

Running Head: Personality and Vote Switching

Title: Stay Loyal or Exit the Party? How Openness to Experience and Extraversion Explain Vote Switching

Bert N. Bakker – *University of Amsterdam*

Robert Klemmensen – *University of Southern Denmark*

Asbjørn Sonne Nørgaard – *University of Southern Denmark*

Gijs Schumacher – *University of Southern Denmark*

Abstract

Following Hirschman, voters who are discontent with the party they voted for have two options: exit the party and vote for another or stay loyal. The inclination to exit or stay loyal is rooted in the Five Factor Model (FFM) of personality. We test our argument in two panel studies in Denmark and the United Kingdom (UK). We find that citizens open to experience are more likely to switch parties since they are more likely to think about alternatives and take risks. Extraverts identify and commit themselves to organizations and stay loyal in Denmark, but we do not confirm this pattern in the UK. Our findings demonstrate that electoral volatility is, at least partly, rooted in personality.

Keywords: Vote Switching, Openness to Experience, Extraversion

Suppose a voter is discontent with the party she voted for, because – for example – the party is mishandling government affairs. According to Hirschman’s (1970) logic, she has two choices: (1) exit by voting for another party or (2) stay loyal to the party and voice discontent. The propensity to stay loyal or to exit varies among individuals (Hirschman 1970, 49) and is rooted in an individuals’ personality. Personality traits – often conceptualized by the Five Factor Model (FFM) consisting of openness to experience, conscientiousness, extraversion, agreeableness and neuroticism (Costa & McCrae, 1992) – are an important source of variation in political behavior. For example, these traits, and especially openness and conscientiousness, explain vote intention (Barbaranelli, Caprara, Vecchione, & Fraley, 2007), ideology (Gerber, Huber, Doherty, Dowling, & Ha, 2010; Mondak & Halperin, 2008), and partisanship (Gerber, Huber, Doherty, & Dowling, 2012). We propose that personality traits explain vote switching in two ways. First, individuals open to experience are more likely to switch votes as they are willing to consider new ideas, more likely to imagine alternatives, and more willing to take risks. Second, extraverted individuals are likely to identify with a party, commit to organizations, and are dominant. For these reasons we expect extraverts to stay loyal to their party.

To evaluate these two claims we present results from two multi-wave panel studies from the United Kingdom (UK) and Denmark. The dependent variable expresses how often individuals switch vote intention (i.e. exit) in the panel study. In Denmark we find that people who are open to experience are more likely to exit, and extraverts are more likely to stay loyal to their party. In the UK we replicate our findings for openness, but not for extraversion. Our results are robust when controlling for political interest, external efficacy, ideology, and socio-economic conditions.

Exit, Openness to Experience and Vote Switching

Voters may vote for another party because of issue position changes, changes in social identification, as punishment or reward for economic conditions or because the party is incompetent on important issues (Bartels, 2012). However, some voters are highly *alert* and others more *inert* in using the exit option (Hirschman, 1970, p. 24) and we propose that this difference is rooted in the FFM trait openness to experience. Openness shapes the way individuals approach the world in terms of internal experience, interpersonal interactions and social behavior (Costa & McCrae, 1992). People open to experience have a lively imagination, are curious and open-minded, have few behavioral inhibitions and are willing to take risks.

We suggest that a trio of individual characteristics subsumed under openness predict switching vote intentions: need for cognition, imaginativeness, and risk-seeking behavior. First, openness makes individuals more willing to consider new ideas. For instance, partisans with a high need for cognition are more likely to engage in rational updating of information about political candidates (Arceneaux & Vander Wielen, 2013). Second, the willingness to imagine alternatives (Petersen & Aarøe, 2013) incites individuals to contemplate voting for other parties. Third, people that take risks are more likely to vote for new or unknown alternatives. Kam and Simas (2012) report that risk-seeking individuals are more likely to prefer a challenger over the incumbent despite uncertainty about the challenger's qualities. Conversely, people who are less open to experience are unwilling to consider new ideas, do not imagine new alternatives and are too risk averse to change voting behavior. In sum, individuals open to experience switch votes because they are open-minded, engage in imaginative thinking and are willing to take risks.

Loyalty, Extraversion and Vote Switching

A loyalist cares about his organization and therefore “leaves no stone unturned before he resigns himself to the painful decision to withdraw or switch” (Hirschman, 1970, p. 83). This inclination towards loyalty is rooted in the FFM trait extraversion. We present three reasons why this is the case. First, extraverts are outgoing, socially engaged and assertive. Therefore they are more likely than introverts to engage in political activity (Mondak, Hibbing, Seligson, & Anderson, 2010), to discuss politics (Hibbing, Ritchie, & Anderson, 2011) and to identify as a partisan (Gerber et al., 2012). Hence, extraverts are more likely to associate with a party. Second, extraversion predicts affective, continuance and normative commitment to organizations (Erdheim, Wang, & Zickar, 2006). This means extraverts are more likely to stay committed to an organization. Third, extraverts are dominant and take on leadership roles (Bono & Judge, 2004). Therefore we expect that when extraverts disagree with their party they are more likely to voice discontent than to silently exit. We expect that the higher people score on extraversion, the lower their propensity to switch vote. However, because extraverts are members of more social networks than introverts one could also argue that extraverts are more exposed to alternative perspectives and therefore are more likely to switch votes. Hibbing and colleagues (2011) demonstrate that even though extraverts are more likely to engage in discussions with people that have other views, they are *not* more likely to be influenced by these people. In sum, a larger network is not sufficient for extraverts to behave disloyally.

Neuroticism, conscientiousness, agreeableness and vote switching

Do the other FFM traits influence vote switching? *Neuroticism* is associated with the tendency to experience negative affect such as fear, anger, guilt, insecurity and vulnerability (Costa & McCrae, 1992). There are two mechanisms that link neuroticism to vote switching:

(1) neurotic people are likely to become angry if their party does something they do not like and switch to another party. (2) Alternatively, due to anxiety and insecurity neurotic people also act risk averse. Even if they are angry at their party, neurotics are not likely to switch votes because they do not like to take the risk of voting for a political alternative they do not know. We consider these two mechanisms equally likely, so we offer no directional hypothesis for neuroticism. *Conscientious* people prefer order, adhere to social norms, plan and organize tasks, control impulses, are goal-oriented and are reluctant to change (Costa & McCrae, 1992). Because of this last characteristic conscientious people could stay loyal. However, because they are goal-oriented, they may be more disappointed with their party if it does not keep its promises or fails to meet performance standards. For these two reasons we also have no directional hypothesis for conscientiousness. *Agreeableness* is characterized by modest, pro-social and altruistic behavior (Costa & McCrae, 1992) and agreeable citizens are more likely to volunteer (Carlo, Okun, Knight, & de Guzman, 2005). Accordingly, agreeable citizens might be loyal to a party as they are “attracted to the communal and cooperative components of joining a political team” (Gerber et al., 2012, p. 661). However, agreeable individuals also avoid any sort of conflict (Park & Antonioni, 2007) and politics is of course about conflict. Therefore, we have no directional expectations about the effect of agreeableness on vote switching.

Motivational Determinants of Vote Switching

Berelson, Lazarsfeld and McPhee (1954) characterized ‘floating voters’ as citizens with less attention to politics. Indeed, politically interested individuals follow politics more closely than non-interested voters, and are less affected by short-term campaign effects (Converse, 1962; Dassonneville, 2012; Kuhn, 2009; van der Meer, van Elsas, Lubbe, & van der Brug, 2015). Moreover, citizens with a strong sense of external efficacy think that they can make a

difference in politics, that elected officials will listen to their grievances, and therefore have a strong tendency to believe in the effectiveness of voice as compared to exit (Dassonneville, 2012; Zelle, 1995). We control for these alternative explanations but openness and extraversion also positively relate to interest and efficacy (Mondak & Halperin, 2008). We do not expect that interest or efficacy moderate the association between personality and vote switching as personality traits are causally prior to these motivations (Gerber et al., 2010). Still the effects of openness and extraversion may be suppressed or mediated by interest and efficacy. In our analyses we evaluate the likelihood of suppression and mediation effects.

We also control for ideology. If left-leaning individuals are more likely to switch then ideology could mediate the association between openness and vote switching due to the positive association between openness and left-wing ideology. Yet, if right-leaning individuals are more likely to switch votes, then ideology could suppress the association between openness and vote switching. Although we see no theoretical argument why left-leaning or right-leaning individuals shift votes more often, we do control for ideology.

Research Design

We use a two-wave panel study on political behavior and personality conducted in Denmark and the multi-wave British Household Panel Survey (BHPS). The first wave of the Danish survey was distributed to 8,012 respondents between May 25 and June 6 2010. Respondents were randomly drawn from an internet panel of 400,000 Danes. 3,612 people responded (45% response rate). The second wave was fielded between October 26 and November 15 2011, a month after the general election on September 15, to 2,840 of the 3,612 respondents who were still active in the panel. 1,972 persons from the first wave answered the survey (69% response rate). We use four waves (15-18) of the BHPS. We selected individuals from 2005 onwards, as the personality battery was included for the first time in this wave. We

restricted our sample to participants who reside in England and were 18 years or older in 2005. This resulted in a panel of over 3,500 individuals who answered in all four waves between 2005 and 2008.

From the Danish study we use two items from the two waves to create the dependent variable. The first item asks: “Which party did you vote for in the last election?”, and the second item asks: “Which party would you vote for if an election were held tomorrow?”. Our dependent variable is the count of the number of shifts in party preference. The maximum number of shifts is 3. For instance, this occurs if someone indicated in wave 1 to have voted for the Liberals in 2007 and will vote for the Social Liberals in 2010, but indicates in wave 2 to have actually voted Social Democrats in 2010 and will vote for the Socialist People’s Party at the next election.¹

From the British data we construct a similar variable using items on party preferences included in the four waves, namely “Which party do you feel closest to?”, and if people did not indicate a party they were asked “Which party would you vote for tomorrow?” We assume that it is likely that people that feel close to a party also vote for that party (Blais, Gidengil, Nadeau, & Nevitte, 2001). Also in the UK, our dependent variable ranges from 0, indicating no declared changes in party preference, to 3, indicating that the respondent changed party preference at each point.

Figure 1 shows the distribution of party preference shifts in the Danish (upper panel) and UK (lower panel) samples. In our Danish sample approximately 60 percent of the respondents declared no shifts in party preference, 35 percent declared one or two shifts and approximately 5 percent declared three shifts. In the UK sample we see less change in party preference: approximately 70 percent of the voters did not change their party preference, the

¹ Our dependent variable includes respondents (1-2%) who indicated they would not vote or vote blank. Results do not change if these respondents are excluded.

number of respondents who change party preference one, two or three times ranges from approximately 15 to roughly 5 percent of the respondents. This difference in party preference switches is not surprising given the difference in the number of parties in the multiparty system in Denmark and the two-and-a-half party system in the UK (Pedersen, 1979, p. 14).² The difference in political context tests the robustness of our hypotheses.

[Insert Figure 1 here]

Our two samples consist of reliable and validated measures of the FFM traits. In the Danish sample we use the 60 item NEO PI-R Short Version (Skovdahl-Hansen, Mortensen, & Schiøtz, 2004) which measures each trait using 12 items. In the UK sample we use a 15 item version of the Big Five Inventory (John & Srivastava, 1999) which measures each trait using three items. Donnellan and Lucas (2008) demonstrated that the 15 item version of the BFI is strongly correlated with the full BFI. In both samples the Cronbach's alphas of the traits are acceptable.³

In the baseline model we control for the SES variables age, sex, household income and education. Additionally, in model 2, we control for the motivational determinants of vote switching. Political interest is measured using one item "How interested are you in politics."

