Negative Campaigning, Issue Salience and Vote Choice: Assessing the Effects of the Australian Labor Party's 2016 'Mediscare' Campaign

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Dear Professor Stevens,

Thank you for the opportunity to make final changes before submitting our paper for publication in the Journal of Elections, Public Opinion & Parties. We have updated the first figure and thank the reviewer and yourself for drawing it to our attention. We have altered the caption to rightfully reflect the corresponding shading that denotes the media coverage (black) and the paid advertising (grey). We also inadvertently dropped off one of the newspapers (the Australian) from the matrix used to build the graph which accounted for the incorrect number. We have now rectified this and you will see that 27 stories are visible. Our sincere apologies for this oversight.

We wish to thank the reviewers and yourself for the time and efforts put in to improve our paper. I agree with the reviewers and think that the process has done what peer review aims to do, to improve scholarship and provide rigour. Could we please thank the reviewers in our acknowledgements? You might also notice that we have changed the authorship in order to be alphabetical. Could this also be acknowledged please in a footnote or in the acknowledgements, whichever is most appropriate? We did this because after the revisions we feel that the workload was evenly distributed among the three co-authors.

We appreciate the work that has gone into getting our paper this far, from yourself and the journal team, and thank you again.
Kind regards,

The author

Negative Campaigning, Issue Salience and Vote Choice: Assessing the Effects of the Australian Labor Party's 2016 'Mediscare' Campaign

This study contributes to the scholarship on negative campaigning, revealing the important dynamics of party and media messaging and its subsequent effects on issue salience and vote choice. Using a large-scale dataset combined with content analysis of media coverage and party press releases, we offer an innovative methodology that provides evidence showing the effect of a prominent negative campaign ('Mediscare') launched by the centre-left Australian Labor Party during Australia's 2016 federal election. We find political elites can influence what voters are paying attention to and, when issue salience is high, this can influence vote choice. We find Labor's 'Mediscare' had two main effects. It significantly raised the issue salience of healthcare with voters, and it had an impact on vote choice, particularly in marginal electorates. The scare campaign providing a reinforcement effect for Labor, arresting declining support for the party that was evident prior to the commencement of the negative campaign. We conclude that under the circumstances of high public awareness, 'issue ownership' and compulsory voting, this negative campaign was effective in shaping the 2016 electoral outcome.

Introduction

Elections play an important role in representative democracy. Parties use campaigns to frame their policies (and those of their opponents) in the best (and worst) ways possible. Through political communications and news coverage, campaigns become a contest for voters' attention and support. Of particular interest to scholars who study elections is the role of negative campaigning. This is 'a widespread phenomenon that has attracted the increased attention from the press and social scientists alike' (Lau and Rovner 2009, 286). The conventional wisdom is that it 'works', with public responses to negative campaigning argued to have roots in human psychology (Soroka 2014). Yet, there has been little support found for this proposition in meta-analysis of the literature on negative campaigning, including those studies employing random assignment (see Lau and Rovner 2009, 296). An important variant of this concerns the dynamic relationship between party messaging and media coverage during a campaign. We test the effects of a prominent case of negative campaigning on issue salience (media and public salience) and vote choice by providing a daily estimate of public opinion and voter intention. In doing so, we examine the dynamics of a prominent negative campaign in greater detail than has previously been possible in many established democracies – and in a way that has not been done before in Australia. We provide evidence of a political party leveraging their advantage on a policy domain to improve their electoral prospects.

The negative campaign that ran during the 2016 Australian election by the centre-left Labor Party was prominent enough to be given its own moniker: 'Mediscare.' Elliot and Manwaring (2018, 551) note that Mediscare 'dominated the final weeks of the campaign.' Labor's negative campaign suggested the incumbent center-right Liberal-National Party (the Coalition) planned to privatise Australia's public health care service, Medicare. This campaign was so prominent that the then centre-right Liberal Prime Minister Malcolm Turnbull cited it as the major reason why his party narrowly escaped defeat (by one seat), arguing that: 'The Labor Party ran some of the most systematic, well-funded lies ever peddled in Australia' (*Herald Sun*, July 3, 2016). Media and academic commentary also centered on this as a key reason for Labor performing better than expected (Errington and van Onselen 2016; *Sydney Morning Herald*, July 2, 2016). Notwithstanding this commentary, the effects of the campaign were unproven. This article aims to redress this.

We extend previous research by using a unique large-N dataset (with an average sample of ~20,000 respondents per day) of voter attitudes to election issues. We combine this with a content analysis of daily television and press coverage and Labor's press releases and television advertising about Medicare. These different data sets provide us with unique insights into the effects and dynamics of a prominent negative campaign. They allow us to track the potential effect of Labor's political messaging on voters' self-nominated 'most important issue' and on Labor's share of the first preference vote to examine change points in both, over the course of the campaign. We are also able to target our analysis to the level of competitive districts (versus those safely held by one party or the other) to focus on those areas which we theorise receive additional campaign effects (as described below).

In doing this, we address three hypotheses:

1) That Labor's 'Mediscare' campaign, particularly its negative television advertising, set the mainstream media agenda and increased media coverage of healthcare (H1);

2) That Labor's 'Mediscare' campaign increased the issue salience of healthcare among voters (H2);

3) That the 'Mediscare' campaign and subsequent media coverage increased Labor's vote share, particularly in competitive marginal electorates (H3).

We focus on the role of healthcare policy in this election for two reasons. First, in addition to the sensational nature of this campaign, healthcare is a salient issue in most established

democracies (Nadeau et al. 2015, 1) – this includes Australia where it is frequently rated as the most important issue or is rated second only to the economy (see Bean 2018). Second, we examine if this example of a political party attempting to leverage its advantage in a particular policy area using negative campaign activities, increased the salience of healthcare as an election issue to Labor's electoral advantage. Healthcare has been found to be particularly salient to Labor supporters, and most voters (including many Coalition supporters) believe Labor's policies in this area are closer to their own preferences than the Coalition alternatives (McAllister and Bean 2000; Bean and McAllister 2009; McAllister, Bean and Pietsch 2012; Bean 2018). Adding to these trends, at different times the Coalition has been hostile to the idea of universal public healthcare, which has sowed further suspicion about their motives in this policy area (see Elliot and Manwaring 2018, 552).

Labor's advantage in this policy domain provides it with a rationale to increase the media and public salience of public healthcare as an issue, which may provide a 'reinforcement effect' on its supporter base. These tactics might be particularly effective for Australian elections where compulsory attendance at polling booths, backed by fines, sees most eligible adults – including those with low levels of political interest and information –turn out to vote (Denemark et al. 2007, 90; Ward and Stewart 2006, 194; Bean 1986, 58).

This article is structured as follows: In the first section we outline the literature as it relates to negative campaigning, issue salience and vote choice. In the second section we outline our methods and describe the data used. We then empirically test our three hypothesis and conclude with a discussion of our findings and implications for negative campaigning scholarship.

Campaign Effects and Negative Campaigning

Election campaigns are in large part a contest for voters' attention on specific issues. The enduring challenge for political parties is to win over the persuadable voter (Hillygus and Shields 2008). Accordingly, 'Political campaigns invest heavily in strategic political communications' (Lau and Rovner 2009, 286). Early studies suggested that campaigns had little effect on elections because long-standing partisan orientations dicatated, in large part, vote choice (Bernard, Lazarsfeld and McPhee 1954; Campbell et al. 1960). However, more recent work has shown that campaigns can have important effects. Fournier et al. (2004, 661) review this literature and conclude that 'election campaigns matter' (see also Johnston et al. 1992; Ansolabehere and Iyengar 1995; Shaw 1999; Gerber et al. 2011).

A key campaign strategy parties use to attract attention to particular issues is negative campaigning. In contrast to a 'positive' appeal, where a candidate or party runs on their own merits, negative campaigning concentrates on the perceived weakness of an opponent or their policy proposals (Lau and Rovner 2009, 286). Despite the increase in research on negative campaigns in recent decades (Lau and Rovner, 2009, 285), evidence of their efficacy is mixed. Early work suggested they demobilised and polarised electorates (Ansolabehere et al. 1994). However, in a meta-analysis of the literature, Lau and Rovner (2009, 285) find little support for the claim that negativity is a particularly effective form of campaigning.

This conclusion does not suggest that negative campaigning *never* works, but rather that it may work on some occasions and not others. The more important question for scholars is not whether negative campaigning 'works', but under what conditions it might have an impact. One potential conditioning factor is the type of campaign employed. Negative campaigning is generally seen to involve negative advertising: attacking the opponent's character, morals or policies. The approach taken in the campaign can be an important mediating factor (Min 2004). The Mediscare campaign involved the latter approach where the (alleged) policies of the Liberals were attacked. The Mediscare campaign was an attempt to persuade voters to view this issue in a way that was advantageous to Labor (as discussed in Riker 1996, 4).

We use this characterization of different forms of negative campaigning to understand the nature of Labor's Mediscare campaign and its influence on the election outcome. We hypothesise this campaign had an effect on issue salience and vote choice for several reasons. It was a strategy employed to draw attention to an issue beneficial to Labor. The literature has shown that campaigns can be effective by emphasising issues that parties identify as areas of greatest advantage for them – known as 'issue ownership' (Petrocik 1996; Konstantinidis 2008). The Labor party ran a campaign featuring an issue where they had a distinct policy advantage, which increased the probability that this campaign strategy would be effective (see Riker 1996).

The Mediscare campaign also featured a negative, emotionally salient and prominent television advertisement. Television campaigns have been shown to have an effect on election outcomes (Lau and Rovner 2009; Lopez-Escobar et al. 1998; Boyle 2001). Emotional salience has also been shown to be important. Brader (2005) shows how parties make deliberate attempts to illicit fear among voters, that 'strike an emotional chord.' This was the approach used for the

Mediscare television advertisement. This ad featured popular former Labor prime minister and architect of Australia's Medicare healthcare system, Bob Hawke, 86, looking frail. Labor used an emotive attack on the Coalition's healthcare policies designed to create concern about the privatisation of public healthcare in Australia (described below).

