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Furnham, A. &Cheng, H. (2019). Personality Traits and Socio-Demographic Variables as Predictors of Political Interest and Voting Behavior in a British Cohort. *Journal of Individual Differences*. 40, pp. 118-125. <u>https://doi.org/10.1027/1614-0001/a000283</u>

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Personality traits and demographic variables as predictors of political interest and voting behaviour in a British Cohort.

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Abstract

This study examines the associations between demographic variables, the Big-Five personality traits and the extent of political interest as well as voting behaviour, in a large, nationally representative sample in the UK. The contribution of the Big Five personality traits to political issues over and above demography, education and social class was the central focus. The analytic sample comprised 7,135 cohort members with complete data. Correlational analysis showed that personality traits and demographic variables were significantly associated with both political interest and voting behaviour. Regression analysis showed that sex, education and occupation, and four of the five personality traits were significantly and independently associated with political interest in adulthood. Extraversion, Agreeableness, and Openness were significantly and positively associated with political interest, whereas Conscientiousness was negatively associated with the outcome variable. Personality accounted for incremental variance. Further, parental social class, education and occupation, and traits Emotional Stability and Openness were all significantly and positively associated with voting behaviours. The results confirm other studies and show that personality traits account for unique variance over and above demographic factors in predicting political interests and behaviours.

Word Count: 5,312

Key Words: Political Interest; Voting Behaviours; Personality Traits; Social Demographic Variables; Cross-sectional and Longitudinal

There is an extensive literature in psychology, political science and sociology on personality and demographic differences in ideology, and specifically political beliefs and behaviour (Blais & St-Vincent, 2011; Deary, Batty & Gale, 2008) Eysenck & Wilson, 1978; Furnham & Fenton-O'Creevy, 2018; Hatemi & Verhulst, 2015; Mondak & Halperin, 2008; Wang, 2014). Studies have been done all over the world with a variety of political belief and behaviour variables (Ackermann, 2016).

This study is concerned with the Big Five personality traits as predictors of interest in politics and election voting behaviour in a large representative British sample. It aims to replicate work in the area and also looks at the extent to which personality traits have *incremental validity* over gender, social class and education in accounting for political beliefs and behaviours (Caprara, Schwartz, Capanna, Vecchione, & Barbaranelli, 2006). The major focus is on which traits account for most of the variance and whether they are correlated similarly with both political variables used in this study.

It should be noted that in this study we examine only the Big Five personality traits which offer a fairly comprehensive measure of personality. Most studies in the area of personality and politics have used the Big Five concept though they have used a variety of self-report tests to measure them. However, it should be acknowledged that there are a number of other individual difference personality characteristics like personal values, moral outlooks and indeed dark-side traits which are also conceptually and empirically related to political interests (Kandler, Zimmerman & McAdams, 2014; McAdams & Pals, 2006; Nilsson, 2014).

Review of the literature

Nearly all researchers in this area have pointed out that personality traits are conceptually and empirically associated with different (but related) political issues like voting, party membership, general interest, taking part in demonstrations and discussions (Gerber, Huber, Doherty, Dowling, Raso & Ha, 2011). However, it should be noted that whilst not all studies report effect sizes where they do they tend to be small, often very small.

There have been so many studies published in politics, psychology and sociology journals that a number of review papers have been written (Weinschenk, 2017). For instance, Mondak and Halperin (2008) reviewed each of the Big Five traits and how each might relate to political variables. Then, using three U.S. data sets of respectively 404, 822 and 1338 respondents, they analysed the relationship of personality with various measures like the approval of presidential candidates to trust in politicians, turnout in elections and participation in political campaigns, meeting and voluntary work. They found that Openness and Conscientiousness most consistently related to many political variables particularly political knowledge and participation. However, more recent study from U.S. found no direct relationship between personality and vote choice but evidence of an indirect relationship (Wang, 2016).

Brandstätter and Opp (2014) reviewed eleven studies on personality and politics from which they derived various hypotheses about the relationship between personality and the propensity to political protest in 438 Germans. They found, as predicted, that Openness was positively, and Agreeableness negatively, correlated with political protesting. Structural equation modelling showed Neuroticism negatively associated with politics though Extraversion was not significantly associated with politics. They noted from their analysis that: "*Personality comes into play (1) by choosing friends who share one's political preferences or by joining protestencouraging groups, (2) by convincing friends and colleagues to become critical of the new* political situation and to join protest activities, (3) by assuming that significant others, friends, or colleagues share one's attitudes toward political protest even if this assumed similarity is only partially true" (p 531).

