

Momentum in the polls raises electoral expectations

Matthew Barnfield

Department of Government, University of Essex, Colchester, Essex, UK

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ABSTRACT

Voters rely on opinion polls to help them predict who is going to win elections. But they are regularly exposed to different polling results over time. How do changes in the polls affect their expectations? I show that when the polls indicate that a party's support has increased, voters' expectations for that party's performance will be higher than they would be at the same vote share but without such evidence of growth, because the party appears to have *momentum*. Across six survey experiments in Britain (total N > 14,000), I find that this effect persists even when changes in vote share are well within the margin of error, when comparing a small change in vote share to consistently polling at the larger vote share, when the change makes little difference to a party's objective probability of victory, and when voters have strong preferences that might colour their interpretation of the polls. In short, the appearance of momentum in the polls robustly raises voters' expectations that a party will win an election. This finding has major implications for any area of research in political science where expectations feature, for theoretical understandings of how people perceive the future, and for salient policy debates about the regulation of opinion polls.

1. Introduction

People base their predictions of the future not only on how things are right now, but on how things have changed compared to the past. In society, people think that trends that are not currently widespread, but have become more common, will soon be the norm (Mortensen et al., 2019; Sparkman and Walton 2019). In sport, people think that competitors whose performance has improved, whether or not they are winning overall, are more likely to go on to victory (Gauriot and Page 2018; Meier et al., 2020). In politics, candidates in presidential nomination campaigns who have recently won a state primary are deemed to be more viable, even if another candidate has won more contests overall (Abramowitz 1989; Abramson et al., 1985, 1992; Utych and Kam 2014). Across all these contexts in which we predict future outcomes, a perception of *momentum* – a perceived ongoing upward trajectory in performance or popularity – guides our expectations.

In this paper, I ask whether voters also perceive momentum in the results of vote intention polls when using them to form their electoral expectations. That is, do changes between polls over time independently affect voters' expectations of election outcomes? Is a party with a given vote share expected to perform better specifically if it recently gained ground to reach that current vote share?

Understanding whether voters interpret polls in this way matters for at least three reasons. First, what voters expect to happen at elections

affects whether and how they vote in those elections (Bartels 1985; Blais et al. 2006; Meffert et al., 2011; Westwood et al. 2020). This link between expectations and voting behaviour means that understanding the sources of those expectations is important (Irwin and Van Holsteyn, 2002, 92). However, the effects of perceived momentum in the polls on expectations specifically has gone largely overlooked, even though some evidence suggests that polls conveying a party as having momentum make people more likely to vote for that party (Dahlgaard et al., 2017; van der Meer et al., 2016). Second, what voters expect to happen at elections affects whether they perceive the eventual outcome to be legitimate and democratically satisfactory (Krizan et al. 2010; Mon-grain, 2023). If changes in the polls excessively raise people's expectations that a given party will win, but it loses, then repeated exposure to polls could chip away at diffuse political support over time, across elections. Third, what voters expect to happen at elections has effects that reach beyond electoral politics, to the economy. Perceptions of momentum could create (un)certainly about election outcomes, affecting investment decisions and exchange rate markets (Bernhard and Leblang 2002, Bernhard and Leblang, 2006).

I begin by arguing that there is, indeed, good reason to think that momentum independently affects expectations. This argument draws, first, on analogies to existing empirical evidence about how people interpret societal trends, sports scores, sequential election contests, and economic change. Second, I establish 'strategic momentum' (Meier

E-mail address: m.g.barnfield@gmail.com.

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et al., 2020), ‘psychological momentum’ (Iso-Ahola and Mobyly 1980), and the ‘third-person effect’ (Wei et al., 2011) as potential theoretical accounts of this effect. However, I then note four considerations that plausibly limit the perception of momentum in the polls specifically: survey error, the (consequent) better evidence of success conveyed by static performance, competitive contexts, and party preferences.

To assess the momentum effect, I conduct four experimental studies, comprising six survey experiments. The results systematically show that momentum raises electoral expectations. Each study accounts for one of the four factors discussed as potentially countering the effect of momentum, and shows that the appearance of momentum in the polls has a significant effect on voters’ expectations that overwhelms these countervailing forces. When polls indicate that a party’s support has increased, voters’ expectations for that party’s performance are higher than they would be *at that same vote share* but without such evidence of growth. The Discussion section sketches potential implications of this contribution for political science work using electoral expectations as an independent variable, for debates around the regulation of opinion polls, and for a political psychological theory of perceptions of the future.

2. Momentum matters

When voters try to predict the outcome of upcoming elections, they usually have plenty of evidence to draw on from vote intention polls. Of course, in some elections, the polls might lead voters astray. Elections that are closely contested, or where the electorate is volatile, are prone to polling misses (Tudor and Wall 2021). Polls – and forecasts based on them – that are conducted further out from the eventual election day are also more likely to misrepresent the result (Jennings et al. 2020). Rather than faulty methodology, though, these predictive inaccuracies are often the result of undecided voters changing their minds late in the election cycle (Durand and Blais 2020). Polls conducted towards the end of a campaign, therefore, tend not to be far off the eventual result (Erikson and Sigelman 1995; Panagopoulos and Farrer 2014; Wright et al. 2014). These patterns have changed little over time, with polls generally tending to be quite good indicators of what is likely to happen at elections that improve as the election nears (Jennings and Wlezien 2018; Prosser and Mellon 2018).

Voters do appear to make use of the polls when forming their expectations. Irwin and Van Holsteyn, 2002 demonstrate that, in the 1994 Dutch election, greater attention to politics and elections brought expectations ‘into the range set by the polls’. Similarly, Blais and Bodet (2006) find that expectations align more closely with the polls for those who are more involved and interested in a campaign. This conclusion receives further support from Meffert et al. (2011), who find a ‘strong positive effect of political knowledge on the quality of expectations’, while also finding that engagement with polls ‘improved’ expectations (see also Zerback et al., 2021). Lavrakas et al. (1991) further show that 95 percent of voters knew who was leading in the 1988 U.S. presidential election and attributed this knowledge to pre-election polling. Zerback et al. (2015, 458) report that poll results are the most significant predictor of accurate vote share expectations for all parties at the 2013 German federal election. Exposure to polling coverage even helps German voters in the more complex task of predicting which parties will enter into coalition together (Bowler et al. 2021).

But the polls change over time. If voters’ expectations roughly align with what the polls say at any given time, then voters who are consistently attentive to polls must be updating their expectations in response to such changes. Indeed, in the context of a public ballot initiative on the legalisation of cannabis, Krizan and Sweeny (2013, 706, emphasis added) find that over the course of a few months ‘well-informed voters were likely to lower their expectations regarding the measure’s passage as the vote neared, *in line with polling results*’. So it certainly seems that, with enough time, average expectations of election outcomes will shift to predict the same winner that the polls predict. But at what rate do individual voters update their expectations? How responsive are they to

changes in the polls?

There is reason to expect that voters will think a party not only has an improved chance, but has an *especially good* chance of winning an election when it has gained ground in the polls. The improvement in performance signals *momentum* – a potentially ongoing positive trajectory – which plays an independent role in raising expectations.