Although voters may claim to dislike negative campaigning, there is a growing body of work suggesting humans possess a "negativity bias", with individuals shown to have a propensity to pay more attention to negative evidence over positive evidence (Trussler and Soroka 2014, 363). Wu and Coleman (2009) also found negativity is an important factor in generating attention for an issue, and participants in experimental studies are more likely to select negative media content (Trussler and Soroka 2014, 373). Prominent and negative television advertisements, including Mediscare, take advantage of this phenomenon to stimulate this bias.

Finally, while negative campaigns may not appear to work in a voluntary voting setting like the US (which may account for the mixed findings reported by Lau and Rovner 2009) we believe negative campaigns are more likely to have an effect in a compulsory voting setting because citizens do not need to be mobilized to vote. Given that public health is a salient concern for many voters, and the Labor Party has an incentive to use this issue to retain the support from their traditional voters who prioritise healthcare, we expect it to get voters' attention.

Media Effects and Vote Choice

We see the mass media as a key conduit for negative campaigns, such as Mediscare, to reach the public and increase the salience of an issue. Even in the digital age, strategic political communications are frequently conveyed through mainstream media, notwithstanding some circumvention through social media (see Carson and McNair 2018). In particular, dramatic television ads, such as those that were central to the Mediscare campaign, are a way of capturing the attention of both the media and voters (Lau and Rovner 2009, 286), and framing the debate (see Riker 1996). Furthermore, repetition plays an important role in reinforcing messages (Lau and Rovner 2009, 286), with media coverage of campaign activities providing potentially helpful repetition of key messages. Repetition increases the chance voters will remember political messages and helps prime the underlying criteria on which citizens make decisions during elections (see Druckman 2004) that may influence partisan choice (Wu and Coleman 2009). We examine to what extent the Labor party used their scare campaign to prime the mainstream media agenda, and its effects on issue salience and vote choice.

We contend that the institutional setting of compulsory voting is important in the effectiveness of negative campaigning. Unlike British and American studies, which have dominated the literature to date, the institutional setting of our study involves compulsory voting, and therefore *mobilisation effects* of negative campaigning are not examined here. Rather, we believe the most important aim of a negative campaign, such as Mediscare, is to shore up support among Labor supporters by giving voters reasons to overcome any doubts and support their prior voting choices – referred to as a *reinforcement effect* (Gelman and King 1993; see also Riker 1996). This is important in the context where Labor voters can (and have) defected to the Greens and other minor parties. Data from the Australian Election Study shows that healthcare is an important issue for many voters who may switch their vote from Labor to the Greens or other minor parties (see Bean 2018). A corollary to this is that campaigns like 'Mediscare' aim to win the support of undecided and 'swinging' voters who have been found to be more open to persuasion on salient issues (Norris 2006). There is also the phenomenon of 'riding the wave'. This is the convergence between the agenda setting activities of political candidates and of news media which results in greater coverage of a single issue for public consumption (Ansolabehere and Iyengar 1994).

The compulsory requirement to attend polling places during Australian elections also mobilises undecided and disinterested voters (Denemark et al. 2007, 90; Ward and Stewart 2006, 194; Bean 1986, 58; McAllister 2011). Seeming to affirm this point, the latest Australian Election Australian Election Study found a large proportion (42 per cent) of respondents decided their vote *during* the 2016 campaign. (Cameron and McAllister, 2016). This suggests many voters were open to political messaging during this period whereas in non-compulsory setting these voters may not turn up to vote.

We believe these effects will be even more pronounced in competitive electorates. Like British parliamentary elections and US presidential elections, Australian elections are not decided by the winner of the popular vote. It is the party (or parties) with a majority of seats in the House of Representatives – each representing a single member district – that forms government. In practice, only a few of these are competitive within a three per cent margin (roughly 20 of 150), and these seats tend to be the focus of campaign activities because they are so pivotal to the election outcome. Discussing the importance of these districts to the election, Goot (2018, 108) writes that 'it was the battles over these seats that were seen as likely to determine the outcome.'

These marginal electorates are also where parties primarily mobilise their resources, including 'on the ground' communications, and where we believe the public would be most exposed to the Mediscare campaign. While we cannot observe the localised campaign activities (i. e. direct mail and in-person voter contact), we reasonably assume this would have been used to complement Labor's Mediscare television advertising, press releases and mass media campaign. While there are clearly other mediating factors that are important – such as the age profile and immigration levels within an electorate (see Martinez i Coma and Smith 2018) – we believe the competitiveness of an electorate is a key factor. We expect to find that Labor's Mediscare campaign had its largest effect in these divisions where persuadable voters and maintaining Labor's base matter most.

The 'Mediscare' campaign

Labor's Mediscare campaign attacked the healthcare policies of the Coalition, suggesting that if re-elected, a conservative government would reduce funding to, or privatise, public healthcare services (see Elliot and Manwaring 2018). As an area of policy strength, it was in Labor's interest to highlight healthcare and make it a discernible point of difference between the two major parties. It did this with enthusiasm. Our analysis showed healthcare was the most prominent subject of Labor's press releases, accounting for a quarter of all of the releases coming from the party's headquarters during the campaign, and it featured in two of the party's television advertisements.

While Labor campaigned on health over several days during the first weeks of the eight-week campaign, its activity increased significantly at the end of the fifth week. On 11 June 2016, Labor released an advertisement featuring its longest-serving Prime Minister, Bob Hawke — whose government established Medicare and who remains a popular figure — attacking the Coalition on (an interpretation of) its healthcare policy. In this ad, the former Prime Minister states: 'You don't set up a Medicare privatisation taskforce unless you aim to privatise Medicare' (*The Australian*, July 4, 2016). The ad launched on *YouTube* and then on free-to-air television the following night, capitalising on large national Sunday night audiences. The paid television advertisement ran for nearly a week (*The Australian*, July 4, 2016). It was followed by significant media coverage (see analysis below) and a focus on healthcare at the official Labor campaign launch a week later. The week before the election, Labor launched several

healthcare-related attacks, including a second television ad on free-to-air networks accusing the Coalition of having a history of misleading the public on healthcare policy.

Materials and methods

This study uses three unique datasets: a large-scale public opinion survey; a repository of press and television news stories gathered during the campaign; and Labor's campaigning activities involving party press releases and television advertisements.

Previous attempts to study campaign effects have been limited by the lack of available data (Hillygus and Jackman 2003, 584). This is highlighted by one effort to measure the influence of the Mediscare campaign using traditional polling which found little effect, although a 1 per cent improvement in Labor's primary vote was detected over the campaign period; see Jackman and Mansillo 2018, 143), which was restricted to publicly available public opinion polls with mostly small samples (and often unknown post-stratification techniques). Lau and Rovner (2009, 303) suggest that tracking polls used (but generally not released) by political campaigns are the ideal type of data to study campaign effects. We use a close approximation of this, drawing on 1.2 million responses collected by Vox Pop Labs during the 2016 Australian federal election campaign through the *Vote Compass* Voter Engagement Application (for more details see Appendix A and Vox Pop Labs 2016), which we model and post-stratify to build a daily tracking poll. These data help overcome some of the limitations of previous campaign research by being able to track daily movements in vote share and issue salience. As representative samples become increasingly difficult and expensive to collect (Kohut et. al., 2012), model-assisted procedures combined with post-stratification have been found to be effective for providing high quality estimates with large non-representative samples (Wang et al. 2015).

We use a variation of this technique to estimate the probability that voters believed healthcare was the most important issue for each date between 13 May (day 6 of the campaign) and 2 July (election day). Each daily estimate is smoothed over six-day moving averages for salience; and four-day averages for vote choice (from 11 May). Sampling across a moving window might mean that we miss some short-term fluctuations in voter behaviour. However, it also reduces the chance that we will mistake noise for genuine shifts in public opinion. In addition, it allows us to make inferences for discrete time periods of the campaign, and provides us with the opportunity to derive division-level estimates, which we use to observe campaign effects in competitive and non-competitive races (we include more details on our modelling to correct for

bias in the data in the online Appendix B). We pool a larger number of days in the smoothing process when modelling salience, as fewer respondents answered the question on most important issue. This approach provided between 10,000 and 100,000 observations for each six-day window of the campaign for salience; and 20,000 to 200,000 for each four-day window for vote choice. We include a division-level approach in our research strategy as we expect any effects to be concentrated in the most competitive electorates, which decide election results, and where parties are likely to focus their on-the-ground campaign activities. This feature is not included in most research on campaign effects (including Jackman and Mansillo 2018). We test it by leveraging our division-based model (documented in the Appendix) to isolate patterns in healthcare salience and Labor first preference vote share in the House of Representative election in the most competitive divisions. While analyses of traditional polls at the electorate level are likely to be inaccurate in Australia, due to the prohibitive costs meaning surveys are infrequent and often use small sample sizes, in contrast, our large-N data allowed for many more observations in each seat than there are in traditional polls.

We combine these estimates of public opinion with a mixed methods approach involving an examination of Labor's political communications, and media content analyses of front-page daily press coverage and the national Australian Broadcasting Corporation's nightly television news bulletins. To examine intermedia agenda-setting and the role Labor may have played in priming the salience of healthcare, we collected data on the dates that Labor's two television advertisements about public healthcare aired (11-15 June, 19-24 June). We also collected all 7pm ABC news bulletins during the campaign and document the days covering this issue (the ABC is the country's public broadcaster, N=8 out of 56 nights with stories about Medicare). Ranging from three quarters to over a million viewers each night during the 2016 campaign, (a large adult audience in a country of 25 million) this premium news bulletin is the only network with truly national reach in Australia. We also recorded every healthcare-related front-page news story for Australia's nine major daily metropolitan newspapers from every Australian state (N=20 front-page stories) and from the country's only two national daily papers (which were treated here as coverage in all states and territories N=7 front-page Medicare stories). This sample of media coverage was representative of Australian news coverage across all states and territories. Front pages are important tests of newsworthiness because they signify what the editor considers are the most important news stories for the reader to know about on any given day (Author 2013). Commercial television, radio and social media coverage was recorded by media monitoring company iSentia**,** with which we externally verified our press and broadcast data. iSentia found health coverage was highest in the last two weeks of the campaign, when

coverage was also greatest in our data (see Figure 1).[1] We then examined all press releases issued from the federal Labor party's head office (N=77) to identify those focused on health (n=16).

