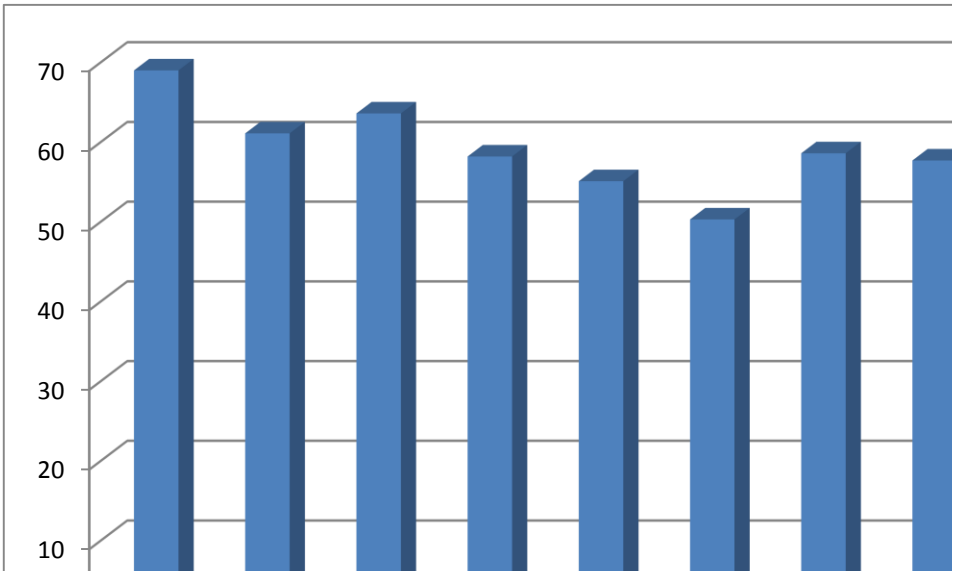
Election Context - Low information elections

We can predict that the effect of ballot design will vary across elections as we know from the voting behaviour literature that electoral context matters a great deal for voters. Looking to the literature on second order effects, we can speculate that positional effects should be more likely when other cues have less resonance. A number of studies have focused on this dimension. Taebel (1975) argued that ballot placement of candidates is an important structural feature in accounting for voting patterns and he concluded that ballot position is especially critical in election contests in which the candidates are relatively unknown. Miller and Krosnick (1998: 291-330) showed that position effects are prominent in low information elections where party affiliations are not listed, when races have been minimally publicised, and when no incumbent is involved. Voters are more likely to select candidates placed higher on the ballot. Low information dynamics will be exacerbated when voters are casting ballots for several contests together and perhaps also dealing with initiative propositions or referendum questions, scenarios which are common in both the US and a number of European jurisdictions. This leads us to our third hypothesis which proposes that *the primacy effect is stronger in a low information election context* (H3).

3 Local Elections in Ireland

Local elections in Ireland are conducted using PR-STV. Voters rank candidates in order of their choice, 1. 2. 3. PR-STV confers a high degree of choice on voters, they are able to choose across, and within, parties and, among non-party affiliated candidates. Since 1999 local elections are co-scheduled with elections to the European Parliament. This decision was taken in an attempt to improve participation rates at both these contests. That being said, they are clearly second order elections in the sense of Reif and Schmitt (1980) and turnout tends to be lower than at national elections. Average turnout at local elections between 1967 and 2009 is 58 per cent. The 2009 figure was just marginally below this average coming in at 57.7 per cent. The variation over the decades is evident from figure one.

Figure 1: Turnout at Local Elections in Ireland



Local democracy in Ireland is particularly weak and it is often argued that it would be better termed local administration. There is an imbalance in the system where elected officials have few real powers and tend to be subordinate to the senior appointed officials, especially the city or county manager renamed chief executive officers under the provisions of the 2012 local government reform document *Putting People First*. Localism and brokerage are central features of the political system and when combined with the limited powers of councillors, it delivers local elections which tend to be dominated by discussion of national political issues although voting frequently displays heavy local characteristics.

The design of the ballot paper at local elections follows the same regulations which govern other political contests. Photographs of candidates have been placed on ballot papers since 1999. The decision to include photographs was informed by arguments that voters with literacy difficulties would be assisted in their voting. Specifically, photographs were also identified as a measure to alleviate a problem, specific to the Irish context, of many candidates of the same name appearing on the ballot paper.

