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Disengagement Hypothesis

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1 Introduction

The political landscape in many western democracies has seen drastic changes along at least two dimensions in the past 30-40 years. First, turnout in elections is falling – in Western Europe by more than 12 percentage points (Solijonov 2016, Fig. 4; Wattenberg 2002a). Second, many voters no longer identify with political parties. In England, for example, the fraction of people feeling close to "no party" today is close to holding the absolute majority compared to about 25 percent two and a half decades ago (Aidt and Rauh 2018). Similar trends are observed in many other established democracies (Dalton, 2002; Dassonneville, Hooghe and Vanhoutte, 2012). On the one hand, as a consequence of this, new parties might emerge fishing for votes at the extreme left or right fringes, as has happened in Italy (5 Star Movement), Germany (Alternative for Germany), and Spain (Vox). On the other hand, established political parties might reposition their platforms to cater to the shrinking subset of engaged voters (e.g., Sørensen, 2013). This reinforces political distrust amongst the excluded who are confirmed in their belief that politics does not work for them. These are symptoms of disengagement with politics and erosion of trust in governance institutions.

This paper presents new evidence on the process of political disengagement in England over the past 25 years. We build on the substantial literature on political socialization (e.g., Neundorf and Niemi, 2014) and on partisan dealignment (e.g., Dalton, 2002). We investigate whether the rise of the "no party", consisting of individuals who have stopped identifying with any of the regular political parties, is driven by a secular trend across voters of all ages (period effects), by different socialization experiences within particular cohorts (cohort or generation effects), or by the fact that the demographic structure is changing and the population is aging (age effects). In contrast to much of the existing literature on the decline in party identification in England which focuses on generation differences and cohort effects (e.g., Jennings and Niemi, 1981; Grasso, 2014; Tilley and Evans, 2014; Grasso et al., 2018, 2019), we propose

the Secular Disengagement Hypothesis to explain this phenomenon. The hypothesis holds that political disengagement is not driven by sudden recent changes or by substantive differences in the socialization experiences of different political generations but that it can be traced back to a secular time trend (period effects). Dassonneville, Hooghe and Vanhoutte (2012) use a similar hypothesis to explain the decline in party identification in Germany between 1992 and 2009 but we are not aware of corresponding evidence for the United Kingdom. Moreover, as many other researchers, we hypothesize that the rise of the "no party" and the decline in turnout in elections are interdependent but add to this literature by proposing that the common link is the underlying secular trend towards political disengagement. This secular trend is likely to reflect a combination of social forces many of which are related to the modernization hypothesis. Dalton and Wattenberg (2002) discuss how rising levels of education, the spread of post-material values, and new issue-based politics undermine the ties between individuals and political parties, and how changes in campaigning strategies (which have become much less labor intensive) and in candidate selection procedures have weakened political parties.¹

We make three specific contributions to the understanding of the process of political disengagement in England. The first contribution is methodological. A major challenge in the study of age-period-cohort (APC) effects is to separate the three effects (e.g., Neundorf and Niemi, 2014). This is not possible to do with a linear regression model and a cross section of data on individuals' party identification without "side information" that provides prior knowledge on the size of one of the three effects because one of the three can be deduced from the other two. With repeated cross sections of individuals, it is, however, possible to overcome this identification problem and estimate a hierarchical APC model (e.g., Yang and Land, 2008). We propose a new way out of the conundrum that explores data on party identification with a longitudinal (panel) structure that follow the same individuals over time. Using this method, we find strong

¹It is not necessarily the case that more education reduces individuals' party identification. Marshall (2016, 2019), using high school reforms in the UK and in the US, respectively, show that individuals who get an extra year of high school education become more likely to support the Conservative Party and the Republican party, respectively.

evidence in support of the Secular Disengagement Hypothesis. The other two contributions are substantive rather than methodological. First, we demonstrate how the rise of the "no party" is linked to the fall in election turnout in England. Our counter-factual analysis shows that about 80% of the fall in turnout over the past 25 years can be accounted for by a combination of increasing numbers of disengaged individuals without any party identification and the fact that they have become increasingly likely not to turn out to vote. This is in line with a large body of work that links falling turnout to voter dealignment with political parties but offers a new quantification of the effect for England.² Second, a unique feature of our research is that we study, not only the broad disengagement trends, but also the dynamics process that underlies them. Using a discrete Markov chain model, we find that transitions from all the major parties in England to the "no party" are an order of magnitude larger than transitions between the regular political parties. The "no party" is, thus, not like any other party. We also document that the rate at which individuals exit the regular political parties has increased over time for all age groups and that the rate at which individuals form a new feeling of identification with a party has decreased. This has made the process of party political disengagement increasingly entrenched and persistent.

The analysis draws on panel data on individuals from the British Household Panel Survey (BHPS) and the UK Household Longitudinal Study (UKHLS), 1991-2016, which we, for simplicity, refer to as the Understanding Society survey. To avoid complications arising from regional parties, we focus on individuals resident in England. With these data, we estimate two-ways fixed effects panel models which seek to model "how close an individual feels" to one of the main parties (the Conservative Party (the Tories), the Labour Party, the Liberal Democrats, and other parties, which we group together) as a function of individual-specific characteristics that vary over the individual's life-cycle. Aidt and Rauh (2018) argue that the individual-specific

²The classical work is Campbell et al. (1960) and Campbell et al. (1966). More recent work elaborating on the same phenomenon in the UK context or comparatively include Wattenberg (2002*b*), Heath (2007), Heath, Jowell and Curtice (1985) and Clarke et al. (2004).

component (the unit fixed effect) is informative about the component of party identification that is stable over the individual's life-cycle. We use this individual-specific component to measure cohort effects, separately from period and age effects.

The tripartite model of parties highlights a number of important functions that political parties perform in a representative democracy (Key, 1964). These include providing cues that help voters navigate a complex political reality, mobilizing voters to vote and participate in political activities, training political elites, articulating political interests, and implementing policy objectives subject to voter accountability when in power. As argued by Levitsky and Ziblatt (2018) for all these reasons political parties are part of the safety railings of democracy and when undermined, democracy itself becomes under threat. From a policy perspective, a first step in designing policy interventions to address the decline in party identification and fall in election turnout is to unpick what is behind the trend to, for example, judge whether the design of policy aimed at re-engagement needs to be cohort-specific (say aimed at the young) or broader strategies are needed.

2 Data

We study the evolution of party identification in England between 1991 and 2016 by combining two annual panel (longitudinal) datasets, the British Household Panel Survey (BHPS) and the UK Household Longitudinal Study (UKHLS), also referred to as the Understanding Society survey. We restrict the sample to individuals residing in England at time of the survey. Our focus on England, as opposed to the United Kingdom, avoids the complications that arise from the presence of regional parties. The BHPS spans the years from 1991 to 2008 and was then partially embedded in the larger UKHLS, for which the available data spans the years from 2009 to 2016. While the BHPS surveyed around 7,000-8,000 individuals annually, the UKHLS includes nearly 50,000 individuals. In combination, the two panels provide a comprehensive

source of information on changes in political attitudes and socio-economic circumstances in England over the past two and a half decades. In particular, we can track self-reported party identification of the surveyed individuals over 25 years.

In each wave, we use two standard survey questions the respondents are asked about their party identification.³ First, the respondents are asked "Do you think of yourself as a little closer to one political party than to the others?".⁴ Those replying with "no", we classify as individuals with no party identification. Those replying "yes" are then asked about which political party they feel closest to. When respondents are asked this question, they can choose between the major parties (the Labour Party, the Conservative Party (the Tories) or the Liberal Democrats), specify another party (e.g., the Green Party or the UK Independence Party), or can reply with "none". We refer to the respondents who do not feel close to any political party as belonging to or supporting the "no party".

