

Personality Traits, Material Self-interest and Attitudes towards the Redistribution of Income

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Abstract

We still do not fully understand why citizens differ in their attitudes towards the redistribution of income. I argue that the Big Five personality traits are antecedents of redistribution attitudes. Moreover, I theorize that material self-interest and the Big Five traits interact in shaping redistribution attitudes. Low income earners are in direct need for the redistribution of income and therefore support redistribution irrespective of their personality traits. High income earners are not in immediate need for the redistribution of income and among these individuals personality traits are correlated with their redistribution attitudes. I support my argument using studies conducted in Denmark and the United Kingdom. In doing so, I demonstrate that personality traits influence redistribution attitudes directly and in combination with material self-interest.

Keywords: Redistribution; Big-Five; Personality; Self-interest

Public opinion is divided over the issue of income redistribution in western democracies (Alesina & Angeletos, 2005; Rehm, 2009). But why do individuals differ in their attitudes towards the redistribution of income and other economic policies? Extant research has put forward that material self-interest influences redistribution attitudes (Esarey, Salmon, & Barrilleaux, 2012; Kluegel & Smith, 1986; Page, Bartels, & Seawright, 2013; Rehm, 2009; Soroka & Wlezien, 2014). Individuals with a low income support income redistribution whereas individuals with a high income oppose redistribution.

Recent research in political science has re-emphasized that personality is another important antecedent of political attitudes (Gerber, Huber, Doherty, Dowling, & Ha, 2010; Mondak & Halperin, 2008). A popular model to study the association between personality and political attitudes is the Big Five model of personality which isolates the traits Openness, Conscientiousness, Extraversion, Agreeableness and Neuroticism (Digman, 1990; Goldberg, 1992). The Big Five traits shape political attitudes when goals and values of this trait resonate with the content of the specific attitude (Carney, Jost, Gosling, & Potter, 2008, p. 817; McClosky, 1958, p. 40; Schoen, 2007, p. 412). For instance, I will demonstrate in this study that the altruism, sympathy and tender-mindedness rooted in Agreeableness resonates with the support for the redistribution of income.

The effects of material self-interest and personality on redistribution attitudes have been isolated independent from each other. Lane (1955) demonstrated that material self-interest and personality interact in shaping political attitudes. Specifically, poor individuals, with an immediate self-interest in the expansion of the welfare state, express these preferences irrespective of their personality. Yet, personality influences attitudes towards the expansion of the welfare state when individuals do not immediately benefit from the expansion of the welfare state. Recent experimental research demonstrated that poverty (i.e. a low income)

severely limits the ability to think in abstract terms and leads respondents to focus upon the most immediate needs (Mani, Mullainathan, Shafir, & Zhao, 2013; Shah, Mullainathan, & Shafir, 2012). Instead, individuals that are rich can think in abstract terms (Mani et al., 2013; Shah et al., 2012) and are driven by their internal motivations (Kraus, Piff, Mendoza-Denton, Rheinschmidt, & Keltner, 2012) such as their personality.

In this study, I theorize that individuals with lower levels of income are in immediate need for the increase of their income, and therefore support the redistribution of income irrespective of their personality traits. High income earners are not in immediate need for the redistribution of income. Instead, they turn to their internal states. Therefore, I expect that the Big Five personality traits are associated with redistribution attitudes among individuals with higher income levels.

I report the results of studies conducted in Denmark and the United Kingdom (UK). In both samples, support for the redistribution of income is associated with high levels of Agreeableness and Neuroticism but lower levels of Conscientiousness. Yet, Big Five traits and material self-interest interact in shaping redistribution attitudes. Respondents with a low income support redistribution irrespective of their level of Agreeableness and Openness. The Big Five traits Agreeableness and Openness are, however, positively associated with support for redistribution among respondents with a high income. Neuroticism and Conscientiousness do not interact with material self-interest but are directly associated with attitudes towards redistribution. Lastly, the results for Extraversion differ across the political contexts.

