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Partisanship, attribution and approval in a public health shock☆

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ABSTRACT

Political scientists have long agreed that partisanship can bias how voters evaluate government performance and attribute responsibility. However, less is known about how – and to what extent – these biases work across different types of voters, or how they respond to positive or non-partisan policy outcomes. In this research note we address these questions, focusing on how voters respond to a positive, non-partisan public health shock: the successful early rollout of Covid-19 vaccinations in England. Through a pre-registered information experiment embedded in the British Election Study (N > 6000), we test how voters respond to claims that the quasi-independent National Health Service, rather than the government, deserved credit for the success of the programme. On average, subjects do attribute less responsibility to government, but this has no downstream effect on general approval. Exploratory heterogeneity analyses suggest that government and opposition supporters, as well as historic swing voters, respond homogeneously to our intervention. Our findings are not fully explained by rational or selective frameworks of responsibility attribution, and add nuance to existing experimental work on the political effects of the pandemic.

1. Introduction

One of the main normative pillars of democratic theory is that voters punish and reward governments for their performance in office (Przeworski et al., 2000). In order to effectively weed out underperforming incumbents, voters should only hold governments accountable for outcomes that are seen as within their purview and control (Powell and Whitten 1993; Fearon 1999). Significant scholarly attention has therefore been dedicated to examining *how* voters determine government responsibility for a given issue. Some have argued that attribution is a rational process whereby voters utilise information to determine whether an outcome is the result of government performance (Powell and Whitten 1993). Others have instead suggested that voters determine responsibility selectively, through a partisan perceptual filter (Tilley and Hobolt 2011).

The debate between these camps has been particularly difficult to settle due to the empirical limitations of the existing literature. For instance, most studies have examined responsibility attribution either in the context of heavily partisan issues, like the economy (Duch and Stevenson 2008; Lewis-Beck and Stegmaier 2019), or in one-off *shock* events that impact only a small subset of the population (see Arceneaux and Stein 2006; Malhotra and Kuo 2008; Achen and Bartels 2017). In addition, the literature has tended to prioritise studying how voters attribute *blame* for negative outcomes over understanding how they apportion *credit* when things go well (Weaver 1986; Marsh and Tilley 2010). Restricting focus to this small set of cases, however, leaves several questions unanswered. How do voters attribute responsibility for highly successful policies? And does depoliticisation lead the electorate to update rationally, not selectively?

At the same time, because most contributions utilise cross-sectional measures of partisanship, often derived from a single survey, they are unable to disaggregate different *types* of party supporters. We do not know, for instance, whether voters who regularly switch their partisan loyalties differ in the way they evaluate performance. As electorates become increasingly volatile, with more voters switching parties between elections, the theoretical significance of such a line of inquiry is mounting (Fieldhouse et al., 2019).

We explore these questions in this research note by examining how voters attribute responsibility in the context of a positive, nationwide

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public health shock. We study how voters in England apportioned credit for the rollout of Covid-19 vaccines in May 2021, at a time when the UK's vaccination effort was one of the fastest in the world (Our World in Data, 2022).

We do this through an original survey experiment embedded in the British Election Study Internet Panel (BESIP), which primes respondents with information about the rollout's success being driven by the government's decisionmaking, or the choices made by the quasi-independent National Health Service (NHS). Unlike existing experimental work surrounding the pandemic, we seek to offer neutral frames which do not have obvious partisan implications (see Aruguete et al., 2021). We also concentrate on a broad measure of government approval, enhancing existing studies on how the pandemic shaped political trust and support for specific policies over time (see: Aruguete et al., 2021; Myers 2021).

On average, we find that our NHS responsibility vignette does cause respondents to assign less credit to the government for the vaccination rollout. This effect, though, does *not* appear to have any consequence for government approval, suggesting that voters are more than capable of rationally processing new information, but without using such information to re-evaluate support. This main result is puzzling, but mirrors other studies that find to Covid to have minimal effects on political beliefs (Blumenau et al. 2022). It also slots into a wider literature that shows the lack of downstream effects in experimental designs (e.g. Clayton et al., 2020).

To better understand these inconsistent results, we investigate how different types of voter respond to our treatment. Contrary to frameworks of selective attribution, treatment effects are similar for both government and opposition supporters. We also use past waves of the BES online panel to identify swing voters, and again find a homogenous negative response. These results evade a neat explanation, highlighting limitations of existing theory and offering several avenues for future scholarly investigation. They also suggest that public opinion in the UK is in some ways more malleable than the United States, where early Covid studies have highlighted the centrality of partisanship (Gadarian et al. 2021).

By grounding our research in the case of the vaccine rollout in England, we are able to make several contributions to the literature. Since the programme was seen as an unambiguous success, we diverge from the dominant focus on the attribution of *blame* and instead explore how voters apportion *credit*. Focusing on public health policy, we contribute to a neglected but growing body of work that studies attribution for issues not directly connected to the economy. Because the rollout was supported by all major political parties, we can largely exclude the effects of elite-level partisan cues and policy disagreement. And because our results fall outside the predictions of existing theory, we open important theoretical and methodological gaps for future research to fill.

2. The argument

2.1. Rational and selective attribution

How do voters assign credit and blame to politicians? The existing literature is centred on two opposing explanations: voters rationally update attributions in response to new information, or they behave selectively in accordance with partisan priors. These frameworks are summarised in Fig. 1.