To better understand the location of any possible breaks in media coverage, and further test our hypotheses on the impacts of campaign activities on the salience of healthcare as a political issue and Labor's vote share, we also fit Bayesian change point models to our estimates of salience and the Labor vote using the *bcp* package (explained in greater detail in Appendix C; Erdman and Emerson 2007) in *R* (R Core Team 2016).

Results

The effect of Labor's Mediscare campaign on media coverage of healthcare

Our first hypothesis is that Labor's 'Mediscare' campaign, particularly its negative television advertising, set the mainstream media agenda and helped increase media coverage on healthcare. This is supported by Figure 1, which provides a visual examination of political advertising and print and television media data. ABC television news virtually ignored this topic prior to the Mediscare television advertisement, covering the policy domain of health with only a single story (which was not about Medicare). Significantly, following the broadcast of the political ad, and mostly concurrently with the second advertisement (19-24 June), ABC nightly news produced seven stories (six just in the week following the first ad). Australia's major daily newspapers reported nine front-page stories during the 35 days of the campaign up to the airing of the Mediscare advertisement, an average of one front-page report every 3.8 days. Over the remaining 21 days following the initial airing of the first advertisement, the metropolitan press ran 18 front-page healthcare stories, increasing the average coverage to a report every 1.2 days, a three-fold increase in intensity. We observe a uni-directional media effect here with the mainstream media covering health as a consequence of Labor's negative campaigning. Before Labor launched this campaign the media payed scant attention to health as a policy area. As hypothesized, television played a key role in this process. The press releases that the party issued earlier in the campaign (which made up a large portion of their overall press releases, 16 of 77) had no discernible impact on media coverage of healthcare, whereas

[1] iSentia monitors and aggregate media topics across different platforms each week. This includes 400 broadcast outlets, over 1,000 print publications and 1,000 news websites.

the party's television ads appear to have had a large impact (explored in more detail using the Bayesian change point model in appendix C).

[Figure 1 near here]

The political salience of healthcare during the 2016 election campaign

To address our second hypothesis concerning issue salience we examine the association with shifts in the estimated salience of healthcare in the electorate by plotting linear trends in our salience time series in Figure 2. The first plot in this figure uses the beginning of the initial Mediscare advertisement on day 35 of the campaign as the break in the series. The second plot uses the predicted change point at day 38 of the campaign as the break in the series. These produced similar results, indicating that after the beginning of Labor's advertising, the gentle increase in the estimated salience of healthcare in the electorate became steeper, jumping by several per cent in less than a week; with this increase occurring entirely during the airing of Labor's Mediscare advertisement. Averaged over five days before the break point, 23.2 per cent of voters were predicted to nominate healthcare as the most important issue, which increased to 26.1 per cent averaged over the five days after the break point and there appears to have been a linear increase in people nominating healthcare as the most important issue over the rest of the campaign. The campaign then appeared to help shape the debate around healthcare in the way the Opposition preferred (see Riker 1996) and it got the attention of voters who nominated it as an important issue for them when completing the *Vote Compass* survey (for additional Bayesian change point analysis that confirms these findings see online Appendix C).

[Figure 2 goes near here]

If our observations are the result of (partially unobserved) campaign effects, we theorise that they should be most apparent in competitive divisions (those won by Labor or the Coalition by less than three per cent of the two-party vote). It is in these electorates that persuadable voters matter most and where campaigners typically concentrate their efforts. To test this assumption, we leverage our division-based model-assisted procedure to isolate patterns in salience in those divisions where we would expect the effect to be largest: competitive divisions (marginal electorates). If our reasoning is correct, the effect of Labor's campaign activities should be

largest in competitive races. This effect can be seen in Figure 3, which shows the average estimated increase in salience was larger in competitive divisions than those held safely by Labor or the Coalition. Averaged over five days before the break point on day 38 of the campaign, it was predicted 25.1 per cent of voters nominated healthcare as the most important issue, increasing to 28.5 per cent over the five days after the break point. This represents average increases after either the beginning of the Mediscare ad or the predicted change point of 3.4 per cent. For safe Coalition seats these figures were 2.4 and 3.1 per cent, and safe Labor districts 2.2 and 2.9 per cent (see online Appendix C for confirmatory Bayesian change point analysis).

[Figure 3 goes near here]

These findings indicate that the Labor Mediscare campaign likely had its own independent effect on issue salience. This effect was amplified from day 38 of the campaign by subsequent media coverage such as national coverage on ABC TV's nightly news and on Australia's daily metropolitan newspapers' front-pages; predicted by our change point model to be the most significant break in our estimated salience time series. Together, with the second Labor TV advertisement, we see an increase in the perceived importance by respondents of healthcare as an issue, this is in line with 'riding the wave' effects discussed earlier whereby there is a convergence of media reporting and political messaging.[2] This addresses our second hypothesis, providing evidence that a negative campaign can elevate the salience of an issue during an election.

The electoral implications of Mediscare

We have provided evidence supporting the hypothesis that there was an association between Labor's strategic campaign strategy and mass media coverage of healthcare and that this likely increased the issue's salience for voters. We now turn to our third hypothesis: that Labor's 'Mediscare' campaign and subsequent media coverage was associated with an increase in Labor's vote share in the 2016 House of Representatives election.

[Figure 4 goers near here]

[2] Of course, while it is not part of our sample, we know from the iSentia data (discussed above) that other media, including social media, were also amplifying this coverage.

As can be seen in Figure 4, day 35 of the campaign, appears to have been an inflection point. Prior to the airing of the Labor Mediscare advertisement, Labor's vote was in decline, estimated in our model to have dropped almost three per cent in the first month of the campaign. This decline appears to have been arrested after the Mediscare advertisement began airing (on June 11). We again fit a Bayesian change point model to these data (detailed in Appendix C). This indicates the largest change points occurred outside of the Mediscare campaign. However, there was a nearly 20 per cent probability that day 35, the date Labor's advertising campaign began, was a change point in the campaign. This was the equal fourth largest change point in the model, with only one larger positive change point occurring during the campaign.

As detailed above, not all shifts in vote choice are equal in parliamentary democracies with discrete legislative districts. It is those located in competitive divisions that decide the outcome of elections. We test the political ramifications of our estimated shifts in vote intention by isolating the average trends in competitive races compared to safe Coalition and Labor-held divisions, shown in Figure 5.

[Figure 5 goes near here]

As can be seen in Figure 5, an increase in the estimated Labor vote is most evident in these competitive electorates after day 35 of the campaign. There is only a very marginal improvement in the average Labor vote share in safe Labor seats and no improvement in safe Coalition seats. The political ramifications are significant. After sliding several points, Labor's vote bottoms out in competitive electorates right at the beginning of the ad campaign, and begins rising before day 39 (the day after the ABC began covering the issue; which is predicted by our model to be the third largest change point of the election in these seats, see online Appendix C). We see a similar boost to the Labor vote during the second Mediscare ad (the largest predicted change point of the campaign for these divisions). These results suggest that the negative campaign reversed the decline in Labor's vote share providing a reinforcement effect among Labor supporters. Without the 'Mediscare' intervention the Labor vote would likely have fallen further. We find as predicted that it is in the most competitive districts that effects of the Mediscare campaign are most evident. (see Appendix C for the change point model results).

We finish by externally verifying our results with commercial polling data, shown in Figure 6. As above, the linear trends in the Labor vote recorded by these polls are plotted (the solid curve), with a break at the predicted change point and beginning of the Labor Mediscare advertisements on day 35 of the campaign. These surveys show a similar pattern to that observed from our estimates of Labor's vote share – albeit with more noise, owing to the small number of polls and limited sample sizes – indicating this result was not an artefact of our data or models. In fact, the commercial polls show a stronger change in the trend of the Labor vote before and after the change point, which corresponds to Labor's Mediscare campaign.

[Figure 6 goes near here]

Discussion

Campaign effects, and negative campaigning in particular, are of perennial interest to social scientists. Reviews of the literature have shown mixed effects (see Lau and Rovner 2009). However, we predicted that a case as dramatic as the Mediscare campaign likely had an impact on issue salience and vote choice at the 2016 election. Voters have been shown to have a 'negativity bias', and television advertising has been found to notably increase the salience of issues. The use of campaigning and increased media coverage of an issue can in turn prime voters' decision-making process (Druckman, 2004). The Labor Party attempted to do this with healthcare at the 2016 Australian federal election. Our results suggest that they were successful in doing so. Using a non-traditional data source – responses from a Voter Advice Application with a model-assisted procedure and post-stratification – we have contributed to the understanding of a negative campaign effect in a representative democracy with compulsory voting; an institutional setting where negative campaign tactics might be particularly effective (Denemark et al. 2007: 90; Ward and Stewart 2006: 194; Bean 1986: 58), but which has been largely ignored due to a scarcity of available data.

The results support our three hypotheses. We find clear evidence of Labor setting the media agenda using the Mediscare campaign. Consistent with Brandenburg (2002), this messaging appears to be unidirectional, flowing from the political party (Labor) to the mainstream media. While we confined our analysis to the ABC and Australia's daily newspapers, the iSentia data documented above (that covers all media) finds the same pattern. We therefore see the media (in this case, conventional mass media) as still a key conduit for communicating negative

political campaigns to the public, and television advertisements are a particularly important component of this. At a time when parties are reaching out to voters through Twitter and other media platforms we highlight the continued importance of the traditional mainstream media, particularly television, as a vehicle for parties to communicate to voters and set the agenda (for a discussion on the ongoing importance of traditional media in Australian election campaigns, see Carson and McNair 2018).

We also find support of our second hypothesis, with media coverage resulting in greater estimated salience for healthcare in the electorate. This helped structure the debate around healthcare in a way that favoured Labor (see Riker 1996 on 'heresthetics'). We again see this as a result of the 'negativity bias' demonstrated by scholars of negative campaigning (Trussler and Soroka 2014), who show negativity is an important factor in obtaining attention for an issue during election campaigns (Wu and Coleman 2009). We believe the Labor campaign combined with media coverage had the effect of priming the criteria used by voters to make their decisions (for a discussion on this, see Druckman, 2004).