In this study, I demonstrate that Big Five personality traits are important antecedents of redistribution attitudes. Support for redistribution is associated with higher levels of Agreeableness and Neuroticism and lower levels of Conscientiousness, whereas Openness is

unrelated to support for redistribution. My findings support the notion that attitudes towards redistribution, like other economic attitudes, have distinct personality correlates compared with left-right ideology and social attitudes (Feldman & Huddy, 2014; Feldman, 2013). Second, I demonstrate that material self-interest and Big Five personality traits interact in shaping redistribution attitudes. Specifically, material self-interest influences redistribution attitudes among individuals that are in immediate need for the redistribution of income, whereas personality influences redistribution attitudes when individuals are not in immediate need for the redistribution of income. In doing so, I redefine the role of material self-interest and personality in the study of redistribution attitudes and political attitudes more broadly.

Material Self-interest and Income Redistribution

Income is a strong indicator of material self-interest when it comes to the redistribution of income. Specifically, individuals with a low income are more supportive of the redistribution of income compared to individuals with a high income (Alesina & La Ferrara, 2005, p. 914; Esarey et al., 2012, p. 621; Feldman & Johnston, 2014, p. 346; Kluegel & Smith, 1986, p. 373; Napier & Jost, 2008, p. 609; Page et al., 2013, pp. 63–64; Rehm, 2009, p. 871, 2010, p. 373). Longitudinal research confirms that a decrease in income leads to an increase in the support for redistribution (Owens & Pedulla, 2014). These findings align with the conclusion by Sears and Funk (1991, p. 76) that self-interest influences economic attitudes when "there are substantial and clear stakes". Additional support is provided by Meltzer and Richard's (1981) rational choice model in which the median voter determines government policy. Specifically, voters with an income below the mean support a strong government providing a social safety net, while voters with income above the mean oppose a strong government that

provides a social safety net.¹ To summarize, material self-interest shapes attitudes towards the redistribution of income.

Personality and Income Redistribution

Sears and Funk (1991, pp. 76–79) concluded that material self-interest is not the only factor influencing political attitudes. Accordingly, alternative explanations have been put forward demonstrating that egalitarianism, humanitarianism and beliefs about fairness are associated with attitudes towards redistribution (Alesina & Angeletos, 2005; Benabou & Tirole, 2006; Fong, 2001; Kam & Nam, 2008). Personality could be another important antecedent of attitudes towards redistribution. The Big Five model of personality is a popular model of personality to study the influence of personality on political attitudes. The Big Five model consists of the traits Openness, Conscientiousness, Extraversion, Agreeableness and Neuroticism (Digman, 1990; Goldberg, 1992). The Big Five integrates a wide variety of individual differences in temperaments and behaviors into five broad traits. The traits are partly heritable (Yamagata et al., 2006), develop in early childhood (Edmonds, Goldberg, Hampson, & Barckley, 2013), are robust across cultures (Schmitt, Allik, McCrae, & Benet-Martinez, 2007) and relatively stable over time (Cobb-Clark & Schurer, 2012; Gerber, Huber, Doherty, & Dowling, 2013). Building upon these characteristics, the traits have been used to explain individual differences in a wide range of behaviors.

¹ Schlozman and Verba (1979) concluded that material self-interest is generally unrelated to vote choice. Others demonstrated that material self-interest only influences vote choice under specific conditions (Feldman, 1982, 1984; Sears, Lau, Tyler, & Allen, 1980).

In the domain of politics, Big Five traits are especially likely to resonate with political attitudes when the specific attitude involves specific goals and values that relate to these traits (Carney et al., 2008, p. 817; McClosky, 1958, p. 40; Schoen, 2007, p. 412). Following this line of reasoning, Big Five traits have been directly associated with general left-right ideology (Hibbing, Smith, & Alford, 2014; Mondak & Halperin, 2008; Sibley, Osborne, & Duckitt, 2012) and social attitudes (Carney et al., 2008; Gerber et al., 2010; Kandola & Egan, 2014; Milfont & Sibley, 2012).