Under the first approach, responsibility attribution plays a crucial *moderating* role in determining support for the government (Powell and Whitten 1993). According to canonical models of accountability, the public seek to elect the highest quality politicians (Barro 1973; Ferejohn 1986). In order to identify capable candidates, voters evaluate their performance when in office: negative outcomes are seen as indicative of bad decision-making while positive ones are suggestive of more competent choices. If the outcomes are beyond the control of politicians, however, performance-based judgments cease to be a useful indicator of true candidate quality. From this perspective, voters have a strong incentive to update their attributions in response to information about who or what is responsible for a given outcome.

Selective attribution changes the implied causal ordering. Government support is now seen as a static function of partisanship, and as a *cause*, rather than a *consequence*, of how voters attribute responsibility. Broadly speaking, government supporters will selectively apportion credit for things that go well, while opposition supporters will disproportionately assign blame for negative outcomes (Tilley and Hobolt 2011).[1] According to this framework, objective information about who or what is responsible for a given policy outcome should have little influence on how voters apportion credit or blame. Rather, a voter's performance beliefs and partisan leaning are central.

2.2. What we are missing

Existing scholarly work on responsibility attribution has so far been characterised by three key limitations.

Firstly, most studies have analysed how voters attribute responsibility over issues that are distinctively partisan or which impact few voters. Since some economic indicators can provide 'objective' measures of government performance (Powell and Whitten 1993; Duch and Stevenson 2008), most studies have examined responsibility attribution in an economic context (Tilley and Hobolt 2011; Bisgaard 2015). However, this narrowed focus fails to recognise how partisan attitudes often shape how voters evaluate the economy (Evans and Pickup 2010) and neglects a host of other competence-related issues that also matter to voters (Green and Jennings 2017).

Relatedly, while there is a large literature on the non-economic determinants of vote choice, from stable partisan identities through to corruption, climate change or natural disasters, work on non-economic shocks tend to focus on short-term events which affect only a small subset of the electorate (Arceneaux and Stein 2006; Malhotra and Kuo

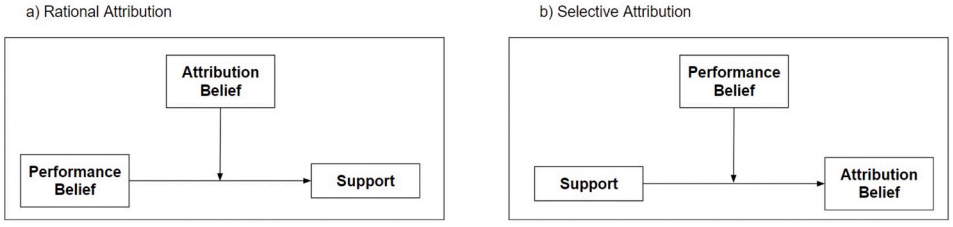

Fig. 1. Visual depiction of rational and selective attribution.

[1] In effect this is a form of motivated reasoning employed by voters to shield their favoured politician from criticism and justify their support (Flynn et al. 2017).

2008; Bechtel and Hainmueller 2011; Achen and Bartels 2017; Rubin 2018; Pahontu 2020). While the Covid pandemic is in many ways atypical, its extent and duration go beyond most shocks. And the positive and non-partisan nature of the vaccination rollout, at least in the UK, can help fill this empirical gap in the literature.

Secondly, the literature appears to disproportionately focus on negative shocks, issues that require voters to assign *blame* rather than *credit*. We know that human beings have innate an "negativity bias" that spills over into the political arena, with voters responding asymmetrically to negative information about candidate performance (Soroka et al. 2019). However, there is still insufficient evidence surrounding the way voters respond to, and attribute responsibility for, unambiguously *positive* events that are highly salient in the public domain (Bechtel and Hainmueller 2011). The early stages of England's vaccination rollout represents such an event, and is thus of wider contextual importance.

Lastly, despite its theoretical centrality, most extant studies have relied upon single cross-sectional measures of partisanship. While such an approach allows analysts to distinguish between government or opposition supporters, it does not enable them to identify many of the multifaceted partisan sub-types, each of whom might react differently to responsibility information. For instance, voters have previously changed party allegiance might behave differently to a party's unshakable supporters in the way they attribute responsibility (Mayer 2008).

This research note aims to address all three of these gaps. Rather than focusing on the economy's effects on voting behaviour, we examine how voters assign credit and view government in the wake of a salient public policy measure. Moreover, as England's vaccine rollout garnered such widespread support, we are able to explore how voters apportion *credit* in the absence of partisan opposition. Finally, by leveraging the data quality and longitudinal structure of the BES online panel, we are able to offer novel insights into how different *types* of voter attribute responsibility and update their beliefs.

3. Research design

3.1. The Covid-19 vaccination rollout in England

In this study, we examine responsibility attribution for the rollout of the Covid-19 vaccinations in England in May 2021. We focus our study on England, as in other UK nations the rollout was managed by devolved governments, making objective responsibility unclear and risking a political response based on beliefs about devolution and seperatism. Since England was yet to fully emerge from its third national lockdown, the progression of the vaccination programme was considered one of the most important issues for voters at the time. Fig. 2 presents Google Trends data from the start of 2020 through to the end of 2021.We can see that searches about Covid-19 vaccinations were significantly more frequent than other political issues at the time, like the general state of the economy or Britain's protracted departure from the European Union (Brexit).