As a result of Labor's negative campaign, growing media coverage and the subsequent increase in salience of healthcare, we find evidence to support our contention that Labor's Mediscare campaign had an influence on the election result. This was largely the result of a reinforcement effect that Labor engaged, by increasing the salience of an issue on which they were substantially advantaged and was most important for those likely to support left of centre parties (McAllister and Bean 2000; Bean and McAllister 2009; McAllister, Bean, and Pietsch 2012; Bean 2018). This helped the Labor Party in competitive races. The political impact of this was considerable. These results suggest that the negative campaign reversed the decline in Labor's vote share, with Labor almost winning the election, and missing by a single seat. In the process, Labor was able to limit the perceived authority of the newly returned centre-right Prime Minister, Malcolm Turnbull, who after two more years of insecure and unstable government, was replaced as Prime Minister by his own party in 2018.

From a politician's perspective, these results support existing research that 'going negative' works. Although voters may claim to prefer positive politics and campaigning (Trussler and Soroka 2014), an incentive remains for politicians to target each other with attack ads and similar tactics. This is particularly the case in the Australian context, and may also be in others. For political scientists, ongoing attention to campaign tactics in a variety of settings – with different variables at play – is clearly warranted. Additionally, to the extent we want to

understand political behavior in representative democracies that use discrete geographic units (such as the US presidential electoral college and parliamentary systems), we need to recognise the importance of variations in public opinion and voter behaviour across different geographies. Given campaign tactics will be received differently in various communities, an incentive also exists for political parties to target voters geographically as was the case in regards to competitive electorates in our study.

This study contributes to the scholarship on negative campaigning illuminating important dynamics of party and media messaging and its effects on issue salience and vote choice. Using a large-scale dataset combined with content analysis of media coverage and party press releases, we offer an innovative methodology that provides evidence supporting Prime Minister Malcolm Turnbull's assertion that the Labor Party electorally benefitted through its Mediscare campaign. In this case, we demonstrated that political elites can influence what issues voters are paying attention to and that this can, in turn, influence their vote choice. While ultimately not an election victory for Labor, its negative campaigning on Medicare, a policy area where it has clear issue ownership, 'worked' by bolstering public and media attention to Australia's public healthcare system.

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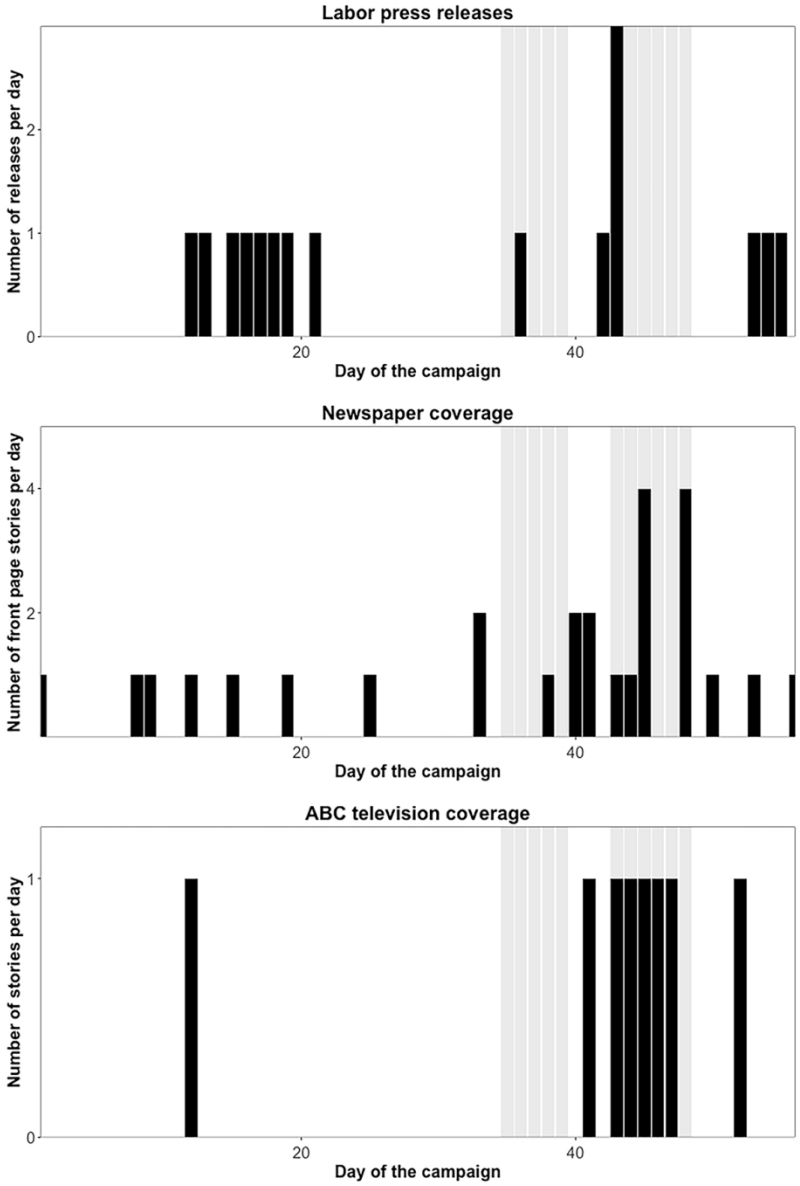

Figure 1. The grey bars represent the timing of the two television 'Mediscare' advertisements. The black bars show the media in various forms of media that occurred before, during and after those advertisements. It is shown that the Labor Party's press releases did little to invite television news (ABC) or daily front page newspaper coverage (from Australia's major mastheads). After the advertisement aired, both TV and press news coverage about healthcare notably increased during the election campaign.

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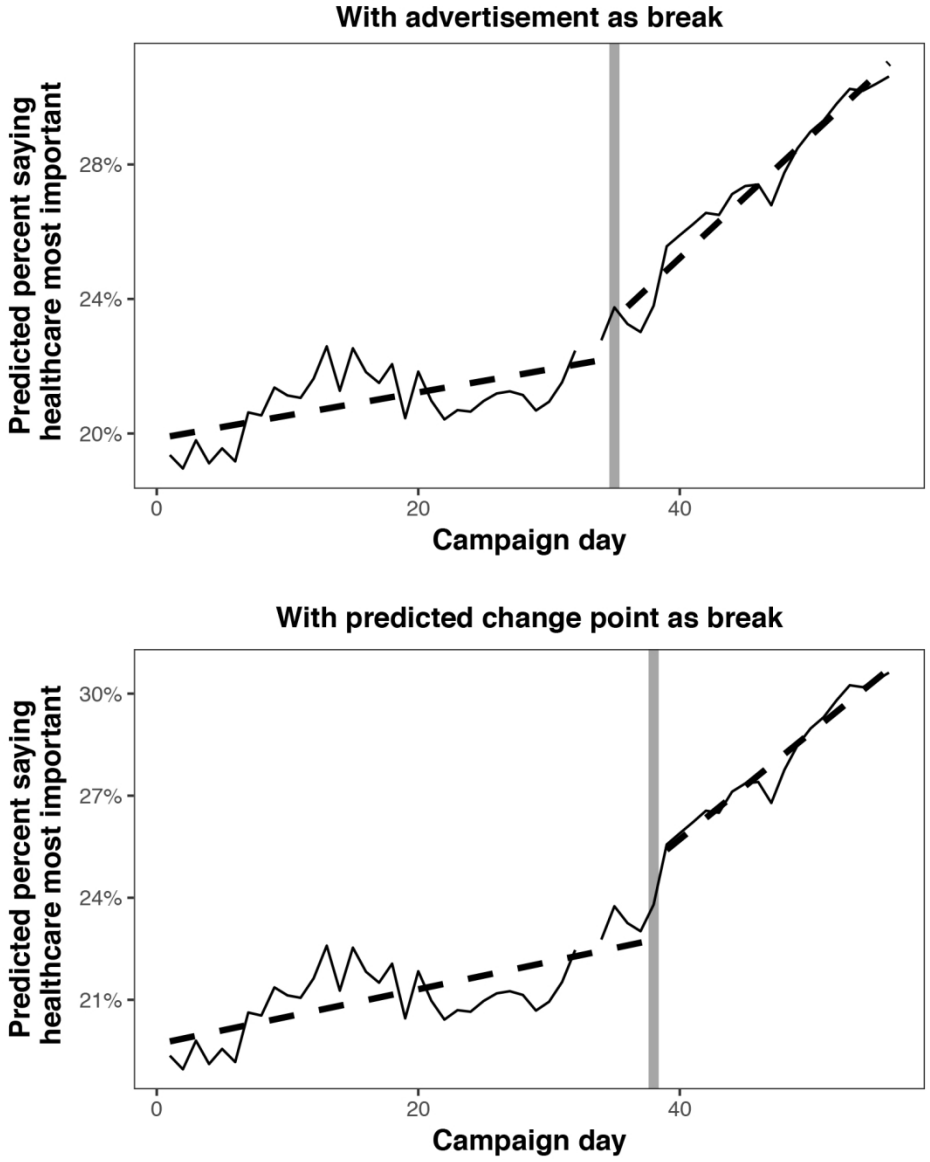

Figure 2: Breaks in Salience of Healthcare
The solid curves represent the estimated patterns in healthcare salience. The dashed curve is the linear trend in salience, which is broken at the beginning of Labor's Mediscare ad (plot 1), or at the predicted change point at day 38 of the campaign (plot 2). Break points are represented by the vertical grey line

139x177mm (300 x 300 DPI)