This momentum effect would mirror how people make predictions in other domains. For example, when predicting sporting outcomes, fans and commentators often fixate on whether a soccer team scored just before half time (Gauriot and Page 2018), whether a tennis player just broke a serve (Meier et al., 2020), whether basketball players have scored a few times in a row (Cohen 2020), or whether a team has recently won a few successive games (Vergin 2000). It is not just what the current score is, or how many baskets a player has shot overall, or how many games a team has won across the whole season, but rather who scored most recently, or who is currently on a scoring or winning ‘streak’, that sways these perceptions. In other words, for an equivalent score within a match, or number of games won, expectations are higher if the team or player has *just* scored, or *just* won a string of games. Recent upticks in performance provide a signal of momentum that itself raises expectations.

Social psychologists have demonstrated that a similar logic characterises how people predict cultural and societal changes. People project that minority behaviours will become the norm if those behaviours appear to have become more common, holding constant how widespread they currently are (Mortensen et al., 2019; Sparkman and Walton 2019). In their assessments of what is going to happen in the future on a societal level, people account for, and project forward, *changes* in the outcome variable of interest.

Conventional wisdom in political science suggests that momentum can also affect electoral expectations in sequential elections. A strong showing in a recent presidential primary can create a signal of momentum in US presidential nomination contests, shifting perceptions of candidates’ ‘viability’ and even causing changes in voting behaviour (Abramowitz 1989; Abramson et al., 1985, 1992; Utych and Kam 2014). Voters could plausibly map this way of thinking about concrete electoral performance onto their interpretation of poll results.

More broadly, voters’ attitudes and behaviours tend to be responsive to *changes* in, rather than current *levels* of, variables that they care about. For example, voters’ economic perceptions, and consequently their vote choices, are driven largely by changes in economic indicators (e.g. GDP growth) rather than by the level of those indicators (current GDP) (Bailey 2019; Lewis-Beck and Stegmaier 2000; Soroka et al. 2015). Therefore, voters clearly have the capacity to identify changes in their political information environment, and deem those changes relevant in forming their perceptions and preferences.

But beyond analogy to other domains, why would we theoretically expect polls to produce perceptions of momentum that raise expectations? There are three promising theoretical accounts: strategic, self-perpetuating, and psychological momentum.

Growth in the polls implies that a party has changed its strategy to good effect. This new strategy could continue to be effective and go on to bring about greater success, in what is known in psychology as *strategic momentum* (Meier et al., 2020). Indeed, political commentators readily link parties’ changes in fortunes in the polls to political events and policy announcements. Growth in the polls may signal that a policy or salient event is effectively cutting through to the electorate. This signal, regardless of its validity, could lead voters to assume that the party is going to win over more voters over time. Consistent with this mechanism, Mutz (1998, 212) argues that learning about an increase in support for a political candidate causes people to reflect on other arguments supportive of that candidate, which could include reflections on their recent strategic choices. Those arguments might even convince people to support the candidate too.

Belief in such a ‘bandwagon effect’ – the idea that voters will vote for candidates or parties because lots or increasingly many others are doing

so (Barnfield 2019) – means voters will perceive parties that have grown in the polls as having momentum of a *self-perpetuating* form. On this view, improvements in the polls especially raise electoral expectations because voters expect those improvements, in turn, to cause even more people to vote for the party. Evidence of the bandwagon effect is limited (Hardmeier 2008; Roy et al. 2021). Voters also do not see themselves as prone to bandwagon effects (Chung et al. 2018). Crucially, though, they do exhibit a so-called ‘third-person effect’, thinking *other people* are susceptible to such effects (Price and Stroud 2006; Wei et al., 2011). So while the bandwagon effect might not be a significant driver of election outcomes, the widespread assumption that it will occur for other people could nonetheless underpin the perception of momentum that raises electoral expectations.

Finally, voters might believe that *psychological* momentum (Meier et al., 2020) will lead to electoral success. As Iso-Ahola and Mobily (1980, 392) explain, psychological momentum is

an added or gained psychological power which changes a person’s view of himself [sic] or of others or others’ view of him and of themselves. Through modified perceptions psychological momentum influences the individual’s mental and physical effort and actual behavior and performance. Psychological momentum is a result of and associated with successful performance or behavior.

On this view, when a party improves its performance in the polls, the psychological momentum this improvement produces will spur the party on, lead campaigners to re-up their efforts, or change politicians’ behaviour in a way that goes on to attract more voters (Henshel and Johnston 1987). The public could perceive parties as being ‘in the groove’, sensing that their improved performance will motivate them to secure victory.

3. Momentum might not matter much

However, there are also particular characteristics of polls that cast doubt on quite how readily voters will use them to form perceptions of momentum that raise their expectations. First, polls are not a completely precise reflection of current levels of support for candidates or parties. As a poll result is usually based on the self-reported vote intentions of only around 1000–2000 members of the population, measurement, sampling, and other sources of error mean that these figures come with uncertainty and imprecision (Groves and Lyberg 2010). Consequently, even if two polls are conducted and there is no change in the level of support for a candidate or party across the electorate, the two polls could differ by multiple percentage points (Bailey and Barnfield 2021). In this sense, polls differ from scores in sport and electoral returns in sequential nomination contests, both of which concretely and directly reflect actual changes in performance. Voters do seem to doubt the precision of polls (Kim et al., 2011), suggesting they are aware that they are at best blurry reflections of reality. As a result, they may resist updating their expectations in response to changes that are plausibly just random fluctuations within the margin of error. So at least when changes between polls are small, there may be no, or a limited, momentum effect on expectations.

Second, and closely related, if a party’s vote share increases to a new higher percentage, then this is arguably worse evidence that the party actually has this higher level of support than if it had polled at this level all along. For example, if a party polls twice at 40%, this gives us better reason to believe that it actually has the support of 40% of the electorate than if its share in the polls increases from 37% to 40%. Because it is possible for would-be momentum simply to result from random error, static large vote shares may be associated with higher expectations than dynamic large vote shares.

Third, in many cases, changes in the polls have negligible implications for important aspects of voters’ expectations. Voters often care about which party is most likely to win. Most prominent approaches to measuring electoral expectations focus on such expectations of victory

(Blais et al., 2008; Mongrain 2021). If a party gains ground in the polls, but does not move into first place or a reasonably competitive second place, it may stand no meaningfully better chance of winning. Similarly, a party that is well in the lead and has a 99% chance of winning the election likely will not improve that chance to 100% just by gaining a few extra percentage points in vote share. The perception of momentum may therefore only matter for expectations in particular competitive circumstances.

Finally, voters have strong preferences over election outcomes. They want their preferred party to win. Such preferences give rise to ‘wishful thinking’ – voters’ tendency to overrate their preferred parties’ electoral prospects (Babad and Katz 1991; Mongrain 2021; Searles et al. 2018). Though contested, one explanation for wishful thinking is ‘partisan motivated reasoning’ (Krizan and Windschitl 2009). Voters have prior beliefs grounded in their existing knowledge. These priors affect their assessments of the plausibility and credibility of new information, following an ‘accuracy motivation’ (Darke et al., 1998) with a ‘priors bias’ (Druckman and McGrath 2019). This accuracy motivation also explains why wishful thinking does not appear to be all-powerful – voters’ expectations are not blind to reality (Babad and Yacobos 1993; Morisi and Leeper 2022; Tikochinski and Babad 2022). But voters also have a ‘directional motivation’, meaning that the extent to which they incorporate new information shows a bias towards a desire to maintain the prior belief – itself also arrived at through such directionally motivated reasoning (Druckman and McGrath 2019). Research on *partisan* motivated reasoning indicates that this tendency leads people to pay more attention to information that is congenial to the political parties they support (Bolsen et al. 2014). Taken together, accuracy and directional motivations therefore imply that changes in the polls may be slightly less influential on voters for whom such changes spell bad news, limiting the extent to which they update their expectations. Conversely, voters for whom those changes would be good news (supporters of the party whose vote share is growing) may already have overly optimistic expectations that are therefore unresponsive owing to ceiling effects.