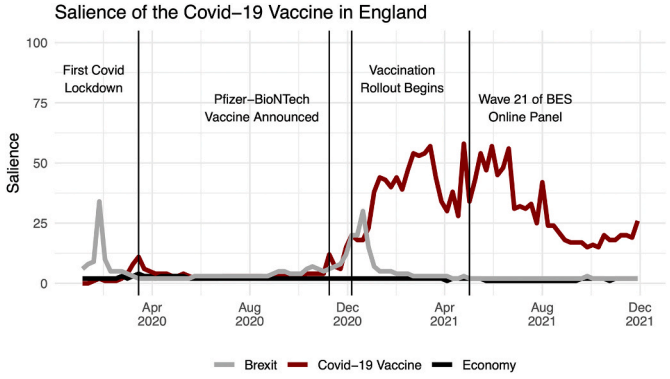

Fig. 2. Salience of the Covid-19 Vaccine in England - Google Trends data.

Aside from its salience, the vaccine rollout presents two features that make it a particularly interesting case to study responsibility attribution and its consequences.

Firstly, both objective indicators and subjective media coverage of the rollout painted an unambiguously positive picture of success in the minds of the voters. With regards to the former, one of the most used metrics to gauge success was to compare the UK's vaccination programme with that of other countries. As shown in Fig. 3, the UK held a significant objective advantage over the efforts of its closest neighbour – the European Union – throughout the period under study. These objectively encouraging statistics were accompanied by overwhelmingly positive media coverage, which provided voters with a clear "one-sided" signal that shaped public perceptions of the rollout as a success (Chong and Druckman 2010). This signal was reinforced by politicians of all stripes who, motivated by a desire to maximise vaccination uptake, consistently praised the vaccination programme and its progress (Craig 2020). Because voters therefore had a clear and unified picture of the rollout's success, our study is able to rule out their responsibility attribution being influenced by elite-level partisan opposition.

Secondly, in this unique context, the government laid claim to credit for the vaccine rollout's success. Throughout the spring, ministers and Conservative backbenchers drew a direct line in media appearances between England's high and rapidly progressing vaccination rates and government decisions; for instance opting out of the EU's vaccine procurement programme or appointing government and NHS outsiders – such as Kate Bingham - to lead the vaccine task force (Craig 2020). This was coupled with attacks on opposition parties, who Prime Minister Boris Johnson claimed would be unable to oversee such a rollout due to their desire to stay in the European Medicines Agency (Williams 2021).

Such communications sought to give the Conservatives electoral credit for what many saw as a non-partisan policy success. In the campaign for the May local elections, for instance, the Prime Minister repeatedly promised that "jabs" would soon become "jobs" under his watch (Piper and James 2021), as the government leveraged a high vaccination uptake to justify the removal of remaining restrictions. The public appears to have agreed with the government's claims; as Fig. 4 shows below, the majority of all BES respondents believe the government handled the vaccination roll-out "well" or "very well", irrespective of partisan disposition. This level of consensus is extremely high when compared to *general* approval in the government, for which large partisan differences can be observed.

However, the narrative of government responsibility did not go entirely uncontested. Despite the government's claims, some reporters and commentators pointed out that most of the credit rested with decisions made by the quasi-independent National Health Service (NHS)

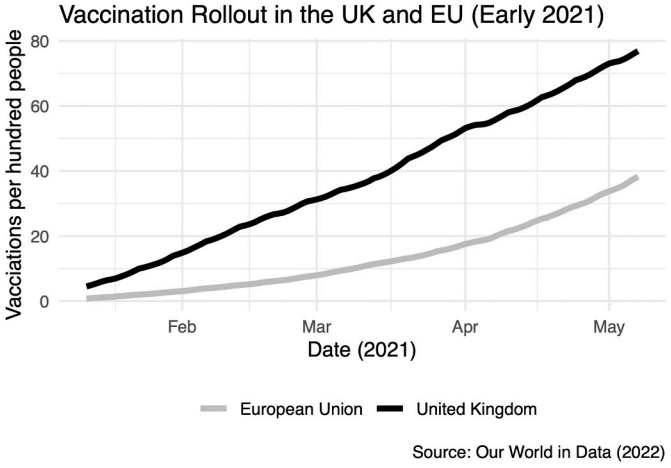

Fig. 3. Progress of the vaccination rollout in the UK and European Union.

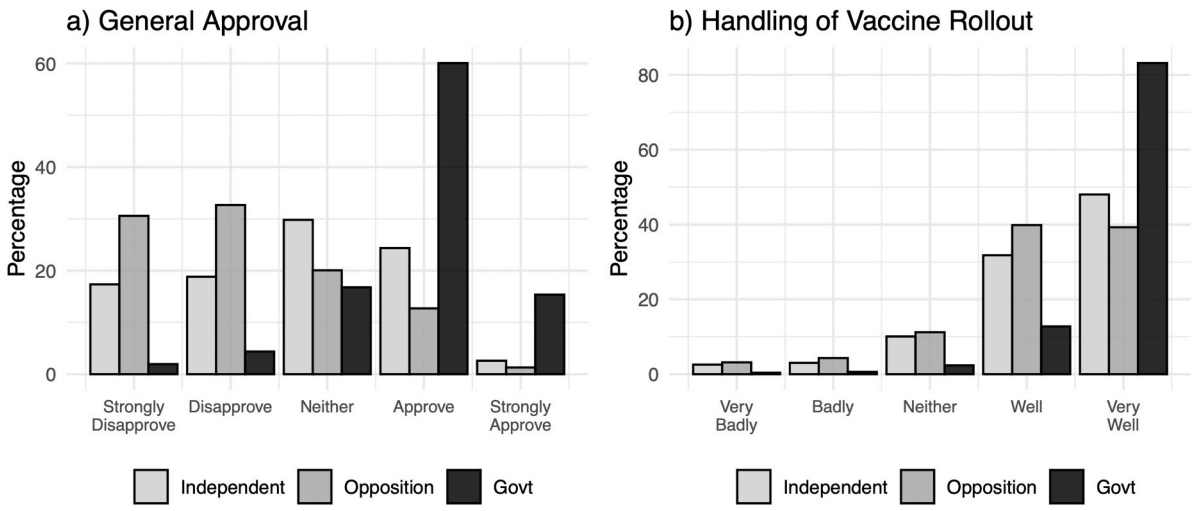

Fig. 4. Government approval and perceived handling of the vaccination rollout, broken by partisanship.