² There were no specific events in the political context in Denmark or the UK that resulted in more party preference switches in one specific year (see SI Table A4 for the Danish sample and SI Table B4 for the UK sample).

³ We tested whether personality traits were skewed due to attrition. In the Danish sample we found small but significant mean differences for neuroticism, conscientiousness and agreeableness. In the UK sample we found small mean differences for conscientiousness and extraversion.

External efficacy is measured using two items such as “People like me have no influence on government decisions.” Ideology is measured using nine items in the Danish sample and three items in the UK sample. In both samples our ideology measures tap into economic and social issues employing items such as “homosexual relationships are wrong” and “It is the government’s responsibility to provide a job for everyone who wants one.” The item wording and descriptive statistics of all variables can be found in Supporting Information (SI) A (Denmark) and B (UK).

Results

Since our dependent variable is a count variable, we use negative binomial regressions. Table 1 shows the incidence ratios of our analyses of the Danish sample. Model 1 only includes the personality traits and SES controls. Openness is positively associated with the tendency to switch party preferences in model 1 ($p=0.06$). When we add political interest, external efficacy and political ideology in model 2, the incidence ratio of openness becomes much stronger.⁴ Interest, efficacy and left-wing ideology are negatively related to the probability of vote switching. Yet, these variables correlate positively with openness, which suggests that they suppress the association between openness and vote switching. This evokes speculation about the interplay between openness and these political motivational constructs. For example, an increase in political interest may weaken the positive effect of openness on vote switching.

Returning to direct association between openness and vote switching, in Figure 2 (panel A) we plot the predicted number of switches at different levels of openness (based on model 2). The figure shows that at one standard deviation below the mean of openness the

⁴ Inclusion of political interest, efficacy, and ideology separately does not change the results (SI A Table A5).

predicted number of vote switches is 0.58 (95%CI=0.52,0.64), whereas the predicted number of vote switches is 0.77 (95%CI=0.69,0.85) at one standard deviation above the mean of openness. This effect is substantive as it is at par with the predicted switches in vote choice between respondents who are not interested in politics (0.77 switches [95%CI=0.66,0.88]) and those that are very interested in politics (0.61 switches [95%CI=0.54,0.67]). In sum, these analyses confirm that openness to experience predicts exit.

[Insert Table 1 here]

Focusing on extraversion, we find in model 1 an incidence ratio of 0.46 for extraversion. This indicates that higher extraversion means less vote switching. Because the effect of extraversion is almost unchanged in model 2 in which we control for interest and efficacy, we can conclude that these variables do not mediate the association between extraversion and vote switching. Based on model 2, Figure 2 (panel B) demonstrates that respondents one standard deviation below the mean of extraversion switch on average 0.74 times (95% CI=0.66,0.81), whereas those scoring one standard deviation above the mean switch on average 0.60 times (95%CI=0.54,0.66). The size of this effect is substantive as it is at grossly at par with the party preferences switches between respondents not interested and respondents very interested in politics. We conclude that extraversion, as predicted, reduces vote switching.⁵

[Insert Figure 2 here]

⁵ Our results replicate when we use a dependent variable that only relies on vote intention at time of the survey (SI C).

Turning to the UK study, Table 2 presents the results of the negative binomial regressions predicting the count of shifts in party preferences. Again, model 1 includes the personality traits and the SES control variables. We find an incidence ratio for openness to experience of 1.44 (significant at $p < 0.05$) once we control for interest, efficacy and ideology in model 2.⁶ Figure 3 (based on model 2) demonstrates that an increase in openness is related to more party preference switches. Specifically, respondents that score one standard deviation below the mean on openness switch on average 0.46 times (95% CI=0.42,0.50), while respondents that score one standard deviation above the mean on openness switch on average 0.53 times (95% CI=0.48,0.58). The effect of openness is not as substantive as the effect of political interest on party preference switches. Specifically, respondents that are not interested in politics switch 0.63 times (95% CI=0.56,0.70), whereas the very interested in politics switch 0.35 times (95% CI=0.30,0.40). Hence, in the UK openness also accounts for some of the variance in the inclination to switch party preferences.⁷

[Insert Table 2 here]

Extraversion is unrelated to party preference switches in the UK.⁸ We have two explanations for this null-finding. First, in the UK study personality is measured by only three items per trait, which means that the measures might not encapsulate the full variance of extraversion (Credé, Harms, Niehorster, & Gaye-Valentine, 2012, p. 876). We created a reduced

⁶ SI B (Table B4) shows the models including political interest, efficacy, and ideology separately.

⁷ The results do not change when we control for the strength of party support (SI D).

⁸ We do not find evidence for the suggestion that party activity conditions the effect of extraversion on party preference switches (SI E).

extraversion measure in the Danish sample consisting of the three items that most closely resemble the items used to measure extraversion in the UK. We re-ran the analyses of the Danish sample using this brief measure and found that the effect of extraversion on party preference switching disappears.⁹ Consequently, the relatively poor measurement of extraversion in the UK study could explain the null-finding. Second, loyalty is more important if two or more alternatives are of almost equal utility (Hirschman, 1970), which is more likely to happen when there are several, similar parties to choose from as is the case in Denmark but not in the UK. Hence, the difference in party system might explain the null-finding. Future research using large personality inventories should address whether the null findings for extraversion are indeed the consequence of the measurement or driven by the political context.¹⁰

In the Danish and UK sample age relates to loyalty. In the UK sample but not in the Danish sample, education and ideology are unrelated to switching votes. The educational difference might be because the UK 2.5 party system is less complex compared to the multiparty system in Denmark. The differences reported for political ideology could be related to the political context at the times of the survey or the operationalization of ideology.¹¹

Conclusion

Using two multi-wave panel studies, this study demonstrates that people open to experience are more likely to switch vote. This result is robust across model specifications and political

⁹ See SI F.

¹⁰ We demonstrate that alternative specifications of the dependent variable yield similar results in the Danish and UK sample (SI G).

¹¹ SI H addresses the operationalization of ideology in greater detail.

contexts and confirms Hirschmann's (1970) expectation that individuals vary in their inclination to stay loyal or to exit.

We also hypothesized that extraverts stay loyal and thus are less likely to switch. In the Danish sample we confirm this hypothesis, however, in the UK sample we fail to replicate it. We suggested this is due to poor measurement of personality traits in the UK study or to party system differences. This latter point reinforces Credé et al.'s (2012) critique that using abbreviated measures of personality traits reduces the reliability and validity of the question batteries.

We hypothesized that openness and extraversion directly impact vote switching. Yet, interest and efficacy suppress the association between openness and vote switching. Future research could address which other political motivational constructs mediate or suppress the association between openness and vote switching. Moreover, the political context could condition the extent to which individuals open to experience are likely to switch votes. For instance, the rise of a new party, such as the UK Independence Party in recent years, motivates individuals from one ideological inclination more than others.

To summarize, our study offers two contributions. First, we enrich the personality and politics literature as we theorize and confirm that openness to experience and extraversion predict vote switching. Second, we expand research on electoral volatility and show that the tendency to change party preference is, at least partly, rooted in deep-seated psychological dispositions.

Acknowledgements

We thank Christopher Federico, Marc Hooghe, Cindy Kam, Michael Lewis-Beck, Sofie Marien, Beth Miller and Rune Stubager for their comments. Correspondence concerning this article should be addressed to Bert N. Bakker, Amsterdam School of Communication Research, University of Amsterdam, Nieuwe Achtergracht 166, Postbus 15793, 1001 NG Amsterdam, the Netherlands. E-mail: b.n.bakker@uva.nl

References

- Arceneaux, K., & Vander Wielen, R. J. (2013). The effects of need for cognition and need for affect on partisan evaluations. *Political Psychology, 34*(1), 23–42.
- Barbaranelli, C., Caprara, G. V., Vecchione, M., & Fraley, C. R. (2007). Voters' personality traits in presidential elections. *Personality and Individual Differences, 42*(7), 1199–1208.
- Bartels, L. M. (2012). The study of electoral behavior. In J. E. Leighley (Ed.), *The Oxford Handbook of American Elections and Political Behavior* (pp. 239–261). Oxford: Oxford University Press.
- Berelson, B. R., Lazarsfeld, P. F., & McPhee, W. N. (1954). *Voting: A study of opinion formation in a Presidential campaign*. Chicago: University of Chicago Press.
- Blais, A., Gidengil, E., Nadeau, R., & Nevitte, N. (2001). Measuring party identification: Britain, Canada, and the United States. *Political Behavior, 23*(1), 5–22.
- Bono, J. E., & Judge, T. A. (2004). Personality and transformational and transactional leadership: A meta-analysis. *Journal of Applied Psychology, 89*(5), 901–910.
- Carlo, G., Okun, M. A., Knight, G. P., & de Guzman, M. R. T. (2005). The interplay of traits and motives on volunteering: Agreeableness, extraversion and prosocial value motivation. *Personality and Individual Differences, 38*(6), 1293–1305.
- Converse, P. E. (1962). Information flow and the stability of partisan attitudes. *Public Opinion Quarterly, 26*(4), 578–599.
- Costa, P. T., & McCrae, R. R. (1992). *NEO PI-R Professional Manual*. Odessa: Psychological Assessment Resources.
- Credé, M., Harms, P., Niehorster, S., & Gaye-Valentine, A. (2012). An evaluation of the consequences of using short measures of the Big Five personality traits. *Journal of Personality and Social Psychology, 102*(4), 874–88.

- Dassonneville, R. (2012). Electoral volatility, political sophistication, trust and efficacy: A study on changes in voter preferences during the Belgian regional elections of 2009. *Acta Politica*, 47(1), 18–41.
- Donnellan, M. B., & Lucas, R. E. (2008). Age differences in the Big Five across the life span: Evidence from two national samples. *Psychology and Aging*, 23(3), 558–566.
- Erdheim, J., Wang, M., & Zickar, M. J. (2006). Linking the Big Five personality constructs to organizational commitment. *Personality and Individual Differences*, 41(5), 959–970.
- Gerber, A. S., Huber, G. A., Doherty, D., & Dowling, C. M. (2012). Personality and the strength and direction of partisan identification. *Political Behavior*, 34(4), 653–688.
- Gerber, A. S., Huber, G. A., Doherty, D., Dowling, C. M., & Ha, S. E. (2010). Personality and political attitudes: Relationships across issue domains and political contexts. *American Political Science Review*, 104(01), 111.
- Hibbing, M. V., Ritchie, M., & Anderson, M. R. (2011). Personality and political discussion. *Political Behavior*, 33(4), 601–624.
- Hirschman, A. O. (1970). *Exit, voice, and loyalty. Responses to decline in firms, organizations, and states*. Cambridge: Harvard University Press.
- John, O. P., & Srivastava, S. (1999). The Big Five trait taxonomy: History, measurement, and theoretical perspectives. In L. A. Pervin & O. P. John (Eds.), *Handbook of Personality Theory and Research* (2nd ed., pp. 102–138). Guilford Press.
- Kam, C. D., & Simas, E. N. (2012). Risk attitudes, candidate characteristics, and vote choice. *Public Opinion Quarterly*, 76(4), 747–760.
- Kuhn, U. (2009). Stability and change in party preference. *Swiss Political Science Review*, 15(3), 463–494.
- Mondak, J. J., & Halperin, K. D. (2008). A framework for the study of personality and political behaviour. *British Journal of Political Science*, 38(2), 335–362.
- Mondak, J. J., Hibbing, M. V., Seligson, M. A., & Anderson, M. R. (2010). Personality and civic engagement: An integrative framework for the study of trait effects on political behavior. *American Political Science Review*, 104(1), 1–26.
- Park, H., & Antonioni, D. (2007). Personality, reciprocity, and strength of conflict resolution strategy. *Journal of Research in Personality*, 41(1), 110–125.
- Pedersen, M. N. (1979). The dynamics of European party systems. *European Journal of Political Research*, 7(1), 1–26.
- Petersen, M. B., & Aarøe, L. (2013). Politics in the mind's eye: Imagination as a link between social and political cognition. *American Political Science Review*, 107(2), 275–293.

