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Does Money Make People Right-Wing and Inegalitarian? A Longitudinal Study of Lottery Winners

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Does Money Make People Right-Wing and Inegalitarian? A Longitudinal Study of Lottery Winners

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Abstract

The causes of people's political attitudes are largely unknown. We study this issue by exploiting longitudinal data on lottery winners. Comparing people before and after a lottery windfall, we show that winners tend to switch towards support for a right-wing political party and to become less egalitarian. The larger the win, the more people tilt to the right. This relationship is robust to (i) different ways of defining right-wing, (ii) a variety of estimation methods, and (iii) methods that condition on the person previously having voted left. It is strongest for males. Our findings are consistent with the view that voting is driven partly by human self-interest. Money apparently makes people more right-wing.

Keywords: Voting; gender; lottery wins; political preferences; income; attitudes.

JEL codes: D1, D72, H1, J7

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Does Money Make People Right-Wing and Inegalitarian? A Longitudinal Study of Lottery Winners

"I made so much money betting on the Labour party to win the election that I was able to become a Conservative." Anon.

1. Introduction

Voting is the foundation of modern democracy. The causal roots of people's political preferences, however, are imperfectly understood. One possibility is that individuals' attitudes to politics and redistribution are motivated by deeply ethical views. Another possibility -- perhaps the archetypal economist's presumption -- is that voting choices are made out of self-interest and then come to be embroidered in the mind with a form of moral rhetoric. Testing between these two alternative theories is important intellectually. It is also inherently difficult. That is because so many of our attitudes as humans could stem from early in life and are close to being, in the eyes of the econometrician, a person fixed-effect.

This study proposes a new empirical test. It provides longitudinal evidence consistent with the second, and some might argue more jaundiced, view of human beings. We exploit a panel data set in which people's political attitudes are recorded annually. In the data set, some individuals serendipitously receive lottery windfalls. We find that the larger is their lottery win, the greater is that person's subsequent tendency, after controlling for other influences, to switch their political views from left to right. We also provide evidence that lottery winners are more sympathetic to the belief that ordinary people 'already get a fair share of society's wealth'.

Access to longitudinal information gives us advantages denied to most previous researchers on this topic. It is possible to observe people's political attitudes before and after events. Although panel data cannot resolve every difficulty of establishing cause-and-effect relationships, they in general allow sharper testing than do cross-section data. Our inquiry combines panel data with a randomized-income element that stems from the nature of lottery windfalls. This study is thus robust to the concern that omitted fixed-effect factors might

explain the different political attitudes of large and small winners. One reason this is important is because it seems plausible that personality might determine both the number of lottery tickets bought and the political attitudes of the person, and this might thereby lead to a possible spurious association between winning and right-leaning views. We provide, among other kinds of evidence, a simple graphical demonstration that winners disproportionately lean to the right having previously not been right-wing supporters.

The study draws upon a nationally representative sample from the British population. In the later regression equations we focus particularly upon a sub-sample of people (a fairly large proportion, given the lottery's popularity in Great Britain) who have ever had a lottery win. Within this group, we are especially interested in the observed longitudinal changes in political allegiance of the bigger winners compared to the smaller winners. Our key information stems from 541 observations on lottery wins larger than 500 pounds.

2. Background

The fact that high income and right-wing views are positively correlated in a cross-section has been repeatedly documented in quantitative social science (recently, for example, by Brooks and Brady 1999 and Gelman et al. 2007 in US data, and by Evans and Tilley 2012 in British data). A somewhat analogous result is reported, using quite different kinds of methods, in Karabarbounis (2011). The difficulty is to know how to interpret this famous correlation of political science. Is it truly cause-and-effect, and if so in what direction?

Our inquiry fits into a modern literature that tries to distinguish causal from correlational relationships in people's voting patterns. Dunning (2008) describes the methodological ideas in the early literature. Examples of recent contributions are Erikson and Stoker (2011), who look at the influence of Vietnam lottery-draft numbers, and Oswald and Powdthavee (2010), who study the longitudinal influence of having daughters rather than sons.

A particularly relevant study[1] for our work is the cross-sectional paper of Doherty, Gerber and Green (2006). These researchers examine the political views of approximately 340 American lottery winners. Although the authors have point-in-time rather than longitudinal data, so are unable to observe switching, they document evidence of hostility among US lottery winners -- compared to a set of selected control individuals -- to certain kinds of taxation, especially to estate taxes. The authors do not test for a Republican/Democrat split; but they give some evidence, of a kind that is on the margin of statistical significance, that their lottery winners do not favour government-led redistribution. The Doherty et al. (2006) paper also gives a fine account of the strengths and potential weaknesses of lottery studies. As the authors explain, a difficulty with inference from cross-sections of lottery winners is that the winners who agree to take part in a study may not be identical to the ideal cross-section of control individuals who did not win.

More broadly, this paper fits within a tradition of work on the nature of endogenous preferences in human beings (see, for instance, Bowles 1998).

3. A Possible Analytical Framework

As an aid to thinking, consider a stylized model in which it is rational for different kinds of people to vote in different ways. The framework has an economic flavour. Intuitively, what happens behind the formal analytics is that, because by assumption,

- some individuals have higher income
- some people derive greater utility from public goods like a national health system and community safety[2],

[1] We discovered this fairly late in our own work and realized we were some years behind these authors in having the idea of studying political attitudes and lottery windfalls. Our work follows in a lottery-study tradition in social science exemplified by studies such as Brickman et al. (1978), Imbens et al. (2001), Lindahl (2005), Gardner and Oswald (2007), Apouey and Clark (2011), Hankins et al. (2011), and Kuhn et al. (2011). It is also related to research on redistributional preferences such as Alesina and Ferrara (2005) and Alesina et al. (2012).

[2] Another case might be that of state pensions and medical care, which, because females live longer than males, are of natural particular concern to women.

it is possible to consider analytically the likely relationships between income and political views. We will have in mind a class of individuals who put a high weight on publicly provided goods (they will have a high 'g-parameter' in the later model), and will also later appeal to informal evidence that females may fall into this category more commonly than males. Our paper assumes, in the tradition of economic modelling and of some work in political science, that people optimize as if conscious of their motives. In practice, we would accept, such forces may instead operate at a subconscious level.

Consider a world in which individuals earn real income y and there is an amount of public good denoted P. The public good -- it might be thought of as a service like state-sponsored medical care in old age -- is funded out of tax revenue. It is paid for out of tax revenue. The revenue is raised from a single tax rate, t, levied on personal income.

Let the political shade of government in this world be captured by a single variable, r, the shade of 'red' of this society.[3]

Assume the existence of a monotonic relationship $P(t)$ between the supply of the public good and the tax rate. This is increasing and differentiable: greater income taxes lead to a larger supply of the public good. Define a left-wing society, with a high value of redness, r, as one that provides a relatively large amount of the public good and funds this with a relatively high tax rate on income. Right-wing societies, by contrast, have low P and low t. Let the tax rate be $t = t(r)$, and assume the tax function $t(r)$ is increasing, monotonic, and differentiable. Write the amount of the public good

$$P = P(t(r)) = p(r) \qquad (1)$$

namely as a reduced-form function of the political shade of the society.

Consider a rational voter. Assume he or she likes both public and private goods, and has separable utility function

[3] We use red in the historical sense that goes back at least to the era of Karl Marx, not in the sense used in recent US Democrat-Republican conventions.

$$V = gv(P) + (1-g)u(y(1-t)) \qquad (2)$$

where the function *v(P)* captures the utility from the public good, *u(.)* is a differentiable, increasing, and weakly concave utility function defined on net private income, g is a preference parameter that lies between zero and unity and denotes the marginal preference the person has for public over private goods. Assume *v(.)* is differentiable, increasing, and strictly concave.

In choosing a society's optimal political colour, r, this voter balances a desire for low taxes with a desire for the public good. The utility maximization decision is the choice of the level of r that maximizes:

$$V = gv(p(r)) + (1-g)u(y(1-t(r))) \qquad (3)$$

so that the voter's optimal choice of the redness of a government is given by the condition

$$\frac{\partial V}{\partial r} = gv'(p(r))p'(r) - (1-g)u'(y(1-t(r)))yt'(r) = 0 \qquad (4)$$

after assuming, as will be done throughout, that the citizen's maximand *V(r, y, g)* is concave in r and is well-behaved.

From this, we have:

<u>Proposition</u>

- *(i)* *Assume the individual has relative risk aversion of less (more) than unity. Then the greater is that person's income, y, the less (more) left-wing is the person.*
- *(ii)* *The greater is parameter g, the more left-wing are individuals*
- *(iii)* *In the limit, as g goes to unity, a rise in income y has no effect on the person's left-wingness.*

To establish these results, consider income, *y*. The sign of the cross-partial derivative of the maximand *V(r, y, g)* with respect to *r* and *y* is given by the sign of the term

$$-(1-g)u''(y(1-t(r))yt'(r) - (1-g)u'(y(1-t(r))t'(r) \qquad (5)$$

which may be rewritten as

$$-(1-g)t'(r)[u''(y(1-t(r))y - u'(y(1-t(r))] \qquad (6)$$

so this expression can, in principle, take either sign.

However, if in expression (6) the term in square brackets is negative, which is simply the requirement that the degree of risk aversion exceeds unity, then expression (6) is positive overall, because *(1-g)* is non-negative and so is the derivative of *t(r)*. This in turn establishes the early part of the proposition.

The sign of the cross-partial derivative of the maximand *V(r, y, g)* with respect to *r* and *g* is given by the term

$$v'(p(r))p'(r) + u'(y(1-t(r))yt'(r) > 0 \qquad (7)$$

which, because expression (7) is unambiguously positive, establishes the proposition's second part.

The third and final part of the proposition follows simply from expression (5) as $g \to 1$.

These methods rely on the existence of differentiable cross-partials[4] of the maximand but the general argument goes through without differentiability of *V*.

The framework described above is a deliberately simple one and rests on a form of individual rationality. The conceptual set-up is not designed to explain details of the political world. Instead the aim is to try to contribute to thinking about possible sources of voting differences -- to allow us to think about averages and trends within a population.

4. Testing

The main data source used in the analysis is the British Household Panel Survey (BHPS)[5]. This is a nationally representative random sample of households, containing over 25,000 unique adult individuals, conducted between September and Christmas of each year from 1991 (see Taylor et al 2002).

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[4] The first-order condition for maximizing J(x,a) is $J_x = 0$. Around that turning point, $J_{xx}dx + J_{xa}da = 0$, which can be written simply as $dx/da = -J_{xa}/J_{xx}$. But J_{xx} is negative by the second-order condition for a maximum. Hence the sign of the comparative static result dx/da is determined solely by the sign of the cross-partial J_{xa}.

[5] The BHPS is freely available for download after registration at www.data-archive.ac.uk.

Respondents are interviewed in successive waves; households who move to a new residence are interviewed at their new location; if an individual splits off from the original household, the adult members of their new household are also interviewed. Children are interviewed once they reach 11 years old. The sample has remained representative of the British population since the early 1990s. Data on political preferences in the BHPS have been collected from 1991, whilst data on lottery wins were collected for the first time in 1997. Relatively little research appears to have been done on political preferences in BHPS data. Exceptions are Sanders and Brynin (1999) and the work of Johnston (2005) and co-authors. These did not study lottery windfalls.

The data set provides 184,045 observations (27,966 unique adult individuals) in the entire unbalanced panel of BHPS. Of those, in 89,218 observations (17,372 individuals) people stated support for either the Labour or the Conservative party. Our main sample for analysis includes lottery winners *at the year of their winning* who also stated support for either the Labour or the Conservative party. This produces 9,003 observations (4,277 individuals). Of those, 94.65% are small wins (£1-£499), and 5.35% are medium to big wins (£500+). Many people also won money from the lottery more than once in our panel. For example, from 1997, the average number of 'years of winning the lottery' for the same person is 2.12 years, with a standard deviation of approximately 2.2 years. This implies that there are likely to be some individuals who repeatedly play. In the econometric estimation, it will thus be desirable to have a method that compares within-individual rather than across (potentially intrinsically different kinds of) people. One reason why we later focus on lottery winners at the year of winning is because the BHPS does not contain information about the number of times (if any) the individual has played the lottery.[6] Hence, we cannot distinguish non-players from unsuccessful players. Also, rather than being unsuccessful in the past,

[6] For a discussion on this, see Apouey and Clark (2011).

winners at time *t* may not have necessarily played at *t*-1, thus making the within-person comparison between **winning at *t*** and **not winning at *t-1*** potentially difficult. Nevertheless, in Britain, as opposed to a number of other countries, many people play lotteries; a recent survey-based estimate by Wardle et al. (2007) places the figure of lottery players at two-third of the entire British adults, with 57% of the population playing the National Lottery (and almost 60% of these playing at least once a week). This explains why there is a considerable number of *repeated* lottery winners in the BHPS data compared to any other nationally representative data sets. Our study's main identification strategy relies on the within-person comparison between **winning at *t*** and **winning at *t-k***, where $k = 1, \ldots, n$.