Fatke (2017) looked at the association between personality and political ideology in 21 countries and concludes that the effects differ considerably from country to country. However, researchers have noted serious problems with the assessment of the Big Five personality variables in the data set used by Fatke (2017) suggesting the results may not be replicable (Ludeke & Larsen, 2017).

Single studies

Many studies in this area have used small student populations (Jonason, 2014). Some have been concerned with particular ideologies like Right Wing Authoritarianism (Leone, Chirumbolo & Desimoni, 2012). Some studies have examined turnout in elections and the way personality mediates the impact of political attitudes (Schoen & Steinbrecher, 2013). Other reports have highlighted factors that mediate or interact with personality factors. (Caprara et al., 2006; De Neve, 2013). Recently Weinschenk and Panagopoulos (2014) showed that Agreeableness and Extraversion, related differently to particularly negative political messages which then influenced political beliefs and behaviours. Another longitudinal study explored how personality traits influenced party identification over time (Bakker, Hopmann, & Persson, 2015).

There have been various attempts to get cross-cultural evidence in this area such as the *Korean* study which showed that Openness was positively correlated with protest participation, rally attendance, internet activity and financial contributions; Agreeableness negatively associated

with different forms of participation; and Conscientiousness associated positively with some activities (contacting officials, donations) but negatively with others (rally participation) (Ha, Kim & Jo, 2013). Leone et al. (2012) in a study with 344 *Italians* found that only Extraversion and Openness related to an interest in politics. The major replicated finding in many of these studies is the correlation of Openness in the interest, and taking part, in varied political issues and events.

One study has examined personality and politics among U.S.American State legislators (Dietrich, Lasley, Mondak, Remmel, & Turner, 2012), while another recent study investigated how personality traits influenced party identification over time (Bakker, Hopmann, & Persson, 2015).

One central issue for this research area is how much variance do personality traits account for. Some papers suggest as much as a third (Brandstätter & Opp, 2014) but the majority far less, around ten percent. These studies are often difficult to compare because they use different measures of both personality and politic beliefs and behaviours as well as different sized samples of students and the general population. Despite these differences there is a reassuring amount of replication in this area.

One more current theme in this literature is the relationship between genes, personality and politics. Verhulst, Eaves and Hatemi (2012) showed that political factors develop in childhood and are influenced as much by genes as is the case for personality traits. Similarly, Weinschenk and Dawes (2017ab) demonstrated that genetic factors accounted for between 70% and 87% of the correlation between personality and civic duty.

This Study

This study was conducted in Great Britain. In a related recent British study Furnham and Fenton-O'Creevy (2018) examined the incremental validity of the Big-Five personality traits over primarily demographic factors in predicting Left-Right political orientation in an adult sample of 3854 participants. They found that traits doubled the variance account for (4% to 9%). Open, agreeable people were more Left-Wing and Introverted Conscientious people more Right-Wing.

This study uses a representative and longitudinal sample of British people. Another study has used this extensively-mined, open-access data set, to investigate determinants of political interests and behaviour. Denny and Doyle (2008) took teacher ratings of participants (e.g. how aggressive, withdrawn or hardworking they were aged 11) as indicators of personality which they related, along with other factors like intelligence and social class, to turnout (yes vs no) in the 1997 British election and a general interest in politics. They found "those with hardworking, even-tempered and aggressive personalities are more likely to vote than those with, respectively, lazy, moody and timid personalities" (p. 309). Equally less rigid and more aggressive people (as rated by their teacher at aged 16yrs) were more interested in politics. A major problem with this study was the measure of personality which was an observer rating of classroom behaviour around twenty years before, rather than any reliable, comprehensive and theoretically derived measure.

This current data set had no information on participants' personality until 2008 when, at aged 50yrs, they completed a standard and well-known Big Five personality test. This allows for a cross-sectional examination of personality and interest in politics (aged 50yrs) as well as the relationship to whether they had voted three years before.