We create a dummy for each of the three main parties, for the "other parties" category and for the "no party". Each dummy variable takes the value 100 for respondents who feel closest to that party, and zero otherwise. In addition to information on party identification, the Understanding Society survey contains information about self-reported election turnout. This enables us to analyze the relationship between party identification and turnout in general elections. Finally, the survey also contains socio-economic data related to each respondent such as gender, age, income, marriage, labor market status and education.

The key advantage of the Understanding Society survey for the purpose of investigating the Secular Disengagement Hypothesis is that it is longitudinal. It follows respondents over 25 years and asks them the same question about their party identification repeatedly. As we explain below, we exploit this data structure to separate age, period, and cohort effects from each other

³Bartle and Bellucci (2008) discuss the validity of applying this measure of party identification, which was first developed to study US politics, to the European context.

⁴In practice, those respondents replying with "yes" when asked whether they think of themselves as supporters of any political party are not asked the specified question but are referred directly to the question about which party they feel closest to.

and we use the rich personal data to separate social aging effects related to life-cycle events from political aging effects related to political learning. Other data sources are either repeated cross-sections or do not provide sufficiently long panels of individuals. For instance, the longitudinal panel of the British Election Study only dates back to 2014 and would, therefore, not be suitable for our purposes.

3 Party Identification in England: Stylized facts

The decline in party identification in England started long before the 1990s (e.g.,, Clarke and Stewart (1984) or Dalton (2002)), but the development over the past two and a half decades has not been widely documented.

3.1 The rise of the "no party"

Figure 1 presents trends in party identification between 1991 and 2016 for respondents aged 18 and above. The most striking stylized fact is that the share of respondents identifying with no party at all has nearly doubled since the beginning of the 1990s. Starting from around 25 percent in 1991, two decades later between 45 and 50 percent belonged to the "no party". The flip side is that each of the three main parties have fewer core supporters now than they had in the beginning of the 1990s. Starting around 2008, other parties, mainly the Green Party and the UK Independence Party, have seen a modest increase in the share of respondents who feel close to them.

Figure 2 plots the share of respondents who identify with no party for different age groups amongst those who were surveyed either in 1991-93 or in 2014-2016, respectively. The left panel shows the trend for men while the right panel shows it for women. We observe three stylized facts. First, the share of disengaged respondents who support no party is declining with age for both men and women and is almost twice as high amongst 18 years old respondents as

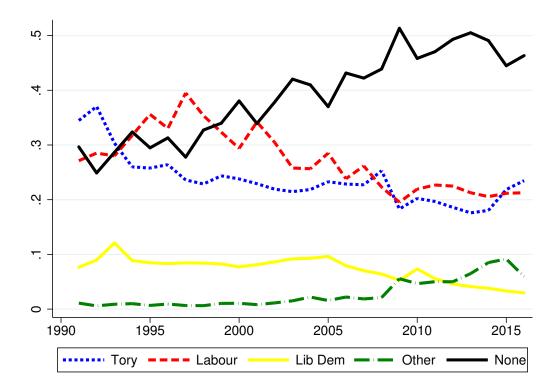


Fig. 1: The decline in party identification and the rise of the "no party", 1991-2016

Notes: The figure shows the share of respondents in England who report that they feel closest to one of the three main parties (the Conservative Party (Tory), the Labour Party (Labour) or the Liberal Democrats (Lib Dem)) or to some other party (Other); if the respondents report they feel close to none of these parties, they are recorded as identifying with the "no party" (None).

among those above 60. Second, party political disengagement is higher for women than for men for all age groups. Third, for all age groups and irrespective of gender, party political disengagement is much higher for respondents interviewed in 2014-2016 than for those interviewed two decades earlier.

Figure 3 disaggregates these patterns geographically for each of the 12 regions of England. We observe that the "no party" has been on the rise in all regions. In South Yorkshire (bottom left), the increase has been particularly pronounced. The share of those feeling close to no party amongst 18-23 year olds has increased from 26% in 1991-1993 to 85% in 2014-2016. But even for inner London, we observe a marked decline in party identification across all age groups.

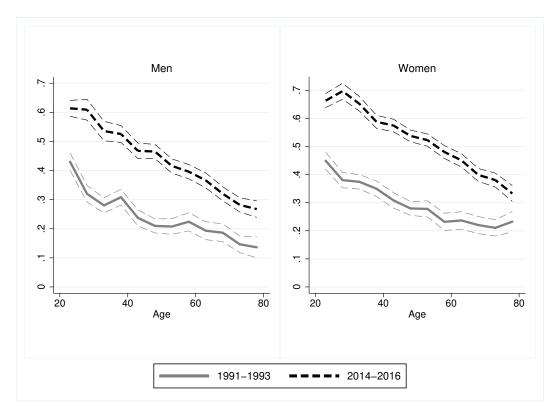


Fig. 2: The share of respondents supporting the "no party" by age groups and gender for two survey waves.

Notes: The figure plots for different age groups (averaged across intervals of five years of age) the share of respondents interviewed in 1991-93 and 2014-2016, respectively, who reported that they did not feel close to any party. The left panel is for men and the right panel is for women. The thin dashed lines represent the 95% confidence interval.

This, therefore, makes it doubtful that the decline in party identification is driven by rural-urban differences or by a North-South divide between those who have prospered and those who have been left behind economically over the past decades.⁵

Figure 4 plots the share of respondents who feel close to no party for different birth cohorts starting with the cohort born in 1920-29 and ending with the cohort born in 1990-99. Each successive birth cohort's response is plotted as a separate line, where the more recent the cohort was born, the lighter is the shade of gray of the corresponding line, and the responses are

⁵This is reinforced by the fact that although the increase in "no party" support has occurred across all income deciles, respondents at the bottom of the income distribution are more disengaged than those at the top (see Appendix Figure A.1).

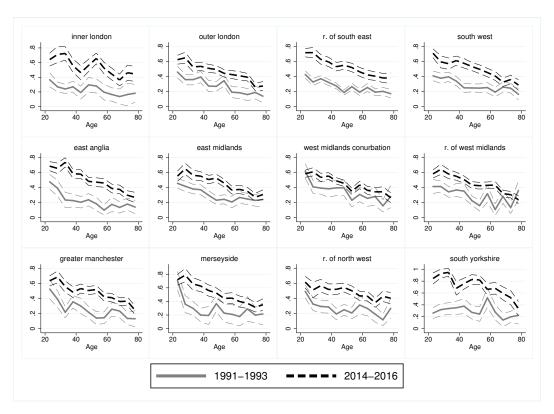


Fig. 3: The share of respondents supporting the "no party" by age groups for two survey waves, by 12 English regions

Notes: The thin dashed lines represent the 95% confidence interval. The figure plots for different age groups (averaged across five years age intervals) the share of respondents interviewed in 1991-93 and 2014-2016, respectively, who reported that they did not feel close to any party for each of the 12 English regions.

tracked as each cohort age.⁶ We observe two facts. First, party political disengagement has become more pronounced for each new cohort. Second, with a few exceptions, at any given age, the share of respondents feeling close to no party is greater for each successive generation.

Clearly, however, these facts represent a mixture of age, period and cohort effects and they conflate macroeconomic and individual developments. Section 4 explains how we separate the various effects.

⁶The first survey wave was in 1991-93 and the last was in 2014-2016. The individuals belonging to the different cohort had different ages at the time of the survey. This generates variation in the number of years for which the aging effect can be tracked across the generations.

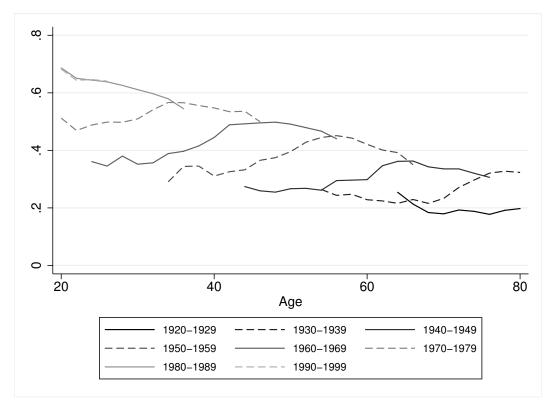


Fig. 4: The share of respondents supporting the "no party" for different birth cohorts, by age groups

Notes: The lighter the shade of gray of a line the younger the birth cohort. Birth cohorts are defined by decade.