Research undertaken after the 1999 election confirmed a positive reaction of all voters to the photographs and specific support for the measure from voters with literacy difficulties (Lansdowne Market Research 2000). However, this research was based on the assumption that voters recognise their politicians or local political candidates. The

research did caution policy makers that the measure could strengthen a candidate centred bias in Irish elections. In response to this advice, a decision was taken in the Electoral Amendment Act (2000) to include party logos to offset any increase in candidate centred politics (Dáil Debates (21/2/2001). Research into voter recognition of politicians has undermined the assumption of widespread recognition. A survey, using photographs of members of the European Parliament (MEPs), undertaken after the 1999 European elections found that less than half of the electorate recognised three or more candidates after the election. The authors concluded that only a small number of voters were equipped with sufficient information for the photographs to be of assistance (Lansdowne Market Research, 2000). Almost identical findings were presented from the study wave taken after the 2004 elections (Lansdowne Market Research, 2005).

The Joint Oireachtas Committee on the Constitution undertook a review of the electoral system in 2009 and it recommended that the ballot paper should be examined especially in light of potential problems with positional bias and also problems with the photographs. Difficulties with the party emblems have also now been added to this list. Ireland has a large number of non-party candidates and it was noticed in 2014 that voters were using the blank space where party emblems appeared for some candidates to mark in their preferences (Dáil Debates, 2015). Despite the recommendations from the 2009 review and more recent concerns, no review has taken place and indeed, no review is planned.

4 2009 European and Local Election Experiment

The June 2009 European Parliament and local elections in Ireland were somewhat unusual. The elections were politically charged as the financial crisis that befell the country in September 2008 had taken hold and the government of the day found itself facing unprecedented economic difficulties. While European Parliament and local elections are frequently dominated by national issues, in the 2009 election, economic affairs dominated to the exclusion of all else.

The research presented here is taken from a unique experimental design. Four replica ballot papers were developed and deployed at polling stations in Cork city and county

on the day of the election in 2009. The replica ballot papers were developed using pictures of *actual* candidates from a constituency in another part of the country. Candidate names and personal details were removed from all ballots. The structural and information details of the ballots are as follows:

Ballot 1 - Photos in ballot order
Ballot 2 - Photos and party logo in ballot order
Ballot 3 - Photos in random order
Ballot 4 - Photos and party logo in random order.

As noted the candidates were from a different electoral area than that surveyed and candidates would have been unknown to the survey respondents. National political representatives are precluded from holding local electoral office simultaneously in Ireland under what was known as the abolition of the dual mandate. As a result there are few nationally recognisable figures in local politics. One of the conditions for receiving access to the ballot paper photographs was anonymity for the election candidates. Candidate photographs are classified as personal data and each candidate had to agree to release their image for the purpose of the study.[2] In all, there were nine candidates on the ballot, five men and four women.

The survey was administered at four polling stations on the day of the election. Two urban polling stations and two mixed rural polling stations were used. Survey respondents were asked to give their own age, gender and citizenship. They were then asked to 'vote' for the candidates on the replica ballot papers, rank ordering the candidates in the same manner as they would under regular PR-STV voting conditions. Finally, survey respondents were asked to outline the key factor that influenced their first preference vote choice.

In total a sample of 1201 ballots was achieved. The total registered electorate at the four polling stations was 8342, resulting in a sample size of 14.39%. The refusal rate was just over 3%.

[2] Further information on the study is available from the authors.

There are a number of remarks that must be made in relation to the data collected. First, and most significant, the respondents in the ballot experiment were *actual* voters. Respondents were approached outside the polling station, after they had completed their voting. Second the candidates on the sample ballot papers were *actual* local election candidates. All of the data was collected on the same day. Furthermore, in using actual voters and candidates, it was possible to compare the results of the *real* election with those of the survey. The use of actual candidates and voters enhances the external validity of the research. Tables one and two provide some summary information on the candidates in the study under the two different formats used.