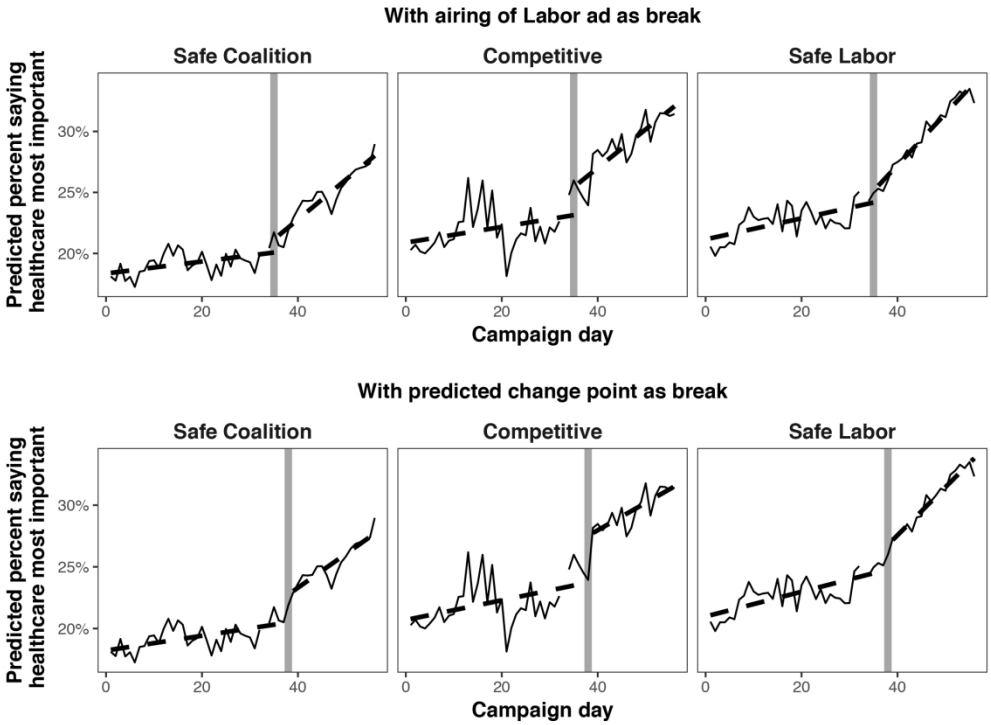

Figure 3: Breaks in Salience of Healthcare in Safe and Competitive races
The solid curves represent the estimated patterns in healthcare salience. The dashed curve is the linear trend in salience, which is broken at the beginning of Labor's Mediscare ad (the upper row of plots), or at the predicted change point at day 38 of the campaign (the low row of plots). Break points are represented by vertical grey lines.

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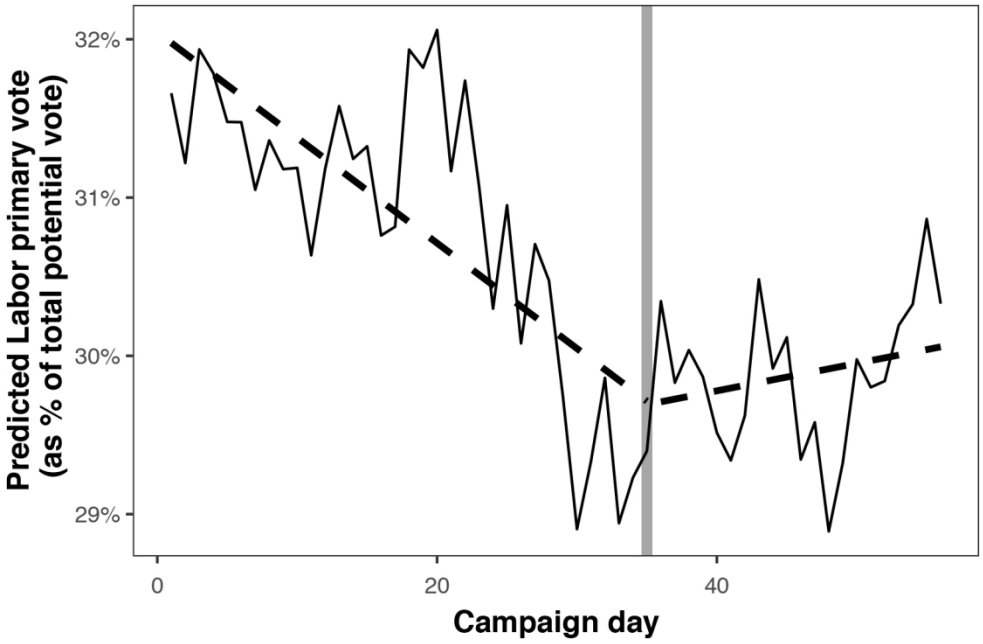

Figure 4: Break in the Labor Vote.
The solid curves represent the estimated patterns in Labor's primary vote. The dashed curve is the linear trend in Labor support, which is broken at the beginning of Labor's Mediscare ad, represented by the vertical grey line.

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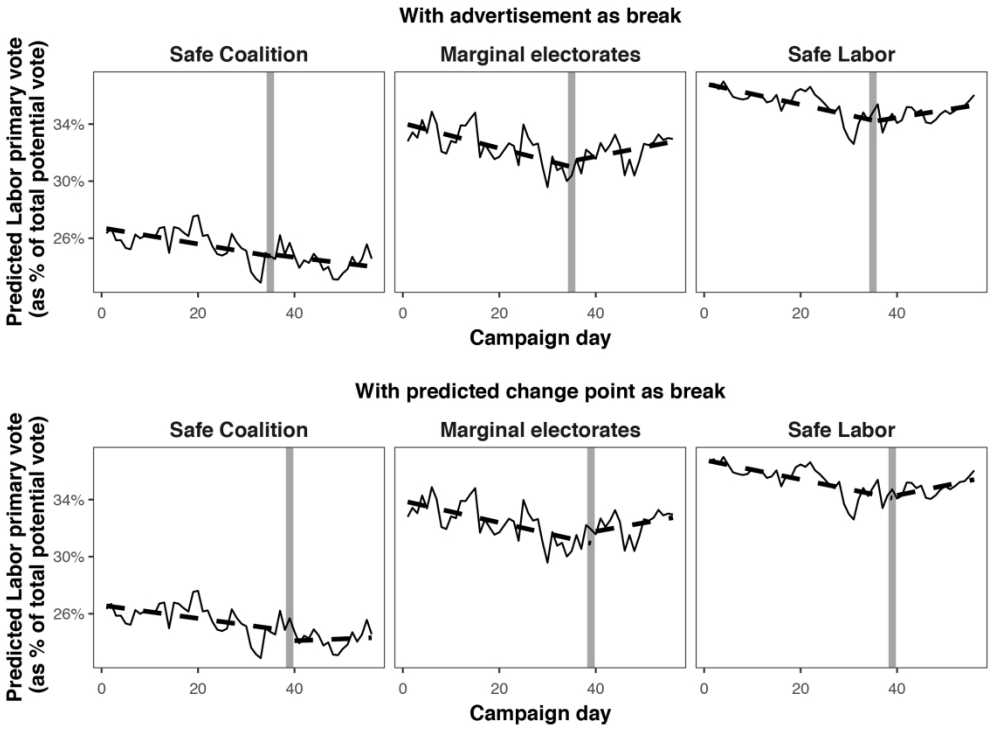

Figure 5: Breaks in the Labor Vote in Safe and Competitive races.
The solid curves represent the estimated patterns in Labor support. The dashed curve is the linear vote trend, which is broken at the beginning of Labor's Mediscare ad (the upper row of plots), or at the predicted change point for marginal districts at day 39 of the campaign (the lower row of plots). Break points are represented by vertical grey lines.

203x152mm (300 x 300 DPI)

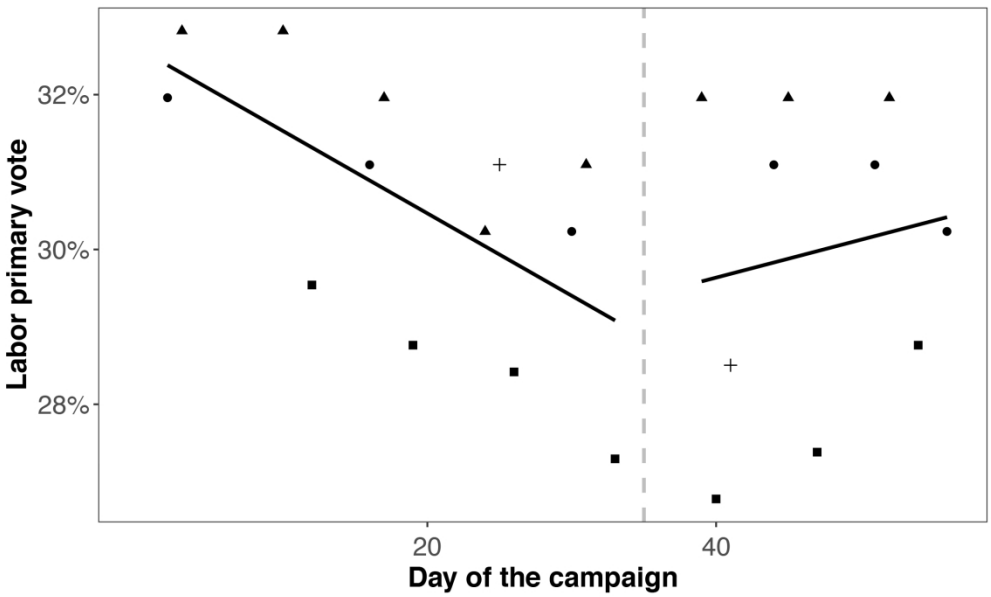

Figure 6: Pattern in Labor Primary Vote from Commercial Polling.
Each point represents the Labor Party first preference vote during the campaign (the y-axis), taken from different polling companies: Essential (shown as the triangles), Ipsos (crosses), Newspoll (circles) and ReachTel (squares). These have been adjusted to account for the proportion of the electorate that did not vote at the 2016 election (to make them comparable to the estimates documented above). The grey vertical line marks the beginning of the Labor Mediscare ad campaign. A trend line was fit to the commercial polling data with a break at this change point to display how the Labor vote shifted before and after.

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Appendix A - About *Vote Compass*

The *Vote Compass* tool was primarily designed to inform respondents about the positions of the parties on issues. However, most relevant for us is that it included a set of questions on respondents' demographics (age, ancestry, education, religion, previous vote, location), their self-nominated most important issue, and vote intention. Over the course of the 56 days of the election campaign, *Vote Compass* collected data on more than one million Australian respondents, with data of several hundred thousand voters available after observations with missing information were removed (over 300,000 for salience and 800,000 for vote choice).