3.2 Are supporters of the "no party" different?

Dalton (1984, 2002) argues that the new politically disengaged individuals belonging to the "no party" can be divided into two types. The first type is the unsophisticated, apolitical non-partisan at the margins of politics. The second type is the sophisticated non-partisan who has stopped identifying with political parties because he or she has developed the skills through education to be self-sufficient in politics and no longer needs party cues to political choices.

Table 1 compares personal characteristics and opinions of "no-party" and party supporters. This is not meant to be a causal analysis of determinants; the aim is to shed light on whether individuals without any party identification tend to be different from individuals who identify with a party and to learn about the average type of the non-partisans. We find that "no party"

Table 1: "No party" and party supporters: A mean comparison of their characteristics and opinions

	No party	party	Ratio	p-value of difference
Characterisitics				
Religious	0.74	0.77	0.96	0.63
English identity	0.45	0.47	0.96	0.02
British identity	0.42	0.5	0.85	0.54
Opinion				
Qualified to participate in politics	0.18	0.42	0.44	< 0.01
Better informed about politics	0.12	0.31	0.39	< 0.01
Public officials don't care	0.54	0.46	1.17	< 0.01

Data source: The 24th wave (2014-2016) of the UKHLS.

Notes: The table shows the means across individuals without party identification ("no party" supporters) and individuals with party identification (party supporters) in the latest wave of the Understanding Society survey for selected personal characteristics and opinions. The p-value is for a t-test of equal means.

supporters are slightly less likely to be religious, and to think of themselves as English in terms of identity. While these differences are small, and except for English identity not significant, we see stark differences in terms of their general views on politics. "No party" supporters are much less likely to agree with the statement "are you qualified to participate in politics" and "are you better informed about politics than most people". These opinions reflect their detachment from politics and that they are conscience about this. Moreover, "no party" supporters are more likely to think that public officials and politicians "don't care about what people like themselves think".

Moreover, respondents with and without party identification source their news on current affairs from very different media. On the one hand, "no party" supporters get most of their information from "word of mouth" and "from friends". On the other hand, they are much less likely to obtain news from "government publications" and "national newspapers" than party supporters. Relative to party supporters, they are more likely to read the "The Sun" and "The Daily Mail" and least likely to read "The Guardian" and "The Financial Times". The pattern for websites visited for news is very similar.

From these data it appears that a large fraction of the "no party" supporters in England in 2014-16 are unsophisticated, apolitical non-partisans at the margins of electoral politics. Dassonneville, Hooghe and Vanhoutte (2012) similarity find that the loss of party identification in Germany (1992-2009) is concentrated in groups with low levels of political sophistication. These facts challenge the hypothesis that the decline in party identification reflects a rise in sophisticated non-partisans.

4 Age, period, and cohort decomposition

The rise of the "no party" may, in principle, reflect age, period, or cohort effects. First, some generations might be more disengaged from politics and less willing to identify with mainstream political parties than other generations because they have been exposed to different political socialization processes in their formative years (e.g., Jennings and Niemi, 1981; Grasso, 2014; Tilley and Evans, 2014; Grasso et al., 2018, 2019). Second, it may reflect a secular trend (or period effects) whereby individuals across all ages have become disillusioned and are turning their backs on parties because of macro political trends or shocks. Third, it may reflect age effects whereby individuals might systematically change their political behaviors as they age, either because of political learning (e.g., Converse, 1969) or because social roles change with age (Nie, Verba and on Kim, 1974; Niemi et al., 1985). As party identification tends to strengthen with age (Converse, 1969) and given that society is aging, this would slow down the rise of the "no party". We need to decompose the rise into these three effects. Section 4.1 presents our new decomposition methodology. Section 4.2 reports the results.

4.1 Methodology

The fundamental identification problem in an Age-Period-Cohort (APC) model is that

$$period = age + cohort$$
 (1)

if the three attributes are measured on the same time scale (say, a year). This makes it impossible to estimate the effect of the three separately in a linear regression model. The literature has developed two main methods to overcome this problem. First, researchers working with single cross sections of individuals have used "side information" to pin down one of three factors. For example, one can estimate the age effect separately from supplementary panel data and then use this estimate to pin down the age effect in the cross section (e.g., Tilley and Evans, 2014). Second, with repeated cross sections, the linear dependency can be broken down by introducing a non-linearity in the model. This can be done, for example, by defining a cohort in terms of, say, five year intervals while period and age effects are counted in years or by allowing the age effect to be quadratic and counting all three variables in years. Either way, it is then possible to estimate all three effects with repeated cross sections data and a linear regression model using period and cohort fixed effects along with a variable that counts the age of an individual. In two influential papers, Yang and Land (2006, 2008) advocate that a hierarchical random effects regression model (the so-called hierarchical age-period-cohort model) is adopted instead of the fixed effect model. The model assumes that the period and cohort effects have a random component that is specific to the particular period or cohort. This model and its extensions have been used in a growing number of studies (e.g., Kroh, 2014; Grasso, 2014; Ho, Weng and Clarke, 2015; Huang, 2018).

We propose a new method to overcome the identification problem which neither relies on "side information" nor imposes the two critical assumptions of the hierarchical age-period-cohort model with random effects, namely that the cohort and period effects must be independent of the respondents' personal characteristics and that the random shocks to cohort and period effects are drawn from independent normal distributions. Our method instead exploits the longitudinal structure of our data.

We start by estimating linear fixed effects regression models separately for the regular parties (The Conservative Party (the Tories), the Labour Party, the Liberal Democrats and other parties) and the "no party" (henceforth the "parties") of the following form:

$$P_{iakt}^{h} = \alpha_i + \gamma_k + \theta_t + \sigma_a + \sum \beta_j X_{iakt}^j + \varepsilon_{iakt}, \qquad (2)$$

where index i is for an individual, index t is for the time period, index k is for the residence of each individual across the 12 major regions of England, index a is for the age of individuals, superscript h indexes the five "parties" and ε_{iakt} is an error term. The time fixed effects θ_t capture secular trends that influence the party identification of all individuals within a given year (the period effects). The age fixed effects σ_a is a set of dummy variables for individuals at different ages (18 to 80 years of age) which captures the age effect. The vector X includes individualspecific characteristics that vary over the life-cycle, such as income, marital status, number of children under 16, gender, education, and unemployment status. Party identification and other political behaviors arguably change with age because the individual's social roles change (Nie, Verba and on Kim, 1974; Niemi et al., 1985). These life-cycle factors, therefore, help us isolate such social age effects from the political age effect which is related to political learning and accumulated experience with elections (Converse, 1969). The main methodological innovation is the way we isolate the cohort effect. The regression model includes individual specific fixed effects α_i . As argued by Aidt and Rauh (2018), these capture the underlying time-invariant party identification of an individual. We estimate the cohort or generation effect by averaging these over individuals born in a particular year:

$$E_i[\alpha_i|\text{year of birth}].$$
 (3)

In this way, we can estimate cohort or generation effects independently of period and (political) age effects and test the Secular Disengagement Hypothesis. The main advantage of this methodology compared to the hierarchical APC methodology is that the individual fixed effects capture unobserved cohort specific heterogeneity. That is, the cohort effect is a summary statistics of (potentially) many different formative experiences and thus does not assume that

⁷We use this formulation because it avoids making parametric assumptions about the shape of the age effect (say, quadratic) and enables us to illustrate the age effect graphically.

all individuals within a birth cohort are affected in the same way by these experiences.