Table 1 Candidate Information – Ballot (Alphabetical) Order

Candidate Label	**Gender**	**Party Affiliation**
Position 1	Male	Fine Gael
Position 2	Male	Fianna Fáil
Position 3	Female	Green Party
Position 4	Female	Fianna Fail
Position 5	Female	Independent
Position 6	Female	Sinn Féin
Position 7	Male	Independent
Position 8	Male	Fine Gael
Position 9	Male	Labour

Table 2 Candidate Information – Random Order

Candidate Label	**Gender**	**Party Affiliation**
Position 1	Male	Fine Gael
Position 2	Male	Fianna Fáil
Position 3	Female	Green Party
Position 4	Female	Fianna Fáil
Position 5	Female	Green Party
Position 6	Female	Sinn Féin
Position 7	Male	Independent
Position 8	Male	Fine Gael
Position 9	Male	Labour Party

There are three hypotheses for the research.

Hypothesis 1: Candidates placed at the top of the ballot will receive more first preference votes than those placed lower down on the ballot.

Hypothesis 2: Party affiliation will moderate primacy effects.

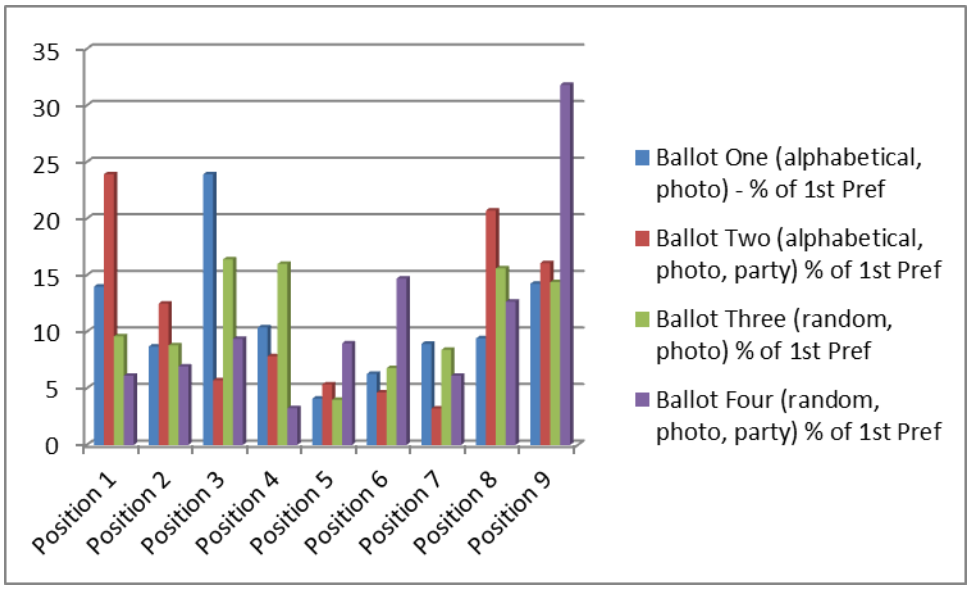
Hypothesis 3: The primacy effect is stronger in a low information election context.

In section five we present the results from our analysis. We look at the candidate in the first position and also at the vote share outcomes for candidates placed at the end of the ballot. We present the first preference vote share achieved by each candidate and we also compare the results to the first preference share of the votes received by the candidates from the real election in which the candidates participated.

5 Ballot Position Effects

We begin by looking at hypothesis one, candidates placed at the top of the ballot will receive a higher percentage of first preference votes. Figure two presents the share of the first preference vote received by each candidate on each of the four sample ballot types. There are interesting impressions from the distribution of the votes. The pattern is very mixed and while there is some evidence of a primacy effect for the candidate in position one, the candidate in position three also does quite well, indeed as do the candidates in positions eight and nine. The mean vote share for the candidate in position one is 13 per cent but this figure is exceeded for candidates in positions three, eight and nine. The highest mean vote share is for position nine at nineteen per cent and this includes a range of 14 to 32 per cent.