(Williams 2021; Neville and Warrell 2021; Niemietz 2021). When compared to many other European countries, the NHS' centralised structure and access to national patient databases made the logistics of the rollout more effective (Cookson et al., 2021). The service insisted upon a data-driven strategy to vaccination sites, which ensured that everyone was within a ten-mile radius of a centre. It also enabled local care providers to reach out directly to patients to offer appointments (Neville and Warrell 2021). Such measures arguably helped England to avoid the logistical complications faced by comparable European states and contributed to the significantly higher vaccination rates at the time.

In an effort to draw positive attention away from government for the rollout without undermining the vaccination effort itself, opposition political parties therefore sought to emphasise the role of the NHS in delivering the vaccines. In a message to Labour Party members in January 2021, shortly after the rollout had begun, Leader of the Opposition Sir Keir Starmer emphasised the importance of "supporting the NHS" and Britain's "brilliant health professionals", with the government only mentioned when accused of "losing control of the virus" (Starmer 2021). In the subsequent local election campaign in May, Starmer focused on Labour's ability to better strengthen the health service, attacking the government for long standing funding shortfalls (The Labour Party 2021).

The motives of such a strategy are arguably twofold. First, there is a clear electoral incentive for the opposition de-emphasising government credit for a successful policy. It is clear, however, that pursuing this strategy was always going to be challenging given that, as already mentioned, voters across the spectrum were overwhelmingly supportive of the government's handling of the policy. Moreover, in our experimental control group respondents give the government an average of 7.2 on a 10-point scale of responsibility for the programme. Voters strongly supported the rollout, and tended to give the government credit.

A second motive rests in the nature of the NHS as an institution, which enjoys broad bipartisan support in Britain and forms a symbol of post-war national identity (Green and Jennings 2017; Burki 2018). Shifting attention away from government and toward the NHS may have been an attempt to increase overall vaccination uptake among non-Government supporters, diffusing partisan tensions that have held back rollouts in other countries, like the United States (see: Sylvester et al., 2022).

There is some evidence that voters credit the government and NHS differently with respect to partisan predisposition. Using pre-treatment measures, we compare the likelihood that government and opposition supporters say the government and/or NHS are responsible for general changes in the pandemic situation over the past 12 months. Fig. 5 below shows clear evidence of selective attribution to government, with supporters giving credit only when they perceive things to have gone well, and opponents the opposite. But for the NHS there is no such divide: both groups are happy to give the NHS credit for positive outcomes irrespective of partisan prior.

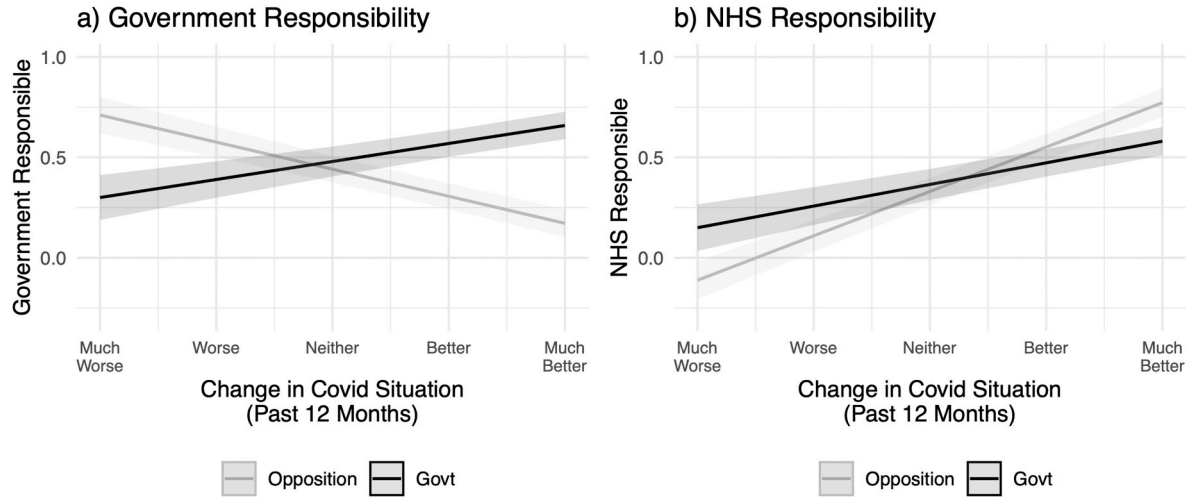

Fig. 5. Probability of attributing the government and NHS responsibility for perceived change in the Covid-19 situation. The figure presents predicted values, conditional on partisanship. Full results in Table 5 of the Supplementary Material.