One survey question that can be used (#AV8 in the survey) is as follows, with, for illustration, British people's mean answers given for the year 1991:

Which party do you regard yourself as being closer to than the others?

Conservative

Labour

Liberal Democrats

Scottish National Party

Plaid Cymru

Green Party

Other Parties

Other answer

Hence non-response is a tiny category.

Entire BHPS sample	**All**	**Women**	**Men**
Conservative	22.1%	20.4%	21.7%
Labour	35.2%	34.8%	35.6%
Lib Dem/lib/SDP	11.2%	11.8%	10.5%
Scot Nat	3.4%	3.2%	3.9%
Plaid Cymru	1.5%	1.6%	1.5%
Green party	1.3%	1.4%	1.1%
Other party	1.0%	0.7%	1.5%

Other answer	0.4%	0.3%	0.4%
None	14.3%	15.5%	14.0%
Can't vote	0.3%	0.3%	0.2%
Ulster unionist	2.9%	3.1%	3.1%
SDLP	2.3%	2.7%	2.2%
Alliance party	0.7%	0.8%	0.6%
Democratic Unionist	1.8%	1.9%	2.0%
Sinn Fein	1.0%	1.0%	1.2%
Other party	0.4%	0.5%	0.4%
N	155,720	78,919	67,765

However, it is also possible to use a different question. In much of the later analysis we measure 'right-wing' by using the expressed strength of support for the Conservative Party. We measure 'left-wing' by using individuals' expressed support for the Labour Party. This leaves the case, in particular, of those voters who favour the centrist Liberal Democrat Party. In the empirical analysis we experimented by including these 'LibDem' voters in, or not in, the Right; the results are not sensitive to that. Because they are hard to classify on a political left-right scale, and numbers are tiny, individual voters for other political parties, such as the Green Party, are eventually eliminated from the data.

A simple binary voting variable has one scientific disadvantage. It provides no information about the strength of feeling of the measured individual. By its nature, a binary variable therefore cannot reveal information about those Labour voters who are close to tipping into being Conservatives, or vice versa. This means it is more difficult, especially in a fixed-effects framework, to detect movements in political opinion as life shocks hit the individual.

For this reason, in much of the paper we use an outcome variable that captures more discerningly the <u>strength</u> of right-wing or left-wing support. This is done by drawing on individuals' responses to the following survey question:

"*Would you call yourself a very strong supporter of (Party reported to be closest to)? 1 = very strong; 2 = fairly strong; 3 = not very strong*."

The question allows us to create a cardinal variable for the 'strength of right-wing support *versus* left-wing support' variable, whereby 1 = very strong supporter of the Labour Party, …, 4 = neutral, …, 7 = very strong supporter of the Conservative Party." Among lottery winners, we find that 3.6% strongly support the Labour Party; 18.1% fairly strongly support the Labour Party; 28.9% do not very strongly support the Labour Party; 13.4% are neutral supporters of either party; 23% do not very strongly support the Conservative Party; 10.8% fairly strongly support the Conservative Party; and 2.1% strongly support the Conservative Party.

By the standards of the long history of political science, our study's approach is a simple one. We would have some sympathy for the criticism that it is arguably not possible in this way, or perhaps in any elementary statistical way, to do justice to the complexities of human beings' political preferences. Nevertheless, a trade-off exists here between tractability and generality. There is agreement in Great Britain that Labour is to the left (it has traditionally promoted socialist ideas) and the Conservatives are to the right (it has promoted the free market). The Liberal Democrats are harder to classify, and inherently in between the two larger parties on a number of issues, but over this period they may have been seen as closer to the left than the right. Paradoxically, at the time of writing, the Lib Dems are in coalition with the right-wing Conservative party. That is unusual in modern British history. Empirically, we try various aggregations of the Liberal Democrats with other parties. The results of our paper do not rest sensitively upon any such aggregation. As we show, a range of taxonomies lead to the same broad conclusion.

In any year of the British Household Panel, a considerable number of voters say they are undecided or have no preferences for any political parties. The typical percentage is 12%. We assume in the paper that this kind of undecided-ness is inevitable when doing empirical work on political preferences, and, for simplicity, later generally leave aside these

observations. In this study we do not address the issue of whether the individual survey respondent is happier when his or her political party is in power, though it is arguably natural to assume so (Di Tella and MacCulloch 2005 find evidence for that in Western Europe).

In later results, we will see some differences between men and women. These could, in principle, relate back to the *g* parameter in the analytical framework. For example, interesting recent work by Campbell (2004) documents systematic gender differences in modern British political attitudes. The author tabulates answers given in the British Election Survey of 2001. She shows that the single most-important political concern to males is that of low taxes. For females, by contrast, it is the quality of the National Health Service. Norris (2002) documents the gradual shift to the left of women in Britain's politics since World War 2.

In the entire adult sample (including lottery winners), approximately 32% of men, as opposed to 30% of women, prefer the Conservative Party to either the Labour or the LibDem Party. The *t*-test statistic [p-value] of whether the mean Conservative Party support is equal across genders is -1.96 [0.050]. This is consistent with the previous findings, which show that men tend to lean more to the right than do women. While the theoretical model may apply generally, this paper will be silent empirically on other nations. Women in the United States, for instance, are known to be more pro-Democrat in general than men, and this tendency has grown over the last few decades (Edlund and Pande 2002; Box-Steffensmeier, De Boef and Lin 2004). Greenberg (1998) concludes: "There is no question that, in general, women are more likely than men to favour activist government, the sort of agenda traditionally associated with the Democratic Party." In modern data, Inglehart and Norris (1999) find some evidence of a more widespread female tendency to vote left in other countries (although in older data this was less common).

In our data set, we examine the avowed voting intentions of adults. We have approximately 99,000 observations on political-party preferences. These are from longitudinal data (this is an unbalanced panel), and there is much stability, year-on-year, in a person's political views. In the entire population a little more than a third of people express a preference for the Conservatives and a little less than two-thirds of people express a preference for the other parties. This was a fairly left-leaning period in British modern history; Mr Tony Blair headed the Labour Party, and was in power, for much of this time. In the raw data on lottery winners, the split between men and women is similar (again, nearly two thirds of the population being left-leaning), although this makes no allowance for size of win, different ages, or cohort effects.

Means and standard deviations for the raw BHPS data are provided in an Appendix. We study those aged at least 21 (so that almost all of the sample have finished education) and in our main estimation we use longitudinal data on up to 14 years from BHPS Wave 5 to Wave 18. The mean number of children in a household is 0.4 with a standard deviation of 0.84. Approximately 2% of the lottery winners sample (the denominator here includes people out of the labour force) say they are unemployed; 57% are in full-time employment; 5% look after the home; 23% are retired; 56% are males; 63% are married; 6% are widowed; 9% have as their highest qualification a university bachelors degree, while 3% have a masters or doctorate; mean age is 49 years old. These personal characteristics are viewed here as additional influences beyond the gender effect studied in the earlier section's formal model.

If we examine lottery winners at the year of winning, we have 15,461 observations on actual lottery wins (on 6,573 discrete individuals) with winning ranges from £1 to £185k (in 1996 prices). Keeping in those people who express support for a right-wing (Conservative) or left-wing (Labour) party, the number of observations on lottery wins is 8,984 (on 4,217 discrete individuals). We have 541 occasions in which someone wins at least 500 pounds.

We estimate the voting regression equation such as the following:

$$Cons_{it} = a + b_1 \ln L_{it} + b_2 \ln Y_{it} + X_{it}^{'} g + u_i + v_{it}, \qquad (8)$$

where $Cons_{it}$ is a measure of individual's preferences for a right-wing political party (e.g., an indicator variable with 0 = vote Labour and 1 = vote Conservatives; or a measure of strength of political support with 1 = very strongly support Labour, 2 = fairly strongly support Labour, 3 = not very strongly support Labour, 4 = Support neither party or no preferences; 5 = not very strongly support Conservatives, 6 = fairly strongly support Conservatives, 7 = very strongly support Conservatives) for individual *i* in survey year *t*; $\ln L_{it}$ is log of real lottery win (= lottery win/CPI); $\ln Y_{it}$ is log of real annual total household income[7]; $X_{it}^{'}$ is a vector of personal and household characteristics, including gender, age, age-squared, highest completed education level, marital status, employment status, health status, number of children, trade union membership, homeownership, dummies for socio-economic class of the current job, regional dummies, and time dummies. u_i denotes individual-specific effects, and v_{it} is the error term.

5. Empirical Background

As suggested by the theoretical framework, the aim is to inquire into whether exogenous income makes a difference to political preferences. The hypothesis to be tested is that after a windfall a person will be intrinsically more favourable to a right-wing government.

Lottery wins are of interest to an empirical social-scientist because they have a quasi-experimental character. They have a stronger claim to be thought of as outside shocks to income than does, for example, a conventional earned-income variable. For this route into

[7] Annual total household income is a derived variable, which includes imputed data and imputed flags. The flags do not distinguish at the individual level how substantial the imputation was, and variables, which are computed from other variables with imputations, may contain widely varying proportions imputed (Taylor et al., 1998). The imputation is performed using a combination of 'hot-deck' and predictive mean matching.

the problem to be scientifically persuasive, however, it is necessary for the researcher to have access to data on significant wins. The size of win in our data set varies from tiny (one pound) to substantial (approximately 185,000 pounds). The exact question asked about lottery wins is

"About how much in total did you receive? Win on the football pools, national lottery or other form of gambling"

and this was asked in every survey wave from 1996 (Wave 7) to 2009 (Wave 18). In modern Britain, the national lottery is overwhelmingly the main form of gambling relevant to this question, so for succinctness we shall refer to this as lottery wins. For the design of the study, any form of gambling windfall would be suitable as a quasi-experimental income shock.

As an elementary background to the empirical analysis, Figure 1 divides the data into three groups of people and provides a histogram of the probability of voting for the Conservative party. This figure depicts the simplest kind of cross-sectional evidence. It gives a flavour of the paper's result. Political preference here is measured on the y-axis and three sizes of prior win on the x-axis. Figure 1 shows -- for these randomly selected British voters -- that people who have had a lottery win are substantially more sympathetic to a right-wing party. Among those who have never had a lottery win, approximately 38% of British individuals vote right. That proportion, although it is not reported in the figure, is slightly lower for females and higher for males. By contrast, as can be seen in Figure 1, among those people who have had a lottery win greater than 500 pounds sterling (which at the time of writing is approximately 800 US dollars), almost 45% of British individuals vote to the right, that is, support the Conservative party. In between, at just over 41%, are those who play the lottery and who have had a windfall from the lottery but who have never won a substantial amount.

Figure 1 is not to be seen as a formal test of the causal role of lottery income upon individuals' political leaning. Moreover, the histogram does not control for other influences -- particularly the fact that lottery tickets may be bought in different quantities by different income, educational, and social groups (and therefore the observed lottery wins will of course be different across these groups). Nevertheless, Figure 1 offers the first indication that there may be a link between winning and voting in a particular direction.

Figure 2 is longitudinal rather than cross-sectional. It depicts data on people who change political affiliation. In this figure, we condition on the individual not having favoured the Conservatives in the previous year. Here we are interested, specifically, in people who switched towards the right and thus were not previously right-wingers. The means on the y-axis are inevitably lower than in Figure 1, because we are now eliminating from the data all died-in-the-wool Conservative supporters. In Figure 2, 13% of non-winners switch to favour the right-wing. By contrast, nearly 18% of the winners who get more than 500 pounds switch to the right-wing party (there are 354 individuals, in this special sub-case, who win more than 500 pounds). Those who are small winners, as might be expected, lie in the middle of the histogram. As background, Figure 3 provides a plot of the distribution of lottery-win sizes.

In the later econometric work, an independent variable has been constructed for the amount of a lottery win (it is expressed as a logarithm, and is deflated by a consumer price index to ensure it is measured in real terms). As coded, the mean of real lottery win (amongst winners) is £223.2 with a standard deviation = £2,923. For males, the average is slightly higher, at £270.4 with a standard deviation of £3,412. We are unable to control for the number of tickets purchased; that number is not recorded in the data set

6. Principal Empirical Results

Table 1 begins with fixed-effects regression equations for the eighteen years of longitudinal British data. The dependent variable measures a person's preference for the

right-leaning Conservative Party rather than for the left-leaning Labour Party. Here the dependent variable is coded from 1 to 7, where 7 is the highest category of support for right-wing voting ("I very strongly support the Conservatives"). The mean of this 'strength of preference' dependent variable is 3.75, with a standard deviation of 1.46. This latter number is determined principally by the wide cross-person variation within the data set; it is not a measure of the smaller within-person variation. Four of the columns in Table 1 are for fixed-effects ordinary least squares within estimators. The final column is an ordered logit with fixed effects. That final column, therefore, does not impose the 1 to 7 cardinalization.

The estimation rests particularly upon information on larger wins. In total, there are 541 usable observations on wins of £500+ across all waves (that is, winners who report a political preference). In terms of discrete individuals, there are 422 people.