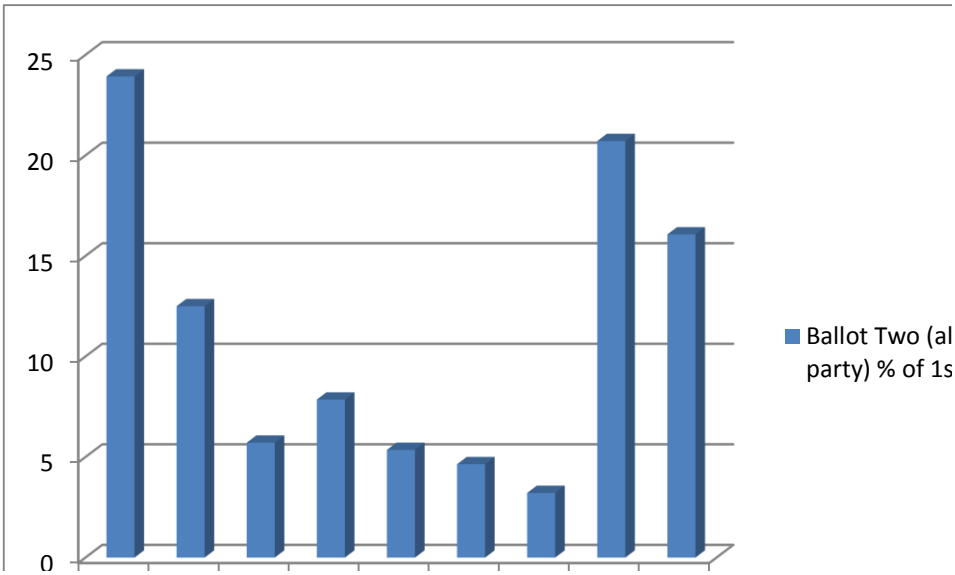
Figure 2: Positional Effects – % of the First Preference Vote (4 Ballot types)



We now turn to what we term mid-table obscurity. The mean share of the first preference vote in position five is six per cent, position six is eight per cent and

position seven is seven per cent. The three positions have the lowest mean vote shares. This pattern is most pronounced in sample ballot two (figure three).

Figure 3: Sample Ballot Two (Alphabetic Order: Photo and Party)



Another way of looking at mid table obscurity is to examine the ballot positions which were most likely to receive no preference at all. This data is presented in table three which reports frequencies. The ballot types are collapsed into two categories to aid presentation of the information (alphabetical order and random order). Again, there is a tendency for candidates placed in positions four, five and six to not have received any preference at all, although it also evident that position two delivers a very high level of no preference.

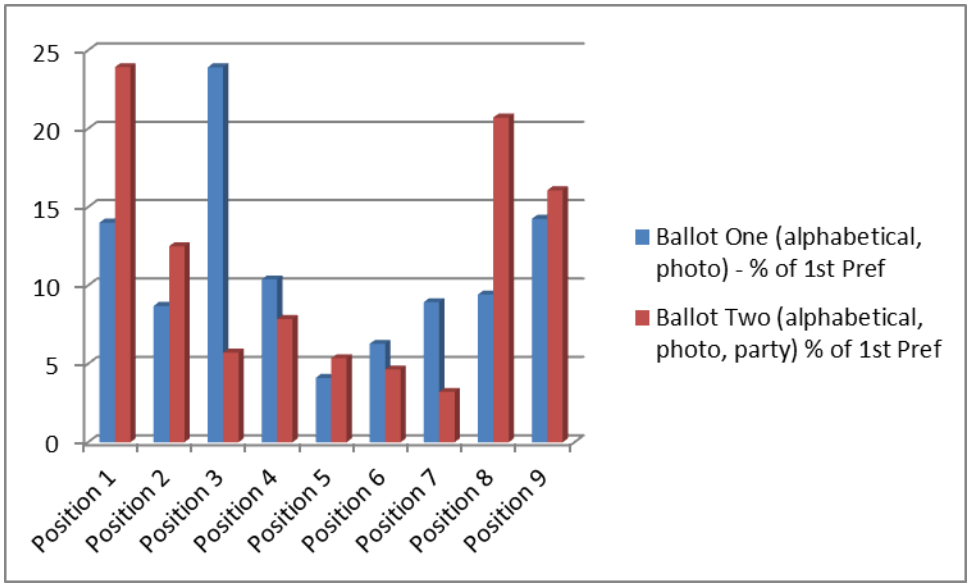
Table 3 Frequencies - Preference 1 and No Preference

	Alphabetical Order		Random Order	
	Number 1 Preference	No Preference at all	Number 1 Preference	No Preference at all
Position 1	125	209	38	205
Position 2	71	297	38	233
Position 3	115	237	64	148
Position 4	65	258	47	211
Position 5	32	306	32	209
Position 6	39	297	53	191
Position 7	46	276	35	204
Position 8	97	210	69	176
Position 9	104	209	112	145

The data in table three also confirm the overall effect that the first and last positions obtain very high shares of the first preference vote. Adding some nuance to the literature, the evidence from the experimental study is that there is a bonus for candidates placed both at the top and at the end of the ballot. Consequently, hypothesis one is accepted but with some qualification that there are advantages for candidates both at the top and at the end of the ballot.