This result suggests that voters can and do see the NHS and Government as separate institutions, and allocate responsibility to them differently. This, in turn, instils confidence in our experimental approach, in which we test how voters respond to information that explicitly primes government *or* NHS responsibility for the vaccination programme. It might be that voters update *rationally*, using new information to adjust their prior beliefs about who deserves credit and whether the government hence deserves approval. Or it may be that voters are more *selective*, and our primes will have limited effect. In either case, our experimental design, coupled with analysis of treatment effect heterogeneity by partisanship, allows us to disentangle what is going on.

3.2. Experimental design

To understand how voters react to novel responsibility information in this context, we embedded a survey experiment into Wave 21 of the BES Internet Panel. We focus solely on English residents, with our experiment fielded to more than 6000 people. As well as providing us with a far greater sample size than most survey experimental studies, the longitudinal structure of the BESIP data gave us access to unbiased information about respondents' previous voting behaviour and preferences.[2] The experiment was fielded in the days following the UK local elections, which took place on the May 6, 2021.[3] For a more detailed discussion of the BESIP, and related ethical considerations, see section 1 of the supplementary materials.

Each respondent was provided with the following introductory sentences outlining the state of the UK vaccination rollout. This ensured that everyone had access to baseline performance information prior to experimental intervention, even though we believe most respondents were already aware of the successful nature of the policy.

> "The UK has earned praise for its vaccine roll-out, which has seen the delivery of several hundred thousand vaccines each day. As of April 2021, the UK has one of the highest vaccination rates in the world."

Respondents that were not assigned to the control group were then presented with an informational treatment designed to prime responsibility attribution either for the government or the NHS.

> "The rollout has been overseen by the [government/NHS], which has been largely credited for this success in delivery and the high numbers of doses given".

After receiving this information, respondents were then presented with two questions aimed at measuring the extent to which they held government responsible for the rollout and their degree of government approval in general. We hold fixed the sequencing of our outcome questions, to encourage respondents to think about who they believe is responsible for the vaccination rollout before evaluating performance.[4]

Since we are interested in whether the government's general rise in support was partly down to the vaccination rollout, we explicitly ask questions about *overall*, rather than *dimension specific*, performance. Both outcomes were measured along a ten-point continuous scale, and we deliberately ask respondents about the "UK Government" to avoid confusion; our sample comprises English respondents, for whom the UK government refers to the national government at Westminster, nominally responsible for public health policy.

> "To what extent do you think the UK Government is responsible for the success of the Covid-19 vaccination programme in the UK?"

> "Do you approve or disapprove of the job that the UK Government is doing?"

The aim of the intervention is to offer respondents information that is both relevant and credible, and so thus has the potential to shift beliefs (Dunning et al., 2019; Adida et al., 2020). Given the high salience of the vaccination rollout, and the government's deliberate attempts to claim credit, we think it plausible that part of the government's rise in opinion polls at the time was a "reward" effect for ther handling of this issue. We also believe the information we offer is credible; while not quite as salient, there was some debate about the NHS's operational autonomy in delivering vaccines and the extent to which they, rather than government, deserved credit. Even if this not an argument respondents had heard regularly or happened to believe, it represents a credible idea to which they likely had some exposure.

That said, there do remain some limitations with our design that apply to survey experiments more broadly. The nature of our vignette-based intervention might constrain the possibility of longer-term changes in beliefs, since our effects more likely resemble immediate reactions than a more durable internalisation of new information (Zaller 1992).

Nonetheless, we believe our vignette wording is similar to subtle changes in framing between rival media outlets in the UK, to which respondents would plausibly be exposed. And so our design does allow us to speak with tentative generalisability about the short-term causal processes underpinning attribution and government support at this time.

3.3. Estimation strategy

In line with our pre-analysis plan, we estimate the effects of treatment using ordinary least squares on theoretically relevant sub samples of the data. We present results with and without covariate adjustment and include several tests in the supplementary materials (Tables 2–4) to confirm balance across treatment groups. In models with covariate adjustment we control for a respondent's age, education, gender, political attention, partisanship, EU referendum vote choice, and an index of perceived Covid risk. Where available, we also control for respondents' government approval in previous BES waves. The full details of these measures can be found in the supplementary materials.

4. Results

4.1. Main findings

We first present the baseline findings from our experiment. Our analysis yields two main results: the NHS responsibility prime has a negative effect on government attribution, but that this has no downstream effect on approval.

4.1.1. NHS treatment causes respondents to update attribution

As a first point of comparison, we analyse how respondents in the NHS and government treatment groups attribute responsibility relative to those under the control. In panel (a) of Fig. 6, we see that receiving the NHS vignette leads to 0.4-point reduction in attribution to the government on our ten-point scale. This effect is of substantive significance,

[2] Since the data were collected in previous waves, we can be confident that responses are not subject to recall bias or other such methodological pitfalls.

[3] This might give rise to concerns that campaign coverage will have primed respondents' partisanship and made them hyper-aware of policy and valence differences between parties (see: Michelitch and Utych 2018), raising questions about generalisability. But we do not think the local elections will have profoundly changed the political dynamics at play. On the one hand, local elections in the UK attract very low levels of voter attention and participation, with only voters in select parts of the country being eligible to vote in any given cycle (Cracknell and Tunnicliffe 2023). On the other, Fig. 2 demonstrates that the vaccination rollout was highly salient as early as January 2021, long before the campaign began, and continued to be salient long after the vote took place in May.