The literature on personality and politics tends to highlight three personality factors above others namely Extraversion, Agreeableness and Openness. Thus, it was predicted that cohort members who had higher scores on political interest *and* who voted in the last General Election in 2005 were more likely to have higher scores on Extraversion (H1), Agreeableness (H2) and on Openness (H3). On the basis of past studies, it was also predicted that males more than females (H4), better rather than less educated (H5) and higher rather than lower social class (H6) participants would be more likely to have voted and be interested in and trust the political process. More importantly this study was able to determine the relative power of personality over demographic variables to determine these two political factors. It was hypothesised, that for political interest, the personality factors would account for as much variance as the demographic factors. This, we believe, advances, albeit modestly, the work in this area using a large representative adult sample.

Method

Participants

The National Child Development Study 1958 is a large-scale longitudinal study of the 17,415 individuals who were born in Great Britain in a week in March 1958 (Ferri, Bynner, & Wadsworth, 2003). At age 50 years 9,636 participants provided information on their political interest and voting behaviours. At age 50 years, 8,532 participants completed a questionnaire on personality traits. The analytic sample comprises 7,135 cohort members (50 per cent females) for whom complete data were collected at birth, at 33, and 50 years. Bias due to attrition of the sample during childhood has been shown to be minimal (Davie, Butler, & Goldstein, 1972; Fogelman, 1976).

Measures

Parental social class at birth was measured by the Registrar General's measure of social class (RGSC). RGSC is defined according to occupational status (Marsh, 1986). Where the father was absent, the social class (RGSC) of the mother's father was used. RGSC was coded on a 6-point scale: I professional; II managerial/technical; IIIN skilled non-manual; IIIM skilled manual; IV semi-skilled; and V unskilled occupations (Leete & Fox 1977). At 33 years, participants were asked about their highest academic or vocational qualifications. Responses are coded to the 6point scale of National Vocational Qualifications levels (NVQ) ranging from 'none' to 'university degree or equivalent'. At 50 years participants provided information on their occupational levels which are coded according to the RGSC described above, using a 6-point classification. Information on political interest and whether cohort members voted in the General Election in 2005 were provided at age 50 years. Political interest is a 4-point scale: 0= Not at all interested (9.3%); 1=Not very interested (42.4%); 2=Fairly interested (36.4%); and 3=Very interested (12.0%). The response of voting is coded as Yes/No. The Big Five personality traits were assessed by the 50 questions from the International Personality Item Pool (IPIP) (Goldberg, 1999). Responses (5-point, from "Strongly Agree" to "Strongly Disagree") are summed to provide scores on the big five personality traits. Given criticisms of short measures this is considered a reliable measure of personality (Bakker & Lelkes, 2016).

Results

Descriptive Analysis

At age 50 years 75.5 percent cohort members reported that they participated in the last General Election in 2005. The correlation matrix of the variables used in the current study is shown in Table 1. Parental social status, education and occupation, and traits Extraversion, Agreeableness, and Openness were all significantly and positively associated with political

interest and voting. Gender was significantly and negatively associated with political interest. Men tended to be more interested in politics then women. This confirms H1 to H6.

Insert Table 1 about here

Given the relatively high inter-correlations between educational qualifications and occupational levels (r=.45, p<.001), and between parental social class and educational qualifications (r=.32, p<.001) with the possibility of multicollinearity between these variables, we further conducted a Multicollinearity Test using variance inflation factors (VIF) between these variables. If the VIF value lies between 1-10, then there is no multicollinearity, and if VIF is > 10, then there is multicollinearity. Results showed that there was no multicollinearity among parental social class, educational qualifications and occupation levels (VIF ranged from 1.12 to 1.35).

Regression analyses

In order to investigate the incremental validity of personality over demographic variables two regressions were conducted using political interest and voting as dependant variables respectively.

Insert Table 2 about here

Table 2 model 1 shows that using political interest as dependent variable, sex, education, and higher levels of occupation were significant predictors of political interest accounting for 10 percent of the total variance; Model 2 shows that after adding personality into the equation, personality traits Extraversion, Agreeableness, and Openness were all significant and positive predictors of political interest, and Conscientiousness was a significant but negative predictor

of the outcome variable, which in addition, explained 5 percent of the total variance of the outcome variable.