4. Experimental evidence

I conducted a series of survey experiments to assess the effect of changes in a party’s performance in the polls on electoral expectations in the United Kingdom.¹ These experiments are grouped into four studies, each of which accounts for one of the potential limiting factors just discussed, in turn. The studies are summarised in Table 1. I received ethical approval for the experiments in these studies from the Ethics of Research Committee at Queen Mary University of London and the Ethics Committee at the University of Exeter. All code and data to reproduce the analyses are available via OSF: <https://osf.io/epduy/>.

The studies also progress from a highly ‘abstract’ scenario to much more ‘detail’ (Brutger et al., 2022). Study One and Study Two introduce minimal information about the hypothetical election context besides the parties’ vote shares, while Study 3 provides detail on multiple other characteristics of the parties and context, and Study 4 explicitly evokes real-world contexts. This variation in levels of detail serves two purposes. First, it is possible that highly abstract experimental designs allow respondents to ‘fill in the blanks’ by making assumptions about the context the experiment is designed to invoke, and those assumptions affect their behaviour (Alekseev et al. 2017). For instance, in Study One, respondents might assume Party B is the UK Labour Party and respond accordingly. But detailed vignettes may give rise to an inverse problem, as ‘color in the laboratory’ elicits ‘impressions and memories of past

¹ In the Supplementary Material, I provide an example of the phenomenon under study in observational data, based on a case study of the Labour Party’s performance in the 2017 UK general election. This example demonstrates the difficulty of using observational data to study the causal effect of momentum, which is why only experimental evidence is presented here.

Table 1
Summary of experiments.

Experiment	Type	N	Platform	Date
Study One				
+3 Experiment	Between-person	1632	YouGov UK	April 2020
+6 Experiment	Between-person	1868	YouGov UK	Oct 2019
+9 Experiment	Between-person	1659	YouGov UK	April 2020
Study Two				
Two Polls Experiment	Within- and between-person	1400	YouGov UK	May 2022
Study Three				
Conjoint Experiment	Conjoint	1000	Prolific UK	May 2022
Study Four				
Factorial Experiment	Two-way factorial	6724	YouGov UK	June 2021

experiences over which the experimenter has no control' (Friedman et al. 1994, 53). By using both approaches, I therefore verify that the effect of momentum is robust to these contrasting forms of 'information equivalence' (Dafoe et al. 2018). Second, Brutger et al. (2022, 3) state that 'if the purpose is to demonstrate that an effect exists, a sparser experimental design better enables researchers to identify it, but if the purpose is instead to understand how important an effect might be relative to other considerations ... a more contextually rich design may be beneficial'. So I begin with a 'sparser' design to establish the effect of momentum on expectations 'exists', then proceed through more 'contextually rich' designs to assess how well that effect fares in the presence of 'other considerations' – namely, the four factors discussed above that might counteract the perception of momentum.

Across all studies, I measure expectations on an 11-point ordinal scale, in line with the British Election Study (Fieldhouse et al., 2023). While recent work suggests that analysing ordinal likert data using techniques designed for continuous data can cause major inferential problems (Bürkner and Vuorre 2019; Liddell and Kruschke 2018), such problems tend to wash out when outcome scales have seven or more response options (Allen and Seaman, 2007; Rhemtulla et al. 2012). I therefore present the results of standard ordinary least squares (OLS) models below. In the Supplementary Material, I also apply recommended Bayesian techniques for the analysis of ordinal data (Bürkner and Vuorre 2019) and find no reason to doubt the robustness of the findings reported below.

4.1. Study One

4.1.1. Experimental design

In Study One, respondents answered the following question. Text in bold was only included for the treatment group – the control group saw all the text except for the text in bold. The text was not presented in bold.

Imagine a general election, contested primarily between two parties, A and B, which is to be held in the next few weeks. Recent opinion polling has shown the two main parties on the following vote shares (**with the change over the past month in brackets**).

Party A - 44% (-1)

Party B - 40% (+*M*)

How likely is it that Party B wins the election?

Very unlikely to win 0-10 Very likely to win

By holding constant current vote share and randomly assigning respondents to see information about change over time in the polls in a hypothetical situation, this design straightforwardly assesses whether voters' expectations are responsive to the perception of momentum in

Table 2
Summary of treatment effects in Study One.

	+3	+6	+9
Intercept	4.338*** (0.069)	4.702*** (0.056)	4.558*** (0.064)
Treatment	0.499*** (0.098)	0.673*** (0.081)	0.839*** (0.090)
Observations	1632	1868	1659
R²	0.016	0.036	0.050

Note: * $p < 0.1$ ** $p < 0.05$ *** $p < 0.01$.

the polls in the abstract (Brutger et al., 2022, 14). I carried out three versions of the experiment, with the figure indicated by *M* above varying in each. In the first experiment, the *M* figure was set at 3, in the second 6, and in the third 9. By covering a range of potential changes in the polls – including a small change of 3 points that is well-within the margin of error across two polls – these experiments account for the possibility that the imprecision of polls could override the effect of momentum.

These experiments were fielded in YouGov's daily omnibus surveys to a sample of British respondents in 2019 and 2020. They were answered by 1632 (treatment 817, control 815), 1868 (treatment 914, control 954) and 1659 (treatment 837, control 822) respondents, respectively.

4.1.2. Results

Table 2 summarises the results of Study One. All three experimental treatments had a substantial and statistically significant effect on average expectations for Party B's performance. While on average those who knew Party B had grown by three percentage points in the polls rated it approximately 0.5 points higher ($\beta = 0.50$, 95% CI: 0.31–0.69), the equivalent effect in the six point treatment was just under 0.7 ($\beta = 0.67$, 95% CI: 0.51–0.83), and just over 0.8 ($\beta = 0.84$, 95% CI: 0.66–1.02) in the nine point treatment – suggesting *more* momentum, rather than just *mere* momentum, drives expectations.² Fig. 1 visualises these results. The dotted horizontal line in Fig. 1 represents the midpoint of the scale (5/10). On average, in the +6 and +9 experiments, the treatment was sufficiently convincing to push people over this midpoint. But, nonetheless, even a small change in vote share, which is plausibly the result of random statistical noise, still raises expectations relative to a constant large vote share.

4.2. Study Two

4.2.1. Experimental design

In Study Two, respondents answered the same question as in Study One. However, this time they answered it twice, after exposure to each of two polls. The two polls were: 1) Party A 44%-Party B 40%, and 2) Party A 45%-Party B 37%. These polls correspond to the implicit polling environment in Study One (+3 experiment): if Party B had gained three points, and Party A had lost one point, this implies the parties previously had shares of 37% and 45% respectively. Participants could see poll 1 twice, or poll 2 twice, or see both in either order. I distinguish these alternative conditions in Table 3. Importantly, these alternative combinations account for the second limiting factor discussed above, because they explicitly compare expectations when voters have seen a party repeatedly poll at 40% to expectations when it has grown from 37% to 40%. Respondents also reported expectations for Party A in this experiment, allowing me to assess how momentum operates in reverse, and had the option to say 'don't know'.³ This experiment was fielded in YouGov's daily omnibus surveys to a sample of 1400 British respondents

² In the Supplementary Material, a pooled interaction model suggests that the difference between the effect of the +3 and +9 treatments is highly statistically significant.