Turning next to hypothesis two, we compare how political party information on the ballot alters the overall share of the first preference vote. From figure four, it is clear that there are significant differences in the vote share for candidates in positions 1, 3 and 8 across the two ballots arranged in alphabetical order. Candidates 1 and 8 were both from Fine Gael and they saw their vote share increase sharply when this was known to voters. This is consistent with the overall performance of the party at the 2009 local elections. The Fianna Fáil candidate in position three saw a sharp drop in her vote once party was known again reflecting wider party performance in the election.

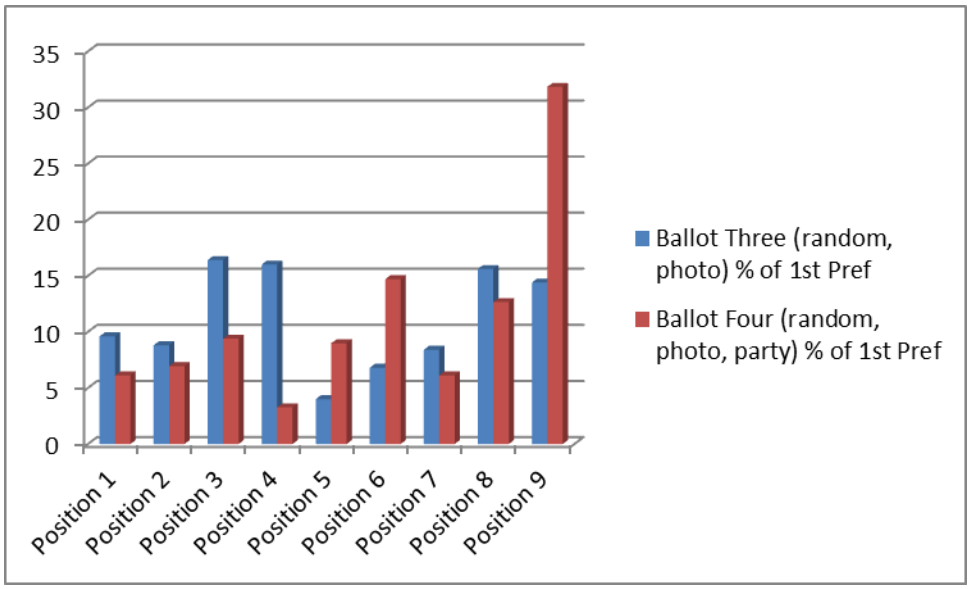
Figure 4: Ballot Position Effects – Alphabetical structure



The pattern in the sample ballots which used a random ballot structure also reflect the wider party performances in a slightly different way but are still consistent with the overall performance of parties at the real election. Both Fianna Fáil candidates

(positions 2 and 4) saw their vote share reduce with candidate four experiencing a particularly sharp reduction. Both Fine Gael candidates also saw a small drop in their vote shares but the Labour Party candidate's vote share doubled as soon as his party label was known (see figure five).

Figure 5: Ballot Position Effects – Random structure



In an attempt to explore the question of primacy effects and party affiliation a little more, we present data in figures six and seven on the parties which had more than one candidate in the race. This allows us to explore the effect of ballot position within party classifications. While there is a clear ballot position effect for the first Fine Gael candidate in the ballot arranged in alphabetical order when party is known (figure 6), the opposite occurs when the data from the random ballot structure is examined. At this point it must be mentioned that there is a significant age difference between the two candidates and it may be that the issues raised in relation to decisions on candidate image may need to be considered. Unfortunately, this type of analysis is outside the scope of this research.