Insert Table 3 here

Tables 3 shows that using voting as dependent variable parental social class, education and occupation, and personality traits Emotional Stability and Openness were significant independent and positive predictors of voting behaviour. The models showed that, for one unit change on educational qualifications (e.g. those who obtained a university degree compared with those who only obtained A Levels), there would be 28% increase in the likelihood of voting in a national election. And for one unit change on occupational levels (e.g. the professionals compared with those who had managerial/technical occupations), there would be 9% increase (without taking Big Five personality factors into account) or 6% increase (after taking all other factors into account) in the likelihood of voting in a national election. Individuals who had one SD increase in scores on Openness or Emotional Stability would be about 10% more likely to vote in a national election all else being equal. Gender was not associated with voting behaviour.

In addition, ordered logistic regression was conducted using the four categories of political interest (from "not at all interested" to "very interested") as the dependent variable. Results are shown in the Appendix 1. The results from the ordered logistic regression in Appendix 1 were very similar to the results from the linear regression shown in Table 2. Education and occupation and traits Openness, Extraversion and Agreeableness were significant and positive predictors of political interest, whereas trait Conscientiousness was a negative predictor of the

outcome variable. And males showed higher political interest than females (Pseudo $R^2 = .147$, p < .001).

Discussion

Using a large, nationally representative sample in the UK, the current study examines demographic and personality factors associated with adult political interest and voting behaviours. Regression analysis showed that individuals who had higher scores on traits Extraversion, Agreeableness, Openness tended to have higher political interest, whereas individuals who had higher scores on trait Conscientiousness tended to have lower political interest. Also individuals who had higher scores on traits Emotional Stability and Openness tended to participate voting. The study also shows that, as found in previous studies, men tend to have greater political interest than women. Further, those who had higher educational qualifications and occupational status tend to show more interest in politics. To a large extent these results replicate those done in different countries and using very different population groups. Of particular interest was the role of gender, education and trait Openness in two political variables

Both correlational and regression analysis showed that trait Openness-to-Experience was the strongest Big Five Predictor of both interest in politics and voting behaviour. This concurs with a number of studies that related Openness to many "ideological" belief and behaviour variables (Ha et al., 2013; Jonason, 2014; Leone et al., 2012). Of all the Big Five personality traits, trait Openness is often shown as the strongest correlate of ability, particularly creativity and intelligence (Kaufman et al., 2016).

People high in Openness have been shown to be unconventional, questioning and emotionally literate (Costa & McCrae, 1997). There seems agreement that it is a stable trait that reflects

intellectual curiosity, imaginativeness and inquisitiveness. Those with high Openness scores are probably more interested in politics because of their general greater curiosity and intellect and how the world works, as well as possible interests in changing it for the better.

The second most important personality variable was Extraversion and indicated that Extraverts were more likely to be interested and active in politics. This has been found in many previous studies and may be explicable by the fact that many political activities are indeed social events (demonstrations, meetings) where Extraverts are more skilled and comfortable than Introverts. Whilst being interested in politics and voting per se are not necessarily social acts it is quite possible that an interest in political debate and activity come more easily to sociable and optimistic Extraverts than Introverts (Weinschenk, 2017).

Unlike some previous studies the results suggested that those high on Agreeableness were more politically interested and involved. Trait Agreeableness is associated with being altruistic, appreciative, compliant, trusting and tender-minded. People high in Agreeableness have been shown to be generous, kind, sympathetic and warm. Agreeableness facets of the NEO-PI-R scale include Straightforwardness and Modesty (Costa & McCrae, 1992). One explanation for our finding is that Agreeable people see politics as a potential way of helping others by making societies and communities accountable, just and well-governed.