³ Approximately 30 people in each of the four conditions selected 'don't know'. As this rate is very low and does not vary by treatment condition, I simply remove these participants from the analysis.

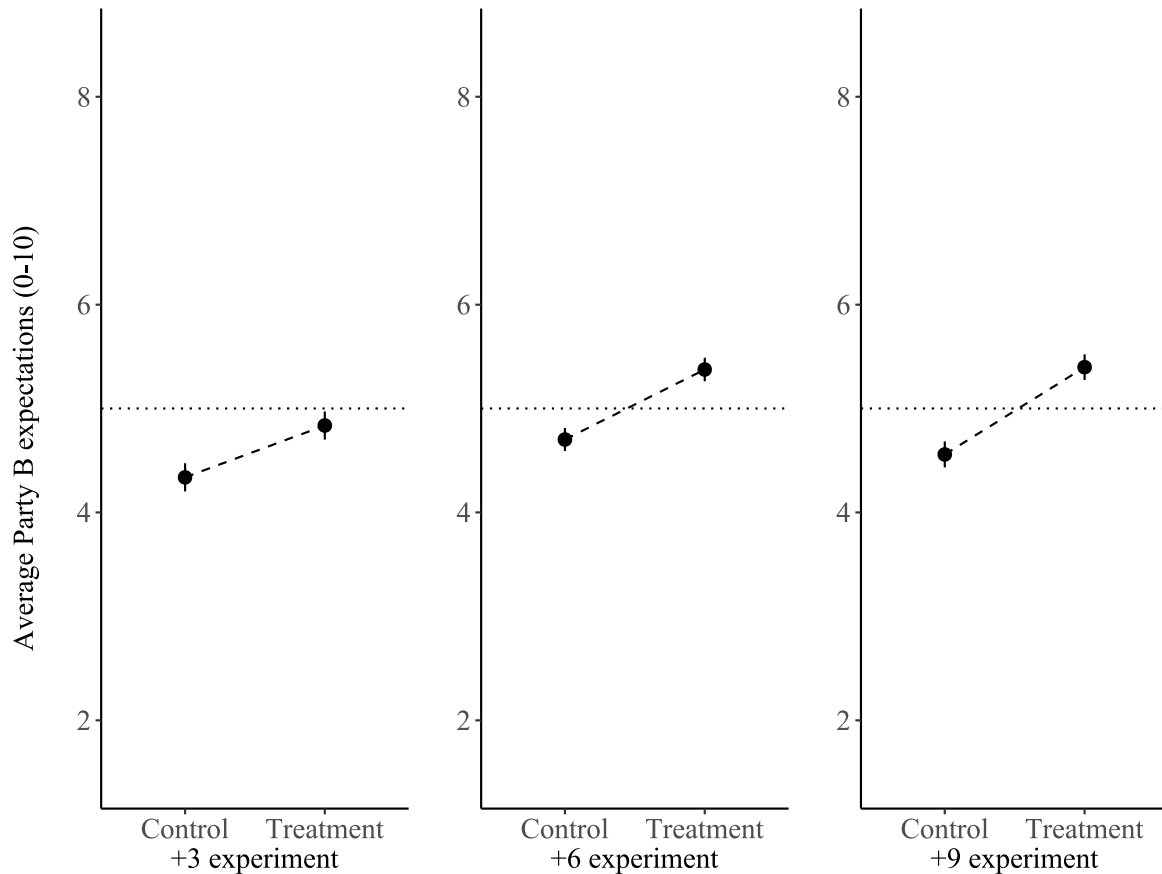


Fig. 1. Average predicted expectations and 95% confidence intervals in control and treatment groups, Study One. In each experiment, expectations are considerably higher in the treatment group, indicating an effect of perceived momentum.

Table 3
Summary of conditions in Study 2.

First poll	Second poll	Reference
Party A 45% - Party B 37%	Party A 45% - Party B 37%	Constant landslide
Party A 45% - Party B 37%	Party A 44% - Party B 40%	Momentum
Party A 44% - Party B 40%	Party A 45% - Party B 37%	Backwards
Party A 44% - Party B 40%	Party A 44% - Party B 40%	Constant marginal

on 25th May 2022.

4.2.2. Results

Table 4 summarises the results of Study Two. For ease of interpretation, Fig. 2 visualises these results as predicted responses in each treatment condition. What is immediately clear is that, regardless of the experimental condition, people think the leading party (A) has a substantially better chance of winning than the trailing party (B). As I will show again below, a party’s current position in the polls is the main driver of expectations.

The triangular points in Fig. 2 refer to the condition in which Party B gains ground in the polls. When Party B’s vote share grows from 37% to 40%, expectations for its chance of winning increase significantly (right panel), and correspondingly, expectations that Party A will win decrease significantly (left panel). Crucially, these changes take expectations for Party B’s chances significantly higher, and Party A’s chances significantly lower, than they are among those people who are told that Party B has constantly polled at 40% (the constant marginal condition, square points). These differences correspond to significant interaction effects between the momentum condition (versus constant landslide condition) and the response stage (second poll vs first) on Party A ($\beta = -0.89$, 95%

Table 4
Summary of treatment effects in Study Two.

	Party A	Party B
Intercept	6.935*** (0.080)	4.097*** (0.089)
Poll (second vs first)	-0.006 (0.056)	0.018 (0.055)
Momentum	0.175 (0.113)	-0.093 (0.126)
Constant Marginal	-0.400*** (0.112)	0.382*** (0.125)
Backwards	-0.265** (0.113)	0.461*** (0.125)
Poll:Momentum	-0.886*** (0.080)	0.737*** (0.078)
Poll:Constant Marginal	0.206*** (0.079)	-0.133* (0.078)
Poll:Backwards	0.688*** (0.079)	-0.789*** (0.078)
Num. IDs	1294	1292
sd(ID)	1.247	1.428
Num. Obs.	2549	2542

Note: *p<0.1 **p<0.05 ***p < 0.01.

CI: -1.04 to -0.73) and Party B expectations ($\beta = 0.74$, 95% CI: 0.58–0.89). So it is not just that Party B’s vote share was 37%, which implies a certain probability of winning, and is now 40%, which implies a higher probability – rather, the *change itself* carries additional weight. When the party constantly polls at 40%, voters *do not* see this as better evidence that it has a good chance of winning than when it gains ground from 37% to 40%. Instead, the perception of momentum raises expectations above and beyond the expectations that would otherwise normally be associated with the higher vote share.