[4] One limitation of our design that we ask respondents about perceptions of government, but not NHS, responsibility for the vaccination rollout. For our theoretical argument government responsibility is central, so was prioritised in our design. Ideally we would also have asked such about the NHS, but were constrained in the number of questions available.

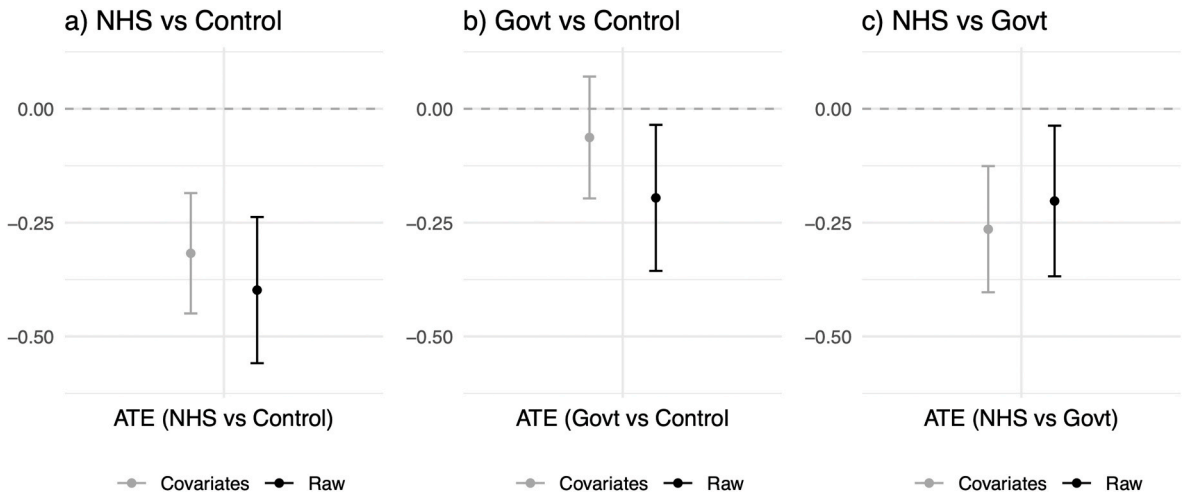

Fig. 6. The effects of treatment on government attribution for the rollout - full results tables 6-8 of Supplementary Material.

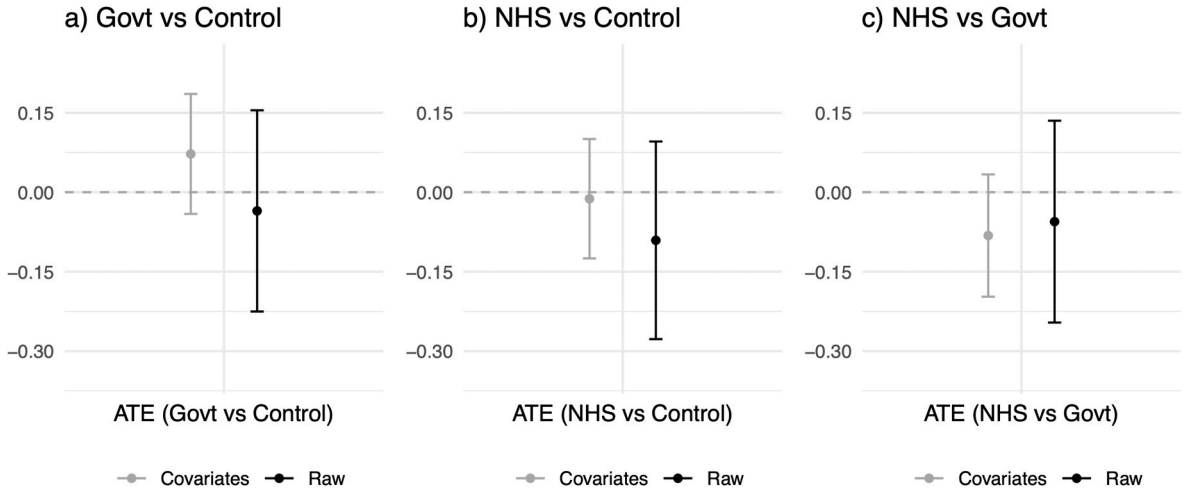

Fig. 7. The effects of treatment on general government approval - full results tables 6-8 of Supplementary Material.

equivalent to around 15% of a standard deviation, and is unchanged after adjusting for a range of pre-treatment covariates (for full results, see Table 7 in the supplementary material).

Conversely, despite anticipating attribution to increase, the same comparison among the control and government treatment groups yields only mixed results. Under a raw comparison the government vignette appears to produce a *negative* average treatment effect, though this effect is not robust to covariate adjustment and hence might be driven by some other factor. Our interpretation of this finding is that the government prime may be subject to *ceiling effects* - baseline attribution to government is extremely high, and hence there is no room for further upward shifts. Indeed, around 1 in 3 respondents in the control group gave a response at 9 or 10 on the 10 point scale.

One concern with comparing each treatment to the control individually is that we assume a form of *informational equivalence* (Dafoe et al. 2018) - we cannot be certain about how respondents think about attribution under the control, because the very notion of attribution itself, alongside who is specifically responsible, are primed by our treatment vignettes.[5]

In a slight deviation from our pre-analysis plan, we deal with this issue by comparing the two treatment groups to one another directly, holding constant the fact that both groups have been primed to think about attribution in and of itself, and differing only in which group we hint they should attribute toward. The results of this test are in panel (c), and show that receiving the NHS vignette has a significant negative effect relative to receiving its Government counterpart. Our negative finding reaffirms our claim that the NHS prime decreases attribution to government for the rollout of Covid-19 vaccinations.