It is possible that Agreeableness is related to different types of political beliefs and behaviours in very different ways. Therefore, it is likely to be negatively associated with protests and aggressive acts of emotional display, but positively associated with trust in the political system and collective efforts as in a petition or charitable campaign (Brandstätter & Opp, 2014; Mondak & Halperin, 2008). In a recent review of representative surveys conducted in 24 countries on the relationship between personality and political and civic engagement and participation Weinschenk (2017) formed a number of hypotheses between the Big Five and eight different political behaviours like turnout to elections and taking part in protests. He predicted Extraversion and Openness would be positively, and Conscientiousness and Neuroticism negatively, correlated with each of his measures. His major finding was how much the effects of the Big Five on political behaviour differed across the countries sampled. He concluded that: *"Moving forward, it might be fruitful to develop multilevel models of participation that account for individual personality attributes, political context (e.g., political conflict, levels of electoral competition, institutional features, etc.), and the interaction between personality and context. This could be done at the country level, but also at lower levels of geographic aggregation" (p1418). Ackermann (2016) in a PhD thesis came to much the same conclusion. Clearly future work in this area could and should take into consideration more contextual factors (country/region economic changes; political leaders) to better understand why personality factors relate rather differently to political variables at different times and in different places.*

There have been many studies that show that demographic variables like gender, education and social class are related to political interests and activities. This study confirmed those established findings but showed that personality accounted for incremental variance: namely 5% whereas the demographic variables accounted for 10%. This suggests that personality traits are indeed important factors in determining political beliefs and behaviours. The results of the regressions should interest both psychologists and sociologists in that they show the relative power of personality and demography in predicting the two outcome variables

Ideally this research could lead to a table which shows which personality variables are linked to which type of political beliefs and behaviour; the strength of that relationship and whether personality is a direct, moderating or mediating variable.

The major contribution of this study, using a large population and a reliable personality measure, was to examine the relative contribution of the Big Five, to two different measures of political interest and using different statistical tests. The results demonstrated clearly the importance and predictive power of Openness above the other personality variables. Next, the study showed that personality related differently to the two outcome measures: for instance, Extraversion was numerically more highly correlated with political interest than voting (r=.15 vs r= .06) but this also reveals a very small effect size. Further, as in similar studies using different populations and measures it seems that together personality accounts for around five percent of the variance in most studies, suggesting it is a factor worth considering for political scientists and sociologists interested in how, when and why people vote and take part in any political activity (Furnham & Fenton-O'Creevy, 2018).

Like all others this study had limitations. It would have been desirable to have measured various other political beliefs and behaviours, like political knowledge, party allegiances, involvement etc. It may be that trait-based correlations were higher for beliefs compared to voting because of method invariance (beliefs vs behaviour). Further, voting in one specific election is a "one off" event and various factors (weather, holidays, sickness) could have meant that people how would like to have voted or tended to vote in the past did not vote in that particular election. Also, this was a cross-sectional study and therefore cannot throw any light onto issues of causality

Acknowledgements

Data from the Cohort Studies were supplied by the ESRC Data Archive. Those who carried out the original collection of the data bear no responsibility for its further analysis and interpretation.

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| | Mean | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|--------------------------------|-----------------|-----------|--------|---------|--------|--------|--------|--------|--------|--------|--------|----|
| Measures | (SD) | | | | | | | | | | | |
| 1 D-1'() - 1 'n (- m-r) | 2.49 | | | | | | | | | | | |
| 1. Political interest | 2.48 (.83) | - | | | | | | | | | | |
| 2. Whether voted in the last | .75 | .34*** | | | | | | | | | | |
| General Election (May 2005) | (.43) | | _ | | | | | | | | | |
| 3. Gender | · · · | 14*** | 01 | _ | | | | | | | | |
| 4. Parental social class | 3.31 | .13*** | .10*** | 01 | _ | | | | | | | |
| | (1.24) | | | | | | | | | | | |
| 5. Educational qualifications | 2.70 | .28*** | .18*** | 08*** | .32*** | _ | | | | | | |
| | (1.45) | | | | | | | | | | | |
| 6. Occupational levels | 4.09 | .21*** | .13*** | .01 | .21*** | .45*** | _ | | | | | |
| 7 Estucion | (1.22) | 1 5 4 4 4 | 07*** | .08*** | .03* | .07*** | .12*** | | | | | |
| 7. Extraversion $\alpha = .73$ | 29.55 (6.60) | .15*** | .06*** | .08**** | .03* | .07 | .12 | - | | | | |
| 8. Emotional stability | 28.89 | .05*** | .05*** | 13*** | .02 | .08*** | .07*** | .20*** | | | | |
| $\alpha = .87$ | (7.05) | .05 | .05 | 15 | .02 | .00 | .07 | .20 | - | | | |
| 9. Agreeableness | 36.80 | .08*** | .06*** | .40*** | .05*** | .09*** | .11*** | .36*** | .06*** | | | |
| α=.81 | (5.29) | | | | | | | | | _ | | |
| 10. Conscientiousness | 33.95 | .03* | .04** | .10*** | .03* | .06*** | .09*** | .14*** | .18*** | .27*** | _ | |
| α=.76 | (5.30) | | | | | | | | | | | |
| 11. Openness | 32.56 | .29*** | .11*** | 02 | .15*** | .32*** | .25*** | .39*** | .09*** | .34*** | .22*** | _ |
| α=.79 | (5.18) | | | | | | | | | | | |