4.2 Results

We report the estimates of the panel regressions from equation (2) in Appendix Table A1 and present the main insights from the age-period-cohort decomposition in three figures. In these figures, we normalize the effect to be zero for all five "parties" for the youngest individual (aged 20), the first year in our sample (1991) or the first cohort (1930), respectively. This makes it easy to compare the three effects.

First, Figure 5 plots the year fixed effects from the five panel regressions. They represent the secular trend in party identification between 1991 and 2016, i.e., all factors that affect the party identification of individuals within a given period in the same way. We observe a very strong secular trend in support for the "no party": the support is 15-20 percentage points larger in 2010-15 than in 1991. The flip-side is that support for the three main parties have declined over time, least for Labour, and most for the Liberal Democrats and the Conservative Party. Support for other parties has surged up toward the end of the period, but remains under the 1991 level.

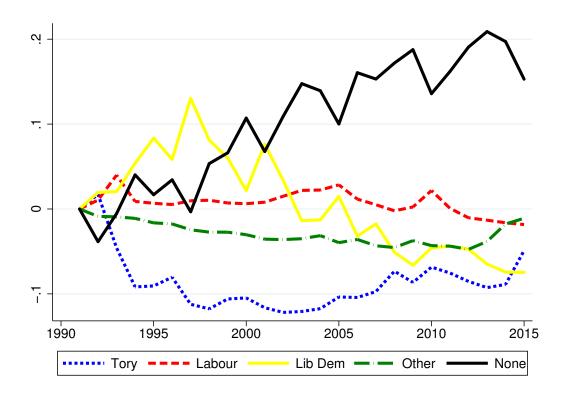


Fig. 5: Secular trends in party identification for the five "parties".

Notes: The figure plots the year fixed effects from equation (2) estimated for identification with the Conservative Party (Tory), the Labour Party (Labour), the Liberal Democrats (Lib Dem), other parties (Other) or the "no party" (None), respectively. The omitted year dummy is for 2016 and the year fixed effects are normalized to equal zero in 1991.

Second, Figure 6 reports the cohort effects from equation (3) for generations (defined as individuals born in a given year) born between 1930 and 1998 for each of the five "parties". We see that a small part of the increase in support for the "no party" can be attributed to a cohort effect. There has been a steady increase in identification with the "no party" since the cohort born at the end of World War II, with a marked reversal for the cohorts born in the 1990s whose support for the "no party" are comparable to that of the generations born before World War II. It does not, therefore, appear that the so-called Blair's Babies generation is less politically engaged than previous generations, as argued by, for example, Grasso et al. (2018). Moreover, the cohort effect for the "no party" is dwarfed by the increase in identification with "other parties". Recent cohorts are almost 20 percentage points more likely to feel close to some other party than someone born in 1930. Identification with the Conservative Party is the mirror image: starting in 1950, cohort by cohort there has been a steady decline in party identification. Recent cohorts are also less likely to identify with the Liberal Democrats, but this effect is much less pronounced. Labour is the only party amongst the three main parties for which the recent cohorts born in the late 1990s are more likely to identify with it than earlier cohorts.

Third, Figure 7 plots the set of age dummy variables defined relative to the dummy for individuals aged 20. Since the panel regressions include many life-cycle variables that capture social age effects, these dummy variables can be interpreted as the political age effect. The most striking feature of the plot is the 40 percentage points *fall* in the support for the "no party" when we compare young individuals aged 18 to old individuals aged 80. This demonstrates that the political age effect associated with political learning is very strong in England: older individuals are much more likely to identify with a party than young individuals. When combined with the fact that the British population has been aging over the past decades, this slows down the rise of the "no party". We also observe that the Liberal Democrats and other parties, and to a lesser extent the Conservative Party, have higher support amongst the old than the young. The opposite is true for Labour.

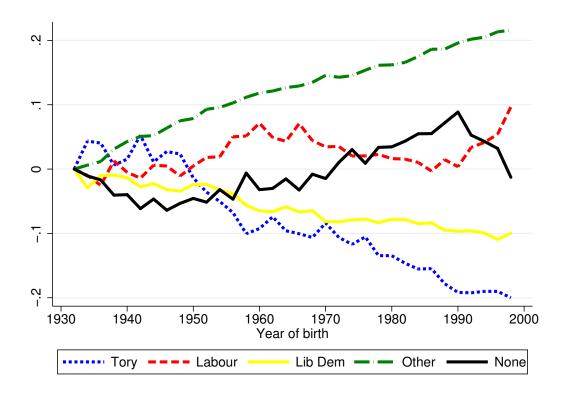


Fig. 6: Party identification and cohort effects for the five "parties"

Notes: The figure shows the cohort effects estimated from equation (3) for identification with the Conservative Party (Tory), the Labour Party (Labour), the Liberal Democrats (Lib Dem), other parties (Other) or the "no party" (None), respectively. The effects are normalized to equal zero for the first generation born in 1930.

To summarize, our decomposition documents two facts: (i) while cohort and period effects both have contributed to the rise of the "no party", the secular trend is by far the most important contributor trumping any generation replacement effects; (ii) as the English population is aging, the political age effect has slowed down the rise of the "no party" but not reversing it. This is consistent with the Secular Disengagement Hypothesis: the main reason why the share of individuals who do not identify with any party has risen from 25 to about 50 percent since the early 1990s is a secular trend that affects individuals across all ages and cohorts. It cannot be attributed to generation replacement.

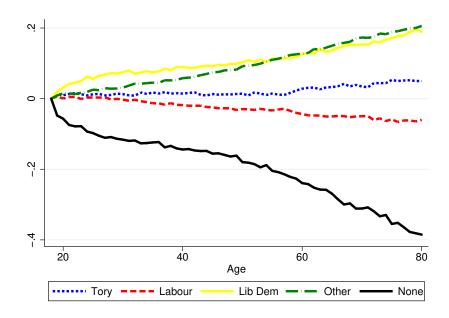


Fig. 7: Party identification and age effects for the five "parties"

Notes: The figure plots the size the age dummy variables, one for each age between 20 and 80, included in equation (2) for identification with the Conservative Party (Tory), the Labour Party (Labour), the Liberal Democrats (Lib Dem), other parties (Other) or the "no party" (None), respectively.

5 The rise of the "no party" and the fall in election turnout

The rise of the "no party" has been accompanied by a fall in turnout in general elections in England: Actual turnout averaged about 75 percent between 1950 and 2000, but fell to about 65 percent in the 2000s (Solijonov, 2016).⁸ A large body of research, starting with the classical studies of Campbell et al. (1960, 1966), links this decline to the rise of the "no party".⁹ In this section, we present evidence that the decline in party identification in England over the past two and a half decades can account for about 80 percent of the decline in turnout.¹⁰

⁸For the respondents in the Understanding Society survey, self-reported turnout in 1992 was about 83 percent and fell to about 75 percent in 2010, with a low of 70 percent in 2001.

⁹Recent work include Wattenberg (2002*b*), Heath (2007), Heath, Jowell and Curtice (1985) and Clarke et al. (2004).

¹⁰In principle, we could use our decomposition method to isolate age, period and cohort effects in election turnout in England. However, since we only observe 5 elections (the respondents were not asked about their participation in the 2015 election, presumably because it took place in the middle of the survey period (2014-16)), the panel dimension is limited and we did not pursue this here. Nevertheless, it would be interesting to do so in future research in order to engage with the ongoing debate about the relative importance of generation effects (e.g.,

Table 2 reports statistical tests of whether those feeling close to no party are, in fact, less likely to vote when controlling for their observable fixed and life-cycle characteristics. Column (1) presents the marginal effects of a pooled logit model that conditions on these personal characteristics along with region and election year fixed effects. Feeling close to no party is associated with a 14 percentage points lower likelihood of turning out to vote. This could obviously be driven by selection: party political disengagement and disengagement with voting could be caused by the same unobserved factors. To address this, column (2) reports the results of a linear probability model in which we control for individual fixed effects. These fixed effects capture all unobserved factors that may simultaneously drive the two aspects of political disengagement which are fixed over the sample period.¹¹ We find that individuals who turn their back on political parties are 9 percentage points less likely to vote afterwards than before. In column (3), we replace election fixed effects by an election count, i.e., the general election in 1992 is coded as 1, while the election in 2010 is coded as 5. We interact the election count with feeling close to no party. In this way, we can test if the turnout probabilities for the two groups of individuals have diverged between 1992 and 2010. We find that they have. With every election the likelihood of turning out has increased by 2.3 percentage points for those feeling close to a party. However, for those feeling close to no party, it has decreased by 1.9 percentage points for each election.