- Skovdahl-Hansen, H., Mortensen, E. L., & Schiøtz, H. K. (2004). *Documentation of the Danish NEO PI-R and NEO PI-R Short Version*. Copenhagen: Danish Psychological Association.
- Van der Meer, T. W. G., van Elsas, E., Lubbe, R., & van der Brug, W. (2015). Are volatile voters erratic, whimsical or seriously picky? A panel study of 58 waves into the nature of electoral volatility (The Netherlands 2006-2010). *Party Politics*, 21(1), 100–114.
- Zelle, C. (1995). Social dealignment versus political frustration: Contrasting explanations of the floating vote in Germany. *European Journal of Political Research*, 27(4), 319–345.

Table 1 Negative Binomial Regression on Number of Party Preference Switches (*Denmark*)

	1	2
Openness	1.56*	2.46*
	(0.37)	(0.65)
Extraversion	0.46*	0.49*
	(0.13)	(0.14)
Conscientiousness	0.91	0.89
	(0.26)	(0.26)
Agreeableness	0.79	0.91
	(0.17)	(0.21)
Neuroticism	0.84	0.78
	(0.23)	(0.22)
Age	0.58*	0.55*
	(0.10)	(0.10)
Female	1.03	1.02
	(0.07)	(0.07)
Education (Ref. = Primary school)		
Vocational	1.07	1.09
	(0.09)	(0.09)
Upper Secondary	1.11	1.18
	(0.17)	(0.18)
Professional	0.92	1.01
	(0.11)	(0.12)
Bachelor or higher	1.29*	1.40*
	(0.16)	(0.18)
Household Income	0.86	0.91
	(0.12)	(0.13)
Political Interest		0.70*
		(0.11)
External Efficacy		0.63*
		(0.09)
Political Ideology		1.84*
		(0.43)
Constant	1.37	1.07
	(0.47)	(0.41)
N	1,728	1,696
LR Chi ²	35.29	56.93
Log likelihood	-1,916.43	-1,865.50

Incidence Ratios with standard errors in parentheses reported; *p<0.1

Table 2 Negative Binomial Regression on Number of Party Preference Switches (*UK*)

	1	2
Openness	1.22 (0.20)	1.44* (0.25)
Extraversion	0.92 (0.17)	0.86 (0.16)
Conscientiousness	1.02 (0.16)	1.02 (0.16)
Agreeableness	1.01 (0.20)	1.01 (0.20)
Neuroticism	1.06 (0.15)	1.05 (0.15)
Age	0.31* (0.05)	0.37* (0.07)
Female	0.96 (0.06)	0.93 (0.06)
Education (Ref. = O-level)		
A-level	0.83* (0.07)	0.89 (0.07)
Vocational	0.88 (0.11)	0.92 (0.11)
Undergraduate	0.86 (0.08)	0.98 (0.10)
Master	0.83 (0.14)	0.97 (0.18)
Other	1.10 (0.09)	1.04 (0.09)
Household Income	0.55* (0.18)	0.63 (0.23)
Political Interest		0.56* (0.06)
External Efficacy		0.39* (0.06)
Political Ideology		1.21 (0.25)
Constant	0.79 (0.17)	1.13 (0.28)
N	3,795	3,584
Wald Chi ²	63.91	130.90
Log Pseudolikelihood	-3554.97	-3316.88

Incidence Ratios reported with standard errors clustered at the household level in parentheses; *p<0.1

Figure 1 Observed Party Preference Switches

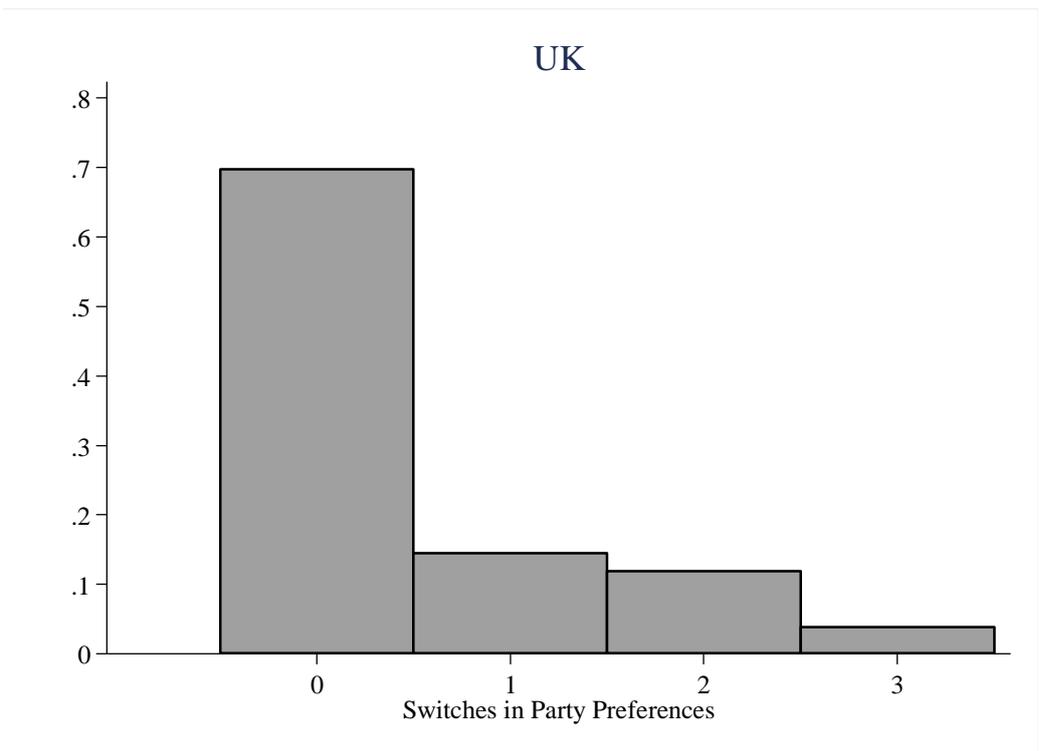
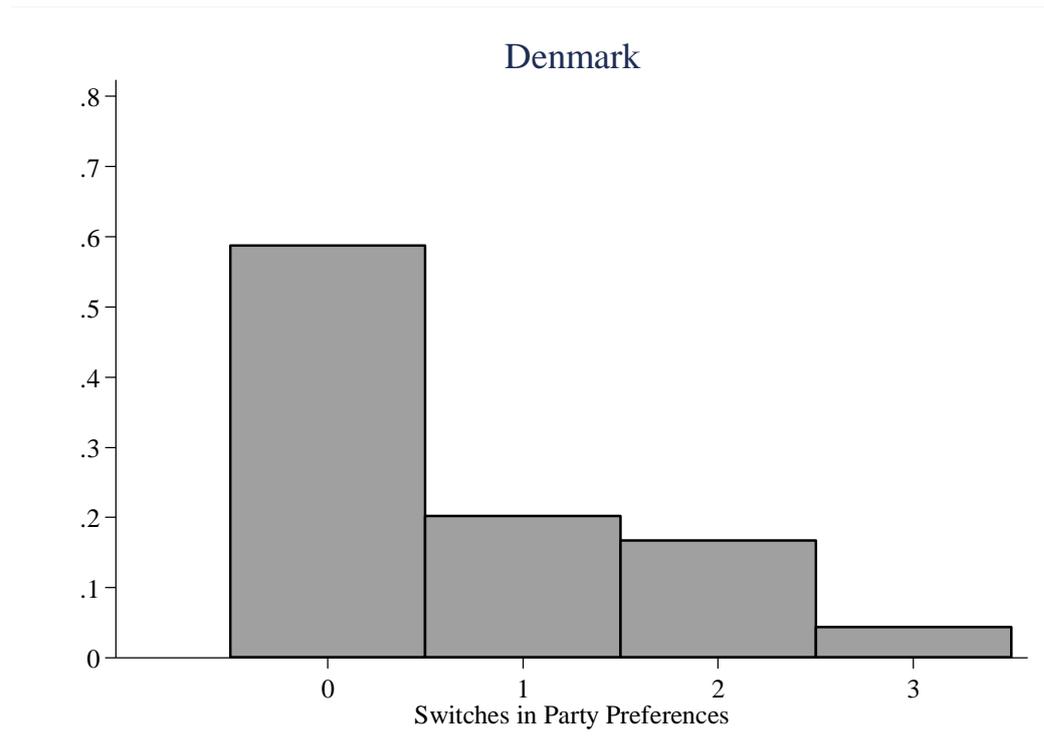


Figure 2 Predicted Party Preference Switches (*Denmark*)