In the first column of Table 1, a variable for the size of a lottery win enters positively, with a coefficient of 0.02 and a small standard error. This is a form of switching result. The estimation uses only within-person information and thus captures the fact that lottery winners now feel more favourable towards the right-leaning party. Adjusting for a large number of covariates, as in column 2 of Table 1, makes no difference to the estimated coefficient. As would be expected in an annual panel, most of these covariates have coefficients that are not significantly different from zero.

Column 3 of Table 1 provides a different specification. Here four banded dummy variables (the base category is a win of less than 100 pounds) are used. The variable for the largest size of win, namely that for a sum greater than 500 pounds, is positive. Its coefficient is 0.135 with a standard error of 0.046. Column 4 reverts to the logarithm of lottery winnings and shows that the effect of winning is far larger upon males than females. Column 5 shows that the main result holds in an ordered logit with fixed effects.

Table 2 probes the robustness of the claim that lottery wins make people more rightwing. It adopts a deliberately simple specification and scrutinizes a range of sub-samples (first the full sample; then the first half of the data period; then the second half of the data period; then the south of Great Britain; then the north of Great Britain). By cutting the data set into sub-samples in this way, we reduce the available statistical power, and standard errors are bound to worsen. But to do so offers a valuable check on the stability of the size of coefficients.

Looking across the columns of Table 2, it can be seen that, for each of these fixed-effect estimates, the coefficient on a large lottery win (won 500 pounds or more) is rather stable. The five estimates are, respectively, 0.124, 0.176, 0.122, 0.082, and 0.169. One result is worth noting. In Great Britain, the north is politically more left-wing than the south. What emerges in this exercise is that the lottery-win variable has a larger positive coefficient for the North than for the South. One implication is potentially of interest. It is that in a left-leaning area the consequences of winning the lottery may be to induce a larger switch to the right. This is reminiscent of a finding in Gelman et al. (2007), which comes from pooled cross-sectional rather than panel data, that in poor US states the rich are more likely to vote Republican than rich people are in prosperous US states.

Table 3 sets out results in a different form of econometric specification. This is for the one-zero dependent variable 'I would vote for the Conservative Party in an election tomorrow', which for statistical purposes has the drawback that it does not allow us to detect movement, after a lottery win, within the scale of support for the rightwing, so it offers less statistical information to a researcher. Nevertheless, although the standard errors are fractionally worse, the tenor of the findings is the same as in Tables 1 and 2. After a lottery win, people lean rightwards.

A possible concern – raised by a reader – is about the direction of causality. Might it be that people who play the lottery are systematically different than people who do not (for example, they might be more self-interested, and so more likely to switch views when they move from being poor to rich)? It is not possible to guard against this possibility in a perfect way, but (i) a pragmatic answer is that a huge percentage of the British public play the lottery so whatever these unobservable characteristics might be they are shared by a large proportion of our studied sample, and (ii) by using fixed-effects equations we are able to control for vertical intercept shifts in such unobservable influences.

To explore more formally whether causality might be flowing in the opposite direction from the one we postulate, we can examine Table 4. It takes as its dependent variable, in a fixed effects regression, the amount of the lottery win in time t+1. The key point for the paper is that being Conservative in period t is not significantly correlated with having a lottery win in period t+1. Indeed the sign in each column is negative. Some of the personal controls in Table 4 are significant. This does not imply that divorced people, say, are better at guessing the likely lottery numbers. It does tell us that, other things held constant, divorced people seem to play the lottery more assiduously.

Supplementary results are provided in the paper's Appendix. They use different methods, including GLS random effects estimation, and produce complementary findings.

7. Discussion

This study is an attempt to understand the causal determinants of people's political views. Methodologically, it is designed as a contribution to an emerging literature on causal inference.

Our work tries to explore the roots of the well-known cross-sectional correlation between having high income and holding right-wing views. By using information on the size of lottery wins, which we treat as offering quasi-experimental insight into the consequences

of exogenous shocks to income and wealth, this study finds support for the idea that money makes people lean to the right. Our results are consistent with a self-interest model of voting. These lottery-win effects are, intriguingly, found predominantly among males. We are not certain why. Other than the theoretical explanation outlined in Section 3, one possible interpretation of the gender difference may be because, in our data set, men tended to win approximately £150 more than women from the lottery. They also tended to win more often than did women; the average numbers of 'years of winning the lottery' for the same person are 2.8 for men and 2.4 for women. Our study has also documented evidence for the role of money in shaping attitudes to what counts as a fair division of wealth in society. We show that an increase in a person's overall household income in year t is associated with a rise in their belief in the justice of the current wealth distribution in society.

How large are the effects of a lottery win upon the probability of voting right? The answer from Figures 1 and 2 is: a number of percentage points. It is four percentage points in the case of the Figure 2 switchers. An alternative way to state this is that the effect of 500+ pounds is, from Table 1 and Table 2, approximately 0.13 points on a strength-of-support scale that is cardinalized from 1 to 7. This is just under half the consequences of completing a good standard of education (namely, A-levels) at high school. [8]

Lottery studies are not flawless. As Doherty et al. (2006) explains, the perfect lottery study would be one in which researchers were able to observe the number of tickets purchased by every person in the sample. Ours, like theirs, and like every other lottery study in social science known to us, is unable to do that. However, we have the unusual advantage that we are able to observe people before and after a win. We can therefore adjust for within-person factors. Then any bias could not stem from personality fixed-effect characteristics of people but would instead have to come from an abrupt unexplained change in a person's

[8] Intriguingly, people who become unemployed appear more likely to become rightwing. This might be a form of protest vote, however, because the left-leaning Labour party was in power for most of the period under study.

political preferences within a single year that (i) was not caused by the serendipitous lottery win in that year, (ii) was for some unexplained reason correlated with that win, and (iii) was somehow of a kind by which the larger the win the greater the tendency to switch away from left-wing voting.

8. Conclusions

This study is designed as a step on the path towards a causal understanding of people's voting choices. Currently, the determinants of individuals' attitudes to politics and redistribution are largely unknown. In this paper we have suggested a way to study one important aspect of this problem. We have examined data on lottery winners in Great Britain. By comparing people before and after a lottery windfall, we have provided evidence that winners tend to support a right-wing political party, and also to be intrinsically less egalitarian. This money-to-right-leaning relationship is particularly strong for males (we are not certain why). It is also of a 'dose-response' kind: the larger the win, the more people tilt to the right. The study's conclusions are robust to different estimators and to controls for a large set of possible confounding influences. Its key findings are not driven by omitted personality factors.

To our knowledge, these are the first fixed-effects results of their kind, either in the economics literature or the political science literature. The results are consistent with the view that individuals' political beliefs are shaped partly by self-interest and not solely by disinterested ethical opinions.[9]

[9] As a referee has pointed out, they are also consistent, if we take the earlier model literally, with the idea that people have relative risk aversion greater than unity.

References

Alesina, A. & La Ferrara, E. (2005) Preferences for redistribution in the land of opportunities, *Journal of Public Economics*, 89, 897-931.

Alesina, A., Cozzi, G. & Mantovan, N. (2012) The evolution of ideology, fairness and redistribution, *Economic Journal*, 122, 1244-1261.

Apouey, B., & Clark, A.E. (2011) Winning big but feeling no better? The effect of lottery prizes on physical and mental health. Working paper. ENS Paris. Original version: 2008.

Bowles, S. (1998) Endogenous preferences: The cultural consequences of markets and other economic institutions, *Journal of Economic Literature*, 36, 75-111.

Box-Steffensmeier, J.M., De Boef, S. & Lin, T.M. (2004) The dynamics of the partisan gender gap, *American Political Science Review*, 98, 515-528.

Brickman, P., Coates, D., & Janoff-Bulman, R. (1978). Lottery winners and accident victims—is happiness relative? *Journal of Personality and Social Psychology*, 36, 917-927.

Brooks, C. & Brady, D. (1999) Income, economic voting, and long-term political change in the US, 1952-1996, *Social Forces*, 77, 1339-1374.

Campbell, R. (2004) Gender, ideology and issue preference: Is there such a thing as a political women's interest in Britain? *British Journal of Politics and International Relations*, 6, 20-46.

Chattopadhyay, R. & Duflo, E. (2004) Women as policy makers: Evidence from a randomized policy experiment in India, *Econometrica*, 72, 1409-1443.

Di Tella, R. & MacCulloch, R. (2005) Partisan social happiness, *Review of Economic Studies*, 72, 367-393.

Doherty, D., Gerber, A.S. & Green, D.P. (2006) Personal income and attitudes toward redistribution: A study of lottery winners, *Political Psychology*, 27, 441-458.

Dunning, T. (2008) Improving causal inference: Strengths and limitations of natural experiments, *Political Research Quarterly*, 61, 282-293.

Edlund, L. & Pande, R. (2002) Why have women become more left-wing? The political gender gap and the decline in marriage, *Quarterly Journal of Economics*, 117, 917-961.

Erikson, R.S. & Stoker, L. (2011) Caught in the draft: The effects of Vietnam draft lottery status on political attitudes, *American Political Science Review*, 105, 221-237.

Evans, G. & Tilley, J. (2012) How parties shape class politics: Explaining the decline of the class basis of political support. *British Journal of Political Science*, 42, 137-161.

Gardner, J., & Oswald, A.J. (2007) Money and mental well-being: A longitudinal study of medium-sized lottery wins. *Journal of Health Economics*, 26, 49-60.

Gelman, A., Shor, B., Bafumi, J. and Park, D. (2007) Rich state, poor state, red state, blue state: What's the matter with Connecticut? *Quarterly Journal of Political Science*, 2, 345-367.

Hankins, S., Hoekstra, M., & Skiba, P.M. (2011) The ticket to easy street? The financial consequences of winning the lottery. *Review of Economics and Statistics*, 93, 961–969.

Imbens, G. W., Rubin, D. B., & Sacerdote, B.I. (2001) Estimating the effect of unearned income on labor earnings, savings, and consumption: Evidence from a survey of lottery players. *American Economic Review*, 91, 778–794.

Inglehart, R. & Norris, P. (1999) The developmental theory of the gender gap: women and men's voting behavior in global perspective. Working paper, JF Kennedy School of Government, Harvard University.

Greenberg, A. (1998) Deconstructing the gender gap. Working paper, Harvard University, presented at the Midwest Political Science Association Annual Meeting, April 1998.

Johnston, R. & Pattie, C. (2000) Inconsistent individual attitudes within consistent attitudinal structures: Comments on an important issue raised by John Bartle's paper on causal modelling of voting in Britain, *British Journal of Political Science*, 30, 361-374.

Johnston, R., Sarker, R., Jones, K., Bolster, A., Propper, C. & Burgess, S. (2005) Egocentric economic voting and changes in party choice: Great Britain 1992-2001. *Journal of Elections, Public Opinion and Parties*, 15, 129-144.

Johnston, R., Jones, K., Propper, C. Sarker, R. Burgess, S. & Bolster, A. (2005) A missing level in the analyses of British voting behavior: the household as context as shown by analyses of a 1992-1997 longitudinal survey. *Electoral Studies*, 24, 201-225.

Karabarbounis, L. (2011) One dollar, one vote. *Economic Journal*, 121, 621-651.

Kuhn, P., Kooreman, P., Stoetevent, A.R., & Kapteyn, A. (2011) The effects of lottery prizes on winners and their neighbors: Evidence from the Dutch Postcode Lottery. *American Economic Review*, 101, 2226-2247.

Lindahl, M. (2005) Estimating the effect of income on health using lottery prizes as exogenous source of variation in income. *Journal of Human Resources*, 40, 144-168.

Norris, P. (2002) Gender and contemporary British politics, in *British Politics Today*, pp. 38-59, edited by C. Hay, Cambridge: Polity Press.

Norris, P. (2004) *Electoral engineering: Voting rules and political behavior*, New York: Cambridge University Press.