Table 1. Correlations between variables used in the study.

Note. Standard deviations (SD) are given in parentheses. Variables were scored such that a higher score indicated having higher scores on political interest, voted in the last General Election, being female, higher scores on educational qualifications, a more professional occupation for the parents and cohort members, higher scores on Extraversion, Emotional Stability, Agreeableness, Conscientiousness, and Openness. Correlations with the outcome variables are in Bold.

p*<.05, *p*<.01, ****p*<.001.

| | Model 1 | Model 2 | | |
|-----------------------------|-----------------------|---|--|--|
| Measures | β t | β t | | |
| Gender | 13 10.44*** | 16 11.31*** | | |
| Parental social class | .03 2.22* | .02 1.76 | | |
| Educational qualifications | .21 13.77*** | .16 10.63*** | | |
| Current occupational levels | .10 7.00*** | .07 5.16*** | | |
| Extraversion | | .07 4.81*** | | |
| Emotional stability | | 02 1.69 | | |
| Agreeableness | | .05 3.32*** | | |
| Conscientiousness | | 04 3.24*** | | |
| Openness | | .17 11.27*** | | |
| Variance explained | R^2 adjusted = .099 | $R^2 adjusted = .145$ F = 103.10 *** | | |
| | F = 152.07 *** | | | |

Table 2. Predicting political interest by parental social class, sex, educational qualifications, occupational levels, and personality traits.

*p<.05, **p<.01, ***p<.001.

Table 3. Logistic regression: Odds ratios (95% CI) for voting behaviour in the General Election in 2005, according to demographic variables and personality traits.

| Model 1 | Model 2 Odds ratio (95% CI) | | |
|---------------------|---|--|--|
| Odds ratio (95% CI) | | | |
| 1.02 (0.90,1.16) | 1.03 (0.90,1.20) | | |
| 1.08 (1.02,1.14) | 1.07 (1.01,1.14)* | | |
| 1.30 (1.23,1.37) | 1.28 (1.21,1.35)*** | | |
| 1.09 (1.03,1.15) | 1.06 (1.00,1.13)* | | |
| | 1.07 (0.99,1.14) | | |
| | 1.08 (1.00,1.15)* | | |
| | 1.02 (0.94,1.10) | | |
| | 0.97 (0.91,1.05) | | |
| | 1.10 (1.01,1.20)* | | |
| | Odds ratio (95% CI) 1.02 (0.90,1.16) 1.08 (1.02,1.14) 1.30 (1.23,1.37) | | |

p*<.05, *p*<.01, ****p*<.001

| Measure | Estimate | Std. Err. | Wald | <i>p</i> -value | | |
|-----------------------------|---|-----------|-----------|-----------------|--|--|
| Gender | 66 | .06 | 128.83*** | <.000 | | |
| Parental social class | .04 | .02 | 3.18 | .075 | | |
| Educational qualifications | .22 | .02 | 108.81*** | <.000 | | |
| Current occupational levels | .12 | .02 | 24.58*** | <.000 | | |
| Extraversion | .16 | .03 | 26.95*** | <.000 | | |
| Emotional stability | 05 | .03 | 2.79 | .095 | | |
| Agreeableness | .11 | .03 | 10.63** | .001 | | |
| Conscientiousness | 08 | .03 | 8.79** | .003 | | |
| Openness | .37 | .03 | 134.72*** | <.000 | | |
| Variance explained | Variance explained $Pseudo R^2 (Cox and Snell) = .147***$ | | | | | |

Appendix 1. Ordered logistic regression: Odds ratios (95% CI) for the four categories of political interests at age 50, according to social, psychological and demographic variables.

p*<.01;*p*<.001.