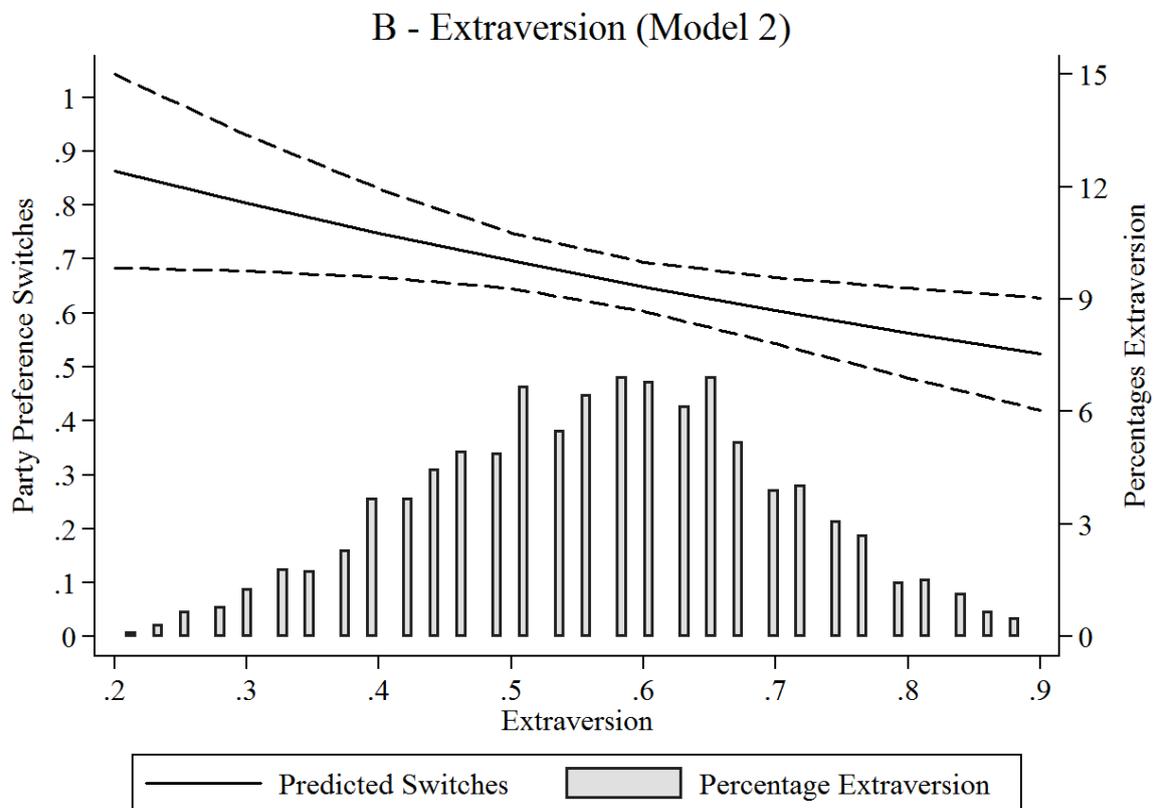
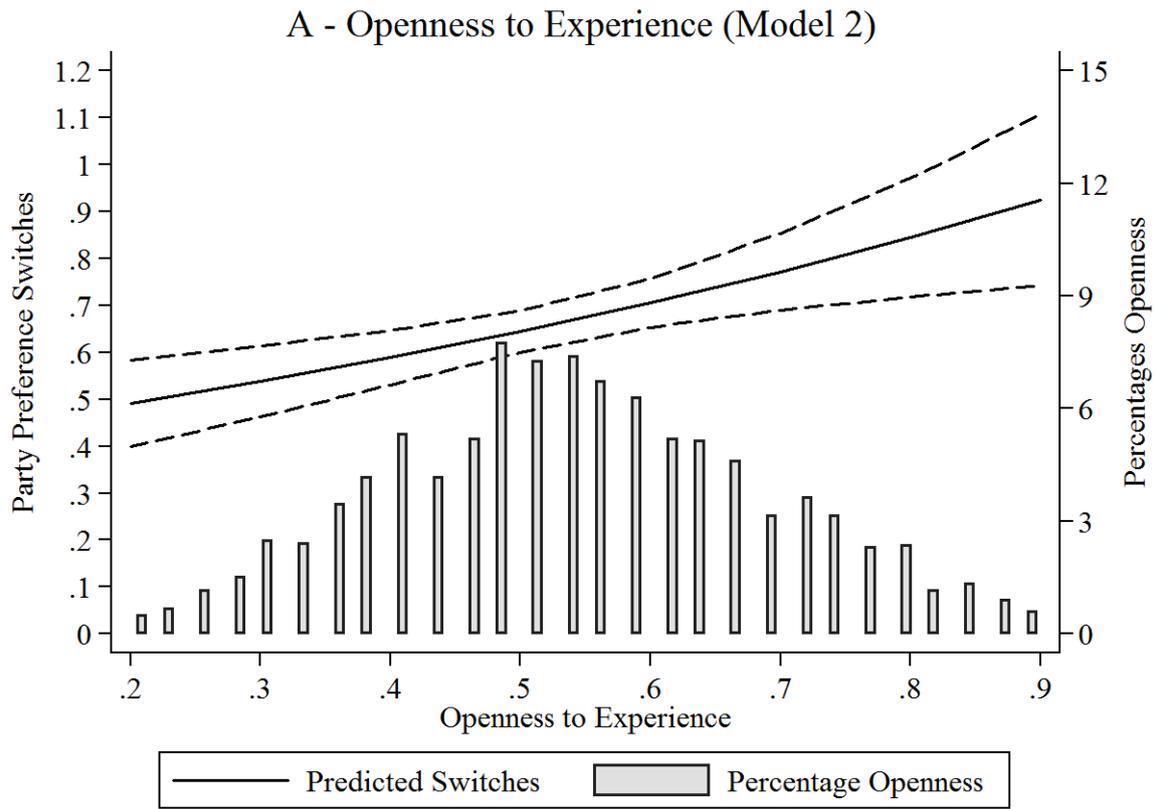
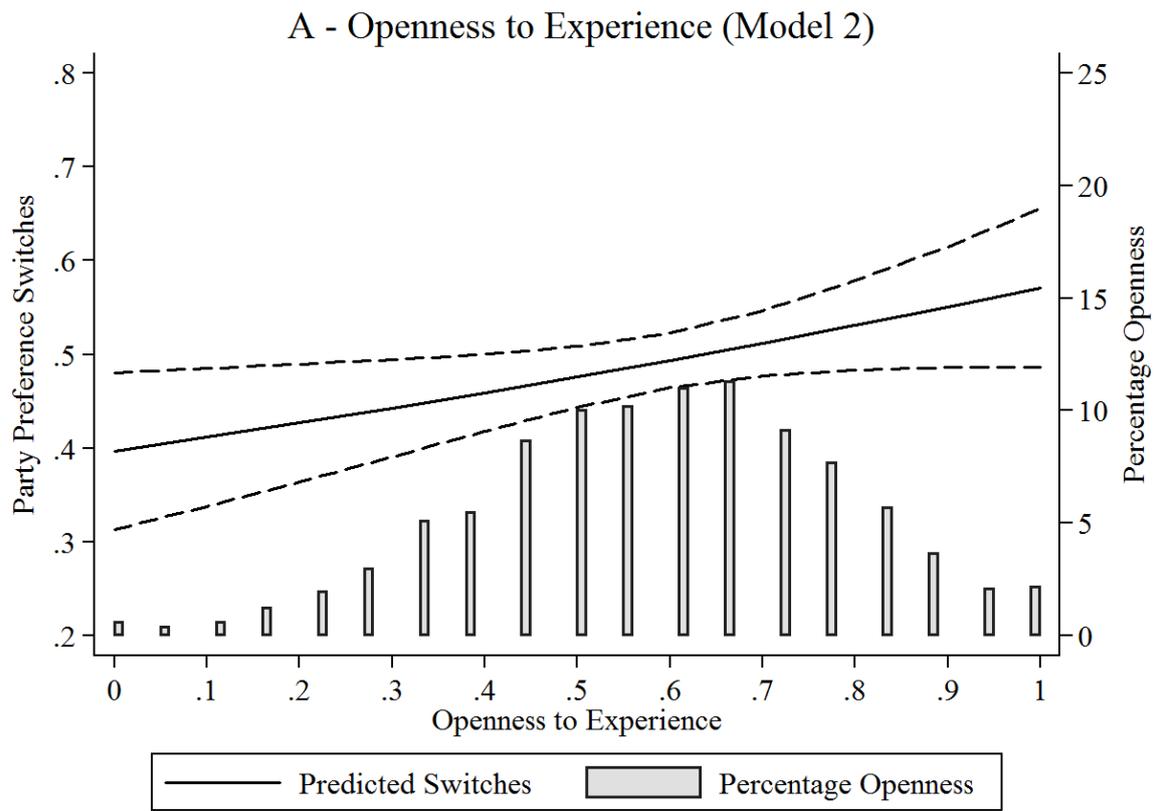


Figure 3 Predicted Party Preference Switches (*UK*)



Supporting Information

"Stay Loyal or Exit the Party? How Openness to Experience and Extraversion Explain Vote Switching"

Bert N. Bakker – *University of Amsterdam*

Robert Klemmensen – *University of Southern Denmark*

Asbjørn Sonne Nørgaard – *University of Southern Denmark*

Gijs Schumacher – *University of Southern Denmark*

Table of Contents

A – Denmark: Descriptive Statistics	24-28
B – UK: Descriptive Statistics	29-33
C – Denmark: Vote intentions at time of survey	34-36
D – UK Analyses with Party Attachment	37-39
E – Extraversion X Party Activity	40-41
F – Danish Analyses with Three-Item Measures	42-44
G – Alternative Specifications of the Dependent Variable	45-52
H – Ideology with a four-item measure	53-54

Supporting Information A – Denmark

A1	Descriptive statistics	2
A2	Item wording variables	3
A3	Correlations between the Independent Variables	4
A4	Party Preference Switches in Denmark	5
A5	Negative Binomial Regression on Number of Party Preference Switches	6

Table A1 Descriptive Statistics

Variable	N	M	sd	%	Min	Max	#Items	Alpha	Year
Openness ^{a)}	1,831	0.55	0.16		0	1	12	0.74	2010
Extraversion	1,831	0.56	0.15		0	1	12	0.80	2010
Conscientiousness	1,831	0.60	0.14		0	1	12	0.78	2010
Agreeableness	1,831	0.54	0.16		0	1	12	0.71	2010
Neuroticism	1,831	0.42	0.16		0	1	12	0.84	2010
Age ^{b)}	1,831	0.52			0	1	1		2011
Gender									2011
Male	1,010			55.16					
Female	821			44.84					
Household Income ^{c)}	1,753	0.25	0.17		0	1	1		2011
Education									2011
Primary School	579			31.62					
Vocational	704			38.45					
Upper Secondary	105			5.73					
Professional	263			14.36					
Bachelor or higher	180			9.83					
Political Interest ^{d)}	1,831	0.75	0.22		0	1	1		2010
External Efficacy ^{e)}	1,781	0.41	0.27		0	1	2	0.81	2010
Political Ideology ^{f)}	1,829	0.53	0.17		0	1	9	0.72	2010

a. The items of the personality traits were scored on five-point Likert scale, ranging from “strongly agree” through “strongly disagree”. The created scales were recoded to range from the lowest observed value (0) to the highest observed value (1). We relied on a patented version of the NEO-PI-R Short Version. See Skovdahl-Hansen et al. (2004) for the manual and item wording of the Danish version.

b. Age of the participants ranges from 22 to 91 and was recoded to range from the lowest (0) to the highest (1) observed value.

c. Household income is measured in Danish Kroner per year before taxes. The 11 categories ranged from “Less than 99,999 Kroner before taxes” (\approx 18,000 US dollar) through “More than 1,000,000 Kroner before taxes” (\approx 180,000 US dollar) with a separate “prefer not to say” option. We re-coded the variable to range from the lowest household income (0) to the highest household income (1).

d. Political interest is scored from no interest in politics (0) through a high interest in politics (1).

e. External efficacy is scored from low efficacious (0) through high efficacious (1).

f. Political ideology is scored from left (0) to right (1).

Table A2 Item Wording

Scale	#items	Item Wording
Political Interest ^a	1	How interested are you in politics?
External Efficacy ^b	1	The government does not take care about what people like me think.
	2	People like me have no influence on government decisions.
Political Ideology ^c	1	Violent crimes should be punished much harder.
	2	We should preserve our national customs in Denmark.
	3	Crime is better prevented with prevention and advice than harsh sentences.
	4	Preserving the environment should not harm business.
	5	Homosexuals should have the same rights as everyone else.
	6	Green taxes on gasoline should be increased.
	7	Religious extremists should be allowed to hold public meetings.
	8	High income earners pay too little in taxes.
	9	Income inequality is too great in this country and the greatest pay raise should be given to low income people.
<i>Scored</i>		^a “Very interested” (1), through “Not at all interested” (4)
		^b “Agree completely” (1), through “Completely disagree” (4)
		^c “Totally Agree” (1), through “Totally Disagree” (4)

Table A3 Correlations between the Independent Variables

	1	2	3	4	5	6	7
1 Openness	-						
2 Conscientiousness	0.06*	-					
3 Extraversion	0.37*	0.31*	-				
4 Agreeableness	0.09*	0.11*	0.06*	-			
5 Neuroticism	-0.03	-0.52*	-0.41*	-0.11*	-		
6 Political Interest	0.23*	0.15*	0.17*	0.02	-0.16*	-	
7 Political Efficacy	0.19*	0.13*	0.20*	-0.03	-0.16*	0.13*	-
8 Political Ideology	-0.38*	0.11*	0.05	-0.23*	-0.09	-0.10*	0.04

*p<0.05

Table A4 Party Preference Switches in Denmark in Different Years

Switch $T_{x1} - T_{x2}$	Stable % (N)	Switches % (N)
Vote in election 2007 – vote intention wave 1 (2010)	75.8 (1,382)	24.52 (449)
Vote intention wave 1 – vote in 2011 election	72.8 (1,333)	27.20 (498)
Vote in 2011 election – vote intention wave 2 (2011)	84.98 (1,556)	15.02 (275)