4.1.2. *Government approval does not shift*

We next consider whether our treatments have a corresponding effect on government approval. Making the same group-by-group comparisons, Fig. 7 shows that we find null effects across the board. This suggests that neither the NHS nor Government vignettes have any effect on our post-treatment measure of approval.

Given our theoretical framework, and given that we have shown that the NHS prime has an effect on the attribution of government responsibility, this null result is surprising. For robustness, in Section 3.3 of the supplementary materials we explore an alternative specification in which one's treatment group is used to instrument their post-treatment attribution. Our aim here is to test whether our experimentally induced change in attribution drives any shift in approval, regardless of how attribution and approval might be otherwise correlated.[6] Once again, for the same subgroup comparisons, we find null

[5] We are grateful to a reviewer for raising this point.

[6] Because we only measure the approval effects among compliers, these specifications yield Local Average Treatment Effects (LATEs).

effects across the board. Collectively, these results fail to provide evidence of a causal shift in approval.

There are several possible explanations for this result. On the one hand, our attribution treatment might be strong enough to nudge explicit beliefs about responsibility, but not strong enough to shape voters' prior evaluations of approval. On the other, our outcome question might be too general; had we asked questions about goverment handling of the vaccine rollout specifically, we might have detected approval effects. In either case, our overall finding is consistent with a wider body of literature on the pandemic, which finds a lack of direct effect on incumbent support beyond an initial "rally round the flag" (e.g. Spälti et al., 2021; Johansson et al. 2021; Blumenau et al. 2022).

4.2. Heterogeneity

Having established the attributional effects of the (NHS) treatment, but a lack of impact on approval, we conduct supplementary analyses to determine how these findings vary across different types of voter. In particular, we are interested in whether swing voters, who change party choice between elections, are more receptive of new information than those who vote for the same party every time. We use past waves of the BES panel to construct longitudinal measures of party support, allowing for a more nuanced treatment of partisanship than is often possible in existing work. Contrary to theoretical expectations, we show that loyal and swing voters respond homogeneously to our treatment.

While our pre-analysis plan discusses looking at "swing voters who change party choice between waves" (p6), it does not go into significant detail about how such groups should be constructed. The analyses that follow should thus be seen as *exploratory* and as a guide for future research. Given the inconsistencies of our main effects, we believe this exercise is still of considerable theoretical value. We are nonetheless transparent about the limitations of such an approach.[7]

For the analyses that follow we present results comparing our two treatment groups to one another, rather than using the control as a baseline. We feel this comparison is the most theoretically appropriate for comparing treatment effect heterogeneity, as subgroup differences might exacerbate unobservable violations of the informational equivalence assumption. This estimates a conditional average treatment effect, conditioned on the particular subgroup of interest.

4.2.1. Government and opposition intended voters do not respond differently

We begin by examining how government and opposition supporters respond to our intervention. Under a selective account, this partisan difference should drive differences in how attributional information is internalised. Government supporters should be less willing to allocate responsibility to the NHS, wanting to reward the incumbent for their positive handling. Opposition supporters should thus be driving the overall negative treatment effect which we observe.

To measure government and opposition support at the time our survey was fielded, we use the BESIP's standard voter intention questions. Respondents are asked which party they would support were a hypothetical general election to be held tomorrow. Respondents who report intending to vote for the ruling Conservative Party are classified as Government supporters, while those intending to vote for other parties are classified as opposition.[8]

Panel (a) of Fig. 8 below shows that both groups respond similarly to the NHS treatment; effects are statistically weaker for government supporters ($p = 0.105$), but not significantly different from their opposition counterparts (Gelman and Stern 2006). Similarly, in panel (b) we see no effect on approval for either group, as in the pooled analysis above.

4.2.2. Swing voters do not respond differently

Moving beyond contemporaneous measures of party support, we exploit the longitudinal nature of the BESIP to consider general measures of swing voting, using actual behaviour in past elections. Our focus is on whether respondents have changed political allegiance or not and how this shapes their response to our primes, irrespective of which parties they support and move between.

Under a selective account, swing voters, relative to stronger partisans, should be more willing to internalise attributional information and use it to evaluate government performance.

We measure swing voting using past waves of the BES to track respondents' voting behaviour in previous elections. We look at how a respondent voted in the 2017 and 2019 general elections, with loyal voters supporting the same party across both, and swing voters changing party between. These measures are recorded by YouGov in waves immediately following the elections in question, so cannot be determined by events in the future (like Covid-19). This is in contrast to present-day voter intention measures, which will be informed by a respondents' beliefs about performance over the course of the pandemic.

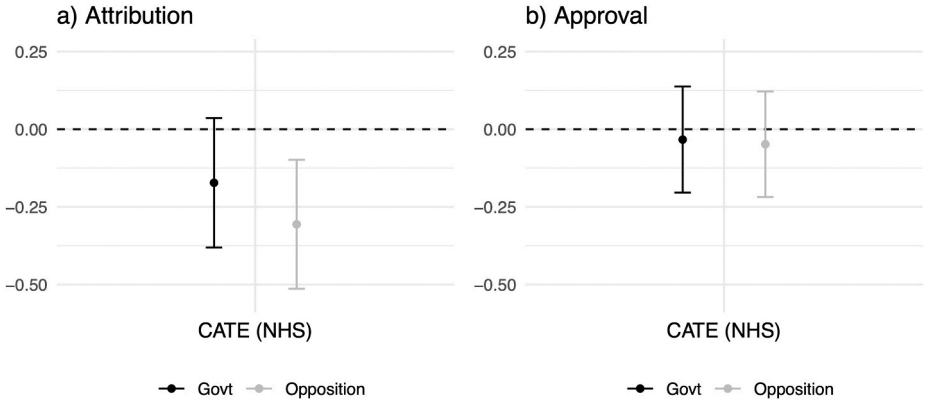

Fig. 8. Heterogeneous effects by Wave 21 vote intention - full results table 12 of Supplementary Material.