Fig. 2 also displays a corresponding ‘backwards’ momentum effect (crosses). When Party B *loses* ground in the polls (from 40% to 37%), expectations of its chances of winning drop, and they increase for the leading Party A. Again, for Party B, expectations fall lower than they are among those who are told it has constantly polled at 37%, and for Party

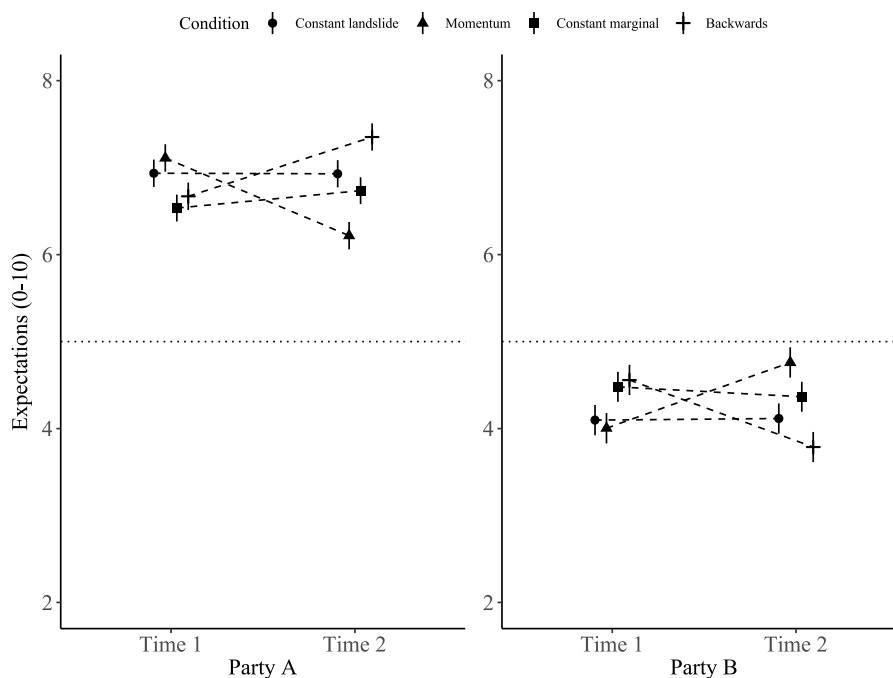


Fig. 2. Average predicted expectations and 95% confidence intervals in each treatment condition, Study Two. In the momentum condition (triangle), expectations rise for the party with momentum (Party B, right) and drop for the party without momentum (Party A, left). Momentum results in higher (lower) expectations for Party B (Party A) than when Party B constantly polls at a higher vote share.

A, they rise higher. The reversal of fortunes affects expectations beyond just shifting them to the average level associated with each vote share.

4.3. Study Three

4.3.1. Experimental design

As noted above, a third factor potentially limiting the effect of momentum is that changes in the polls have negligible implications for parties' probabilities of victory in certain competitive contexts. In Study Three, I account for this consideration by conducting a conjoint analysis (Hainmueller et al. 2014; Leeper et al. 2019) which introduces additional layers of context by randomly varying multiple aspects of the electoral environment reported in the polls that participants are asked to evaluate. I designed the experiment in Qualtrics and fielded it to a sample of 1000 British Prolific members on 6th May 2022.⁴

Respondents completed three conjoint tasks. In each task, respondents faced two profiles. Each profile reports a poll. One is a poll on an election between Parties A, B, and C. The other is a poll on an election between Parties X, Y, and Z. Respondents reported their expectations of Party B's and Party Y's chances of winning their respective elections. In each poll, the party's ranking (first, second, or third) is randomly assigned, as is whether each party is 'left-wing', 'right-wing', or 'centrist', whether the election takes place 'in a few months', 'in a few weeks', 'next week', or 'tomorrow', and how the polls have changed. Party B/Party Y's change over time in the polls is set to '-6', '-3', '+0', '+3' or '+6', and the change over time for the two other parties in each case is set to balance out this change. For example, if Party B has gained six points (+6) then Party A and Party C will each have lost 3 points

⁴ It is important to note that, owing to budgetary constraints, Study Three relies on a convenience sample which is not nationally representative (see Supplementary Material for sample composition). However, evidence suggests such samples produce comparable results to more representative samples in survey experiments (Mullinix et al., 2015), as is indeed the case here – the effect of momentum in Study Three is comparable to Studies One and Two which rely on more rigorous YouGov samples.

Table 5

Summary of randomized features and levels, Study 3.

Feature	Levels
Momentum	-6, -3, +0, +3, +6
Rank	First, second, third
Party	Left-wing, centrist, right-wing
Ideology	
Contest	Three close (36%, 29%, 23%), close top two (42%, 40%, 7%), big margin (44%, 32%, 12%)
Timing	In a few months, in a few weeks, next week, tomorrow

(-3). A final component in the design randomly assigns vote shares between three possible combinations: 1) 36%, 29%, 23%; 2) 42%, 40%, 7%; 3) 44%, 32%, 12%. These combinations of vote shares reflect three important scenarios, respectively, and are based on three recent UK general election results: 1) all three parties have large vote shares that are relatively close (2010); 2) two parties dominate vote share in a close two-horse race (2017); 3) one party is far and away the clear winner (2019). This variety therefore allows me to assess how momentum may matter in different, and crucially realistic, competitive contexts.⁵ Table 5 summarises the randomised features and their possible levels. Screenshots of example tasks are provided in the Supplementary Material.

4.3.2. Results

Firstly, Table 6 displays the average marginal component effects (AMCEs) of each of the randomized design features. What stands out most clearly is the overwhelming effect of a party's position in the polls on expectations. Expectations were around 5 points higher for Party B or Y when in first place, as opposed to third place ($\beta = 4.97$, 95% CI: 4.80–5.14). People clearly think that a party has a better chance of winning an election the higher its overall ranking in the polls.

⁵ Here, I follow Laver and Benoit (2015) in recognising that, functionally, there are few electoral distributions that are strategically distinct in multiparty systems. The three contexts used here correspond roughly to their 'strongly dominant party', 'top-two', and 'top-three' systems.

Beyond this though, changes in the polls exert a significant effect. Relative to having a constant vote share, expectations for Party B/Y are approximately 0.6 ($\beta = 0.59$, 95% CI: 0.42–0.77) and 0.8 points ($\beta = 0.77$, 95% CI: 0.59–0.95) higher when it has gained three and six points in the polls, respectively. The drop in expectations when a party has lost ground in the polls is smaller, but still significant: expectations are approximately 0.2 ($\beta = -0.21$, 95% CI: -0.38 to -0.04) and 0.4 points ($\beta = -0.36$, 95% CI: -0.53 to -0.18) lower when a party has lost three and six points in the polls, respectively. This is further evidence that perceived momentum exerts an effect on expectations beyond its implications for current polling: at a constant position and share in the polls, how a party's performance has changed recently can raise or lower expectations. There is little evidence of any overall effect of election timing, party ideology, or the overall distribution of vote shares.

Fig. 3 explores the effect of momentum further by assessing how the effect varies depending on the party's overall performance in the polls. Specifically, the effect of changes in the polls is estimated for each position in the polls that Party B/Y could take within each of the three competitive contexts. For example, the top left panel reports the effect of changes in vote share for a party in first place, with 44% of the vote, with opponents polling at 32% and 12%. The middle panel reports the effect for a party in second place, with 40% of the vote, with opponents polling at 42% and 7%.

Most importantly, in every possible case, momentum has some effect on expectations – and the size of this effect varies little. However, for a third-placed party, regardless of the distribution of vote shares, perceived momentum only raises expectations significantly when the party has gained six, and not three points. Also, although on average 'backwards' momentum had a significant effect on expectations, there is no case in Fig. 3 where its negative effect on expectations was statistically significant at this more fine-grained level.

On the whole, these findings suggest that perceived momentum raises expectations *regardless* of how well a party is otherwise positioned in the polls. Even when a party has a clear lead in first place, it looks more likely to win if it recently gained vote share to get there. Even when a second-placed party's growth in the polls still leaves it twelve points behind the leader, expectations are raised by this perceived momentum. Even when a party is a distant third place, having gained ground to get there makes it appear better positioned to win.

4.4. Study Four

4.4.1. Experimental design

Finally, Study Four further increases the contextual detail introduced in Study Three by asking respondents to assess polls referring to real named parties. Although Study Three provides little reason to believe

that increased detail dampens the effect of perceived momentum, it does not account for the phenomenon of 'wishful thinking' – voters' tendency to overrate their preferred parties' electoral prospects – as discussed above (Babad and Katz 1991; Searles et al. 2018). Study Four is designed to assess whether the effect of momentum persists in more realistic conditions where partisan motivated reasoning might dampen the effect of changes in the polls on either out-partisan or indeed in-partisan expectations.