Figure 6: Alphabetical Structure, Party Effects

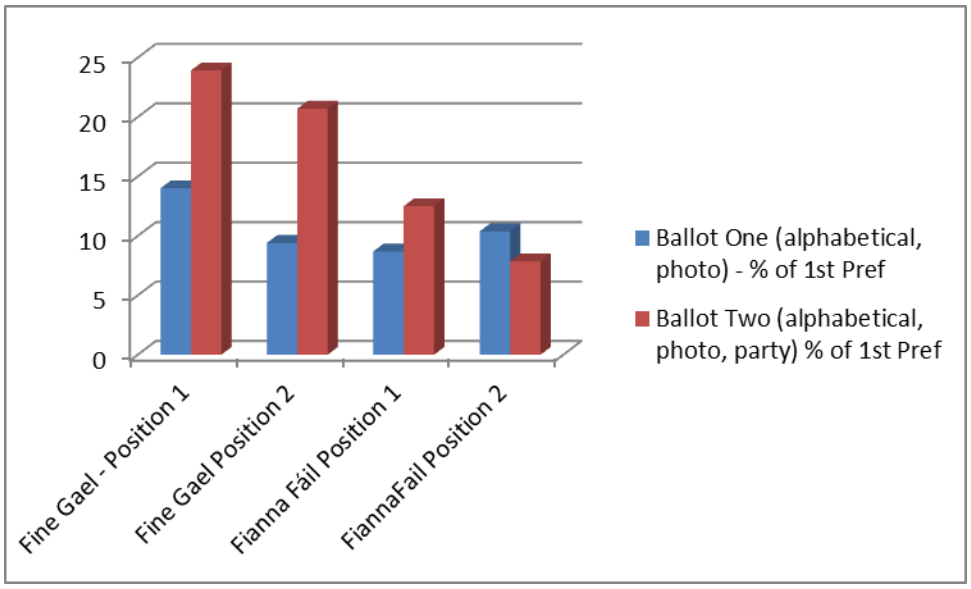
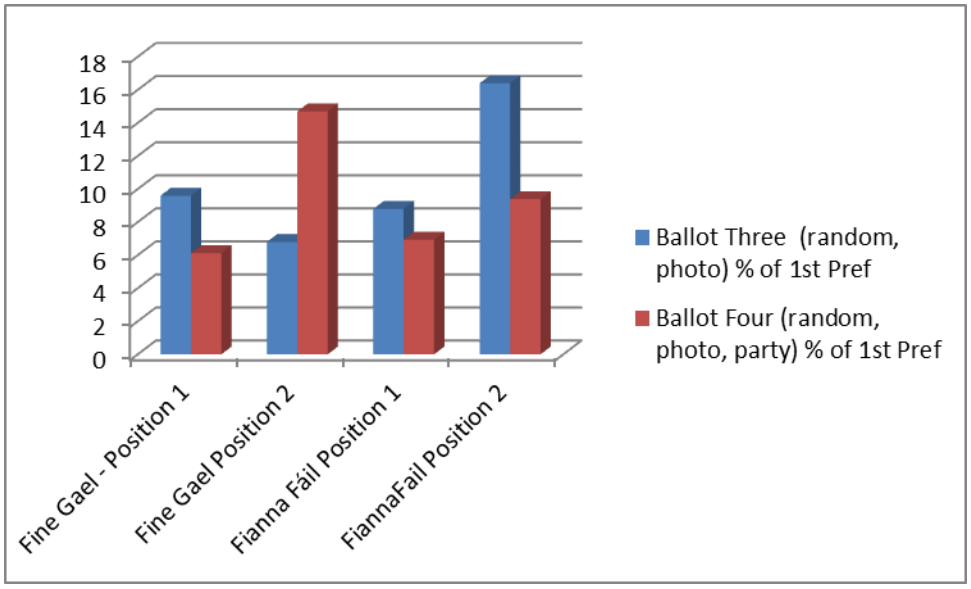


Figure 7: Random Structure, Party Effects



As the data is drawn from four separate experiments, there are limits on the extent of the statistical examination which can be undertaken. However, we can compare means for each ballot position across the four ballot types and this is done in tables four (a) and (b) for position one and in tables five (a) and (b) for position nine.

Table 4 (a) Comparing Means – Candidate A

	Ballot One (Alphabetical, Photo)	Ballot Two (Alphabetical, Photo, Party)
Means	276.97	334.75
F Statistic	2.723	
Sig	0.99	

Table 4 (b) Comparing Means – Candidate A

	Ballot Three (Random, Photo)	Ballot Four (Random, Photo, Party)
Means	361.42	490.66
F Statistic	8.515	
Sig	(0.004)*	

A higher mean is reported when party information is included for both formats. This confirms that party has an effect and, when it is known to voters the primacy effect is moderated. In other words, the candidate in position one is more likely to be allocated a greater number of (lower) preferences ie; 6,7,8,9. This effect is statistically significant for the random order ballot. We also turn to the other end of the ballot and the analysis is repeated for candidate I. Here again, the means are higher under both ballot orderings indicating that party does have an impact.