[7] As we note in our pre-analysis plan (p7), "any effects here will not be central to the theoretical argument of the paper, but could be worthy of discussion and may point to future avenues for empirical investigation."

[8] For parsimony, we exclude respondents who answer "don't know" in response to this question.

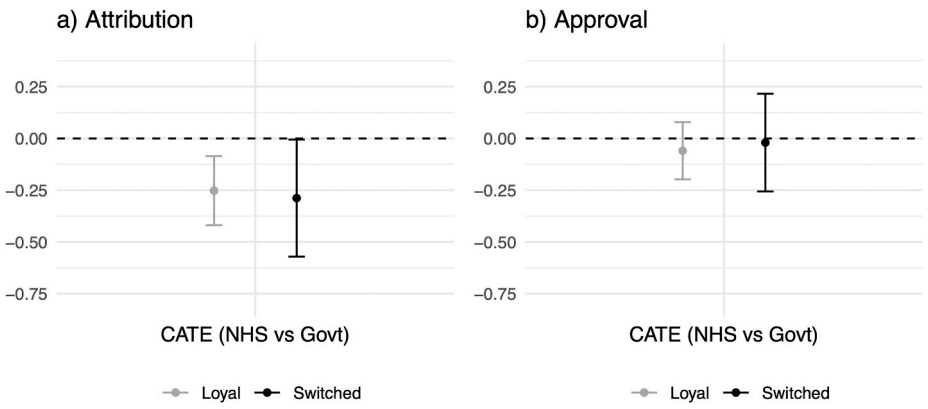

Fig. 9. Heterogeneous effects among swing voters (vote for different parties in 2017 and 2019 general elections) - full results table 13 of Supplementary Material.

Panels (a) and (b) of Fig. 9 below shows no significant difference in responsiveness to the treatment; both subgroups attribute less responsibility to government for the Covid-19 vaccination rollout upon receiving the NHS prime, while neither updates government approval.

Taken together, these results suggest that swing and loyal voters, and government and opposition supporters, do not respond differentially to our treatment vignettes.

5. Discussion

In this research note, we have studied how voters attribute responsibility for successful public health policy and how this in turn shapes general approval of the government. Looking at the rollout of Covid-19 vaccinations in England, a programme which saw objective early success compared to other parts of the world, we provide experimental evidence that voters attribute less responsibility to government when given information minimising their role in the policy. However, this attribution effect does not appear to shift general government approval, despite both the pandemic and vaccine rollout being highly salient in political discourse at the time.

To try to explain these findings, we considered how our effects varied across different types of voter. Our results do not fit neatly into either rational or selective logics of responsibility attribution. On the one hand, the overall negative effect of our NHS vignette provide evidence that voters can adopt new information and update their beliefs accordingly. This effect permeated conventional partisan divides, holding across swing and loyal voters, alongside self-reported government and opposition party identifiers. But on the other, our general *lack* of effect on approval discards the idea that when voters do update, it is in order to decide which politician to support. Rather, in line with selective frameworks of attribution, we see that voters' prior evaluations are sticky and difficult to change, even in the face of a non-partisan policy.

When situated in the existing literature, these results are somewhat mixed. Our robust effect on responsibility attribution suggests that voters can and do update their beliefs about the political handling of the pandemic. Our null effects on approval and lack of partisan divergence contributes to a growing consensus that Covid had only minimal impacts on public opinion (Blumenau et al. 2022).

What might these findings mean going forward? First, we show the need for a re-evaluation of how responsibility attribution, and its consequences for party support, can best be explained. Given the high salience of the vaccination rollout, our core finding - that attribution updates but approval does not - is puzzling. Future research should use similar experimental designs to replicate these results along other policy dimensions. Are our findings, for instance, specific to a one-off policy event or can they be generalised further? Are they a function of Britain's idiosyncratic healthcare system, or driven more by structural changes in the electorate? And how might voters respond to stronger attribution treatments, like detailed information leaflets, videos or focus groups? (e.g. Gottlieb 2016; Bhandari et al. 2021) The answers to these questions remain unclear.

This feeds in to our second key implication about the nature of partisanship. Our ability to distinguish different *types* of voter, using their past *behaviour* as well as modern day party identity, goes beyond existing work. We feel this raises the empirical bar for the study of attribution, with our paper making the case for greater use of longitudinal surveys to study sources of partisan nuance. While our results indicate a surprising homogeneity, future research should investigate how different groups diverge in response to more explicitly partisan interventions.

Lastly, we bring attention to the understudied electoral effects of *positive* shocks, with a particular focus on public health management. This is an area ripe for further work as public health concerns - from population ageing to inhospitable weather through to preparedness for future pandemics - become a progressively important issue for governments around the world to address.

Declaration of competing interest

We confirm that we have no conflicting interests to disclose with regard to this research.

Data availability

Data will be made available on a public repository upon publication

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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.2023.102643.

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