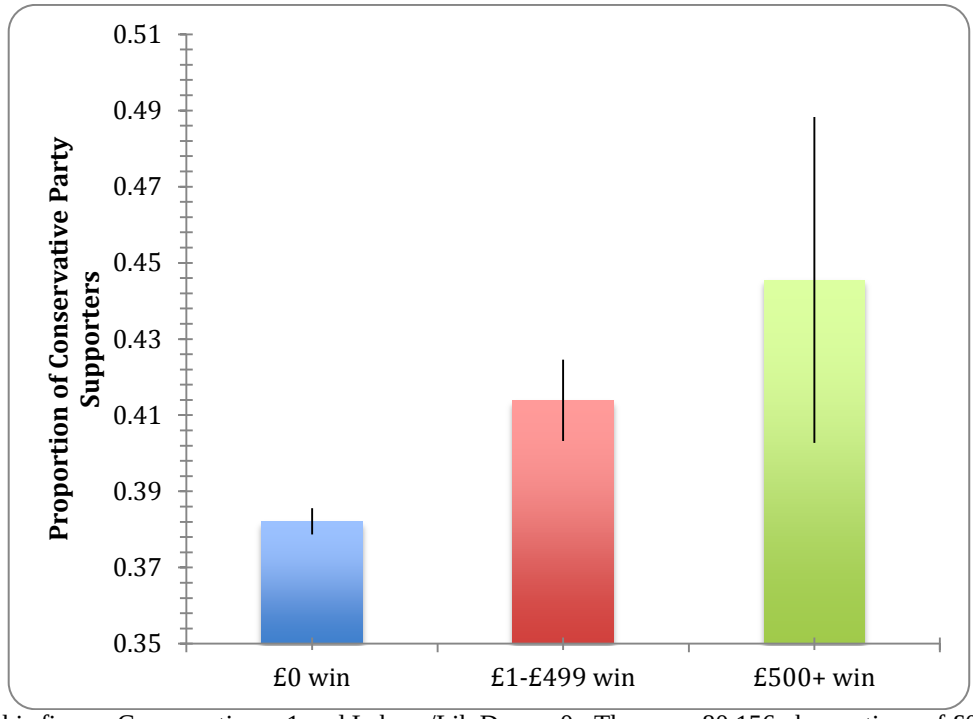
Oswald, A.J. & Powdthavee, N. (2010) Daughters and left-wing voting, *Review of Economics and Statistics*, 92, 213-227.

Sanders, D. & Brynin, M. (1999) The dynamics of party preference change in Britain, 1991-1996, *Political Studies*, 47, 219-239.

Taylor, M. F., Brice, J., Buck, N. & Prentice-Lane, E. (2002) *British Household Panel Survey User Manual*. Colchester: University of Essex.

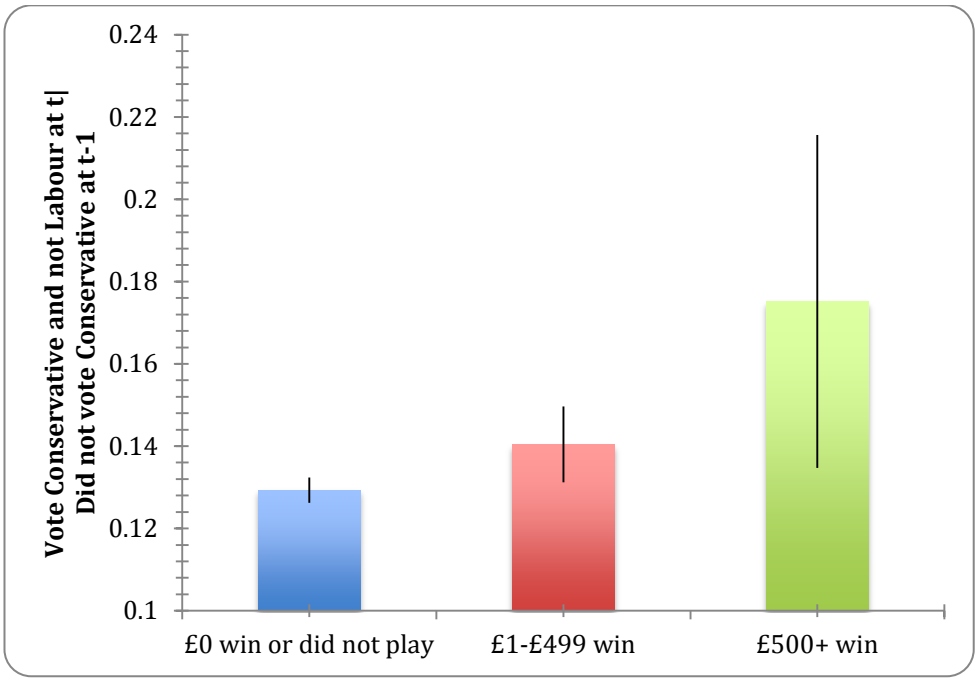
<u>Figure 1</u> Simple Cross-Sectional Evidence: The Percentage of People Who Vote Right (Conservative) by the Size of any Prior Lottery Win

Source: BHPS Data, Waves 7-18



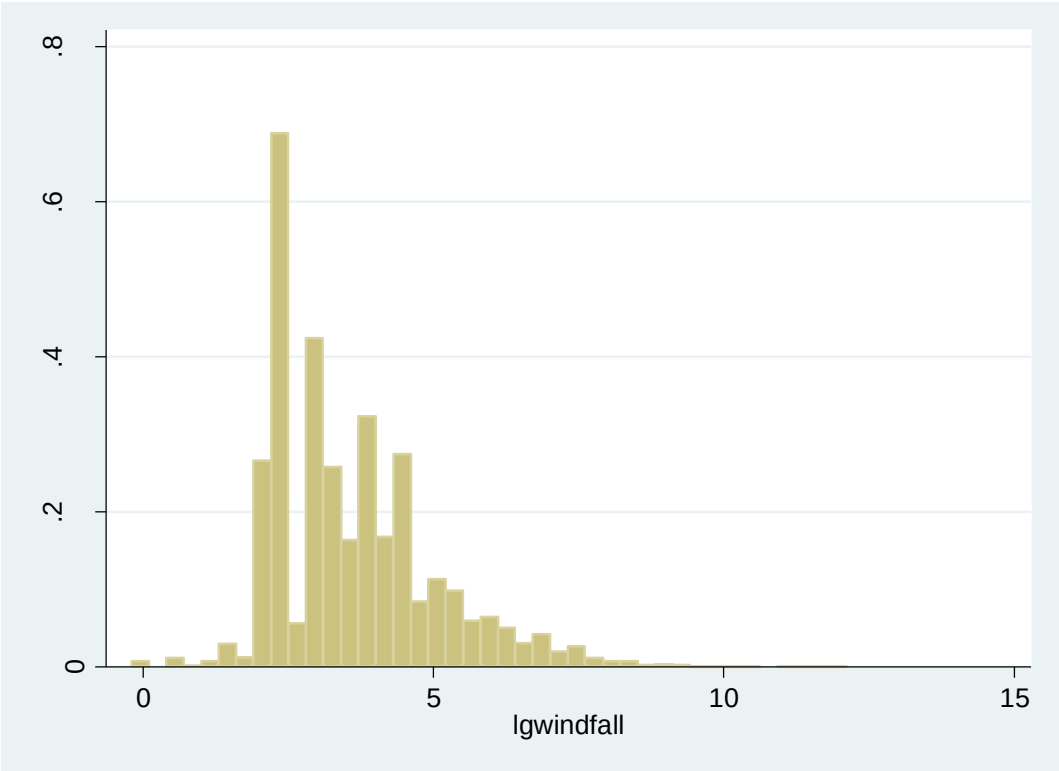
Notes: In this figure, Conservative = 1 and Labour/Lib Dem = 0. There are 80,156 observations of £0 lottery win; 8,525 observations of small win, i.e. £1-£499; and 541 observations of medium-large win, i.e. £500+. Four standard error bars (two below, two above) are presented. These are raw, unadjusted means in the data. Winners are those who have ever reported a win.

<u>Figure 2</u> Evidence on Switchers: The Percentage of People Who Switched Right (Conservative), and Previously Did Not Vote Conservative, After a Lottery Win
Source: BHPS Data, Waves 7-18



Notes: There are 48,177 observations of £0 win (or people who did not participate in the lottery); 5,675 observations of small win, i.e., £1-£499; and, in this particular sub-sample, 354 observations of medium-large wins, i.e. £500+. Four standard error bars (2 above and 2 below). These are raw, unadjusted means in the data set.

<u>Figure 3</u> The Frequency Distribution of (Log) Real Lottery Wins in the BHPS Dataset



The vertical axis gives a proportion; the horizontal axis is the logarithm of the size of a win.

A log windfall of 5 is approximately £150. A log windfall of 8 is approximately £2800.

Table 1: Fixed-effects Equations for the Strength of Rightwing Voting (denoted RW voting)

	OLS with Fixed Effects				Ordered Logit with Fixed Eff.
	(1)	(2)	(3)	(4)	(5)
VARIABLES	Strength of RW voting	Strength of RW voting	Strength of RW voting	Strength of RW voting	Strength of RW voting
Ln(real lottery win)	0.0210***	0.0209***			0.0982***
	[0.00792]	[0.00794]			[0.0367]
Won £100-£249			0.0287		
			[0.0307]		
Won £250-£499			0.0287		
			[0.0446]		
Won £500+			0.135***		
			[0.0460]		
Females × ln(real lottery win)				0.00291	
				[0.0128]	
Males × ln(real lottery win)				0.0321***	
				[0.0101]	
Ln(real household income)		-0.0248	-0.0236	-0.0248	-0.112
		[0.0256]	[0.0256]	[0.0255]	[0.115]
Age	0.00862	0.00526	0.00540	0.00450	0.0538
	[0.0406]	[0.0408]	[0.0408]	[0.0408]	[0.181]
Age-squared	5.31e-05	6.58e-05	6.86e-05	6.44e-05	0.000205
	[9.01e-05]	[9.79e-05]	[9.79e-05]	[9.78e-05]	[0.000435]
Completed higher degree		-0.226	-0.230	-0.224	0.246
		[0.288]	[0.288]	[0.288]	[1.572]
Completed 1st degree		-0.167	-0.183	-0.170	0.132
		[0.227]	[0.227]	[0.227]	[1.391]
Completed HND, HNC		-0.409	-0.414	-0.394	18.25
		[0.351]	[0.351]	[0.351]	[4,785]
Completed A-levels		0.355*	0.342*	0.358*	2.699**
		[0.202]	[0.202]	[0.202]	[1.315]
Completed O-levels		-0.0720	-0.0782	-0.0671	0.489
		[0.171]	[0.171]	[0.171]	[1.005]
Completed CSE levels		0.0206	0.0291	0.0370	0.117
		[0.811]	[0.811]	[0.811]	[0.276]
Living as couple		-0.0272	-0.0298	-0.0259	-0.0218
		[0.0580]	[0.0580]	[0.0580]	[0.376]
Widowed		-0.0852	-0.0872	-0.0830	0.650
		[0.0895]	[0.0897]	[0.0895]	[0.484]
Divorced		0.00638	0.00652	0.00459	-0.965*
		[0.0938]	[0.0939]	[0.0938]	[0.548]
Separated		-0.177	-0.176	-0.177	0.200
		[0.109]	[0.109]	[0.109]	[0.381]

Never married		0.0259	0.0311	0.0275	0.246
		[0.0840]	[0.0842]	[0.0840]	[1.572]
Employed full-time		-0.0608	-0.0582	-0.0652	0.138
		[0.0883]	[0.0883]	[0.0883]	[0.373]
Unemployed		0.231*	0.225*	0.225*	1.332**
		[0.128]	[0.128]	[0.128]	[0.565]
Retired		0.0202	0.0206	0.0169	0.517
		[0.105]	[0.105]	[0.105]	[0.448]
Maternity leave		-0.276	-0.282	-0.285	-1.115
		[0.191]	[0.191]	[0.191]	[1.230]
Family care		0.0764	0.0815	0.0737	0.760
		[0.111]	[0.111]	[0.111]	[0.484]
Full-time student		-0.546***	-0.548***	-0.551***	-0.979
		[0.164]	[0.164]	[0.164]	[0.771]
Disabled		0.126	0.131	0.123	0.937*
		[0.120]	[0.120]	[0.120]	[0.513]
Government training		0.755*	0.757*	0.747*	2.561*
		[0.431]	[0.431]	[0.430]	[1.464]
Other type of employment		-0.302	-0.305	-0.307	0.531
		[0.225]	[0.225]	[0.225]	[1.072]
Health: Poor		-0.143**	-0.143**	-0.140**	-0.706**
		[0.0703]	[0.0704]	[0.0703]	[0.328]
Health: Fair		-0.129*	-0.129*	-0.124*	-0.470
		[0.0734]	[0.0735]	[0.0734]	[0.338]
Health: Good		-0.104	-0.104	-0.101	-0.443
		[0.0743]	[0.0744]	[0.0743]	[0.341]
Health: Excellent		-0.0808	-0.0808	-0.0765	-0.273
		[0.0777]	[0.0778]	[0.0777]	[0.357]
Number of children		0.000987	0.000403	0.000784	-0.000691
		[0.0232]	[0.0232]	[0.0232]	[0.106]
Member of trade union		-0.0213	-0.0221	-0.0218	0.00544
		[0.0384]	[0.0384]	[0.0383]	[0.176]
Home owner (=1)		-0.0726	-0.0765	-0.0737	-0.418*
		[0.0516]	[0.0517]	[0.0516]	[0.232]
Constant	3.020	4.250*	4.266*	4.295*	
	[2.229]	[2.270]	[2.270]	[2.270]	
Observations	9,003	8,984	8,984	8,984	3,897
Within R-squared	0.020	0.045	0.045	0.045	
Number of person-wave	4,227	4,217	4,217	4,217	972

Notes: *<10%; **<5%; ***<1%.