The use of voter engagement applications (VEA) of this nature provides advantages, as well as complications, compared with conventional commercial polls. The advantages include the cost-effective collection of data from every day of the election campaign in very large numbers, compared with the smaller sized random sample collected by conventional polls. Even with access to every commercially run poll conducted during the campaign, there were several days left uncovered during the campaign. Many of these polls have relatively small sample sizes and (at times) low response rates. Large random samples can provide highly valuable insights, but have generally not been collected in Australia (or other democracies outside the US) at a scale to allow for daily inferences during a campaign, due to prohibitive costs. While not a random sample, the very large numbers of observations provided by this dataset — approximately 1.2 million in total — offers opportunities to examine daily movement in public opinion during the election. This is particularly important in this study where we are looking at party-media campaign dynamics. Vox Pop Labs (2016) also collected information on issues that voters believed were most important for them. This question was open-ended and did not involve prompts.[1] We recoded these responses into a single binary variable indicating whether voters rated healthcare as the most important issue or not.[2]

The complications of using these data is that selection bias is larger than what is encountered in surveys collected using random sampling. Any patterns observed in issue salience or partisan choice may be artifacts of different party supporters self-selecting into the survey at different rates over the course of the campaign. Gelman et al. (2016), for instance, found respondent self-

[1] The specific wording of this question was: 'Which issue is most important to you in this election?' Those providing the following responses were coded as indicating healthcare was the most important issue: addiction, disability, disabilities, health, health care, healthcare, hospital, hospitals, medical, Medicare, NDIS (the acronym for the National Disability Insurance Scheme).

[2] The data of respondents who did not provide a response to this question was discarded for this section.

selection, conditioned by campaign events, accounted for some of the variability in polling results. Rather than changing voter behaviour, political communications and media coverage on healthcare might merely make Labor supporters, and those who care about this issue, more enthusiastic about completing *Vote Compass*. We adopt modelling techniques to limit this possibility as outlined in the body of the article.

Another possible limitation was the lower response rate for the MII question, which may mean that the impact of the Labor campaign on the salience of healthcare is overestimated if voters with higher levels of political interest were more likely to respond to this question. We try and control for this by post-stratifying on education, age and other demographic characteristics that may generally correlate with political engagement. However, there may be other uncontrolled for confounding factors here that increase the size of our observed effects. This was not the case for vote choice, which had a much larger sample size.

Appendix B – Modelling the Data

The model-assisted approach that we use to reduce the bias in the *Vote Compass* data uses a tree-based, gradient boosting for either binary or multi-class classification (Chen et al. 2017) to fit a predictive model for y (salience or vote for the House of Representatives) as a function of X in each of the 150 electoral divisions represented in the Australian parliament (for more details see Appendix). Our predictors are:

- Age (18-20, 21-29, 30-44, 45-64, and 65 years and older).
- Gender (male, female).
- Education (some school, high school, a trade qualification or diploma, or a bachelor degree or higher).
- Income (divided into quintiles, and not stated3).
- Religion (Mainline Protestants, Conservative Protestants, Catholic, other and no religion).
- Vote at the 2013 election.

We extract a data set of census cells matching these demographic characteristics from the Australian Bureau of Statistics (ABS) Tablebuilder tool, enabling the cross-classification of X

[3] Close to a quarter of households did not provide (or inadequately described) their income in the 2011 Australian Census.

in each division (with vote choice added to this dataset using a similar model-assisted procedure). This provide counts of Australian citizens n_c in each of the 1,200 cells in each electoral division, or C = 180,000 total cells. Using the model derived from the *Vote Compass* data, with a binary outcome y, we predict $\theta_c \equiv h(X_c)$, the probability a citizen in census cell c has attribute y. The predicted count of persons in cell c with the attribute is simply: $\hat{n}_c = \theta_c \cdot n_c$.

Summing over cells and dividing by the total cell count gives us an estimate of the proportion of citizens within a division with attribute y, with which we can then use to estimate issue salience and electoral outcomes in all 150 lower house divisions for each six or four day moving window over the campaign.

Appendix C – Bayesian change point models

The analysis below complements and expands on the patterns found in the article by reporting Bayesian change point models for each of the three hypotheses.

We implement Bayesian change point models using the *bcp* package in *R* (Erdman & Emerson, 2007), which is based on a product partition model, and adopts the approach of Barry and Hartigan (1993). Developed for the agricultural industry during the Great Depression to estimate spatial changes in insect populations threatening crops. Since then, change point methods have been applied to problems in economics, politics, and survival analysis. While frequentist procedures for change point analysis estimate specific locations for change points, Bayesian estimation offers a probability distribution for the chance of a change point at each day in the time series.

We model the salience of healthcare and Labor's vote share as a sequence of observations X_1, X_2,...,X_n, ordered in time. Given the partition, and the parameters, each observation X_i for day i is assumed to be independent in different blocks, and that there is an unknown partition ρ of the set $\{1, 2, ..., n\}$. This divides contiguous blocks of observations, with the sequence of observations θ_1,θ_2,...,θ_n constant within jth block of b blocks, broken at change points, or petitions, which can be written as $\rho = (i_0, i_1, i_2, ..., i_b)$.

We use a Monti Carlo Markov Chain (MCMC) to estimate our product partition model, in which the probability of change at point i is p, independently at each point i. This assumes the observations are independent with a distribution of $N(\mu_i,\sigma^2)$ and that the probability of a change point at a position i is p, independently at each i. This assumption is not entirely correct in our case, as our daily estimates are four-day moving averages rather than independently observed days. This means that some of the same data is used to estimate consecutive days. However, the likely effect of this is to reduce the size and probability of a change point between two days, making out tests more conservative not less, and increasing the chance of a false negative not a false positive.

Additionally, the assumption of independent observations can be weakened, with Barry and Hartigan (1993, 310) asserting that the only requirement of independence is that observations in different blocks of the model are mutually independent. We take this into account by adding the prior distribution $N(\mu_0,\sigma_0^2/(j-i))$ to μ_{ij}. This prior allows for weak signals to be observed in the time series, provided sufficient data exists with which to estimate them (Barry and Hartigan 1993, 311). In asserting this prior, we expect larger deviations from μ_0 in short blocks than long blocks, as it is not practical to identify small movements in short blocks. This assumption is built into our priors. The upside of this is that the posterior distributions of partitions and parameters are simplified. We took a burn-in period of 50 draws and stored the subsequent 500 draws. In each step of the Markov chain, on each day i, a value of U_i is drawn from the conditional distribution of U_i given the data and the current partition. After each iteration of the MCMC, the posterior means are updated conditional on the current partition.

These analyses are referred to in the results section of the article.

The Effect of Labor's Mediscare Campaign on Media Coverage of Healthcare

To better understand the location of any possible breaks in coverage, and how they might be associated with Labor's Mediscare campaign, we fit a Bayesian change point model to our estimates of salience and the Labor vote.

The results are shown in Figure 1, which consists of two plots. The first plot represents the posterior mean produced by the change point model. The second plot displays the posterior probability of each day being a change point. These support our first hypothesis. It shows an increase in media attention to healthcare *after* the screening of the Mediscare ad and associated

campaigning. It is worth noting that the Labor party did issue eight press releases prior to the ad (the last of these occurring on day 21 of the campaign), which do not appear to have been followed up by substantial media coverage. Rather, it was after Labor's Mediscare television advertisement aired that there was substantial media attention to healthcare as an election issue. Moreover, the four days with a greater than 75 per cent probability of being change points in coverage, were all located during the ad runs. Here we see evidence of intermedia agenda setting effects.

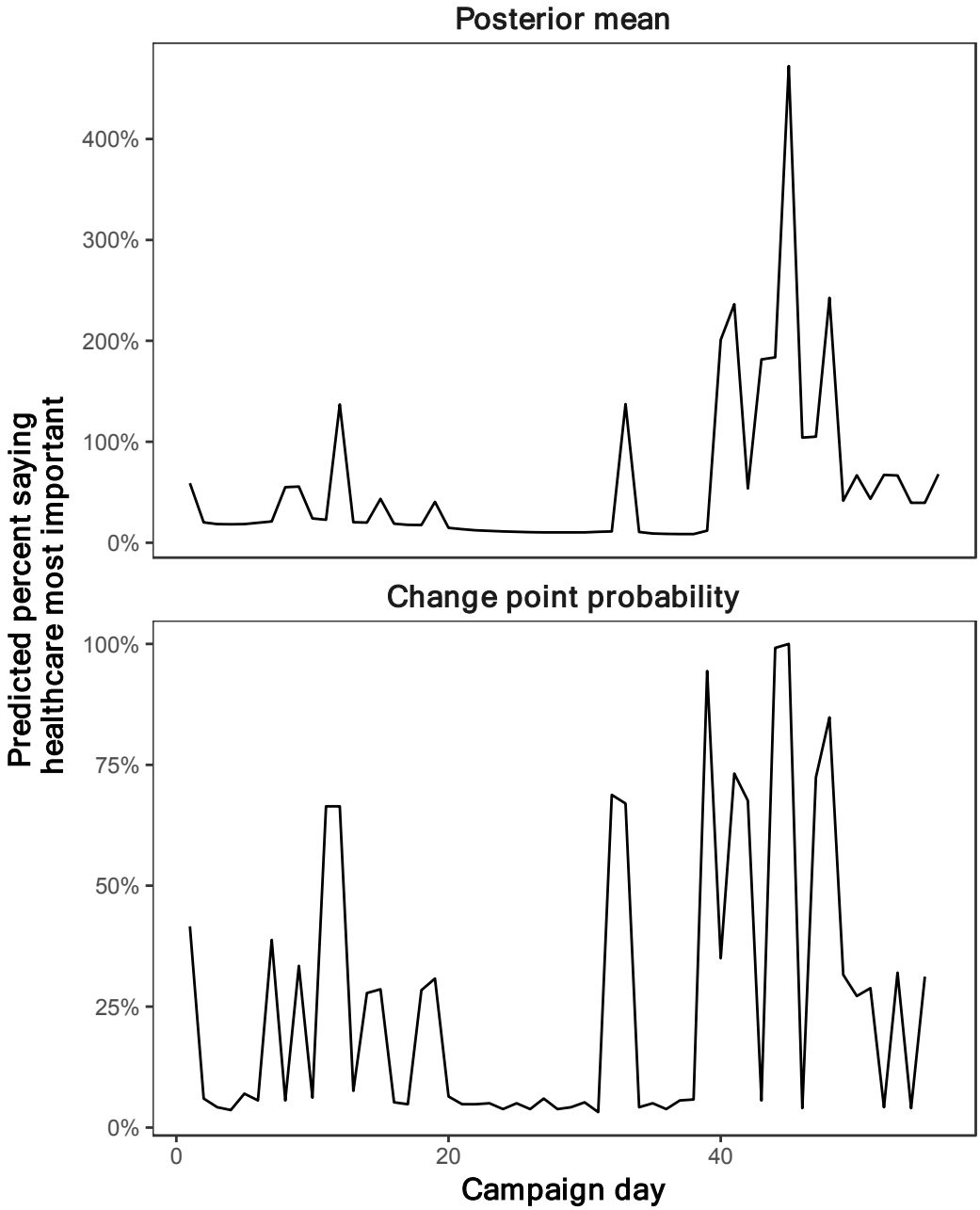

Figure 1: Posterior Means and Probabilities From the Change Point Model Fit to Media Coverage of Healthcare as an Election Issue.