The results reported in Table 2 suggest that the fall in turnout is related to the rise of the "no party" in two ways. First, the share of disengaged "no party" supporters, who are less likely to vote, has increased over the period. Second, the disengaged "no party" supporters have become less likely to vote over time. To understand how much these two trends contributed to the observed fall in (self-reported) turnout, Figure 8 reports on a counter-factual simulation that isolates them. The black dotted line is the actual turnout rate for each election. To isolate the Smets and Neundorf, 2014; Blais et al., 2004), period effects (e.g., Konzelmann, Wagner and Rattinger, 2012) or contextual effects related to dis-functional institutions (e.g., Hooghe and Quintelier, 2014).

¹¹The estimate could still be biased if there are individual specific time varying factors that affect both aspects.

portion attributable to the greater propensity of "no party" supporters not to vote, we estimate a logit model (see Appendix Table A2) and use it to simulate what turnout would have been had "no party" supporters had the same turnout rates as in 1992 in subsequent elections. The blue dashed line in Figure 8 shows the result. Comparing turnout in 1992 to turnout in 2010, changes in the voting behavior of "no party" supporters can account for 29% of the drop in actual turnout.

To isolate the portion of the observed fall in turnout due to the increase in "no party" supporters, we use the sample from 1992 to train a statistical model to predict the likelihood of belonging to the "no party" as a function of observables for the following years. This keeps support for the "no party" fixed at the 1992 level in relation to observables but allows for changes in the personal characteristics of the individuals over time. We, then, use the predicted support for the "no party" to estimate the implied turnout. This is plotted in Figure 8 as the gray solid line, which represents turnout under the assumption that support for the "no party" had not changed over time (except for that implied by changes in characteristics). Again, drawing the comparison between 1992 and 2010, the increase in support for the "no party" accounts for 68% of the decline in turnout. Finally, the red dashed line in Figure 8 combines the two effects. Together they can account for 80% of the drop in turnout, leaving only 20% to be accounted for by other factors than the rise of the "no party". Although we are not able to demonstrate that the causality runs from party identification to turnout, there are solid theoretical reasons why this should be the case. Dalton and Wattenberg (2002) highlight that political parties are important for mobilizing turnout in elections. Direct canvassing and other mobilization strategies play a role. Most importantly, perhaps, is the fact that feelings of party identification can be a strong motivator for voting and that the fall in party identification has set many voters adrift in a complicated political world, resulting in total withdrawal from electoral politics (Wattenberg, 2002a).

Table 2: The probability of turning out to vote in general elections between 1992 and 2010 and the rise of the "no party"

Dependent variable: Voted	in general ele	ection	
	(1)	(2)	(3)
No party	-0.160***	-0.089***	-0.015
rio party	(0.013)	(0.014)	(0.018)
Election count since 1992	(0.012)	(0.01.)	0.023***
200000000000000000000000000000000000000			(0.004)
No party * Election count			-0.019***
r r			(0.003)
Conservative	0.069***	0.024*	0.033**
	(0.014)	(0.014)	(0.014)
Labour	0.081***	0.024*	0.025*
	(0.013)	(0.014)	(0.014)
Lib Dem	0.098***	0.012	0.013
	(0.014)	(0.014)	(0.014)
Age	0.012***	-0.007***	-0.006***
	(0.001)	(0.001)	(0.001)
$Age^2 / 1000$	-0.069***	-0.002	-0.021*
	(0.008)	(0.011)	(0.011)
HH income	0.069***	0.019***	0.013**
	(0.009)	(0.007)	(0.007)
Married	0.042***	0.035***	0.024***
	(0.004)	(0.005)	(0.005)
Children under 16	-0.001	0.029***	0.018**
	(0.007)	(0.007)	(0.007)
Retired	0.018**	0.019***	0.001
	(0.009)	(0.005)	(0.005)
Unemployed	-0.041***	-0.004	-0.007
	(0.008)	(0.008)	(0.008)
Female	0.023***		
	(0.005)		
A level	0.050***		
	(0.008)		
Some higher education	0.047***		
	(0.006)		
Degree	0.121***		
	(0.006)		
Estimation method	Logit	OLS	OLS
Region fixed effects	Yes	Yes	Yes
Election fixed effects	Yes	Yes	No
Individual FE	No	Yes	Yes
Observations	111895	116463	116463

Notes: The dependent variable is a dummy variable equal to one if the respondent self-declared to have voted in the election at time t with $t \in \{1992, 1997, 2001, 2005, 2010\}$. Column (1) reports logit estimates. The coefficients represent marginal effects. Column (2) reports Ordinary Least Squares (OLS) estimates of a linear probability model with individual fixed effects. Column (3) replaces the election year fixed effects with a count variable where the general election in 1992 is coded as 1, while the election in 2010 is coded as 5 and interacts this election count variable with the indicator variable for belonging to the "no party". Standard errors (in round brackets); *p<0.10, **p<0.05, ***p<0.01.

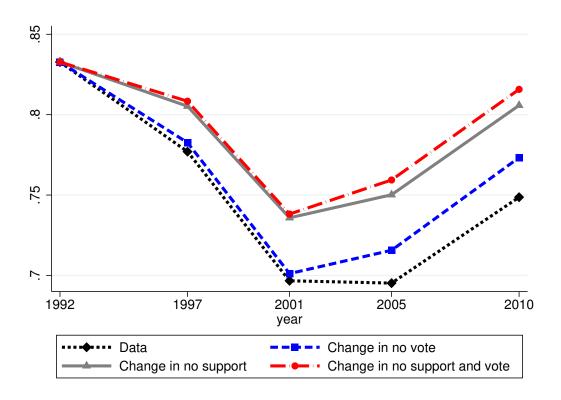


Fig. 8: A counter-factual decomposition analysis of the impact of the rise of the "no party" on the turnout rate

Notes: The black dotted line is the actual observed self-reported turnout rate for the respondents in each election between 1992 and 2010. The blue dashed line is the counter-factual turnout rate under the assumption that "no party" supporters had the same turnout rate in each subsequent election as in 1992. The gray solid line is the counter-factual turnout rate under the assumption that support for the "no party" had not changed over time (except for that implied by changes in personal (life-cycle) characteristics). The red dashed line combines the two counter-factual effects.

6 The dynamics of party identification

We now present new evidence on the dynamics of party identification in England.

6.1 Transition probabilities

In principle, the observed rise of the "no party" can either be due to many individuals temporary moving away from regular parties to the "no party" and back again or due to a smaller trickle of individuals who join the "no party" for good. We use a discrete Markov chain to model this dynamic process and to obtain insights into the transition patterns behind the rise of the "no party". In general, a Markov chain is a stochastic model describing a sequence of possible events in which the probability of each event depends only on the state attained in the previous event. Our model has five states: one for each of the four regular parties that an individual at time t can feel close to and one for the "no party". Table 3 reports the transition probabilities that govern the likelihood that an individual in the "state" recorded in the left-most column at time t will be in one of the states recorded in the top row at time t + 1. The probabilities along the diagonal, which represent the likelihood of not changing state from one year to the next, show that, on average, persistence is high, ranging from 81% for those feeling close to the Conservative Party to 61% for the Liberal Democrats. That is, once an individual identifies with a party or with the "no party", he or she is highly likely to keep that identification in the future. For the four regular parties, the off-diagonal probabilities that govern how likely individuals are at switching from one of them to another are very low, at most 5%. In contrast, the off-diagonal probabilities in the last column that govern the likelihood that individuals who in the past felt close to one of the regular parties will in the future become "no party" supporters are remarkably large. In plain English, this means that if an individual stops feeling close to a regular party, the most likely defection is to the "no party". For instance, the probability that an individual who at time t self-reports as feeling close to the Liberal Democrats has a 24% probability to self-report as a "no party" supporter at time t+1. The corresponding probabilities for the Conservative Party and for Labour are 15% and 18%, respectively.