Table A5 Negative Binomial Regression on Number of Party Preference Switches

	1	2	3
Openness	1.82*	1.74*	1.94*
	(0.44)	(0.42)	(0.50)
Extraversion	0.47*	0.50*	0.44*
	(0.13)	(0.14)	(0.12)
Conscientiousness	0.99	0.94	0.84
	(0.28)	(0.27)	(0.24)
Agreeableness	0.78	0.77	0.91
	(0.17)	(0.17)	(0.21)
Neuroticism	0.85	0.78	0.83
	(0.23)	(0.22)	(0.23)
Age	0.64*	0.55*	0.55*
	(0.11)	(0.09)	(0.09)
Female	0.99	1.05	1.02
	(0.07)	(0.08)	(0.07)
Education (Ref. = primary school)			
Vocational	1.08	1.10	1.06
	(0.09)	(0.09)	(0.09)
Upper Secondary	1.13	1.15	1.12
	(0.17)	(0.18)	(0.17)
Professional education	0.95	0.96	0.95
	(0.11)	(0.11)	(0.11)
Bachelor or higher	1.33*	1.30*	1.34*
	(0.16)	(0.16)	(0.17)
Household Income	0.84	0.92	0.85
	(0.12)	(0.14)	(0.12)
Political Interest	0.62*		
	(0.10)		
External Efficacy		0.63*	
		(0.08)	
Political Ideology			1.70*
			(0.39)
Constant	1.64	1.42	0.93
	(0.57)	(0.49)	(0.35)
N	1,728	1,697	1,726
LR Chi ²	43.91	44.34	39.74
Log likelihood	-1912.12	-1874.04	-1909.72

Incidence Ratios reported; * p<0.1

Supporting Information B – UK

B1	Descriptive Statistics	7
B2	Item Wording	8
B3	Correlation between the Independent Variables	9
B4	Switches UK at different years	10
B5	Negative Binomial Regressions on Number of Party Preference Switches	11

Table B1 Descriptive Statistics

	N	M	sd	%	Min	Max	#Items	Alpha	Year
Openness ^{a)}	3,910	0.59	0.20		0	1	3	0.67	2005
Extraversion	3,918	0.71	0.18		0	1	3	0.51	2005
Conscientiousness	3,923	0.58	0.20		0	1	3	0.60	2005
Agreeableness	3,921	0.73	0.16		0	1	3	0.52	2005
Neuroticism	3,929	0.44	0.22		0	1	3	0.68	2005
Age ^{b)}	4,049	0.38	0.22		0	1	1		2005
Gender							1		2005
Men	1,932			47.24					
Woman	2,158			52.76					
Household Income ^{c)}	3,986	0.15	0.10		0	1	1		2005
Education							1		2005
O-level	1,232			31.19					
A-level	781			19.77					
Vocational	278			7.04					
Undergraduate	500			12.66					
Master	124			3.14					
Other	1,035			26.20					
Political Interest ^{d)}	4,090	0.47	0.30		0	1	1		2005
External Efficacy ^{e)}	3,933	0.37	0.21		0	1	2	0.61	2005
Political Ideology ^{f)}	3,807	0.47	0.16		0	1	3	0.17	07-08

a. All personality traits are scored from the lowest observed value (0) to the highest observed value (1).

b. Age ranges from 18 to 81 and was recoded to range from the lowest (0) to the highest (1) observed value.

c. Household income was measured with the self-reported household income in the previous months in pounds and ranged from 0 to roughly 20,500 pound sterling. We recoded the scale to range from the lowest (0) to the highest (1) household income.

d. Political interest is scored from no interest in politics (0) through very interested in politics (1).

e. External efficacy is scored from low efficacious (0) through high efficacious (1).

f. Political ideology is scored from left (0) to right (1).

Table B2 Item Wording

Scale	#	Item Wording
Openness ^a	1	Respondent see himself/herself as someone who: Is original, comes up with ideas
	2	Values artistic, aesthetic experiences
	3	Has an active imagination
Extraversion ^a	1	Is talkative
	2	Is outgoing, sociable
	3	Is reserved (reversed score)
Conscientiousness ^a	1	Does a thorough job
	2	Tends to be lazy (reversed scored)
	3	Does things effectively
Agreeableness ^a	1	Is sometimes rude to others (reversed score)
	2	Has a forgiving nature
	3	Is considerate and kind
Neuroticism ^a	1	Worries a lot
	2	Gets nervous easily
	3	Is relaxed, handles stress well
Political Interest ^b	1	How interested would you say you are in politics?
External Efficacy ^c	1	The government reflects people's wishes
	2	People can't influence government policy
Political Ideology ^d	1	Homosexual relationships are wrong
	2	British citizenship is best
	3	It is the government's responsibility to provide a job for everyone who wants one.
<i>Scored</i>	^a "Does not apply" (1) through "Applies perfectly" (7) and "don't know"	
	^b "very interested" (1) through "not at all interested" (4)	
	^c "Stongly agree" (1) through "strongly disagree" (5) and "don't know"	
	^d "Stongly agree" (1) through "strongly disagree" (5)	

Table B3 Correlation between the independent variables

	1	2	3	4	5	6	7
1 Openness	-						
2 Conscientiousness	0.22*	-					
3 Extraversion	0.30*	0.21*	-				
4 Agreeableness	0.18*	0.38*	0.16*	-			
5 Neuroticism	-0.06*	-0.16*	-0.16*	-0.09*	-		
6 Political Interest	0.20*	0.01	0.02	-0.02	-0.05*	-	
7 Political Efficacy	0.07*	-0.03*	0.03	0.02	-0.02	0.10*	-
8 Political Ideology	0.20*	-0.01	0.10*	-0.08*	0.05*	0.11*	0.07*

*p<0.05

Table B4 Party Preferences switches in the UK at Different Years

Switch $T_{x1} - T_{x2}$	Stable % (N)	Switches % (N)
2005-2006	83.30 (3,407)	16.70 (683)
2006-2007	83.77 (3,427)	16.23 (664)
2007-2008	82.96 (3,393)	17.04 (697)

Table B5 Negative Binomial Regression on the Number of Party Preference Switches (*UK*)

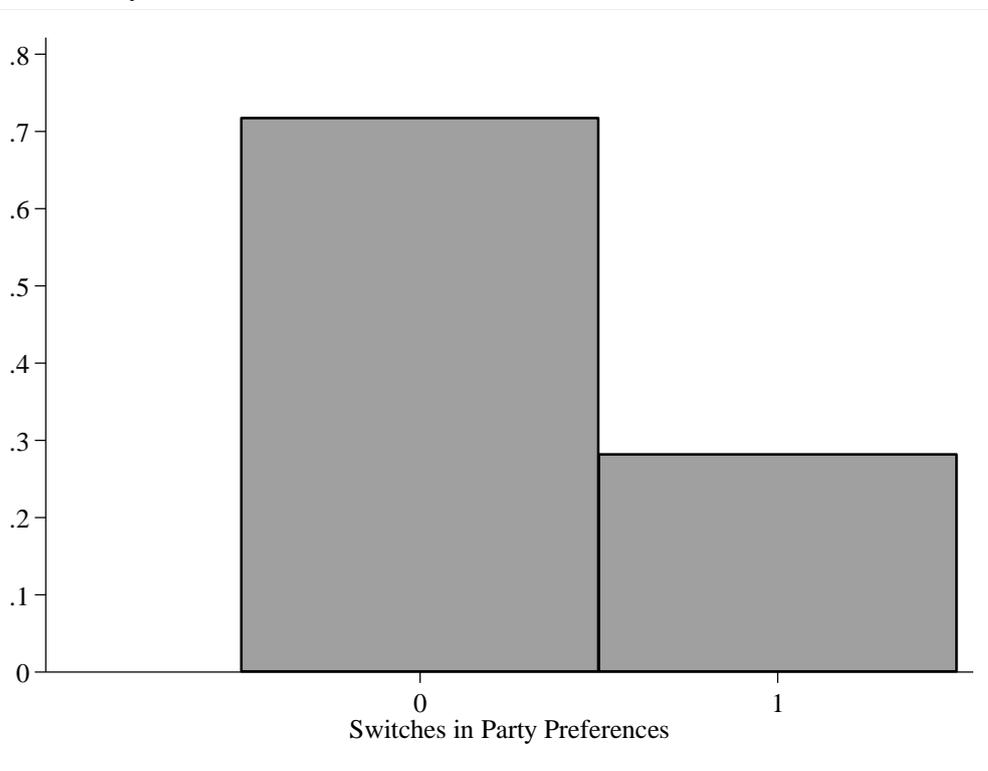
	1	2	3
Openness	1.41*	1.22	1.27
	(0.23)	(0.20)	(0.21)
Extraversion	0.90	0.87	0.91
	(0.16)	(0.16)	(0.17)
Conscientiousness	1.04	1.04	0.97
	(0.16)	(0.16)	(0.16)
Agreeableness	0.98	1.10	0.98
	(0.19)	(0.21)	(0.20)
Neuroticism	1.09	1.04	1.04
	(0.15)	(0.15)	(0.15)
Age	0.39*	0.29*	0.31*
	(0.07)	(0.05)	(0.05)
Female	0.91	0.96	0.98
	(0.05)	(0.06)	(0.06)
Education (Ref. = O-level)			
A-level	0.87	0.85*	0.84*
	(0.07)	(0.07)	(0.07)
Vocational Education	0.91	0.90	0.87
	(0.11)	(0.11)	(0.11)
Undergraduate	0.94	0.92	0.84*
	(0.09)	(0.09)	(0.09)
Master or equivalent	0.94	0.92	0.78
	(0.16)	(0.16)	(0.14)
Other	1.06	1.10	1.07
	(0.09)	(0.09)	(0.09)
Household Income	0.58	0.66	0.50*
	(0.20)	(0.22)	(0.18)
Political Interest	0.54*		
	(0.06)		
External Efficacy		0.39*	
		(0.06)	
Political Ideology			1.13
			(0.23)
Constant	0.89	1.05	0.79
	(0.19)	(0.23)	(0.19)
N	3,795	3,737	3,629
Wald Chi ²	96.27	100.74	63.93
Log Pseudolikelihood	-3,539.88	-3,476.38	-3,398.69

Incidence Ratios reported with standard errors clustered at the household level in parentheses; * p<0.1

Supporting Information C – Denmark: Vote intentions at time of survey

Here we show that the results in our Danish study are robust when only focus upon vote intention at time of the survey. In 2010 and 2011 participants were asked “Which party would you vote for if an election were held tomorrow?” A score of 0 indicates that the voter voted for the same party in the two elections: 1 indicates that the voter voted for a different party. As Figure C1 demonstrates, roughly 30 percent of the voters changed party preference between 2010 and 2011.

Figure C1 Party Preference Switches (*Denmark 2010-2011*)



We created a binary variable and ran logistic regression models using the same independent variables as used in the presented analyses in the study. Table C1 shows that on average we replicate the finding we presented in the main text of our study. In Figure C2 we plot the predicted probability of switching party preference at different levels of openness to experience derived from model 2 in Table C1. We find that participants who score two standard deviations above the mean on openness are approximately 1.5 more likely to switch

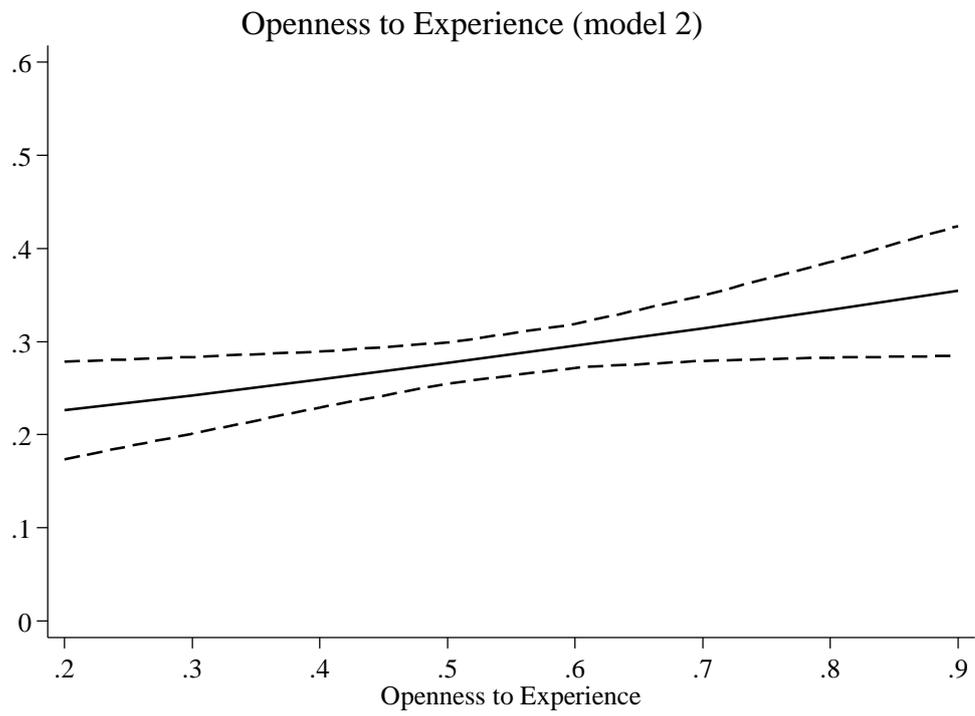
party preference compared to participants who score two standard deviations below the mean on openness.