The dependent variable is a 7-point variable that represents the strength of a person's support for the Conservative Party versus the Labour Party, and which takes the following values: Labour (very strong support) = 1; Labour (moderate support) = 2; Labour (weak support) = 3; Neutral = 4; Conservatives (weak support) = 5; Conservatives (moderate support) = 6; Conservatives (very strong support) = 7.

Standard errors are in parentheses. All regressions include wave dummies (10), regional dummies (20), and occupational classes (35) as controls.

Table 2: Fixed-effects Equations for the Strength of Rightwing Voting (in various subsamples)

VARIABLES	(1) All	(2) First half of BHPS (Up to Wave 10)	(3) Second half of BHPS (Wave 11-18)	(4) South of Britain	(5) North of Britain
Won £500+	0.124***	0.176*	0.122**	0.0816	0.169**
	[0.0444]	[0.0927]	[0.0590]	[0.0582]	[0.0701]
Ln(real household income)	-0.0229	0.0475	-0.0109	0.0135	-0.0693*
	[0.0256]	[0.0561]	[0.0364]	[0.0347]	[0.0390]
Age	0.00611	0.104	-0.0141	-0.0816	0.0435
	[0.0408]	[0.0875]	[0.0586]	[0.0694]	[0.0531]
Age-squared	6.74e-05	-0.000518	-1.20e-06	0.000168	-1.01e-06
	[9.79e-05]	[0.000421]	[0.000170]	[0.000134]	[0.000147]
Completed higher degree	-0.238	-0.916	-0.0734	-0.678*	-0.112
	[0.288]	[0.841]	[0.618]	[0.390]	[0.499]
Completed 1st degree	-0.186	-0.414	-0.383	-0.576*	-0.222
	[0.227]	[0.669]	[0.462]	[0.330]	[0.376]
Completed HND, HNC	-0.415	-0.327	-1.745**	-1.113**	-0.118
	[0.351]	[0.681]	[0.690]	[0.515]	[0.532]
Completed A-levels	0.341*	-0.352	-0.00706	0.0567	0.229
	[0.202]	[0.618]	[0.311]	[0.290]	[0.309]
Completed O-levels	-0.0749	-0.609	-0.120	-0.0574	-0.359
	[0.171]	[0.476]	[0.294]	[0.201]	[0.351]
Completed CSE levels	0.0323	-0.573		-0.0668	
	[0.811]	[0.909]		[0.801]	
Living as couple	-0.0279	0.0558	-0.0416	-0.0423	-0.0746
	[0.0580]	[0.127]	[0.0924]	[0.0837]	[0.0853]
Widowed	-0.0851	-0.245	-0.164	0.0673	-0.279**
	[0.0895]	[0.232]	[0.131]	[0.120]	[0.136]
Divorced	0.00714	-0.0708	0.102	-0.0321	-0.0524
	[0.0938]	[0.215]	[0.154]	[0.143]	[0.131]
Separated	-0.178	-0.0988	-0.0115	-0.331**	-0.0897
	[0.109]	[0.233]	[0.156]	[0.139]	[0.192]
Never married	0.0361	0.173	0.0146	0.0866	-0.0710
	[0.0839]	[0.201]	[0.129]	[0.112]	[0.137]
Employed full-time	-0.0582	0.103	-0.0789	-0.0509	-0.00746
	[0.0883]	[0.198]	[0.117]	[0.112]	[0.147]
Unemployed	0.224*	-0.0501	0.370**	0.185	0.344*
	[0.128]	[0.267]	[0.167]	[0.170]	[0.201]
Retired	0.0218	0.0574	0.129	0.00984	0.0794
	[0.105]	[0.224]	[0.142]	[0.137]	[0.169]
Maternity leave	-0.282	-0.0257	-0.507**	-0.219	-0.176
	[0.191]	[0.377]	[0.241]	[0.278]	[0.274]
Family care	0.0831	0.0457	0.0977	0.0371	0.179
	[0.111]	[0.227]	[0.151]	[0.144]	[0.178]

Full-time student	-0.546***	-0.466	-0.481*	-0.888***	0.0508
	[0.164]	[0.376]	[0.269]	[0.199]	[0.297]
Disabled	0.131	-0.0685	0.198	0.271	0.132
	[0.120]	[0.247]	[0.171]	[0.181]	[0.178]
Government training	0.762*	1.077	-0.152		0.220
	[0.430]	[0.827]	[0.531]		[0.518]
Other type of employment	-0.309	-0.853	-0.376	0.0390	-0.571*
	[0.225]	[0.540]	[0.276]	[0.313]	[0.334]
Health: Poor	-0.144**	-0.0886	0.00691	-0.0289	-0.226**
	[0.0703]	[0.115]	[0.110]	[0.116]	[0.0898]
Health: Fair	-0.131*	-0.0754	-0.0960	0.0380	-0.264***
	[0.0734]	[0.120]	[0.117]	[0.116]	[0.0972]
Health: Good	-0.107	-0.0922	-0.106	0.0622	-0.230**
	[0.0743]	[0.122]	[0.118]	[0.117]	[0.0990]
Health: Excellent	-0.0829	-0.0950	-0.0559	0.0962	-0.207*
	[0.0777]	[0.130]	[0.121]	[0.120]	[0.106]
Number of children	0.00106	0.0563	-0.00962	-0.0322	0.0243
	[0.0232]	[0.0633]	[0.0381]	[0.0325]	[0.0344]
Member of trade union	-0.0221	0.0654	-0.0689	0.0435	-0.109*
	[0.0384]	[0.0754]	[0.0582]	[0.0519]	[0.0589]
Home owner (=1)	-0.0772	-0.321***	-0.0846	-0.0419	-0.0788
	[0.0516]	[0.110]	[0.0835]	[0.0713]	[0.0788]
Constant	4.224*	1.716	5.069	7.703**	1.041
	[2.270]	[3.922]	[3.158]	[3.120]	[2.518]
Observations	8,984	4,304	4,680	4,607	4,377
Within R-squared	0.045	0.062	0.074	0.063	0.069
Number of person-wave	4,217	2,873	2,456	2,061	2,188

Notes: *<10%; **<5%; ***<1%.

The key independent variable here is a dummy for whether the person had a lottery win of 500 pounds or more in that year.

The dependent variable represents the strength of Conservative versus Labour, which takes the following values: Labour (very strong support) = 1; Labour (moderate support) = 2 .... Conservatives (moderate support) = 6; Conservatives (very strong support) = 7.

Standard errors are in parentheses. All regressions include wave dummies (10), regional dummies (20), and occupational classes (35) as controls. To aid subsample size, here the 'South' of Great Britain is taken to include the regions of Midlands and East Anglia. Excluding those two from the definition does not significantly alter the results.

Table 3: Fixed-effects Equations for 'I would vote Conservative tomorrow'

VARIABLES	(1) Vote for Cons. tomorrow	(2) Vote for Cons. tomorrow	(3) Vote for Cons. tomorrow	(4) Vote for Cons. tomorrow
Ln(real lottery win)	0.00533**	0.00501*		
	[0.00265]	[0.00270]		
Won £100-£249			0.0143	
			[0.0107]	
Won £250-£499			0.0199	
			[0.0151]	
Won £500+			0.0268*	
			[0.0156]	
Females × ln(real lottery win)				-0.00292
				[0.00433]
Males × ln(real lottery win)				0.00997***
				[0.00343]
Ln(real household income)		-0.00429	-0.00388	-0.00396
		[0.00936]	[0.00937]	[0.00936]
Age	-0.00527	-0.00614	-0.00659	-0.00687
	[0.0130]	[0.0132]	[0.0132]	[0.0132]
Age-squared	-1.37e-05	-8.05e-06	-8.36e-06	-8.92e-06
	[3.19e-05]	[3.57e-05]	[3.58e-05]	[3.57e-05]
Completed higher degree		-0.00990	-0.0117	-0.0145
		[0.110]	[0.110]	[0.110]
Completed 1st degree		0.0326	0.0275	0.0232
		[0.0781]	[0.0780]	[0.0781]
Completed HND, HNC		0.0715	0.0670	0.0734
		[0.100]	[0.100]	[0.100]
Completed A-levels		0.0711	0.0669	0.0707
		[0.0661]	[0.0660]	[0.0660]
Completed O-levels		0.0666	0.0600	0.0631
		[0.0632]	[0.0633]	[0.0631]
Completed CSE levels		0.0104	0.00947	0.0116
		[0.0192]	[0.0192]	[0.0192]
Living as couple		0.00995	0.00951	0.00891
		[0.0344]	[0.0344]	[0.0343]
Widowed		-0.0220	-0.0207	-0.0217
		[0.0310]	[0.0309]	[0.0309]
Divorced		0.0108	0.0114	0.0106
		[0.0358]	[0.0358]	[0.0358]
Separated		-0.0202	-0.0215	-0.0190
		[0.0270]	[0.0271]	[0.0269]
Never married		-0.00990	-0.0117	-0.0145
		[0.110]	[0.110]	[0.110]
Employed full-time		-0.0618*	-0.0603*	-0.0652*
		[0.0337]	[0.0337]	[0.0337]
Unemployed		-0.0398	-0.0397	-0.0433

		[0.0436]	[0.0437]	[0.0436]
Retired		-0.0138	-0.0138	-0.0157
		[0.0374]	[0.0375]	[0.0374]
Maternity leave		-0.0680	-0.0691	-0.0710
		[0.0595]	[0.0595]	[0.0594]
Family care		-0.0220	-0.0208	-0.0242
		[0.0398]	[0.0398]	[0.0398]
Full-time student		-0.0867	-0.0874	-0.0923*
		[0.0534]	[0.0534]	[0.0534]
Disabled		-0.0209	-0.0204	-0.0228
		[0.0418]	[0.0418]	[0.0418]
Government training		-0.0746	-0.0789	-0.0725
		[0.211]	[0.211]	[0.211]
Other type of employment		-0.0380	-0.0388	-0.0408
		[0.0820]	[0.0820]	[0.0820]
Health: Poor		0.00768	0.00856	0.0101
		[0.0228]	[0.0229]	[0.0228]
Health: Fair		-0.00198	-0.000573	0.00132
		[0.0239]	[0.0239]	[0.0239]
Health: Good		-0.00444	-0.00271	-0.00231
		[0.0242]	[0.0242]	[0.0242]
Health: Excellent		-0.00492	-0.00358	-0.00208
		[0.0253]	[0.0254]	[0.0254]
Number of children		0.00643	0.00637	0.00641
		[0.00776]	[0.00776]	[0.00775]
Member of trade union		0.00830	0.00821	0.00830
		[0.0122]	[0.0122]	[0.0122]
Home owner (=1)		0.0213	0.0214	0.0214
		[0.0170]	[0.0171]	[0.0170]
Constant	0.329	0.396	0.426	0.430
	[0.550]	[0.579]	[0.580]	[0.579]
Observations	5,743	5,728	5,728	5,728
Within R-squared	0.051	0.078	0.078	0.080
Number of person-wave	2,981	2,969	2,969	2,969

Notes: As for Table 1.

The dependent variable: Vote Labour tomorrow = 0; Vote Conservatives tomorrow = 1

Table 4: Voting Right at Time t Does Not Predict the Amount of Lottery Win at Time t+1
Fixed Effect (Within) Regressions for 'log of real lottery win at time t+1'

VARIABLES	All	Women	Men
Labour = 0; Conservative (=1)	-0.0268	-0.100	-0.0145
	[0.107]	[0.198]	[0.132]
Ln(real household income)	0.0628	0.0546	0.0593
	[0.0516]	[0.0793]	[0.0713]
Age	0.191**	0.110	0.293***
	[0.0828]	[0.127]	[0.112]
Age-squared	-0.000518**	-0.000752**	-0.000420
	[0.000211]	[0.000344]	[0.000276]
Completed higher degree	-1.416**	-0.784	-2.061***
	[0.592]	[0.976]	[0.771]
Completed 1st degree	-1.114**	-0.761	-1.482**
	[0.477]	[0.751]	[0.650]
Completed HND, HNC	-0.839	2.975*	-2.012***
	[0.653]	[1.611]	[0.770]
Completed A-levels	-0.840**	-0.273	-1.369***
	[0.415]	[0.763]	[0.530]
Completed O-levels	0.209	0.820*	-0.429
	[0.337]	[0.461]	[0.526]
Completed CSE levels	0.926	1.689	
	[1.488]	[1.524]	
Living as couple	-0.383*	-0.571	-0.255
	[0.216]	[0.408]	[0.268]
Widowed	-0.0200	-0.403	0.210
	[0.261]	[0.503]	[0.316]
Divorced	-0.291	-0.581	-0.108
	[0.238]	[0.436]	[0.301]
Separated	-0.507	-0.541	
	[0.380]	[0.519]	
Never married	-0.194	-0.553	0.245
	[0.253]	[0.444]	[0.465]
Employed full-time	-0.384	-1.019	-0.211
	[0.361]	[0.782]	[0.430]
Unemployed	-0.368	-1.007**	-0.0587
	[0.269]	[0.501]	[0.333]
Retired	-0.729	-0.355	-1.002
	[0.783]	[1.533]	[0.928]
Maternity leave	-0.355	-0.609	-0.216
	[0.377]	[0.578]	[0.576]
Family care	-0.383*	-0.571	-0.255
	[0.216]	[0.408]	[0.268]
Full-time student	-0.0200	-0.403	0.210
	[0.261]	[0.503]	[0.316]
Disabled	-0.291	-0.581	-0.108

	[0.238]	[0.436]	[0.301]
Government training	-0.507	-0.541	
	[0.380]	[0.519]	
Other type of employment	-0.194	-0.553	0.245
	[0.253]	[0.444]	[0.465]
Health: Poor	-0.158	-0.133	-0.163
	[0.143]	[0.212]	[0.197]
Health: Fair	-0.179	-0.190	-0.141
	[0.149]	[0.213]	[0.213]
Health: Good	-0.245	-0.327	-0.174
	[0.150]	[0.216]	[0.213]
Health: Excellent	-0.304*	-0.317	-0.273
	[0.157]	[0.229]	[0.221]
Number of children	0.0116	-0.0157	0.0402
	[0.0487]	[0.0840]	[0.0627]
Member of trade union	-0.0394	-0.0912	-0.0138
	[0.0786]	[0.136]	[0.0997]
Home owner (=1)	0.172	0.369*	0.163
	[0.105]	[0.188]	[0.132]
Constant	-5.808	-0.887	-8.490*
	[4.538]	[7.206]	[4.979]
Wave dummies (10)	Yes	Yes	Yes
Regional dummies (20)	Yes	Yes	Yes
Socio-economic classes (35)	Yes	Yes	Yes
Observations	7,401	3,161	4,240
R-squared	0.032	0.057	0.043
Number of person-year	3,535	1,635	1,900

Notes: *<10%; **<5%; ***<1%. Standard errors are in parentheses.