Days shaded purple and red are those where Labor released healthcare-related media statements and aired its Mediscare advertisement respectively.

The political salience of healthcare during the 2016 election campaign

To address our second hypothesis concerning issue salience, we estimate shifts in the salience of healthcare by fitting a series of models on a subset of our data for six-day moving windows. From this we obtain smoothed daily estimates for the probability a voter would rate healthcare as their MII. We fit a Bayesian change point model to these estimates of salience to examine the probabilities different days will be breakpoints in our time series. The headline results from this change point model are shown in Figure 2, which (as above) consists of plots showing the posterior mean produced by the change point model and the posterior probability of each day being a change point. There were four days of the campaign that had greater than 50 per cent probabilities of there being positive change points. Two of these change points occurred during the period of high intensity coverage of healthcare, when the Labor advertisement ran followed by increased media reporting. We find salience increased substantially. The largest of these predicted change points was day 38 of the campaign (four days after the first Mediscare television ad began running. We examine the association with shifts in the estimated salience of healthcare in the electorate by observing the magnitude of the shift in salience from this predicted change point on day 38 of the campaign, and also the beginning of Labor's Mediscare campaign.

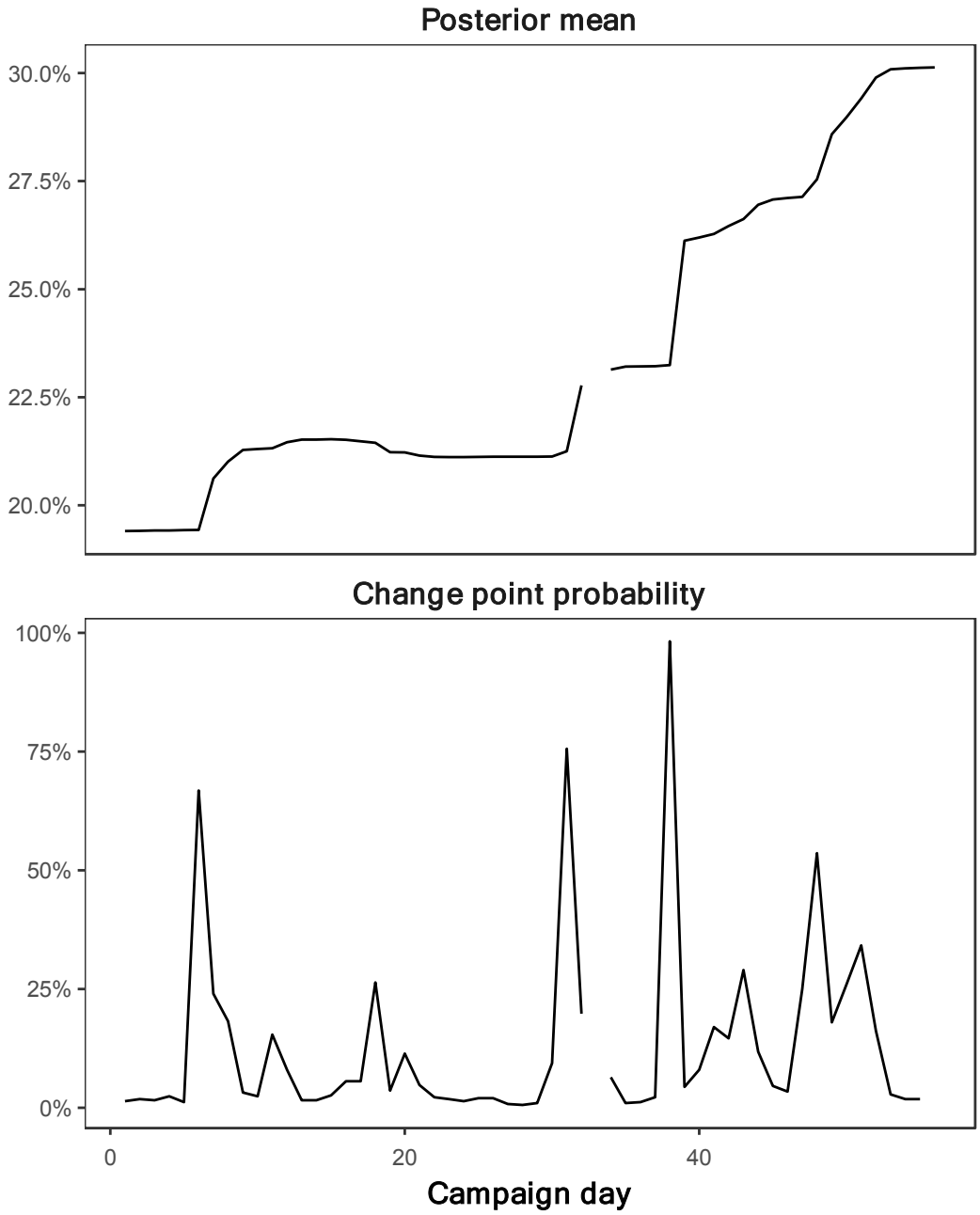

Figure 2: Posterior Means and Probabilities From the Change Point Model Fit to Estimates of the Salience of Healthcare.

Days shaded purple and red are those where Labor released healthcare-related media statements and aired its Mediscare advertisement respectively. The break in the series reflect a paucity of data for 9 June, which made it difficult to obtain reliable estimates for that day.

If our observations are the result of a campaign effect, we theorise that they should be most obvious in competitive divisions (those won by Labor or the Coalition by less than three per cent of the two-party vote). We fit a change point model to the average estimated salience in safe Coalition, safe Labor, and the most competitive divisions. If our reasoning is correct, the

effect of Labor's campaign activities should be largest in competitive races. This is what we find, as can be seen in Figure 3. The day with the largest probability of being a change point was estimated to be during the airing of the Mediscare advertising in competitive electorates.

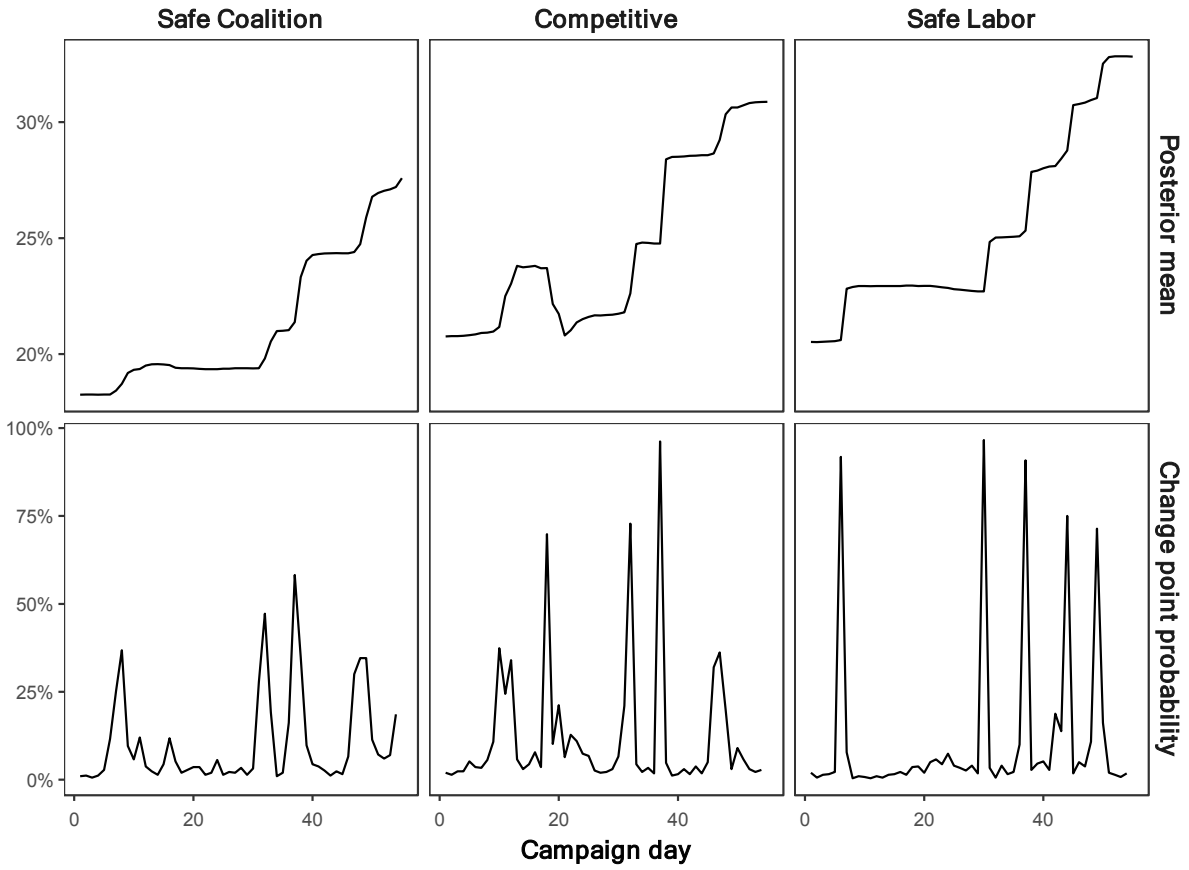

Figure 3: Posterior Means and Probabilities From the Change Point Model Fit to Estimates of the Salience of Healthcare, by Division Type.