Table C1 Logistic Regression on Party Preferences Switches in Denmark (2010-2011)

	1	2
Openness	1.50 (0.58)	2.56* (1.10)
Extraversion	0.26* (0.12)	0.29* (0.13)
Conscientiousness	0.84 (0.38)	0.92 (0.44)
Agreeableness	1.09 (0.39)	1.28 (0.48)
Neuroticism	0.96 (0.43)	0.87 (0.39)
Age	0.45* (0.12)	0.41* (0.12)
Female	1.13 (0.13)	1.10 (0.13)
Education (Ref. = Primary School)		
Vocational	1.15 (0.15)	1.22 (0.17)
Upper Secondary	1.44 (0.35)	1.57* (0.40)
Professional education	1.13 (0.20)	1.30 (0.24)
Bachelor or higher	1.34 (0.27)	1.49* (0.32)
Household Income	1.06 (0.25)	1.21 (0.29)
Political Interest		0.61* (0.16)
External Efficacy		0.41* (0.09)
Political Ideology		1.72 (0.64)
Constant	0.80 (0.44)	0.74 (0.47)
N	1,728	1,696
LR Chi ²	32.32	55.46
Pseudo R ²	0.02	0.03
Log likelihood	-1,017.91	-985.83

Odds ratios with standard errors in parentheses; * p<0.1

Figure C2 Predicted number of Party Preference Switches (*Denmark 2010-2011*)



Supporting Information D – UK Analyses with Party Attachment

The UK study included in each wave an item assessing the “strength of the support for the party”. Participants answered this item on a scale from “not very strong” (1) through “very strong” (3). First, we created a measure of the strength of party support for each year. Then we created an additive scale measuring the overall strength of party support over the four waves. This result in a scale ranging from 0 to 12, where 0 means no support in any wave and 12 means strong support for a party at each wave. We recoded the scale to range from 0 to 1.

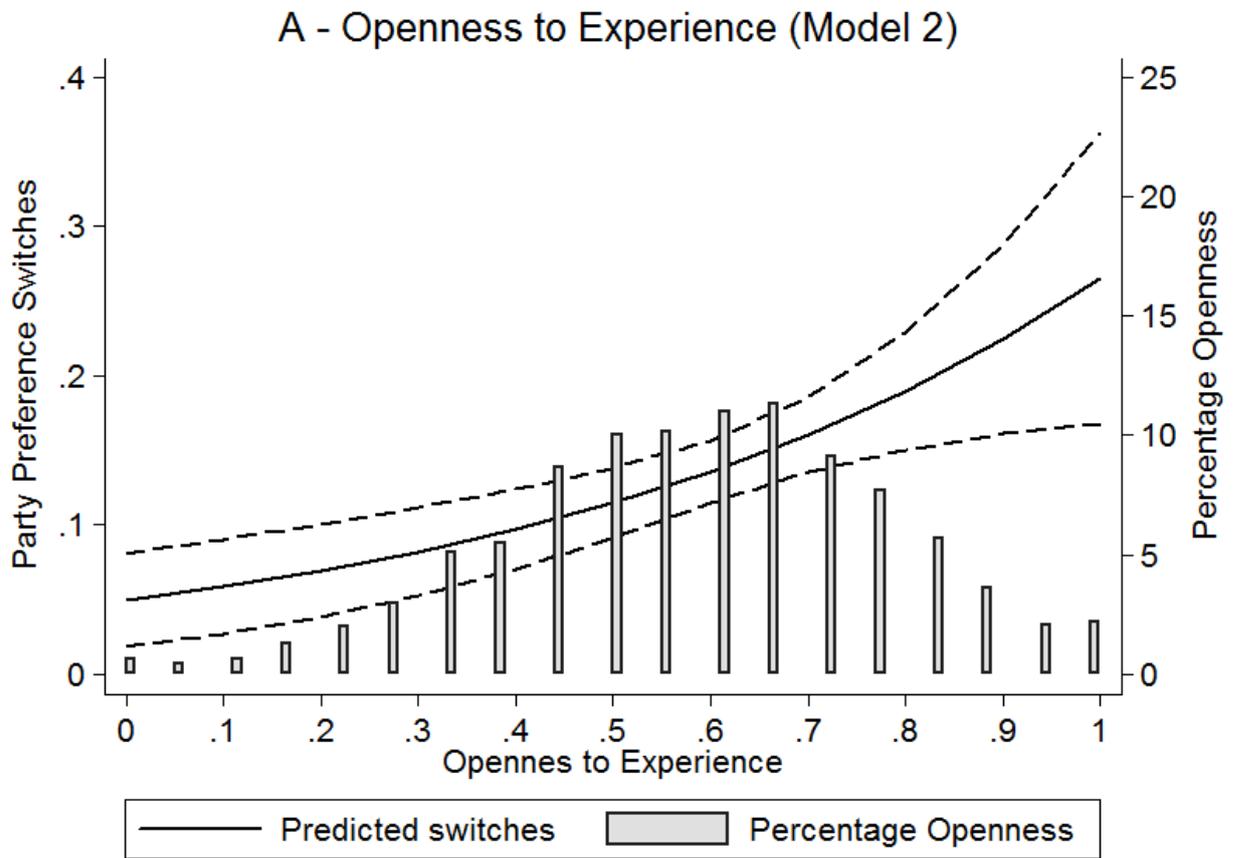
Table D1 present the results of the British analyses when we include the strength of party support (see gray panel). In model 1, the strength of party support is included as an additional covariate. In this model the effect of openness remains robust. In model 2 we combine all covariates and show that the results are robust controlling for the strength of party support. Figure D1 projects the predicted number of party switches at different levels of openness. We see that the effects of openness to experience are somewhat compressed but remain robust.

Table D1 Negative Binomial Regressions on Number of Party Preference Shift controlling for the Strength of Party Support (*UK*)

	1	2
Openness	7.17* (3.36)	5.36* (2.59)
Extraversion	0.82 (0.38)	0.79 (0.39)
Conscientiousness	0.96 (0.39)	1.04 (0.43)
Agreeableness	1.05 (0.53)	1.12 (0.57)
Neuroticism	2.01* (0.71)	1.99* (0.71)
Age	0.74 (0.33)	0.56 (0.27)
Female	1.05 (0.16)	1.11 (0.18)
Education (Ref.= O-level)		
A-level	1.03 (0.21)	1.06 (0.22)
Vocational Education	1.14 (0.34)	1.10 (0.33)
Undergraduate	1.02 (0.27)	1.09 (0.29)
Master or equivalent	0.74 (0.27)	0.81 (0.30)
Other	1.26 (0.28)	1.34 (0.32)
Household Income	0.10* (0.10)	0.17 (0.17)
Strength of Party Support	0.05* (0.02)	0.04* (0.01)
Political Interest		3.12* (1.04)
External Efficacy		0.33* (0.13)
Political Ideology		0.64 (0.36)
Constant	0.13* (0.07)	0.15* (0.10)
N	2,107	2,107
Wald Chi ²	133.48	157.13
Log Pseudolikelihood	-802.25	-754.76

Incidence Ratios reported with standard errors clustered at the household level in parentheses;* p<0.1

Figure D1 Predicted number of Party Preference Switches Controlling for the Strength of Party Support (*UK*)



Supporting Information E – Extraversion X Party Activity

Party activity could condition the effects of extraversion on party preference switching.

Specifically, one could argue that extraverts who are engaged with their parties are less likely to switch party preference, but extraverts who are not engaged with their parties are more likely to switch. In this Supplementary Material we will address this expectation. We can, however, only test this in the UK sample as the Danish sample has no indicator of party activity.

In the UK sample, the number of participants that indicated that they were active in a political party was low (1.24% of the sample [N=49]). Yet, we included a dummy variable capturing party activity (1) versus no activity in a political party (0). In Table E1 we present the result of the interaction between extraversion and party activity. The interaction between extraversion and party activity is not significant. Inspection of the plots confirms that there is no meaningful interaction between extraversion and party activity.

Table E1 Interaction between Extraversion and Party Activity

	1
Openness	1.45*
	(0.25)
Extraversion	1.04
	(0.17)
Party Activity	1.06
	(1.40)
Extraversion X Party Activity	0.06
	(0.14)
Conscientiousness	0.86
	(0.16)
Agreeableness	1.02
	(0.20)
Neuroticism	1.06
	(0.15)
Age	0.38*
	(0.07)
Female	0.92
	(0.06)
Education (Ref.= O-level)	
A-level	0.89
	(0.07)
Vocational Education	0.91
	(0.11)
Undergraduate	0.99
	(0.10)
Master or equivalent	0.96
	(0.18)
Other	1.03
	(0.09)
Household Income	0.62
	(0.22)
Political Interest	0.57*
	(0.06)
External Efficacy	0.39*
	(0.06)
Political Ideology	1.21
	(0.25)
Constant	1.17
	(0.29)
N	3,584
Wald Chi ²	130.67
Log Pseudolikelihood	-3310.44

Incidence Ratios reported with standard errors clustered at the household level in parentheses;* p<0.1

Supporting Information F – Danish Analyses with Three-Item Measures

In the UK study openness and extraversion were measured using three items per personality trait. We selected the three items in the Danish that closely resemble the items in the British study as projected in Table F1.