Table 5 (a) Comparing Means – Candidate I

	Ballot One (Alphabetical, Photo)	Ballot Two (Alphabetical, Photo, Party)
Means	243.25	384.47
F Statistic	16.579	
Sig	(0.000)*	

Table 5 (b) Comparing Means – Candidate I

	Ballot Three (Random, Photo)	Ballot Four (Random, Photo, Party)
Means	277.47	324.7
F Statistic	1.302	
Sig	0.254	

This analysis presented here leads to the general conclusion that party label does moderate ballot position effects. When the party label is known, the overall

performance of candidates altered to more closely reflect the outcome of the real election.

The final hypothesis we look at is an exploration of how the primacy effect should be stronger in a low information election. Here we present two figures, both of which include data from the actual elections. Data limitations mean that only a very descriptive discussion is possible.

Figure 8: Alphabetical Structure and *real* Election Result

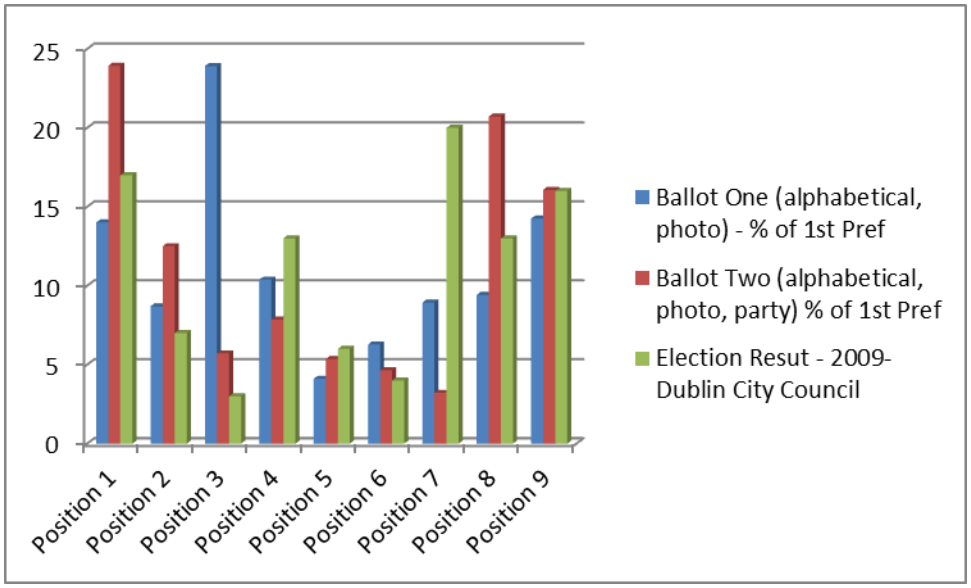
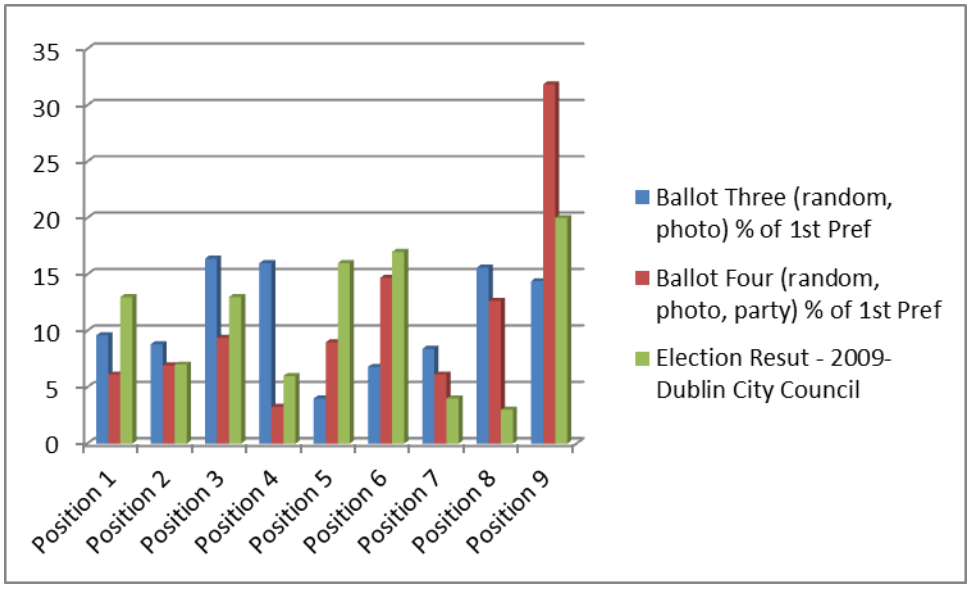