Table 3: The transition probabilities of the discrete Markov Chain model

	<u> </u>	t+1				
		Conservative	Labour	Liberal	Other	No party
		Party	Party	Democrats	parties	
	Conservative Party	.810	.016	.014	.012	.149
	Labour Party	.012	.780	.019	.012	.177
t	Liberal Democrats	.046	.090	.605	.018	.241
	Other parties	.043	.054	.020	.613	.271
	No party	.071	.104	.031	.032	.762

Notes: The entries in the transition matrix of the discrete Markov chain are the probability that individuals self-reporting at time t to be close to the "party" recorded in the left-most column will at time t+1 be close to the "party" recorded in the top row.

6.2 Transition dynamics across the life-cycle

To investigate the transition dynamics across the respondents' life-cycle, we define the following rates: 12

- The party exit rate: the fraction of individuals who identifies with one of the (four) regular political parties at t who supports the "no party" at t + 1.
- The party finding rate: the fraction of individuals who does not identify with any party at t who at t+1 identifies with one of the (four) regular political parties.
- The party-to-party switching rate: the fraction of individuals who identifies with one of the (four) regular parties at t who at t+1 has switched identification to one of the other regular parties.

Figure 9 plots these three rates for different age groups, i.e., over the life-cycle. The gray solid line represents the party exit rate. It decreases with age, from almost 40% for individuals in their 20s to less than 20% for individuals above 60 years of age. Accordingly, the majority

¹²This terminology is inspired by the labor economics literature where using Markov transition matrices to describe dynamics is standard (e.g., Shimer 2012).

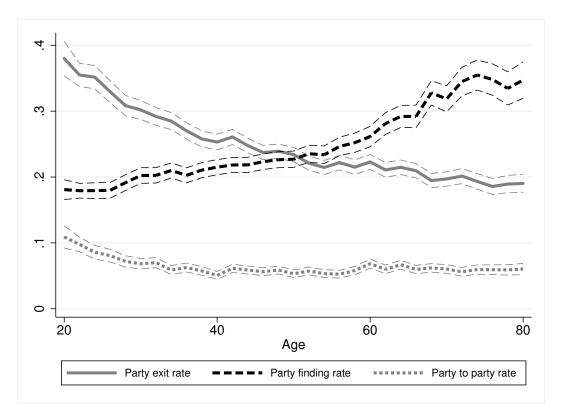


Fig. 9: Transition dynamics over the life-cycle

Notes: The thin dashed lines represent the 95% confidence intervals. The party exit rate is the fraction of individuals who identifies with one of the (four) regular political parties at t who supports the "no party" at t+1; the party finding rate is the fraction of individuals who does not identify with any party at t who at t+1 identifies with one of the (four) regular political parties; and the party-to-party switching rate is the fraction of individuals who identifies with one of the (four) regular parties at t who at t+1 has switched identification to one of the other regular parties.

of individuals do not switch to the "no party" at any age and the rate of exit to the "no party" decreases over the life-cycle. The black-dashed line, which shows the party finding rate, exhibits the reverse pattern, with the rate at which individuals belonging to the "no party" start identifying with one of the regular parties increases over the life-cycle from less than 20% to about 35%. The gray-dashed line shows the party-to-party switching rate. This rate is declining with age until around 40 years of age and flat thereafter. More importantly, the party exit rate is 2 to 4 times greater than the party-to-party switching rate. This means that, at any age, individuals are much more likely to turn their back on the political parties and join the "no party"

than switching directly to a different party. The flip side of this is that political parties rarely draw supporters from other parties directly, but are mainly fishing for (or at least catching) new supporters amongst the increasingly large pool of individuals feeling close to the "no party".¹³ However, many of those who do exit stay disengaged.

6.3 Changes in party identification dynamics over time

Figure 10 plots the party exit rate (left panel) and the party finding rate (right panel) of respondents surveyed in 1991-1999 (gray solid line), in 2000-2009 (black solid line), and in 2010-2016 (black dashed line) for different age groups. Support for the "no party" has become more persistent over time. First, over time the party exit rate has increased across all ages, i.e., the persistence of party identification has decreased, individuals have become more footloose. Second, over time the party finding rate has decreased across all ages, i.e., individuals have become less likely over time to re-identify with one of the regular parties once they have joined the "no party".

6.4 The correlates of the transition rates

To gain insights into how the three transition rates relate to respondents' personal characteristics, we estimate multivariate regressions with year and region fixed effects that correlate them with the personal characteristics. Table 4 reports the results. ¹⁴ First, the party exit rate declines with household income and with education. The exit rate is also declining in age until 81 years of age and falls after retirement. Females are more likely to join the "no party" than men, and having children under the age of 16 in the household is also related with a higher exit rate.

Second, many of the correlates of the party-to-party switching rate are the same as for the

¹³Appendix Figure A.3 reports the party exit and the party-to-party switching rates for the Conservative Party, the Labour Party, the Liberal Democrats and other parties separately. For all of these parties, the party exit rate is higher across the life-cycle than the party-to-party switching rate.

¹⁴In Appendix Table A3, we show the correlates of the party exit rates for the regular parties.

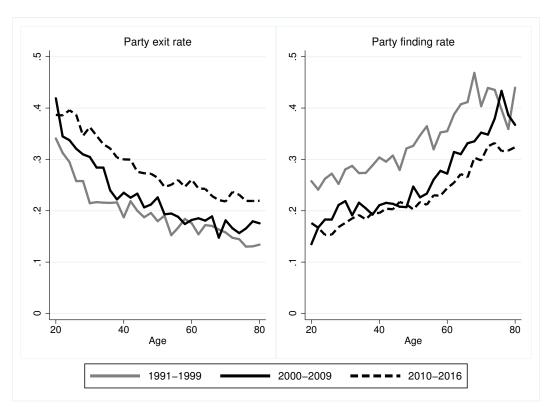


Fig. 10: Party exit and finding rates over the life-cycle for the respondents in different survey rounds

Notes: The party exit and party finding rates, respectively are graphed for the respondents surveyed in 1991-1999, 2000-2009 and 2010-16, respectively. Due to the panel structure of the data, there will be significant overlap between the respondents in the three survey waves, but the more recent rounds will include younger individuals that were not previously interviewed and some older individuals who were interviewed in previous rounds will have died and not be including in later rounds.

party exit rate, but with two notable differences. Firstly, the party-to-party switching rate is positively correlated with education, suggesting that better educated individuals are more likely to switch party and less likely to disengage with political parties. Secondly, while life-cycle events such as becoming unemployed, getting married or retiring are related to the party exit rate, the party-to-party switching rate is not affected by these events. This suggests that party-to-party switches are not triggered by a sudden change in circumstances, but by other factors. Third, the correlates of the party finding rate are, with the exception of age, the mirror image of the correlates of the party exit rate. Accordingly, the personal characteristics that tend to make

it less likely for an individual to terminate their identification with a party, in turn, make it more likely that an individual finds a new party to identify with conditional on having exited and vice versa.