Table F1 Item wording Openness and Extraversion in the UK and Danish studies

	UK study	Danish study
<i>Openness</i>	I see myself as a person who is:	
	(1) is original, comes up with ideas	(1) I think that philosophical discussion are boring (R)
	(2) values artistic, aesthetic experiences	(2) Poetry does not tell me much (R)
	(3) has an active imagination	(3) I have lively fantasy
<i>Extraversion</i>	(1) talkative	(1) I really like to talk to people
	(2) sociable	(2) I like having many people around me
	(3) reserved (R)	(3) I am a happy and cheerful person

(R) signals items which are reversed scored

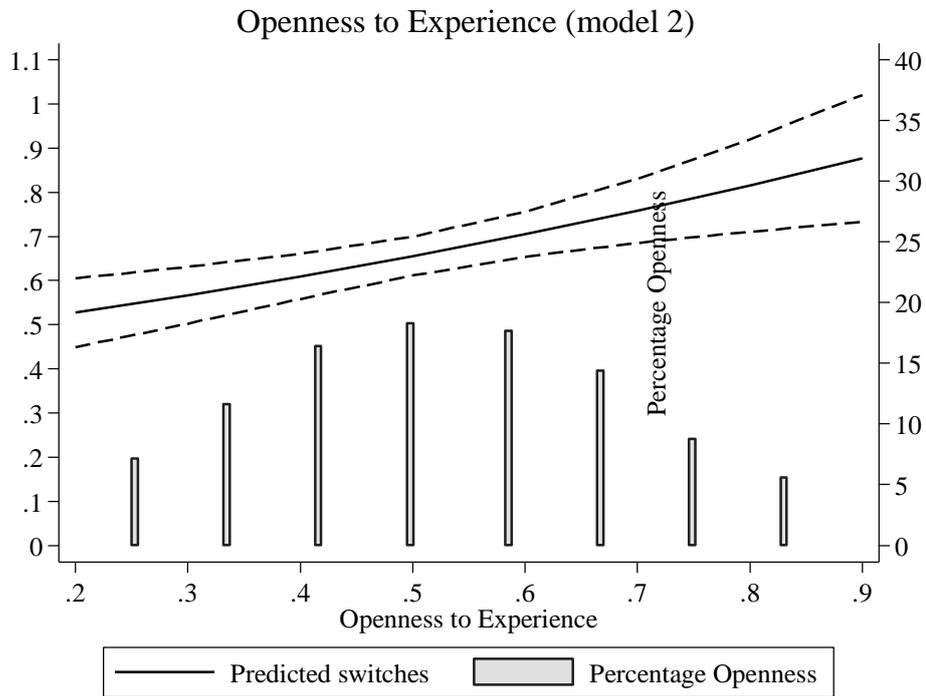
We ran the same models as presented in the paper using these adjusted openness and extraversion scales. The results presented in Table F2 confirm that the findings for openness are robust with this alternative measure of openness. However, we fail to replicate the results for extraversion. In Figure F1, we show that the effects of openness are in line with the results using the full 12 item openness battery as presented in our study.

Table F2 Negative Binomial Regression on Number of Party Preference Shift with three-item Openness and Extraversion measures (*Denmark*)

	1	2
Openness (3 items)	1.41*	2.07*
	(0.27)	(0.43)
Extraversion (3 items)	0.80	0.84
	(0.18)	(0.19)
Conscientiousness	0.86	0.87
	(0.24)	(0.25)
Agreeableness	0.86	1.01
	(0.20)	(0.24)
Neuroticism	1.02	0.95
	(0.27)	(0.26)
Age	0.58*	0.57*
	(0.10)	(0.10)
Female	1.03	1.03
	(0.07)	(0.08)
Education (Ref. = primary school)		
Vocational	1.06	1.09
	(0.09)	(0.09)
Upper Secondary	1.11	1.18
	(0.17)	(0.18)
Professional education	0.91	0.99
	(0.11)	(0.12)
Bachelor or higher	1.28*	1.41*
	(0.16)	(0.18)
Household Income	0.83	0.89
	(0.12)	(0.13)
Political Interest		0.67*
		(0.11)
External Efficacy		0.62*
		(0.08)
Political Ideology		1.84*
		(0.42)
Constant	1.00	0.81
	(0.35)	(0.32)
N	1,728	1,696
LR Chi ²	30.02	55.86
Log likelihood	-1,919.07	-1,866.52

Incidence Ratios with standard errors in parentheses; * p<0.1

Figure F1 Predicted number of Party Preference Switches Using a three-item Openness Measure (Denmark)



Supporting Information G – Alternative Specifications of the Dependent Variable

In this Supporting Information we discuss the extent to which there are differences in the extent to which switching votes once differs from switching votes more than once. One could argue that switching a vote once signals a deliberate change, while switching more than once represents a lack of political sophistication. In this Supplementary Material we will further explore whether there are differences between those that switch once and those voters that switch more than once. We explore two alternative explanations which we will discuss in detail.

Stability versus change

First, compare voters that stay loyal compared to voters that switch vote at least once. We do so, as we want to illustrate that openness and extraversion are associated with the tendency to either switch. We expect that our conclusions hold and that the open to experience are more likely to switch voters at least once, whereas extraverts are less likely to switch their vote choice. We test this alternative specification by first recoding our dependent variable used in the main text of the study in a dummy variable indicating whether respondents have a stable vote choice (0) or change their vote choice at least once (1). Given the binary nature of this dependent variable we ran logistic regression models whereby we test to what extent openness and extraversion are associated with the tendency to switch vote compared to a stable vote choice.

Changing once or changing more than once

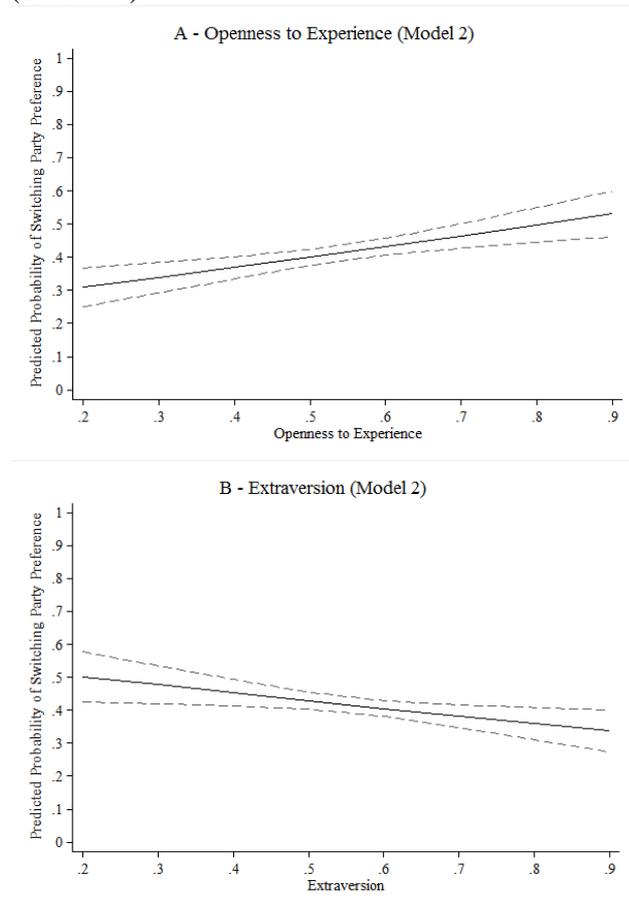
Alternatively one could argue that the extent to which voters switch vote once differs from respondents that switch votes two times or more. We expect that openness is positively associated with the tendency to change vote choice once, as well as the tendency to change

votes more than once. Likewise, we expect that extraverts generally have a more stable vote choice. In order to test whether this is indeed the case, we recoded our dependent variable and created three categories, namely those that stay loyal (0), respondents that switch vote choice once (1) and respondents that change vote choices two or three times (2). We ran multinomial regression analyses in both the Danish and the UK sample whereby we set the loyal voters as the base category. Here we will discuss the results for the Danish and UK sample.

Danish sample

First, we test whether respondents that stay loyal at all four time points (coded 0) and that change vote choice at least once (1). As can be seen in the left-hand column of Table G1, we observe that our results for openness and extraversion are robust for this alternative model specification. Figure G1 demonstrated the predicted probabilities of switching party preference over the range of openness (left-hand panel) and extraversion (right-hand panel). Respondents that score a standard deviation above the mean on openness have a higher probability to switch party preference (0.46[95% CI=0.43,0.50]) compared with respondents that score a standard deviation below the mean on openness (0.37[95% CI=0.33,0.40]). This result mirrors the results for openness reported using the count model reported in Table 1 of the main text. Turning to extraversion, we report a similar pattern. Respondents that score a standard deviation above the mean on extraversion have a lower probability to switch party preference (0.38 [95% CI=0.34,0.42]) compared with respondents that score a standard deviation below the mean on extraversion (0.45[95% CI=0.41,0.48]).

Figure G1 Predicted Probability of Switching Party Preference: Logistic Regression Model (Denmark)



Next, we turn to our multinomial regression model in the right-hand panel of Table G1. Here, we test to what extent the changing vote choice once differs from changing vote choice two or three times. We do so by comparing the likelihood to change in both categories with the baseline of not changing votes. Indeed, openness is positively associated with changing vote choice once as well as changing vote choice two or three times. This supports that openness is positively associated with switching party preferences. This is further illustrated in Figure G2 where we calculate the predicted probability to switch party preference once (left-hand panel) and the predicted probability to switch party preference two or three times (right-hand panel). As can be seen from Figure G2, the slope of the predicted probability to switch votes, over the range of openness, is strikingly similar between the two polots. This confirms that openness is similarly associated with the tendency to switch once or more than once.

The results for extraversion differ slightly. Extraverts are indeed more likely to remain loyal compared to voters that switch two or three times, but not compared to voters that switch once. Yet, given the general consistency of our findings for extraversion in the Danish sample we do not give too much weight to this null finding.

Figure G2 Predicted Probabilities of Switching Party Preference Once or Switching or More Than Once over the range of Openness to Experience: Multinomial Regression Model (Denmark)

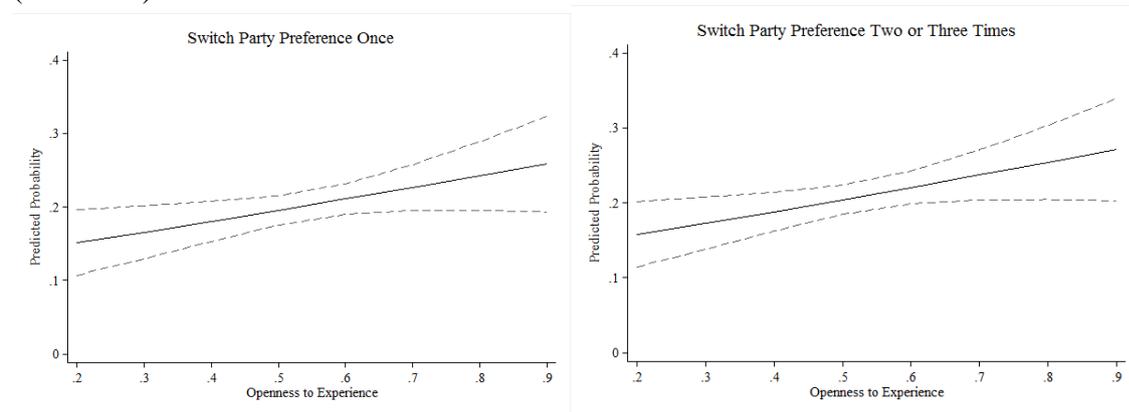


Figure G3 Predicted Probabilities of Switching Party Preference Once or Switching or More Than Once over the range of Extraversion: Multinomial Regression Model (Denmark)

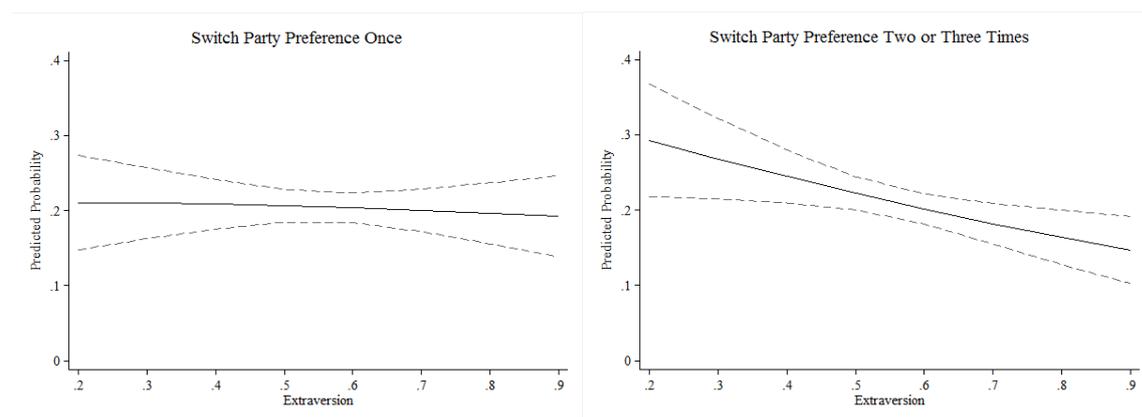


Table G1 Alternative Specifications of Switches in Party Preferences: Logistic Regression and Multinomial Regression Models (*Denmark*)