In Study Four, as well as being randomly assigned to a treatment or control condition, respondents are also randomly split between three different groups: one in which the parties are again labelled A and B (A/B condition), one in which they are labelled Conservative and Labour (UK condition), and one in which they are labelled Conservative and Liberal (Canada condition). This gives a total of six different conditions, summarised in Table 7. The purpose of including the two additional conditions (UK and Canada) is to investigate how motivated reasoning alters the effects observed in Study One. The two conditions represent a case in which respondents are likely to have strong, directionally motivated priors (UK), and a case in which they are likely to have much weaker or more uncertain, and less-motivated priors (Canada), as compared to a case in which it does not make sense to have any priors at all (A/B). This, in turn, compares the abstract scenario in Study One to how people make sense of polling information in two realistic scenarios: when it pertains to elections in their own polity, and when it pertains to elections in other polities.

In each case, the poll results are the same as in the +6 experiment from Study One: the leading party (A/Conservative/Conservative) has 44% of the vote, while the trailing party (B/Labour/Liberal) has 40%. Under treatment, the leading party has changed by -1, and the trailing party has changed by +6. Poll aggregators prior to the conduction of the experiment suggested that the Labour Party had approximately 34% support. This implies that, for it to poll at 40%, the party would need to increase its share by six points, in line with the +6 treatment. The Liberal Party of Canada had also recently polled in this region, with poll aggregators suggesting it had approximately 35% support (Grenier 2021). As well as providing consistency and a replication of Study One, this was also therefore a particularly 'experimentally realistic' treatment option (McDermott 2011).

I chose Canada as the additional condition in the design primarily because very few British voters are likely to have a good level of knowledge about Canadian politics, but its two main parties are broadly similar in ideological terms to those that dominate UK politics. An average Labour or Conservative voter might not be expected to know much about Canadian politics, but should know which party they would rather see win an election, when told their names and ideological position. In addition, Canada has a very similar electoral system to the UK, facilitating a comparison across the two.

I collected a large sample, fielding this experiment to 6724 British YouGov respondents on 7-11th June 2021, to ensure I had sufficient power to conduct the three-way interaction required to assess how the treatment affects different partisans in different contexts.⁶ Concretely, I conduct a regression analysis in which treatment status is interacted with condition (A/B, UK, Canada) and respondents' 2019 vote choice: Conservative (N = 2328; 1163 Control, 1165 Treatment), Labour (N = 1729; 858 Control, 871 Treatment), or Other (N = 1150; 575 Control, 575 Treatment).

⁶ This experiment was, unavoidably, conducted during the COVID-19 pandemic. Some evidence suggests that survey data quality temporarily declined during the pandemic, so the results below should be read with an appropriate degree of caution (Peyton et al. 2022). However, for the most part, this decreased data quality is likely to have suppressed, rather than exaggerated, the effects observed here, which remain statistically significant regardless.

Table 6
Summary of treatment effects (AMCEs) in Study Three.

	AMCE
Intercept	1.493*** (0.099)
Momentum -6	-0.357*** (0.083)
Momentum -3	-0.210** (0.083)
Momentum +3	0.595*** (0.083)
Momentum +6	0.771*** (0.083)
Rank First	4.969*** (0.065)
Rank Second	2.437*** (0.065)
Contest Close top two (2017)	-0.031 (0.065)
Contest Three close (2010)	0.144** (0.065)
Party Ideology Left-wing	-0.016 (0.065)
Party Ideology Right-wing	0.041 (0.064)
Timing In a few weeks	-0.067 (0.075)
Timing Next week	0.061 (0.075)
Timing Tomorrow	0.001 (0.075)
Observations	5962
R ²	0.512

Note: * $p < 0.1$ ** $p < 0.05$ *** $p < 0.01$.

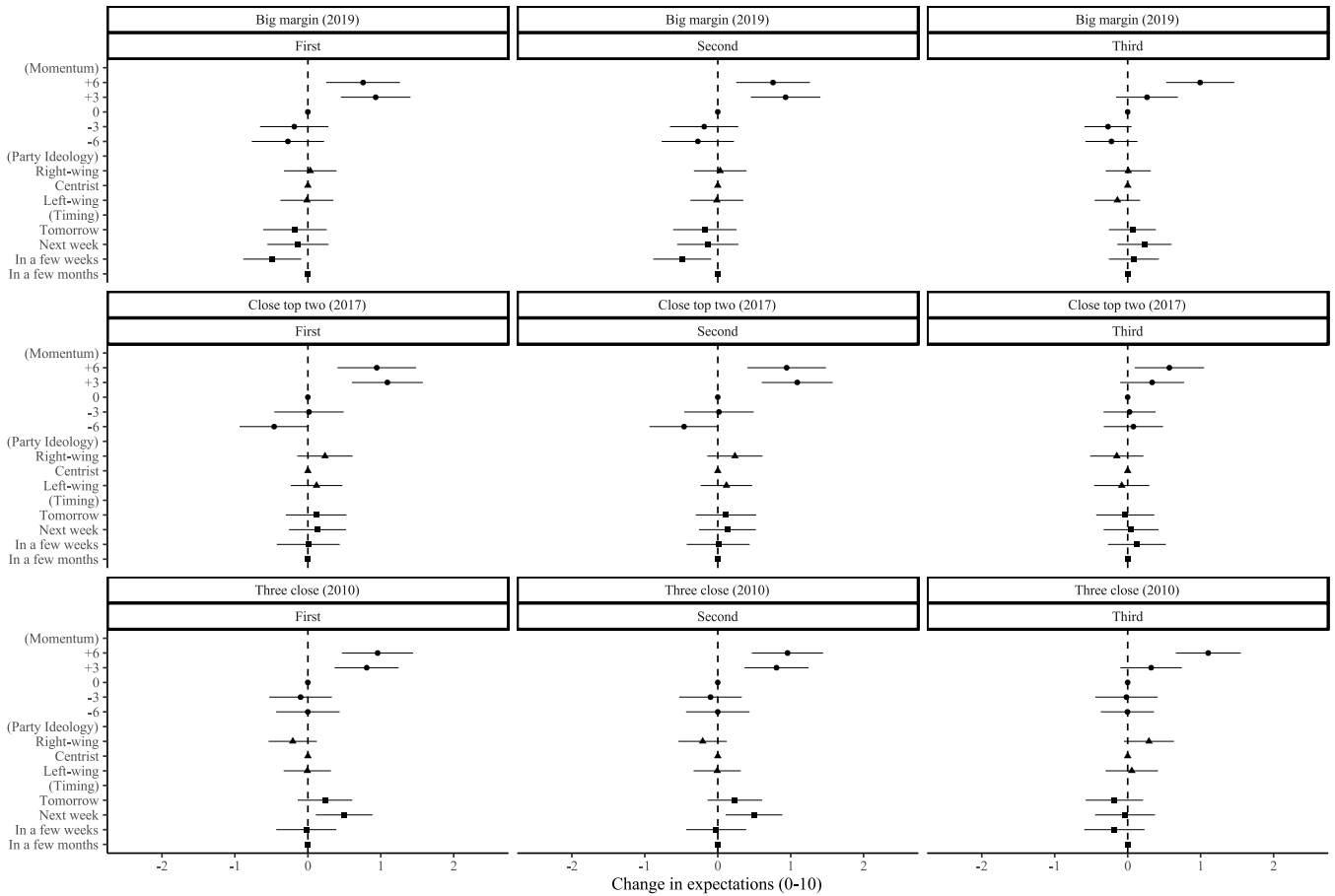


Fig. 3. Conditional AMCES and 95% confidence intervals, Study Three. Momentum raises expectations for first-, second-, and third-placed parties, in a range of vote share distributions.