Figure 9: Random Structure and *real* Election Result



The sample ballots with photos only provide the closest condition we can get to a no information election for voters while we suggest that the ballots with party affiliation provide a low information context, in that candidate information has been stripped out. In Figure 8, a noteworthy point is that the survey respondents were considerably closer to the real voters when party affiliation was known. In Figure 9, the same is true for the candidate in position two but to a lesser extent for the other positions. Unsurprisingly we conclude that context matters - the more information that is available to the survey respondents the more closely the survey results reflect the outcome of the election.

6 Discussion

The findings presented here suggest that primacy effects at elections in Ireland may have moderated quite a bit since the early research in the 1970s. Consistent with Curtice and Marsh (2014) we find moderate evidence of a primacy effect across the four experimental ballot formats. Candidates in the first position do well but they do not outperform those in other positions consistently across formats. There is also an advantage for candidates located on the last position on the ballot. There is some evidence that candidates located in the middle of the ballot face a challenge as they received the lowest vote shares of all candidates on the four ballot variations. When party affiliation is introduced, ballot position effects are reduced but there is still some evidence of a mid-ballot obscurity.

The electoral context is a vital factor and the nature of the economic crisis in Ireland in 2009 meant that parties mattered a great deal. The results for the ballots with political party affiliations replicated the disastrous performance of Fianna Fáil and the surge in support for Fine Gael and Labour, both of whom were in opposition at the time. The more information that was presented to survey respondents, the closer they came to replicating the results of the real election.

It was noted in section one that the overriding principle of ballot design is that it should not confer any *a priori* advantage to one candidate over another. As an extension of that it should not confer any disadvantage on candidates. Ballot format should not determine or condition an election outcome. Ballot papers should be a *level playing pitch* for all candidates. The phenomenon of *mid-table obscurity*

observed in this study presents evidence that candidates placed in such positions incur a disadvantage. To neutralise this effect, the introduction of a set of randomly ordered ballot papers should be considered. This matter has been raised in a variety of fora in recent years notably in the review of PR-STV by the Joint Oireachtas Committee on the Constitution in 2010 and again at the Constitutional Convention in 2013 when participating citizens were asked to vote on 'changing the alphabetical order of candidates on the ballot paper'. On that occasion 67 per cent of the convention members were in support of such a change. To date the Irish government has yet to act on these recommendations (Buckley et al, 2015).

The operationalization of randomised ballots would require the development of a set of ballots in each constituency along the lines of the so-called 'Robson Rotation'. The 'Robson Rotation' advises that the versions of the ballot paper produced is equal to the number of candidates running in a constituency to ensure that each candidate's name appears in each ballot position an equal number of times. So for a constituency of five candidates, five ballots would be produced along the following lines[3]:-

Rotation #1	***Rotation #2***	***Rotation #3***	***Rotation #4***	***Rotation #5***
Candidate A	Candidate B	Candidate C	Candidate D	Candidate E
Candidate B	Candidate C	Candidate D	Candidate E	Candidate A
Candidate C	Candidate D	Candidate E	Candidate A	Candidate B
Candidate D	Candidate E	Candidate A	Candidate B	Candidate C
Candidate E	Candidate A	Candidate B	Candidate C	Candidate D

However, the introduction of randomised and rotational ballots would pose significant administrative challenges. Under Ireland's current system of electoral management where responsibilities are spread across a variety of agencies and arms of government, such a major change to the structure and deployment of ballot papers would likely meet with strong resistance by the various stakeholders involved. The introduction of such a system of ballot papers would require detailed research and a pilot study, resources (both financial and personnel), voter awareness campaigns and a dedicated

[3] This is only an illustrative example. As noted by Hawkey (2008) positions on the first rotation are drawn by lot).

oversight and monitoring body to ensure proper distribution and usage of ballot papers. In the continuing absence of an electoral commission in Ireland the current system of ballot papers is likely to remain.

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