	Logistic Regression: <i>stability (0) versus change (1)</i>		Multinomial Logit: <i>stability (0) versus changing once (1) or change two or three times (2)</i>	
	Baseline	Full model	One	Two or three
Openness	2.35* (0.84)	3.97* (1.57)	3.87* (1.92)	3.97* (1.98)
Extraversion	0.32* (0.13)	0.36* (0.15)	0.57 (0.30)	0.24* (0.13)
Conscientiousness	0.91 (0.39)	0.96 (0.42)	1.07 (0.58)	0.88 (0.48)
Agreeableness	0.81 (0.27)	0.95 (0.33)	1.05 (0.46)	0.84 (0.36)
Neuroticism	0.84 (0.34)	0.78 (0.33)	0.98 (0.52)	0.62 (0.33)
Age	0.33* (0.09)	0.33* (0.09)	0.29* (0.10)	0.39* (0.13)
Female	0.99 (0.11)	0.97 (0.11)	0.85 (0.12)	1.11 (0.15)
Education (Ref. = Primary school)				
Vocational	1.11 (0.13)	1.14 (0.14)	1.06 (0.17)	1.23 (0.19)
Upper Secondary	1.32 (0.31)	1.44 (0.35)	1.37 (0.40)	1.50 (0.46)
Professional	0.90 (0.15)	1.00 (0.17)	0.95 (0.20)	1.05 (0.23)
Bachelor or higher	1.43* (0.27)	1.55* (0.31)	1.25 (0.31)	1.91* (0.46)
Household Income	0.81 (0.18)	0.87 (0.19)	0.87 (0.24)	0.87 (0.24)
Political Interest		0.52* (0.13)	0.50* (0.15)	0.53* (0.16)
External Efficacy		0.54* (0.11)	0.72 (0.18)	0.41* (0.10)
Political Ideology		1.71 (0.59)	0.77 (0.33)	3.82* (1.66)
Constant	1.97 (1.01)	1.89 (1.10)	1.15 (0.83)	0.76 (0.55)
N	1,728	1,696	1,696	
LR Chi ²	47.22	65.55	89.54	
Pseudo R ²	0.02	0.03	0.03	
Log likelihood	-1149.69	-1117.54	-1592.06	

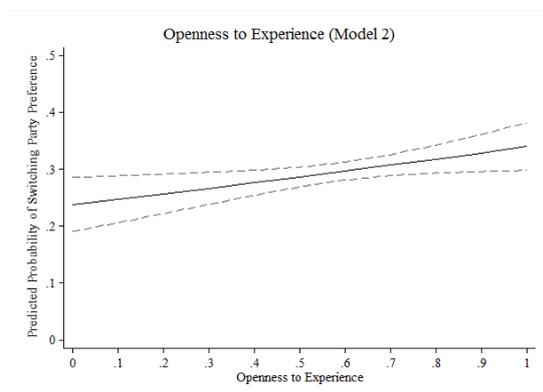
Odds Ratios reported for the logistic regression analyses and relative risk ratios reported for the multinomial regression analyses. Standard errors are reported in the parentheses; *p<0.1

UK sample

Following the Danish sample, we confirm that the open to experience are more likely to switch vote choice compared to those that stay loyal in the logistic regression model (see left-hand panel of Table G2). As can be seen in the left-hand column of Table G2, we observe that our results for openness are robust for this alternative model specification. Figure G4 demonstrated the predicted probabilities of switching party preference over the range of openness. Respondents that score a standard deviation above the mean on openness have a higher probability to switch party preference (0.28[95% CI=0.25,0.30]) compared with respondents that score a standard deviation below the mean on openness (0.32[95% CI=0.29,0.34]). This result mirrors the results for openness reported using the count model reported in Table 2 of the main text. Like in the analyses reported in the main text, we do not find an association between extraversion and vote switching.

The covariates behave in line with the model. Political interested and efficacious citizens have a lower probability of switching party preferences compared to respondents who are not interested in politics and have low levels of political efficacy.

Figure G4 Predicted Probability of Switching Party Preference: Logistic Regression Model (UK)



Turning to the multinomial regression analyses, we observe in the right-hand column of Table G2 that openness is consistently associated with changes in party preferences at the level $p < 0.1$. This is further illustrated when we inspect the slopes of the predicted probabilities of change once or change more than once in Figure G5 below. Like in the main text, we do not find any association between extraversion and switches in party preferences. We do observe some associations between switching party preferences and the other three FFM traits. These unexpected associations could be explained by the fact that we increase the number of models ran in the Supplementary Material so that we should at some point find an association with another trait by chance alone. This is further supported by the fact that the substantive effects for these traits are modest, also in comparison to the openness results reported here. Lastly, the covariates also behave as expected. The more political interested and efficacious are less likely to change party preference once or more than once.

Figure G5 Predicted Probabilities of Switching Party Preference Once or Switching or More than Once: Multinomial Regression Model (UK)

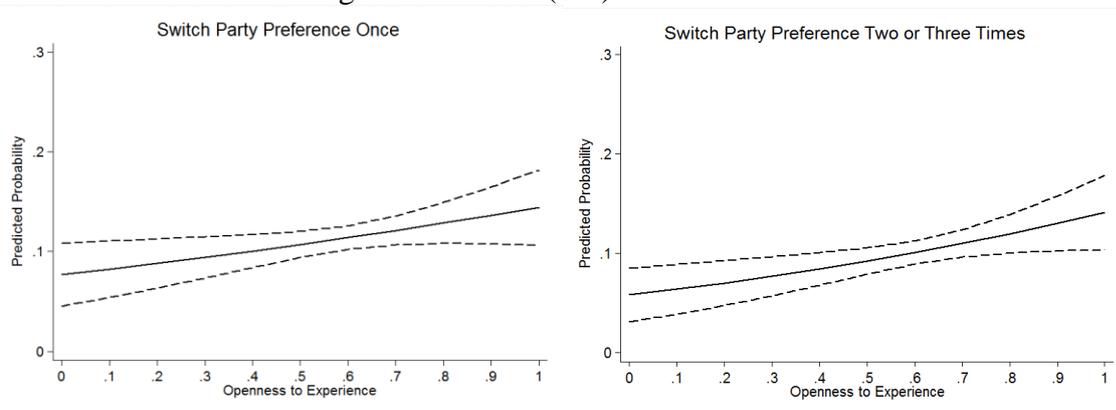


Table G2 Alternative Operationalization of Switches in Party Preferences: Logistic Regression and Multinomial Regression Models (*UK sample*)

	Logistic Regression: <i>stability (0) versus change (1)</i>		Multinomial Logit: <i>stability (0) versus changing once (1) or change two or three times (2)</i>	
	Baseline	Full model	One	Two or three
Openness	1.35 (0.29)	1.69* (0.38)	1.74* (0.51)	1.64* (0.47)
Extraversion	0.82 (0.20)	0.76 (0.19)	0.83 (0.28)	0.71 (0.22)
Conscientiousness	1.01 (0.21)	0.96 (0.21)	0.92 (0.25)	1.00 (0.28)
Agreeableness	1.23 (0.31)	1.20 (0.32)	1.25 (0.45)	1.15 (0.39)
Neuroticism	1.22 (0.22)	1.20 (0.22)	1.20 (0.29)	1.20 (0.28)
Age	0.13* (0.03)	0.16* (0.04)	0.08* (0.03)	0.28* (0.09)
Female	0.91 (0.07)	0.87 (0.07)	0.86 (0.09)	0.89 (0.09)
Education (Ref. = O-level)				
A-level	0.79* (0.08)	0.86 (0.09)	0.89 (0.13)	0.84 (0.11)
Vocational	0.88 (0.13)	0.99 (0.16)	1.09 (0.23)	0.90 (0.18)
Undergraduate	0.80 (0.10)	0.96 (0.13)	0.97 (0.17)	0.96 (0.16)
Master	0.87 (0.19)	1.08 (0.24)	1.37 (0.38)	0.86 (0.27)
Other	1.29* (0.14)	1.20 (0.14)	1.48* (0.23)	1.01 (0.15)
Household Income	0.40* (0.17)	0.46 (0.21)	0.38* (0.22)	0.56 (0.33)
Political Interest		0.50* (0.07)	0.57* (0.11)	0.44* (0.08)
External Efficacy		0.31* (0.06)	0.37* (0.10)	0.27* (0.07)
Political Ideology		1.18 (0.32)	1.01 (0.34)	1.35 (0.47)
Constant	0.90 (0.25)	1.59 (0.52)	0.81 (0.36)	0.77 (0.31)
N	3,795	3,584	3,584	
Wald Chi ²	105.34	151.83	171.15	
Pseudo R ²	0.03	0.04	0.03	
Log Pseudolikelihood	-2254.91	-2087.39	-2812.29	

Odds Ratios reported with standard errors clustered at the household level in parentheses; *p<0.1

Supporting Information H – Ideology with a four-item measure

Ideology in the UK sample was measured using three items “homosexual relationships are wrong” “British citizenship is best” and “It is the government's responsibility to provide a job for everyone who wants one”. In the Danish sample we included a nine item battery (see Supplementary Material A Table A2 for item wording). In the Danish sample we find that right-wing ideology is associated with exit, whereas we fail to find this effect in the UK. Possibly this difference between Denmark and the UK is driven by the differences in the operationalization of political ideology. We created a four item measure of ideology in the Danish sample which closely resembles the ideology measure in the UK sample. Specifically, we operationalized ideology in the Danish sample using the four of the nine items that were included in the nine items used to measure ideology. We selected the following four items: “Homosexuals should have the same rights as everyone else”; “We should preserve our national customs in Denmark”; “High income earners pay too little in taxes” an “Income inequality is too great in this country and the greatest pay raise should be given to low income people” In Table H1 we present the results of the analyses were we included our adjusted ideology scale in the Danish analyses. The results presented in Table H1 confirm that the findings for openness and extraversion are robust controlling for the adjusted ideology measure. However, the adjusted ideology measure is not significantly related to vote switching. Possibly the non-findings for ideology in the UK study are caused by the operationalization of political ideology in the study. Unfortunately, the British Household Panel Survey employed in this study did not include more elaborate measures of political ideology.

Table H1 Negative Binomial Regression on Number of Party Preference Shift with a four-item ideology measure (*Denmark*)

	1	2
Openness	1.56*	2.15*
	(0.40)	(0.58)
Extraversion	0.49*	0.54*
	(0.15)	(0.16)
Conscientiousness	0.82	0.87
	(0.25)	(0.26)
Agreeableness	0.85	0.84
	(0.21)	(0.21)
Neuroticism	0.86	0.81
	(0.25)	(0.24)
Age	0.55*	0.57*
	(0.10)	(0.11)
Female	1.01	1.00
	(0.08)	(0.08)
Education (Ref. = primary school)		
Vocational	1.06	1.08
	(0.09)	(0.10)
Upper Secondary	1.06	1.12
	(0.17)	(0.18)
Professional education	0.94	0.99
	(0.12)	(0.12)
Bachelor or higher	1.30*	1.35*
	(0.17)	(0.18)
Household Income	0.85	0.87
	(0.13)	(0.14)
Political Interest	(0.13)	0.58*
		(0.10)
External Efficacy		0.68*
		(0.10)
Political Ideology (4 items)	1.00	1.19
	(0.20)	(0.24)
Constant	1.38	1.69
	(0.53)	(0.66)
N	1,545	1,529
LR Chi ²	30.5	49.69
Log likelihood	-1,703.64	-1,673.57

Incidence Ratios reported; * p<0.1