Table 7
Summary of experimental conditions, Study Four.

	Control	Treatment
Party A/B	Imagine a general election is going to be held in the next few weeks, and recent opinion polling shows the two main parties, Party A and Party B, on the following vote shares. Party A - 44% Party B - 40% How likely is it that Party B would win the election?	Imagine a general election is going to be held in the next few weeks, and recent opinion polling shows the two main parties, Party A and Party B, on the following vote shares (with the change over the past month in brackets). Party A - 44% (-1) Party B - 40% (+6) How likely is it that Party B would win the election?
UK (Labour)	Imagine a general election is going to be held in the next few weeks, and recent opinion polling shows the two main parties, the Conservative Party and the Labour Party, on the following vote shares. Conservative Party - 44% Labour Party - 40% How likely is it that the Labour Party would win the election?	Imagine a general election is going to be held in the next few weeks, and recent opinion polling shows the two main parties, the Conservative Party and the Labour Party, on the following vote shares (with the change over the past month in brackets). Conservative Party - 44% (-1) Labour Party - 40% (+6) How likely is it that the Labour Party would win the election?
Canada (Liberal)	Imagine a general election is going to be held in the next few weeks in Canada, and recent opinion polling shows the two main parties, the right-wing Conservative Party and the left-wing Liberal Party, on the following vote shares. Conservative Party of Canada - 44% Liberal Party of Canada - 40% How likely is it that the Liberal Party of Canada would win the election?	Imagine a general election is going to be held in the next few weeks in Canada, and recent opinion polling shows the two main parties, the right-wing Conservative Party and the left-wing Liberal Party, on the following vote shares (with the change over the past month in brackets). Conservative Party of Canada - 44% (-1) Liberal Party of Canada - 40% (+6) How likely is it that the Liberal Party of Canada would win the election?

4.4.2. Results

Table 8 reports the overall results of Study Four. The effect in the Party B condition ($\beta = 0.89$, 95% CI: 0.56–1.22) is comparable to the effect of gaining six points in the polls reported in both Study One and Study Three. In the UK condition, the effect is slightly smaller, though the interaction effect capturing this difference is not statistically significant at the 95% level ($\beta = -0.41$, 95% CI: -0.87–0.05). In the Canada condition, the effect is significantly smaller ($\beta = -0.53$, 95% CI: -0.98 to -0.07). Yet, as Fig. 4 reveals, pooling across different party supporters,

the average effects of momentum in each condition are highly statistically significant: the perception of momentum significantly raises expectations, on average, across all three conditions.

Fig. 5 demonstrates how these effects vary by party support. In the A/B condition, treatment has substantial and highly statistically significant effects on Conservatives, Labour voters, and supporters of other parties – though it is notably larger for the latter. In the UK condition (middle panel), treatment again has a strong and statistically significant effect on Conservatives, Labour voters, and supporters of other parties –

Table 8
Summary of treatment effects in Study Four.

	Effect
Intercept	4.604*** (0.122)
Treatment	0.889*** (0.168)
Labour Party (UK)	-0.543*** (0.165)
Liberal Party (Canada)	0.299* (0.168)
Other Voter	-0.293 (0.183)
Conservative Voter	0.001 (0.160)
Treatment:Labour Party (UK)	-0.407* (0.234)
Treatment:Liberal Party (Canada)	-0.526** (0.233)
Treatment:Other Voter	0.363 (0.259)
Treatment:Conservative Voter	-0.286 (0.221)
Labour Party (UK):Other Voter	-0.386 (0.261)
Liberal Party (Canada):Other Voter	0.294 (0.258)
Labour Party (UK):Conservative Voter	-1.571*** (0.219)
Liberal Party (Canada):Conservative Voter	-0.251 (0.220)
Treatment:Labour Party (UK):Other Voter	-0.073 (0.368)
Treatment:Liberal Party (Canada):Other Voter	-0.363 (0.365)
Treatment:Labour Party (UK):Conservative Voter	0.444 (0.310)
Treatment:Liberal Party (Canada):Conservative Voter	0.119 (0.306)
Observations	5207
R ²	0.155

Note: *p<0.1 **p<0.05 ***p < 0.01.

and the size of this effect varies little. However, there are substantial differences in levels of expectations for the Labour Party, net of these treatment effects. For example, Conservative voters give the Labour Party a considerably lower chance under both treatment and control than Labour voters do. Supporters of other parties give it a chance approximately half way between the two. This would suggest that party preferences do not condition the effect of momentum, but nor does the effect of momentum cause partisans to converge in their expectations.

In the Canada condition (right panel), across treatment and control, everyone’s expectations remain clustered very close to 5/10 (represented by the dotted horizontal line). Only for Labour Party supporters is the treatment effect statistically significant, which may suggest that only those who would like the Liberal Party to win are responsive to its apparent momentum, but even here the effect is small. It seems likely that in this case, the invocation of a real context, combined with respondents’ lack of knowledge about that context, simply dampens the treatment effect (Brutger et al., 2022).

Discussion

When drawing on polls to predict who will win the next election, people learn more than just how the parties rank currently – they also learn about how this performance has changed over time. These changes in the polls create perceptions of momentum that shift expectations beyond where they would be if a party constantly polled at a given vote share. The perception of momentum itself carries an additional causal force – just as it does when people make sports predictions (Meier et al., 2020), interpret societal trends (Mortensen et al., 2019), and engage with sequential election contests (Bartels, 1987). Across four studies comprising six large-scale survey experiments of increasing complexity and detail, I have provided extensive evidence of this effect in action. Even when changes in vote share are plausibly just statistically insignificant fluctuations, and even when compared to consistently polling at a higher vote share, and even when the change makes little difference to a party’s objective probability of victory, and even when voters have strong preferences that might colour their interpretation of the polls, momentum raises electoral expectations. Whatever vote share a party currently has, learning that this vote share is larger than the party had in the recent past raises people’s expectations that it will go on to win the election.