APPENDIX

This appendix provides additional material, including a number of checks suggested by referees.

In Table A1, for example, a GLS random effects model is estimated for a wide range of dependent variables. It does not adjust for person fixed-effects, so documents essentially cross-sectional patterns, although allowing for a random intercept. The size of a past lottery win enters positively. Right-wing voting is especially likely among those with high household incomes, those with middling levels of education, those who are not widowed or divorced, those working on government training schemes or part-time, those who are home owners, and those who are not members of a trade union.

Table A2 provides some simple robustness checks. First, it estimates the effect of household income on right-wing preferences without any allowance for a lottery variable. As can be seen in the first column, the logarithm of real income enters strongly positively. The null hypothesis of a zero coefficient can be rejected at conventional significance levels. Second, Table A2 then introduces a lagged lottery-win variable in its second column. This, at the suggestion of referees, is a way to test for the longish-run influence of lottery windfalls from before the previous year. In column 2 of Table A2 the coefficient on lagged lottery-win is 0.00414 with a small standard error of 0.0018. Interestingly, the household income variable now becomes smaller and loses its statistical significance, which points to the possibility that windfalls empirically may have the more powerful effect on political views. Column 3 of Table A2 does a form of simple placebo test. The underlying idea here is the following. If the lottery-win variable plays the role ascribed to it both in our theory and the discussion, it is the event of winning a non-trivial amount of money that should alter people's political opinions. Miniscule wins should, in themselves, have no effect on voting. The

reason is that they do not materially alter a person's wealth and therefore should not change the person's views on issues such as how people in a society ought to be taxed. By contrast, if the lottery-win variable was standing in, instead, for an underlying omitted variable, such as a proclivity for gambling, and that underlying variable was itself correlated with political views, then an observed connection between lottery windfalls and right-wingness could be spurious. A simple way to check is to include a variable for people who won only a single pound sterling. This is done in column 3 of Table A2. Encouragingly for the paper's interpretation, this "Won one pound" variable has a tiny coefficient that is insignificantly different from zero.

Table A3, at the request of a referee, checks for interaction terms. It has a dependent variable that takes the value of 1 if the person favours the Conservative party and a value of zero otherwise. There is some evidence for an interaction term between being Conservative in an earlier period and the amount won on the lottery. That term is negative in each of columns 5 to 9 of Table A3. Hence being Conservative in a prior period makes right-wing voting after a major windfall rather less likely. This result is not as paradoxical as it looks. It is easiest to understand intuitively when considered the other way around: being Labour in a prior period makes rightwing voting after a major windfall more likely.

Table A4 explores the relationship between the size of a lottery prize and individuals' attitudes towards redistribution and the fairness of the income distribution. The attitudinal, and key dependent, variable here is constructed from the BHPS survey question: *Do you agree that* "*Ordinary people get a fair share of the nation's wealth?*", with responses ranging from 1 "Strongly Disagree" to 5 "Strongly Agree". It can be seen in Table A4 that those on higher incomes are more sanguine about the state of British society. They are more likely to see the current distribution of wealth as fair.

Table A5 studies the possible concern that attrition from the sample might spuriously be generating the paper's main finding. It can be seen from the table that large lottery winners do not leave the BHPS sample.

On the suggestions of referees, Tables A6 and A7 are also reported. The first of these is a check for the consequences of an inheritance. There is some weak evidence of an effect upon a person's political stance, and the male and female coefficients are almost identical, so this issue may merit further research on larger samples of inheritees. The second, Table A7, reveals weak evidence for long-lived effects of lottery wins.

Table A8, on further readers' suggestions, details some more information about a particular kind of switching. Table A9 gives descriptive statistics.

Table A1: Regression Equations for the Probability of Voting Right
Estimated by GLS Random Effects

VARIABLES	Labour = 0; Cons = 1	Labour/Lib Dem = 0; Cons = 1	Labour = 0; Cons/Lib Dem = 1	Cons/Labour Strength	Vote for Cons or Labour tomorrow
Ln(real lottery win)	0.00482**	0.00452**	0.00300	0.0224***	0.00541**
	[0.00210]	[0.00216]	[0.00242]	[0.00715]	[0.00225]
Ln(real household income)	0.0215***	0.0239***	0.0251***	0.0343	0.00900
	[0.00656]	[0.00661]	[0.00737]	[0.0222]	[0.00730]
Male	-0.0121	0.00387	-0.0276**	-0.0727*	-0.0229**
	[0.0143]	[0.0130]	[0.0137]	[0.0425]	[0.0112]
Age	0.00157	0.000393	0.00315	-0.00647	-0.00331*
	[0.00202]	[0.00197]	[0.00213]	[0.00645]	[0.00188]
Age-squared	1.78e-05	2.54e-05	2.86e-07	0.000129**	2.32e-05
	[1.95e-05]	[1.92e-05]	[2.08e-05]	[6.26e-05]	[1.88e-05]
Completed higher degree	0.0863**	0.0331	0.174***	0.114	-0.0139
	[0.0412]	[0.0373]	[0.0400]	[0.129]	[0.0387]
Completed 1st degree	0.0919***	0.0314	0.143***	0.175**	-0.00189
	[0.0259]	[0.0236]	[0.0252]	[0.0794]	[0.0222]
Completed HND, HNC	0.149***	0.105***	0.155***	0.331***	0.0464*
	[0.0295]	[0.0260]	[0.0276]	[0.0882]	[0.0241]
Completed A-levels	0.115***	0.0892***	0.119***	0.347***	0.0175
	[0.0209]	[0.0195]	[0.0207]	[0.0633]	[0.0170]
Completed O-levels	0.101***	0.0794***	0.107***	0.339***	0.0120
	[0.0183]	[0.0171]	[0.0181]	[0.0553]	[0.0152]
Completed CSE levels	0.0231	0.0212	0.0296	0.132	0.0191
	[0.0366]	[0.0336]	[0.0353]	[0.108]	[0.0265]
Living as couple	0.0225*	0.0149	0.0280*	0.00959	0.0197
	[0.0135]	[0.0136]	[0.0150]	[0.0445]	[0.0131]
Widowed	-0.0532***	-0.0567***	-0.0398*	-0.0792	-0.00250
	[0.0201]	[0.0203]	[0.0222]	[0.0656]	[0.0202]
Divorced	-0.0552***	-0.0437**	-0.0445**	-0.0568	-0.0164
	[0.0206]	[0.0205]	[0.0224]	[0.0668]	[0.0189]
Separated	-0.0273	-0.0255	-0.0297	-0.152	-0.00827
	[0.0281]	[0.0291]	[0.0325]	[0.0955]	[0.0281]
Never married	0.00421	-0.0116	0.00618	0.0526	-0.00244
	[0.0172]	[0.0169]	[0.0183]	[0.0553]	[0.0154]
Employed full-time	-0.0496**	-0.0251	-0.0320	-0.0861	-0.0540*
	[0.0243]	[0.0257]	[0.0290]	[0.0839]	[0.0302]
Unemployed	-0.0393	-0.0395	-0.0327	0.114	-0.0818**
	[0.0344]	[0.0355]	[0.0399]	[0.118]	[0.0382]
Retired	-0.0179	-0.00459	-0.0120	-0.0257	-0.0485
	[0.0285]	[0.0297]	[0.0333]	[0.0982]	[0.0335]
Maternity leave	-0.0442	-0.0502	-0.0881	-0.301*	-0.0583

	[0.0514]	[0.0529]	[0.0594]	[0.176]	[0.0526]
Family care	-0.0181	0.00758	-0.00322	0.0372	-0.0348
	[0.0298]	[0.0308]	[0.0347]	[0.102]	[0.0349]
Full-time student	-0.0670*	0.000369	0.0139	-0.297**	-0.0689
	[0.0407]	[0.0403]	[0.0450]	[0.137]	[0.0420]
Disabled	-0.0334	-0.0291	-0.0292	-0.0133	-0.0439
	[0.0320]	[0.0334]	[0.0375]	[0.109]	[0.0358]
Government training	0.217*	0.180	0.150	0.660*	-0.0959
	[0.116]	[0.110]	[0.124]	[0.400]	[0.166]
Other type of employment	-0.121**	-0.0657	-0.0806	-0.180	-0.0741
	[0.0612]	[0.0599]	[0.0672]	[0.211]	[0.0734]
Health: Poor	0.00127	0.0128	-0.00790	-0.0272	0.00660
	[0.0190]	[0.0197]	[0.0222]	[0.0652]	[0.0196]
Health: Fair	-0.00154	0.0152	-0.00106	0.0108	0.000235
	[0.0194]	[0.0200]	[0.0224]	[0.0664]	[0.0197]
Health: Good	0.0114	0.0244	0.0145	0.0548	0.00535
	[0.0196]	[0.0201]	[0.0225]	[0.0668]	[0.0198]
Health: Excellent	0.0178	0.0360*	0.0203	0.105	0.00851
	[0.0204]	[0.0210]	[0.0235]	[0.0696]	[0.0208]
Number of children	0.470	0.573	0.335	0.117	0.939***
	[0.458]	[0.448]	[0.472]	[1.358]	[0.300]
Member of trade union	0.00578	0.00312	0.00257	-0.00670	0.00346
	[0.00557]	[0.00563]	[0.00621]	[0.0185]	[0.00549]
Home owner (=1)	-0.0227**	-0.0341***	-0.0354***	-0.132***	-0.0132
	[0.00957]	[0.00962]	[0.0107]	[0.0321]	[0.00937]
Constant	0.0188	0.0837	0.159	3.747***	0.162
	[0.130]	[0.131]	[0.146]	[0.435]	[0.159]
Wave dummies (10)	Yes	Yes	Yes	Yes	Yes
Regional dummies (20)	Yes	Yes	Yes	Yes	Yes
Socio-economic classes (35)	Yes	Yes	Yes	Yes	Yes
Overall R-squared	0.1390	0.1376	0.1237	0.1104	0.0725
Observations	8,984	10,674	10,674	8,984	5,728
Number of person-wave	4,217	4,881	4,881	4,217	2,969

Notes: In Great Britain, the Conservative Party is to the right, the Labour Party is to the left, and the Liberal Democrats although less well-defined is traditionally more centrist. The principal BHPS survey question, which is used here in the first three columns, is: *Which party do you regard yourself as being closer to than the others?* The fourth column uses a strength of opinion variable; the fifth relies on a question about which party would you vote for if there were an election tomorrow.
*<10%; **<5%; ***<1%. Standard errors are in parentheses.

(1) Labour = 0; Conservatives = 1
(2) Labour/Lib Dem = 0; Conservatives = 1
(3) Labour = 0; Conservatives/Lib Dem = 1
(4) Labour (very strong support) = 1; Labour (moderate support) = 2; Labour (weak support) = 3; Conservatives (weak support) = 4; Conservatives (moderate support) = 5; Conservatives (very strong support) = 6
(5) Vote Labour tomorrow = 0; Vote Conservatives tomorrow = 1

Table A2: Robustness Checks (with a lag-of-lottery-win variable and a "won £1 in the lottery" dummy)

GLS regressions

	Dependent variable: Labour=0; Cons=1		
VARIABLES	**(1)**	**(2)**	**(3)**
Real lottery win/£1,000	0.00582		
	[0.00489]		
Ln(sum of lottery wins in t-1 and t-2)		0.00386**	
		[0.0018]	
Won £1 in the lottery			0.0091
			[0.053]
Ln(real household income)	0.0218***	0.0062	0.0216***
	[0.0065]	[0.0051]	[0.0066]
Observations	8,984	11,708	8,984

Notes: **<5%; ***<1%. Standard errors are in parentheses. Control variables are as in Table 1.