Table 4 shows that the party exit rate is lower and the party finding rate is higher for individuals with higher (log) household income. In Figure 11, we investigate whether transitions to and from the "no party" is associated with *changes* in household income from one survey wave to the next, i.e., if relative income shocks matter. The left panel shows the effect of income changes (measured relative to the zero change in the middle of the diagram) on the party exit rate and the right panel shows the effect on the party finding rate. Households are coded as not experiencing any change if they stay within the same income decile from one survey to the next and are coded as moving up or down one or two deciles if they experience a sufficiently large positive or negative income change relative to other respondents between two survey rounds to induce such a relative move within the income distribution.¹⁵

We see in the left panel that the party exit rate is at a minimum for individuals who see no change in household income, amongst whom only 16% switch to the "no party". Both movements up and down in the income distribution have a positive effect on the party exit rate and thus any change in (relative) income increases the probability of joining the "no party". The size of the effect is about 1.5 percentage point increase in the probability of switching to the no party per decile moved up or down. In the right panel, for those who already belong to the "no party", we see the mirror image. Individuals who maintain their place within the income distribution are least likely to switch away from the "no party" with a probability of staying put that is greater than 24%. Movements up and down in the income distribution decrease the probability of staying with the "no party" by more than 1 percentage point per decile. The symmetry of the effect of income shocks that move individuals up or down the income distribution suggests that individuals react, not so much to the direction of movements within the income

¹⁵Too few household experience changes larger than two deciles to enable reliable statistical inferences.

Table 4: The correlates of the party exit rate, the party-to-party switching rate, and the party finding rate

	Party	Party	Party
	exit	to party	Finding
	rate	switching rate	rate
	(1)	(2)	(3)
Age	-0.006***	-0.002***	0.001
11gc	(0.000)	(0.002)	(0.000)
Age squared / 1000	0.036***	0.018***	0.029***
rige squared / 1000	(0.003)	(0.002)	(0.005)
Female	0.020***	0.003*	-0.026***
Tomare	(0.002)	(0.001)	(0.003)
Log HH income	-0.044***	-0.014***	0.031***
8	(0.003)	(0.002)	(0.005)
Married	-0.008***	0.001	0.009***
	(0.002)	(0.002)	(0.003)
Children under 16	0.017***	-0.008***	0.004
	(0.003)	(0.002)	(0.004)
Retired	-0.012***	0.001	0.024***
	(0.004)	(0.002)	(0.006)
Unemployed	0.021***	-0.003	0.007
	(0.007)	(0.004)	(0.007)
Education			
A level	-0.035***	0.005*	0.041***
	(0.004)	(0.003)	(0.005)
Some higher education	-0.029***	0.008***	0.032***
	(0.003)	(0.002)	(0.004)
Degree	-0.065***	0.014***	0.083***
	(0.003)	(0.002)	(0.004)
Sample mean	.183	.062	.236
Year fixed effects	Yes	Yes	Yes
Region fixed effects	Yes	Yes	Yes
R^2	0.029	0.006	0.042
Observations	133517	133517	93304

Notes: Estimated with Ordinary Least Squares (OLS). In column (1), the dependent variable is a dummy variable equal to one if the respondent switched from a party to the "no party" and zero if he/she stayed with a party; in column (2), it is equal to one if the respondent switched from a party to another party; and in column (3), it is equal to one if he/she switched from the "no party" to a party. "Less than A levels" is the baseline level of education. Standard errors (in round brackets); *p<0.10, **p<0.05, ***p<0.01.

distribution, but to the mere fact that they are either gaining or losing relative to others.

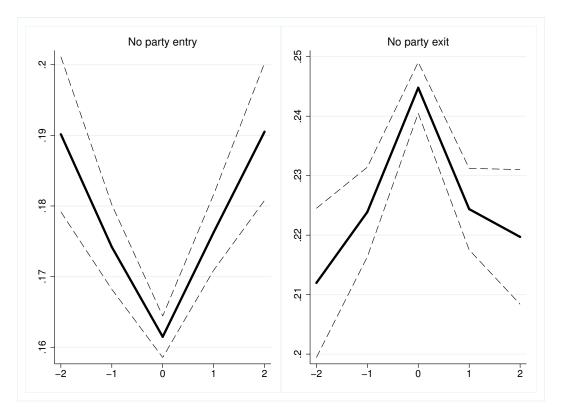


Fig. 11: The party finding and the party exit rates by income-decile change

Data source: BHPS, UKHLS.

Notes: The x-axis shows the change in household income deciles from one survey to the next relative to the income distribution of the respondents in each round. The thin dashed lines represent the 95% confidence interval. The left panel shows the party finding rate and the right panel shows the party exit rate.

7 Conclusion

We document the rise of the "no party" in England during the past two-and-a-half decades. The share of individuals who self-reports to "not feeling close" to any of the regular parties has nearly doubled and the "no party" supporters are close to holding an absolute majority. The rise is observed across regions, age, income, and gender and it is the continuation of a long-term trend of party political dealignment starting in the 1950s (Clarke and Stewart, 1984; Dalton, 2002).

Developing a new method to decompose age, period, and cohort effects that exploits individuallevel longitudinal data, we show that the rise of the "no party" is driven much more strongly by a secular trend (period effects) than by generation replacement (cohort effects) and that age effects have slowed the rise. The main difference between individuals who identify with a political party and those which do not is that the "no party" supporters feel less qualified to participate in politics, feel unrepresented, and source their information about politics from very different sources than individuals who identify with a political party. This strongly suggests that most of the "no party" supporters are what Dalton (1984) calls unsophisticated, apolitical non-partisans at the margins of politics and that few are sophisticated non-partisans who have stopped identifying with political parties because they have the skills to navigate the political arena without cues. We show that the increase in "no party" supporters and the fact that these supporters have become less likely over time to vote can explain 80% of the observed decline in election turnout in England. A detailed investigation of the dynamics of party identification shows that party political disengagement has become more persistent over time and that individuals are much more likely to transition from identifying with a party to the "no party" than to some other party.

Our study leaves a number of questions open for further research. First, we do not provide an answer to the question why support for the "no party" has increased. Given the large shifts in party identification across the board this is an important but difficult question to answer which is left for future research. Our decomposition of the rise of the "no party" into age, period, and cohort effects suggest that the key to unlocking this is a better understanding of what is behind the secular disengagement trend. Second, we study the Westminster system based on the first-past-the-post election system. Significant insights into the causes of the decline in party identification are likely to come from comparative studies of different election systems (e.g., proportional vs. majoritarian).

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Appendix

Table A1: Fixed effect panel regressions underlying the decomposition of age, period and cohort effects

Dependent variable: Ind	ividual clo	sest to			
	Cons.	Labour	Lib	No	Other
	Party	Party	Dems	Party	Parties
T THE '	0 (()	0.20	0.04	0.22	0.67*
Log HH income	0.66**	0.20	0.04	-0.23	-0.67*
	(0.28)	(0.28)	(0.21)	(0.19)	(0.38)
Positive future	0.13	0.29*	0.12	0.14	-0.68***
	(0.14)	(0.17)	(0.11)	(0.09)	(0.21)
Negative future	-0.32**	0.06	0.10	0.01	0.15
	(0.16)	(0.18)	(0.12)	(0.11)	(0.24)
Married	-0.05	0.03	-0.22	0.11	0.13
	(0.20)	(0.24)	(0.16)	(0.12)	(0.29)
Children under 16	-0.40	0.58	0.20	-0.21	-0.18
	(0.30)	(0.36)	(0.21)	(0.15)	(0.43)
Divorce	-0.67*	-0.06	-0.33	-0.26	1.32**
	(0.40)	(0.45)	(0.29)	(0.21)	(0.55)
Retired	0.06	-0.42	0.15	0.10	0.10
	(0.26)	(0.28)	(0.19)	(0.16)	(0.37)
Unemployed	-0.19	0.25	0.53**	0.27	-0.86*
	(0.28)	(0.40)	(0.21)	(0.23)	(0.49)
Student	-0.02	0.31	0.37	0.81***	-1.47***
	(0.31)	(0.38)	(0.23)	(0.17)	(0.46)
Individual fixed effects	Yes	Yes	Yes	Yes	Yes
Age fixed effects	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes
Region fixed effects	Yes	Yes	Yes	Yes	Yes
Observations	361794	361794	361794	361794	361794

Data source: BHPS, UKHLS.