Days shaded purple and red are those where Labor released healthcare-related media statements and aired its Mediscare advertisement respectively. The break in the series reflect a paucity of data for 9 June, which made it difficult to obtain reliable estimates for that day.

The electoral implications of Mediscare

We now turn to our third hypothesis: that Labor's 'Mediscare' campaign and subsequent media coverage was associated with an increase in Labor's vote share in the 2016 House of Representatives election. We do this by obtaining rolling four-day estimates of the Labor first preference vote using the methods outlined in the paper, to which we fit change point models. The headline results from this model are shown in Figure 4, which consists of two plots: the first showing the posterior mean produced by the change point model, the second the posterior

probability of each day being a change point. These results indicate the largest change points occurred outside of the Mediscare campaign. However, there was a nearly 20 per cent probability that day 35, the date Labor's advertising campaign began, was a change point in the campaign. This was the equal fourth largest change point in the model, with only one larger positive change point. Prior to the airing of this advertisement, the party's vote was in decline, estimated in our model to have dropped almost three per cent in the first month of the campaign. This decline appears to have been arrested after the Mediscare advertisement began airing on day 35 of the campaign (June 11).

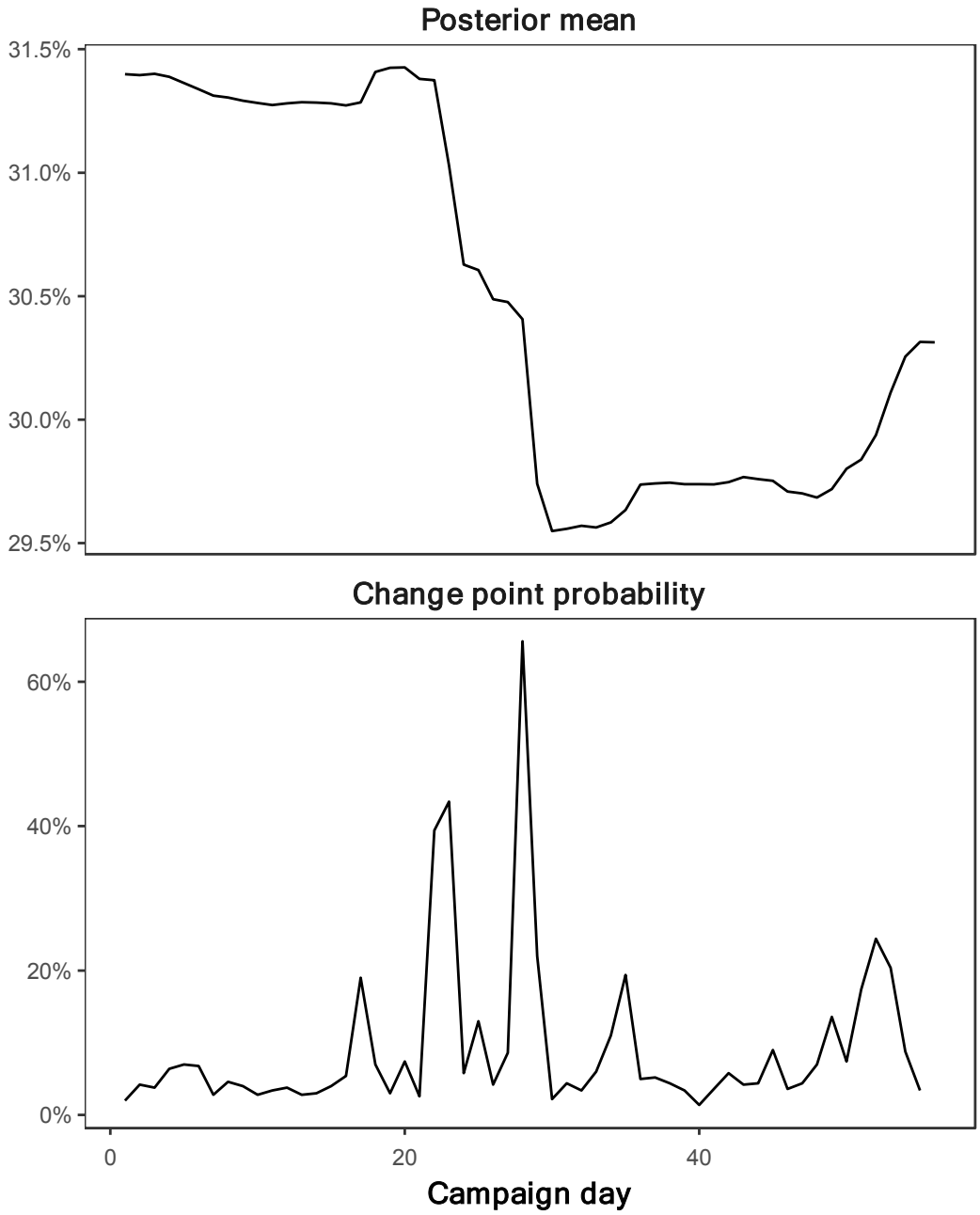

Figure 4: Posterior Means and Probabilities From the Change Point Model Fit to Estimates of the Labor Vote Share.

Days shaded purple and red are those where Labor released healthcare-related media statements and aired its Mediscare advertisement respectively.

We test the political ramifications of our estimated shifts in vote intention by isolating the average trends in competitive races compared to safe Coalition and Labor-held divisions. Shown in Figure 5, three of the four largest change points predicted for competitive races – and the only positive change points with a greater than 20 per cent probability in these divisions – were predicted to have occurred during the Mediscare ad run. The timing of these breaks in the series in relation to campaign activities is unlikely to have been random. There was a fraction

of a one per cent chance that the only three positive days with a greater than 20 per cent probability of being positive change points in the Labor vote share would occur independently during the screening of Labor's Mediscare advertisements. As can be seen in the top row of Figure 5, an increase in the estimated Labor vote is evident in these competitive divisions, and only these divisions, after day 35 of the campaign. Notably, there is no improvement in the average Labor vote share in safe Coalition or safe Labor seats.

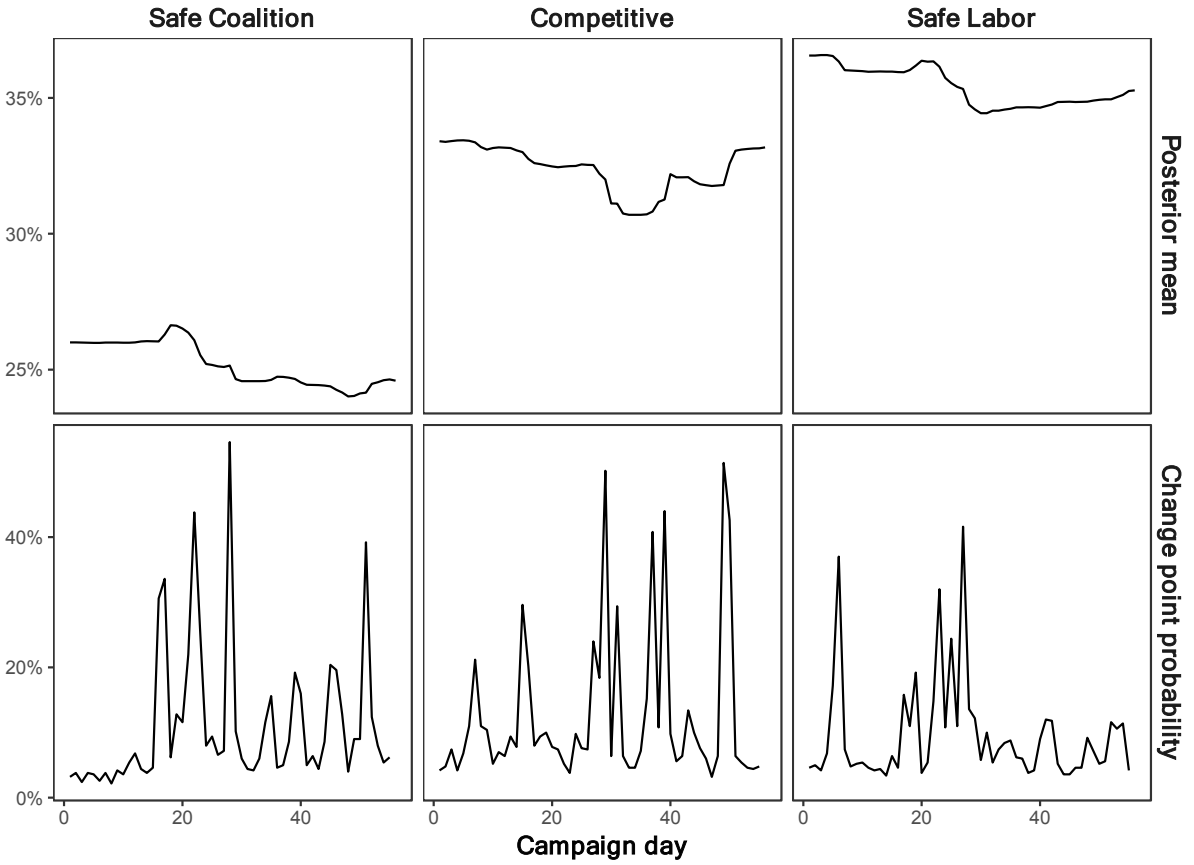

Figure 5: Posterior Means and Probabilities From the Change Point Model Fit to Estimates of Labor Vote Share, by Division Type.

Days shaded purple and red are those where Labor released healthcare-related media statements and aired its Mediscare advertisement respectively. The break in the series reflect a paucity of data for 9 June, which made it difficult to obtain reliable estimates for that day. Competitive divisions are those held by the incumbent by less than three per cent of the two-party vote.

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