The "Won £1 in the lottery" variable is a placebo-variable robustness check; as required, its coefficient is small and insignificantly different from zero. When "Ln lottery win" is entered without the logarithmic form the coefficient is large and positive but its t-statistic is only 1.2.

Table A3: Testing for Interaction Effects Between Voting Right at t-1 and the Amount Won at t Upon Voting Right at t (GLS – Random Effects)

VARIABLES	Dependent variable: Labour/Lib Dem=0; Cons=1								
	All	**Women**	**Men**	**All**	**Women**	**Men**	**All**	**Women**	**Men**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**
Ln(real lottery win)	0.00485**	-0.00050	0.0081***	0.00498**	0.00495	0.00386	0.00635**	0.00144	0.00914**
	[0.00211]	[0.00331]	[0.00276]	[0.00236]	[0.00349]	[0.00320]	[0.00276]	[0.00426]	[0.00364]
Cons1 at t-1: Labour=0; Cons=1				0.843***	0.890***	0.799***			
				[0.0144]	[0.0211]	[0.0198]			
Cons 2 at t-1: Others=0; Cons=1							0.485***	0.540***	0.447***
							[0.0181]	[0.0279]	[0.0238]
Cons 1 × Ln(real lottery win)				-0.0071**	-0.0092*	-0.00428			
				[0.00358]	[0.00537]	[0.00483]			
Cons 2 × Ln(real lottery win)							-0.00847*	-0.0110	-0.00636
							[0.00441]	[0.00693]	[0.00575]
Ln(real household income)	0.0212***	0.00714	0.0317***	0.0151***	0.0113	0.0202**	0.0161**	0.00551	0.0217**
	[0.00661]	[0.00963]	[0.00923]	[0.00550]	[0.00773]	[0.00794]	[0.00694]	[0.0101]	[0.00973]
Constant	0.0439	-0.0676	0.0712	0.0102	0.139	-0.0909	0.156	0.243	0.138
	[0.138]	[0.246]	[0.163]	[0.104]	[0.207]	[0.127]	[0.138]	[0.251]	[0.163]
Overall R-squared	0.1376	0.1503	0.1319	0.8620	0.8749	0.8532	0.6367	0.6533	0.6187
Observations	8,864	3,785	5,079	7,106	3,021	4,085	8,350	3,584	4,766
Number of person-year	4,171	1,919	2,252	3,253	1,497	1,756	3,856	1,786	2,070

Notes: *<10%; **<5%; ***<1%. Standard errors are in parentheses. Control variables are as in Table 1.
Dependent variable: Labour = 0; Cons = 1. Cons1 at t-1 represents Labour =0; Cons = 1 at t-1/ Cons2 at t-1 represents Others = 0; Cons = 1.

Table A4: An Alternative Dependent Variable: Attitudes to Whether Others Have a Fair Share of Wealth
(GLS – Random Effects)

	Dependent variable: "Do ordinary people get a fair share of the nation's wealth?" 1 = strongly disagree", ..., 5 = "strongly agree"					
	All	**Women**	**Men**	**All**	**Women**	**Men**
VARIABLES	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Ln(real lottery win)	0.0165*	0.00889	0.0241**	0.00100	0.00470	0.00253
	[0.00867]	[0.0131]	[0.0117]	[0.0102]	[0.0152]	[0.0140]
Others=0; Cons=1				0.0531	0.105	0.0615
				[0.0796]	[0.124]	[0.105]
Conservatives × Ln(real lottery win)				0.0511**	-0.00396	0.0783***
				[0.0206]	[0.0326]	[0.0268]
Ln(real household income)	0.0722***	0.0551	0.0935***	0.0641**	0.0586	0.0733**
	[0.0248]	[0.0375]	[0.0342]	[0.0260]	[0.0393]	[0.0360]
Male	-0.0340			-0.0208		
	[0.0296]			[0.0307]		
Age	-0.0298***	-0.0352***	-0.0255***	-0.0293***	-0.0345***	-0.0246***
	[0.00550]	[0.00789]	[0.00780]	[0.00577]	[0.00831]	[0.00817]
Age-squared	0.000324***	0.000393***	0.000267***	0.000309***	0.000385***	0.000246***
	[5.66e-05]	[8.02e-05]	[8.11e-05]	[5.88e-05]	[8.34e-05]	[8.41e-05]
Completed higher degree	-0.0733	0.183	-0.179	-0.0560	0.149	-0.135
	[0.0971]	[0.176]	[0.121]	[0.0994]	[0.184]	[0.123]
Completed 1st degree	-0.0220	-0.0109	-0.0464	-0.0173	0.0224	-0.0543
	[0.0587]	[0.0895]	[0.0798]	[0.0604]	[0.0925]	[0.0819]
Completed HND, HNC	0.0584	0.218**	-0.0372	0.0273	0.240***	-0.108
	[0.0587]	[0.0884]	[0.0798]	[0.0610]	[0.0908]	[0.0836]
Completed A-levels	-0.0111	0.0698	-0.0676	-0.0218	0.0895	-0.0913
	[0.0441]	[0.0681]	[0.0595]	[0.0453]	[0.0703]	[0.0610]
Completed O-levels	-0.0210	0.0452	-0.0750	-0.0413	0.0393	-0.0975*
	[0.0385]	[0.0529]	[0.0564]	[0.0396]	[0.0547]	[0.0577]
Completed CSE levels	0.0628	0.0257	0.110	0.0413	0.0382	0.0731

	[0.0681]	[0.0957]	[0.0975]	[0.0701]	[0.0982]	[0.101]
Living as couple	-0.0279	-0.0201	-0.0322	-0.0390	-0.0484	-0.0320
	[0.0417]	[0.0624]	[0.0565]	[0.0439]	[0.0656]	[0.0598]
Widowed	-0.00119	0.108	-0.179*	0.0127	0.123	-0.172*
	[0.0623]	[0.0799]	[0.100]	[0.0636]	[0.0815]	[0.103]
Divorced	-0.121**	-0.00364	-0.262***	-0.114*	0.0217	-0.265***
	[0.0580]	[0.0783]	[0.0878]	[0.0597]	[0.0805]	[0.0905]
Separated	-0.257**	-0.182	-0.310**	-0.232**	-0.177	-0.255*
	[0.102]	[0.143]	[0.145]	[0.105]	[0.146]	[0.152]
Never married	0.0434	0.0672	0.0244	0.0363	0.0808	0.00930
	[0.0461]	[0.0719]	[0.0622]	[0.0479]	[0.0756]	[0.0644]
Employed full-time	-0.0165	0.159	-0.0997	-0.0656	0.0567	-0.135
	[0.144]	[0.281]	[0.179]	[0.146]	[0.294]	[0.180]
Unemployed	-0.123	0.0345	-0.152	-0.0191	0.0667	-0.0214
	[0.174]	[0.327]	[0.216]	[0.179]	[0.350]	[0.221]
Retired	-0.0193	0.0962	0.0162	0.0623	0.177	0.0808
	[0.161]	[0.305]	[0.203]	[0.165]	[0.319]	[0.207]
Maternity leave	-0.0378	0.218	-0.616	-0.0945	0.0682	-0.436
	[0.238]	[0.333]	[0.924]	[0.261]	[0.369]	[0.915]
Family care	0.0459	0.245	-0.338	0.143	0.332	-0.263
	[0.163]	[0.301]	[0.293]	[0.167]	[0.314]	[0.306]
Full-time student	-0.0720	0.0218	-0.0460	-0.0787	-0.0515	-0.00818
	[0.177]	[0.323]	[0.224]	[0.196]	[0.346]	[0.257]
Disabled	-0.113	-0.0198	-0.0767	0.0119	0.128	0.0190
	[0.167]	[0.312]	[0.209]	[0.171]	[0.326]	[0.214]
Government training	0.901*		1.003*	0.948*		1.019*
	[0.508]		[0.532]	[0.505]		[0.530]
Other type of employment	0.167	0.334	0.110	0.291	0.584	0.168
	[0.253]	[0.495]	[0.304]	[0.273]	[0.546]	[0.327]
Health: Poor	-0.0230	-0.122	0.0557	-0.0632	-0.152	0.0290
	[0.0882]	[0.119]	[0.134]	[0.0917]	[0.125]	[0.138]
Health: Fair	-0.0867	-0.133	-0.0549	-0.117	-0.187	-0.0405

	[0.0845]	[0.111]	[0.132]	[0.0877]	[0.115]	[0.136]
Health: Good	-0.0691	-0.109	-0.0381	-0.114	-0.140	-0.0597
	[0.0846]	[0.111]	[0.132]	[0.0878]	[0.116]	[0.136]
Health: Excellent	-0.0135	-0.0916	0.0353	-0.0688	-0.152	0.0163
	[0.0879]	[0.117]	[0.136]	[0.0915]	[0.122]	[0.141]
Number of children	0.0240	0.0109	0.0328	0.0270	0.0186	0.0304
	[0.0177]	[0.0259]	[0.0249]	[0.0185]	[0.0269]	[0.0260]
Member of trade union	-0.0306	-0.0482	-0.0124	-0.0224	-0.0603	0.0104
	[0.0330]	[0.0510]	[0.0440]	[0.0341]	[0.0528]	[0.0455]
Mental distress (GHQ-12)	-0.00552**	-0.00542	-0.00509	-0.00483*	-0.00453	-0.00406
	[0.00253]	[0.00346]	[0.00373]	[0.00263]	[0.00360]	[0.00386]
Home owner (=1)	0.119***	0.109**	0.131***	0.115***	0.119**	0.123**
	[0.0321]	[0.0457]	[0.0451]	[0.0341]	[0.0485]	[0.0479]
Constant	2.474***	3.007***	2.126***	2.601***	3.090***	2.190***
	[0.513]	[0.912]	[0.652]	[0.523]	[0.927]	[0.662]
Wave dummies (10)	Yes	Yes	Yes	Yes	Yes	Yes
Regional dummies (20)	Yes	Yes	Yes	Yes	Yes	Yes
Socio-economic classes (35)	Yes	Yes	Yes	Yes	Yes	Yes
Overall R-squared	0.0487	0.0725	0.0604	0.0661	0.0795	0.0902
Observations	5,196	2,276	2,920	4,794	2,108	2,686
Number of person-year	3,784	1,710	2,074	3,455	1,563	1,892

Notes: *<10%; **<5%; ***<1%. Standard errors are in parentheses.

Table A5: Checking for Attrition: Winning the Lottery Today Does Not Lead to Individuals Dropping out of the Sample

	Dependent variable: Dropping out of the sample at t+1					
	GLS			OLS with Fixed Effects		
	All	Women	Men	All	Women	Men
VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
Ln(real lottery win)	0.00173	0.00242	0.00170	0.000800	0.00277	-2.68e-05
	[0.00137]	[0.00204]	[0.00186]	[0.00168]	[0.00256]	[0.00226]
Ln(real household income)	0.000903	0.0104*	-0.00665	0.00537	0.0137*	-0.000404
	[0.00413]	[0.00598]	[0.00577]	[0.00525]	[0.00777]	[0.00724]
Male	0.0143**					
	[0.00649]					
Age	-0.0055***	-0.0052***	-0.0055***	0.00385	-0.00789	0.0118
	[0.00110]	[0.00154]	[0.00157]	[0.00808]	[0.0120]	[0.0110]
Age-squared	5.01e-05***	5.37e-05***	4.42e-05***	1.67e-05	3.61e-05	8.21e-06
	[1.11e-05]	[1.52e-05]	[1.61e-05]	[2.12e-05]	[3.05e-05]	[2.97e-05]
Completed higher degree	-0.0151	-0.0316	-0.000832	0.0432	0.176*	-0.0378
	[0.0203]	[0.0330]	[0.0264]	[0.0667]	[0.103]	[0.0894]
Completed 1st degree	-0.00524	-0.000819	-0.00249	0.0678	0.211***	-0.0245
	[0.0125]	[0.0181]	[0.0173]	[0.0530]	[0.0817]	[0.0714]
Completed HND, HNC	-0.0191	-0.0316*	-0.00554	0.159***	0.340***	0.0619
	[0.0131]	[0.0192]	[0.0180]	[0.0595]	[0.103]	[0.0744]
Completed A-levels	-0.0236**	-0.0181	-0.0220	-0.0105	0.0905	-0.0635
	[0.00983]	[0.0145]	[0.0136]	[0.0483]	[0.0788]	[0.0623]
Completed O-levels	-0.0153*	-0.0182	-0.00983	-0.000490	0.0473	-0.0168
	[0.00877]	[0.0118]	[0.0130]	[0.0445]	[0.0645]	[0.0640]
Completed CSE levels	-0.0301*	-0.0420**	-0.00916	0.0110	0.0862	-0.0445
	[0.0157]	[0.0213]	[0.0230]	[0.0975]	[0.121]	[0.169]
Living as couple	0.000535	0.00452	-0.00211	-0.00790	0.0141	-0.0198
	[0.00770]	[0.0114]	[0.0105]	[0.0116]	[0.0182]	[0.0154]
Widowed	0.0312**	0.0295*	0.0222	-0.00247	0.0377	-0.0546