These insights have major implications for any topic in political science where electoral expectations feature as an independent variable. For example, voters with excessive expectations for their preferred

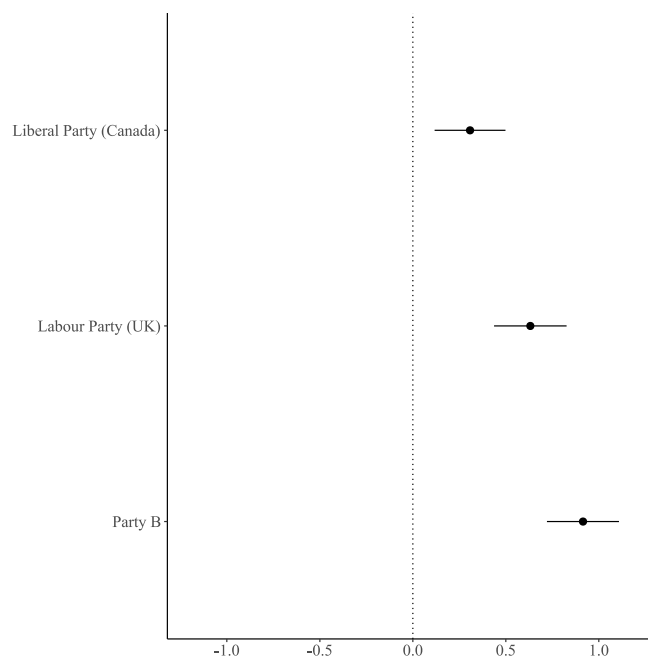


Fig. 4. Pooled average treatment effect and 95% confidence intervals in all three context conditions, Study Four. Momentum significantly raises expectations in hypothetical, familiar and unfamiliar real-world contexts. Real-world contexts moderate the size of the effect.

party’s performance become dissatisfied with democracy when they lose an election (Mongrain 2023). The perception of momentum in the polls could, in many cases, be a factor that is driving the formation of such unrealistic expectations. If momentum affects expectations, then it could also affect voters’ ability to correctly identify their ‘best insincere vote’ (Eggers and Vivyan 2020) and cast an effective strategic vote (Fey 1997). Even rational choice models of voting behaviour where the decision to vote depends on the perceived chance of casting a decisive vote suggest that momentum could indirectly affect levels of turnout. So when predicting these behaviours, scholars should account for the influence of momentum on the formation of the expectations that drive them. Curiously though, despite the apparent link between expectations and voting behaviour, and abundant evidence that polls help people form their expectations, evidence on the influence of polls on voting behaviour is mixed at best: some work suggests polls help people cast strategic votes (Meffert and Gschwend 2011; Merolla 2009; Rich 2015) or produce bandwagon effects (Farjam 2020; Gimpel and Harvey 1997; Marsh 1985), but recent work casts doubt on these relationships (Blais et al., 2018; Daoust et al. 2020; Roy et al. 2021). While my findings cannot speak to any effect of momentum or polls on voting intentions, the clear effects of momentum on expectations demonstrated above suggest that investigating the potential influence of momentum on vote choice, via its effects on expectations, might help to resolve this paradox. It could be that, just as economic voters are more responsive to economic change than current economic performance (Bailey 2019; Lewis-Beck and Stegmaier 2000; Soroka et al. 2015), voters who use polls in their decision-making might be more responsive to changes in vote share than current vote shares. Indeed, some of the best experimental evidence of the bandwagon effect suggests the effect is *dynamic* rather than *static* (see Barnfield 2019): polling treatments emphasising a party’s growth in the polls do appear to persuade some people to vote for that party (Dahlgaard et al., 2017; van der Meer et al., 2016).

My findings also have implications for policy debates about the regulation of opinion polls. Scholars have recently shown that even relatively stable polling environments are portrayed by the media as changing and dynamic, likely shaping public understanding of elections

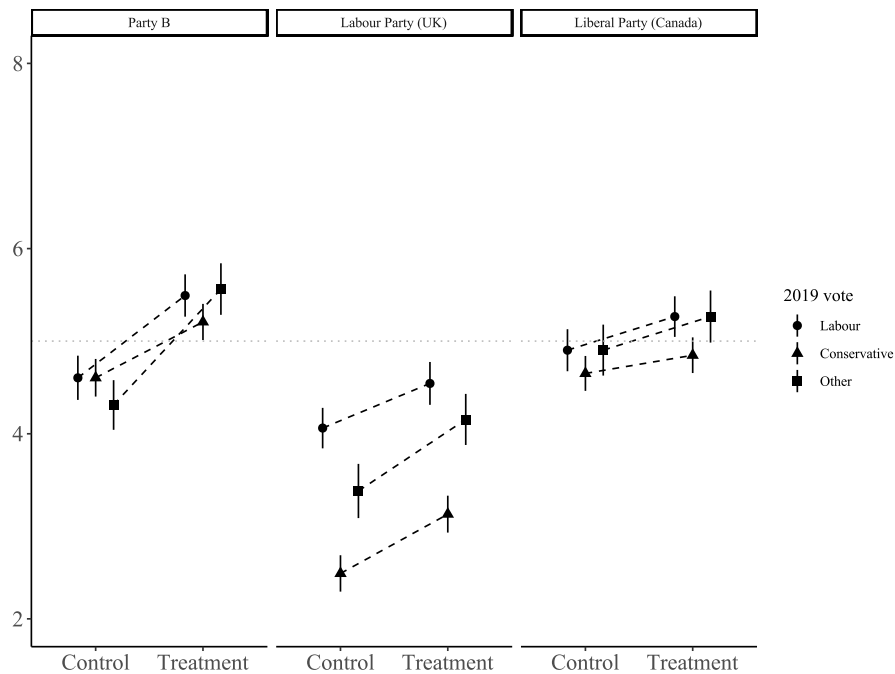


Fig. 5. Average predicted expectations and 95% confidence intervals in control and treatment groups, in all three context conditions, Study Four. Party supporters vary more in the overall levels of their expectations than in responsiveness to treatment.

(Larsen and Fazekas, 2020). My findings demonstrate that this effect on voters' expectations may not even require journalistic exaggeration of changes in the polls; simply learning, absent any media 'spin', that the polls have changed a little has a substantial effect on what people expect to happen at elections. While increased regulation of how journalists report polls may nonetheless be beneficial, if regulators want to prevent voters from forming expectations that exaggerate the chances of trailing parties with 'momentum', this may require limiting whether pollsters themselves report change between polls alongside their vote share estimates at all, or requesting that they report a margin of error to show when changes fall within that margin. Admittedly, further evidence is needed before taking such radical regulatory steps. For example, scholars should collect longitudinal observational data to produce more ecologically valid evidence of the effect of momentum over time, and study whether that effect ultimately spills over into voting intentions. If conducted in a cross-national context, such work could also account for this study's limited focus on only British voters accustomed to a Westminster, first-past-the-post election system. Voters may give less weight to the implications of momentum in the polls in proportional electoral systems where the meaning of 'winning' is less clear-cut (Plescia 2018; Stiers et al. 2018), and other sources of information – such as coalition signals – provide important additional clues as to which parties are likely to end up in government (Bowler et al. 2021; Gschwend et al. 2017). Yet, it is precisely in such multiparty systems that scholars have experimentally demonstrated an effect of momentum in the polls on vote choice (Dahlgaard et al., 2017; van der Meer et al., 2016). This puzzling nexus of findings only further demonstrates the need for more study of momentum's link to expectations and voting behaviour in a range of contexts, to inform important regulatory decisions.

Finally, my findings provide a launchpad for building a political psychological theory of beliefs about the future. Such an account must incorporate the observation that people do not think the future can be predicted entirely based on knowledge about how the world is right now, without paying any attention to how it was *in the past* (Bendor et al., 2021). Changes between the past and present drive expectations of the future too. A next step for the development of this theoretical account is to establish exactly how perceptions of momentum operate –

through a strategic, self-perpetuating, or psychological mechanism. Scholars should take the theoretical claims and base of empirical evidence provided here as a starting point for exploring in greater depth how exactly momentum operates as a psychological link between changes in our measurements of public opinion and changes in our predictions of the future.

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Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

The data and code to reproduce the analyses presented in this paper have been deposited in a public OSF repository: <https://osf.io/epduy/>.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.electstud.2023.102656>.

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Dr Matthew Barnfield is an ESRC Postdoctoral Fellow at the University of Essex. He conducted much of the research featured in this article as a PhD Candidate at Queen Mary University of London, and as a Postdoctoral Research Fellow at the University of Exeter.