Notes: Estimation technique is Ordinary Least Squares (OLS). Each column is a separate panel fixed effects regression (equation (2)) with the depending variable being a dummy equation to 1 if the respondent identified with the respective party indicated in the column heading. The regressions are used to construct Figure 5, 6 and 7. Standard errors (in round brackets); *p<0.10, **p<0.05, ***p<0.01.

Table A2: Logit model to preduct turnout in the general elections between 1992 and 2010

Dependent variable: Voted	in general election
No party	-0.138***
	(0.015)
Conservative Party	0.075***
	(0.014)
Labour Party	0.087***
	(0.013)
Liberal Democrats	0.103***
	(0.015)
Election FE	
1997	-0.043***
	(0.006)
2001	-0.123***
	(0.007)
2005	-0.109***
	(0.007)
2010	-0.034***
	(0.008)
Interaction election FE x No.	ne
1997 x No party	-0.011
	(0.009)
2001 x No party	-0.008
	(0.009)
2005 x No party	-0.032***
	(0.010)
2010 x No party	-0.038***
	(0.010)
Controls	Yes
Region fixed effects	Yes
Observations	111895

Notes: Logit coefficients reported. Controls include age, age squared, log household income, marital status, whether one has children under the age of 16, retirement status, unemployment status, gender, education, and region fixed effects. The model is used to simulate what turnout would have been *without* the interaction term between being a "no party" supporter and the election dummies. This isolates the portion of the decline in turnout attributable to the greater propensity of "no party" supporters not to vote and is used to construct the blue dashed line in Figure 8. Standard errors (in round brackets); *p<0.10, **p<0.05, ***p<0.01.

Table A3: The correlates of the party exit rate for the Conservative Party, the Labour Party, the Liberal Democracts and other parties

	Party exit rates					
	Conservative	Labour	Liberal	Other		
	Party	Party	Democrats	parties		
	(1)	(2)	(3)	(4)		
Age	-0.006***	-0.006***	-0.004***	-0.008**		
	(0.001)	(0.001)	(0.001)	(0.002)		
Age squared / 1000	0.035***	0.036***	0.017	0.048**		
	(0.005)	(0.005)	(0.011)	(0.017)		
Female	0.012***	0.023***	0.025***	0.013		
	(0.003)	(0.003)	(0.007)	(0.010)		
Log HH income	-0.040***	-0.049***	-0.017	-0.040***		
	(0.005)	(0.005)	(0.011)	(0.015)		
Married	-0.010***	-0.012***	-0.004	0.019°		
	(0.004)	(0.003)	(0.007)	(0.012		
Children under 16	0.028***	0.014***	0.012	0.040**		
	(0.006)	(0.005)	(0.011)	(0.017)		
Retired	-0.010*	-0.017***	-0.017	0.00'		
	(0.005)	(0.006)	(0.011)	(0.017		
Unemployed	0.062***	0.017**	-0.023	-0.033		
	(0.013)	(0.009)	(0.021)	(0.025		
ducation						
A level	-0.029***	-0.044***	-0.046***	-0.043***		
	(0.006)	(0.006)	(0.013)	(0.017		
Some higher education	-0.026***	-0.030***	-0.055***	-0.047**		
	(0.004)	(0.004)	(0.009)	(0.013		
Degree	-0.045***	-0.087***	-0.094***	-0.109***		
	(0.005)	(0.004)	(0.009)	(0.011		
Sample mean	.149	.179	.243	.265		
Year fixed effects	Yes	Yes	Yes	Yes		
Region fixed effects	Yes	Yes	Yes	Yes		
R^2	0.028	0.039	0.040	0.043		
Observations	49329	58532	16654	9002		

Notes: Estimation technique is OLS. The dependent variable is a dummy variable equal to one if the respondent switched from the respective party in the column heading to the "no party" and zero if he/she stayed with the respective party. Less than A levels is the baseline level of education. Standard errors (in round brackets); p<0.10, **p<0.05, ***p<0.01.

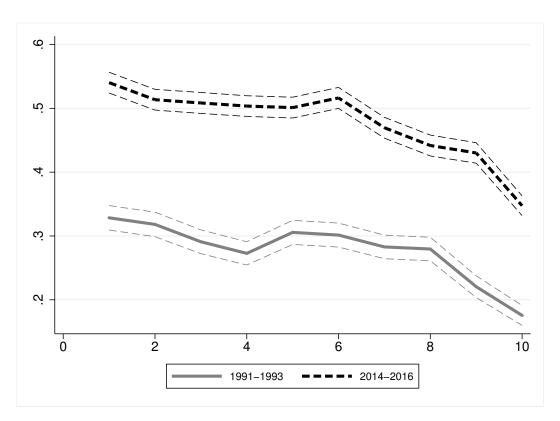


Fig. A.1: "No party" support by income decile

Notes: The x-axis shows household income decile relative to the income distribution of the respondents in each round. The thin dashed lines represent the 95% confidence interval.

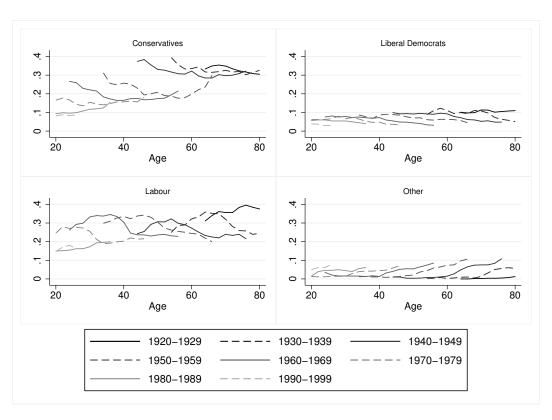


Fig. A.2: Identification with the Conservative Party, Labour, the Liberal Democrats and other parties by cohort over the life-cycle

Note: The lighter the shade of gray of a line the younger the birth cohort. Birth cohorts are defined by decade. Figure A.2 displays party preferences over the life-cycle by birth cohort for the three major parties and the other parties (aggregated). Each panel exhibits the share of respondents feeling close to a given party over the life-cycle. Within a panel each successive cohort is plotted as a separate line, where the more recent the cohort was born, the lighter is the shade of gray of the corresponding line. The three main messages from this figure are: First, the share of respondents supporting the Conservative Party are declining with each birth cohort. Second, there has been a rise in support for the other parties across all cohorts in recent years. Third, for the Liberal Democrats and Labour there are only small differences by cohort.

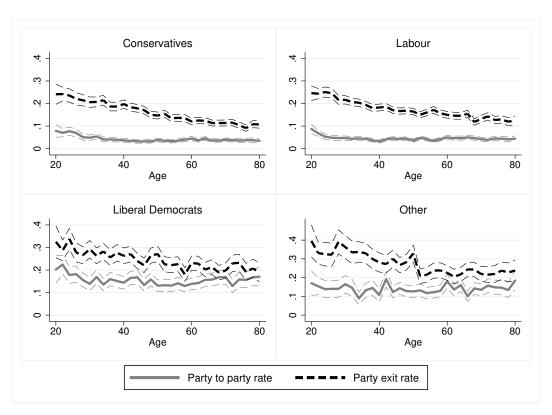


Fig. A.3: Party-to-party switching and party exit rates over the life-cycle for the Conservative Party, Labour, the Liberal Democrats and for other parties.

Note: The thin dashed lines represent the 95% confidence interval. The party exit rate is the fraction of individuals who identifies with one of the (four) regular political parties at t who supports the "no party" at t+1, and the party-to-party switching rate is the fraction of individuals who identifies with one of the (four) regular parties at t who at t+1 has switched identification to one of the other regular parties.