	[0.0124]	[0.0152]	[0.0208]	[0.0212]	[0.0266]	[0.0340]
Divorced	0.00916	-0.00136	0.0222	-0.0176	0.00200	-0.0386
	[0.0115]	[0.0150]	[0.0180]	[0.0196]	[0.0265]	[0.0295]
Separated	-0.00196	-0.0108	0.00258	-0.0135	-0.00374	-0.0276
	[0.0168]	[0.0218]	[0.0260]	[0.0214]	[0.0290]	[0.0321]
Never married	0.0203**	0.0289**	0.0137	-0.00799	-0.0198	-0.0114
	[0.00916]	[0.0138]	[0.0124]	[0.0170]	[0.0286]	[0.0218]
Employed full-time	-0.000751	-0.0273	0.0149	0.00561	-0.0313	0.0284
	[0.0170]	[0.0287]	[0.0218]	[0.0191]	[0.0335]	[0.0243]
Unemployed	0.0261	0.00438	0.0336	-0.000637	-0.0230	0.00699
	[0.0225]	[0.0372]	[0.0291]	[0.0262]	[0.0441]	[0.0337]
Retired	-0.0116	-0.0389	0.00687	-0.00642	-0.0413	0.0178
	[0.0199]	[0.0322]	[0.0263]	[0.0228]	[0.0378]	[0.0300]
Maternity leave	-0.0404	-0.0683*	-0.0966	-0.0522	-0.0953**	
	[0.0327]	[0.0390]	[0.196]	[0.0368]	[0.0448]	
Family care	-0.00706	-0.0313	-0.00269	-0.0113	-0.0435	-0.0149
	[0.0204]	[0.0316]	[0.0487]	[0.0236]	[0.0370]	[0.0570]
Full-time student	0.0983***	-0.00226	0.147***	0.0477	-0.00672	0.0633
	[0.0252]	[0.0407]	[0.0328]	[0.0327]	[0.0542]	[0.0427]
Disabled	-0.0128	-0.0180	-0.0162	-0.0376	-0.0554	-0.0318
	[0.0216]	[0.0346]	[0.0287]	[0.0260]	[0.0425]	[0.0344]
Government training	0.0580		0.0450	0.0142		0.0122
	[0.0771]		[0.0815]	[0.0858]		[0.0910]
Other type of employment	0.00426	0.0236	-0.0301	0.0473	0.0717	0.00781
	[0.0364]	[0.0550]	[0.0497]	[0.0412]	[0.0629]	[0.0563]
Health: Poor	-0.0463***	-0.0830***	-0.0109	-0.0226	-0.0607***	0.00802
	[0.0129]	[0.0175]	[0.0187]	[0.0150]	[0.0213]	[0.0210]
Health: Fair	-0.0576***	-0.0760***	-0.0383**	-0.0303**	-0.0504**	-0.0144
	[0.0128]	[0.0171]	[0.0189]	[0.0153]	[0.0214]	[0.0217]
Health: Good	-0.0580***	-0.0782***	-0.0377**	-0.0294*	-0.0477**	-0.0145
	[0.0130]	[0.0174]	[0.0191]	[0.0156]	[0.0219]	[0.0221]
Health: Excellent	-0.0541***	-0.0800***	-0.0297	-0.0280*	-0.0524**	-0.00948

	[0.0136]	[0.0184]	[0.0198]	[0.0164]	[0.0234]	[0.0231]
Number of children	-0.00573*	0.00163	-0.0110**	-0.00330	0.00775	-0.0112*
	[0.00327]	[0.00471]	[0.00461]	[0.00480]	[0.00745]	[0.00645]
Member of trade union	-0.000337	-0.0135	0.00788	0.00663	-0.00111	0.0139
	[0.00574]	[0.00863]	[0.00778]	[0.00765]	[0.0119]	[0.0102]
Mental distress (GHQ-12)	0.00127***	0.000853	0.00172***	0.00109**	0.000431	0.00167**
	[0.000402]	[0.000541]	[0.000592]	[0.000487]	[0.000674]	[0.000702]
Home owner (=1)	-0.0315***	-0.0206**	-0.0397***	-0.00530	-0.000728	-0.00636
	[0.00622]	[0.00898]	[0.00862]	[0.0105]	[0.0171]	[0.0136]
Constant	0.283***	0.154	0.383***	-0.187	0.0794	-0.374
	[0.0766]	[0.121]	[0.101]	[0.348]	[0.531]	[0.467]
Wave dummies (10)	Yes	Yes	Yes	Yes	Yes	Yes
Regional dummies (20)	Yes	Yes	Yes	Yes	Yes	Yes
Socio-economic classes (35)	Yes	Yes	Yes	Yes	Yes	Yes
Observations	15,176	6,660	8,516	15,176	6,660	8,516
R-squared				0.040	0.061	0.046
Number of person-year	6,483	3,040	3,443	6,483	3,040	3,443

Notes: *<10%; **<5%; ***<1%. Standard errors are in parentheses.

Table A6: Weak Evidence for an Effect on Voting Right Among Recipients of an Inheritance

Estimated by GLS Random Effects

VARIABLES	All	Women	Men
Ln(real inheritance)	0.00930*	0.0117	0.0103
	[0.00517]	[0.00723]	[0.00803]
Ln(real household income)	0.0246	0.0330	0.0214
	[0.0159]	[0.0211]	[0.0286]
Observations	1,557	873	684

Notes: *<10%. Standard errors are in parentheses. Labour/Lib Dem = 0; Conservatives = 1. Personal controls are included.

Table A7: GLS Voting Equations with Variables for Past Lottery Wins

VARIABLES	(1) Strength of RW voting	(2) Voting Cons versus Labour.
Ln(sum of lottery wins in t-1 and t-2)	0.00920	0.00386**
	[0.00630]	[0.00179]
Ln(real household income)	0.0162	0.00619
	[0.0179]	[0.00507]
Age	-0.0480	0.000529
	[0.0416]	[0.0145]
Age-squared	0.00274	0.00411**
	[0.00625]	[0.00195]
Completed higher degree	0.148	0.0940**
	[0.122]	[0.0389]
Completed 1st degree	0.149*	0.0731***
	[0.0759]	[0.0249]
Completed HND, HNC	0.312***	0.134***
	[0.0838]	[0.0285]
Completed A-levels	0.258***	0.0796***
	[0.0610]	[0.0204]
Completed O-levels	0.335***	0.0942***
	[0.0533]	[0.0179]
Completed CSE levels	0.115	0.0167
	[0.105]	[0.0359]
Living as couple	0.0201	0.00412
	[0.0393]	[0.0115]
Widowed	-0.104*	-0.0105
	[0.0581]	[0.0173]
Divorced	0.0127	0.0104
	[0.0587]	[0.0175]
Separated	-0.0854	-0.00204
	[0.0761]	[0.0216]
Never married	0.0875*	-0.00792
	[0.0513]	[0.0156]
Employed full-time	-0.0827	-0.0215
	[0.0645]	[0.0180]
Unemployed	-0.00343	-0.00271
	[0.0883]	[0.0246]
Retired	-0.0127	-0.0209
	[0.0773]	[0.0216]
Maternity leave	-0.195	-0.0224
	[0.134]	[0.0373]
Family care	-0.0354	0.00131
	[0.0825]	[0.0231]
Full-time student	-0.460***	-0.136***
	[0.128]	[0.0361]

Disabled	0.0370	-0.0362
	[0.0868]	[0.0244]
Government training	0.446	0.139
	[0.318]	[0.0882]
Other type of employment	-0.116	-0.0536
	[0.142]	[0.0396]
Health: Poor	-0.0207	0.00485
	[0.0507]	[0.0142]
Health: Fair	-0.0555	-0.00772
	[0.0516]	[0.0145]
Health: Good	-0.0283	3.80e-05
	[0.0523]	[0.0147]
Health: Excellent	-0.0173	-0.00718
	[0.0547]	[0.0154]
Number of children	-0.00723	-0.00159
	[0.0165]	[0.00484]
Member of trade union	-0.136***	-0.0173**
	[0.0274]	[0.00787]
Home owner (=1)	0.162***	0.0569***
	[0.0338]	[0.0101]
Constant	3.772***	0.206**
	[0.350]	[0.102]
Observations	11,708	11,708
Within R-squared	0.1083	0.1276
Number of person-wave	4,000	4,000

Notes: *<10%; **<5%; ***<1%.

The first dependent variable represents the strength of Conservative versus Labour, which takes the following values: Labour (very strong support) = 1; Labour (moderate support) = 2 .... Conservatives (moderate support) = 6; Conservatives (very strong support) = 7. The second dependent variable represents voting preference between 0 = Labour and 1 = Conservative.

Table A8: Proportion of people supporting Conservative and not Labour one year before winning, at the year of winning, and one year after winning the lottery

Winning status in year *t*		***One year before (t-1)***	***The year of winning (t)***	***One year after winning (t+1)***
Did not win/did not play in *t*	M	0.361	0.366	0.381
	(S.E.)	(0.002)	(0.002)	(0.002)
	N	*47,983*	*47,219*	*45,795*
Winning £1-£499 in *t*	M	0.382	0.396	0.413
	(S.E.)	(0.009)	(0.009)	(0.009)
	N	*2,958*	*3,032*	*2,872*
Winning £500+ in *t*	M	0.386	0.438	0.428
	(S.E.)	(0.041)	(0.041)	(0.042)
	N	*140*	*144*	*138*

Note: Certain individuals either did not win or did not play in both t-1 and t+1.
A number here such as 0.386 in the bottom left-hand corner means 38.6% of individuals before the win, and this proportion becomes 43.8% in the year of the win, and 42.8% one year after the win.

Table A9: Descriptive Statistics for the Sample of Lottery Winners in BHPS

	All		Female		Male	
	Mean	**SD**	**Mean**	**SD**	**Mean**	**SD**
Voting strength (Strongly support Labour = 1, ..., Strongly support Conservative=7)	3.749	1.457	3.781	1.420	3.725	1.484
Voting right (LabourLibDem=0)	0.349	0.277	0.348	0.276	0.350	0.277
Ordinary people get a fair share	2.414	0.941	2.406	0.890	2.427	0.948
Ln(real lottery win)	3.591	1.400	3.479	1.367	3.679	1.472
Ln(real household income)	9.158	0.640	9.100	0.646	9.203	0.632
Male	0.564	0.496				
Age	49.003	16.518	50.248	16.423	48.040	16.528
Completed higher degree	0.026	0.160	0.020	0.139	0.032	0.175
Completed bachelor degree	0.091	0.287	0.073	0.261	0.104	0.306
Completed HND, HNC	0.069	0.253	0.061	0.240	0.075	0.263
Completed A-levels	0.191	0.393	0.141	0.348	0.230	0.421
Completed O-levels	0.267	0.443	0.305	0.460	0.238	0.426
Completed CSE levels	0.045	0.207	0.048	0.215	0.042	0.200
Living as couple	0.119	0.324	0.105	0.307	0.130	0.337
Widowed	0.062	0.242	0.090	0.287	0.041	0.198
Divorced	0.047	0.213	0.059	0.236	0.038	0.192
Separated	0.011	0.104	0.014	0.119	0.008	0.091
Never married	0.129	0.335	0.095	0.293	0.155	0.362
Employed full-time	0.569	0.495	0.522	0.500	0.606	0.489
Unemployed	0.017	0.129	0.012	0.107	0.021	0.144
Retired	0.233	0.422	0.262	0.440	0.210	0.407
Maternity leave	0.003	0.055	0.007	0.083	0.000	0.013

Family care	0.053	0.224	0.117	0.322	0.003	0.055
Full-time student	0.010	0.099	0.010	0.099	0.010	0.099
Disabled	0.034	0.182	0.034	0.181	0.034	0.182
Government training	0.001	0.024	0.000	0.000	0.001	0.032
Other type of employment	0.003	0.050	0.002	0.049	0.003	0.051
Health: Poor	0.000	0.014	0.081	0.272	0.072	0.259
Health: Fair	0.076	0.265	0.237	0.425	0.214	0.410
Health: Good	0.224	0.417	0.475	0.499	0.461	0.499
Health: Excellent	0.468	0.499	0.180	0.384	0.233	0.423
Number of children	0.438	0.845	0.439	0.855	0.436	0.838
N	8,984		3,842		5,142	