I focus upon the association between the Big Five traits and attitudes towards the redistribution of income, which is one of the central issues of the economic attitude dimension (Treier & Hillygus, 2009; Van Der Brug & Van Spanje, 2009). Here I will discuss the expected direct relationships between the Big Five traits and the redistribution of income using the existing literature on Big Five traits and economic attitudes (Carney et al., 2008; Gerber et al., 2010; Leeson & Heaven, 1999; Riemann, Grubich, Hempel, Mergl, & Richter, 1993; Van Hiel & Mervielde, 2004).

First, Agreeableness encapsulates modest, altruistic, pro-social, and cooperative behavior (Costa, McCrae, & Dye, 1991; Goldberg, 1992). Altruism and pro-social behavior have been shown to correlate with left-wing political attitudes (Bechtel, Hainmueller, & Margalit, 2014; van Lange, Bekkers, Chirumbolo, & Leone, 2012). Moreover, Agreeableness has been positively associated with left-wing economic attitudes (Gerber et al. 2011, 2010; Riemann et al. 1993; Van Hiel & Mervielde 2004; but see null findings by Carney et al. 2008; Leeson & Heaven 1999). Consequently, I expect that the tender-mindedness, altruism and sympathy rooted in Agreeableness leads to the support for the redistribution of income.

Second, Openness marks the sensitivity to feelings, the willingness to try new activities, consider new ideas, and to re-evaluate one's social and political beliefs (Costa & McCrae,

1992; Goldberg, 1992). Generally, “open individuals have an affinity for liberal, progressive, left-wing political views, whereas closed individuals prefer conservative, traditional, right-wing views” (McCrae, 1996, p. 325). Accordingly, individuals that are open to experience hold left-wing economic attitudes (Gerber et al. 2010; Riemann et al. 1993; Van Hiel & Mervielde 2004; but see null findings by Carney et al. 2008; Leeson & Heaven 1999). Therefore, I expect to observe a positive association between Openness and support for the redistribution of income.

The evidence supporting an association between economic attitudes and the other three Big Five traits is less consistent. Conscientious individuals are dutiful, self-disciplined and strive for achievement (Costa et al., 1991; Goldberg, 1992). Individuals that score high on Conscientiousness are likely to support the idea that those who work hard will get ahead and accept inequality as a result of differences in achievement (Gerber et al., 2010, p. 115). Moreover, conscientious individuals have a preference for order and structure, which makes conscientious individuals more likely to prefer that the role of the government in a society remains unchanged. Consequently, conscientious individuals are expected to hold right-wing economic attitudes (Gerber et al., 2011, 2010). However, other studies failed to find an association between Conscientiousness and economic attitudes (Carney et al., 2008; Leeson & Heaven, 1999; Riemann et al., 1993; Van Hiel & Mervielde, 2004). These non-findings suggest that economic attitudes might not resonate with personality traits in the same manner as has been documented for social attitudes (Feldman & Huddy, 2014; Feldman, 2013). Given the inconclusive state of the literature, I will test whether there is a direct and negative association between Conscientiousness and support for redistribution.

Neuroticism marks the experience of negative affect such as anxiety, depression and anger as well as the tendency to be self-conscious and insecure (Goldberg, 1992). Neurotic

individuals tend to support left-wing economic policies that “create ‘safety nets’ and reduce exposure to market risk” (Gerber et al., 2011, 2010, p. 116). Importantly, the association between Neuroticism and left-wing economic attitudes was not replicated in other studies (Carney et al., 2008; Leeson & Heaven, 1999; Van Hiel & Mervielde, 2004). In this study, I will test whether the redistribution of income accommodates the negative affect and insecurity experienced by neurotic individuals.

Lastly, Extraversion embodies social and outgoing behavior as well as the tendency to experience warm feelings and positive emotions. The conceptual understanding of the association between Extraversion and political attitudes is up to this point unclear.

Personality, Material Self-interest and Redistribution

So far, the effects of material self-interest and personality on redistribution attitudes have been isolated independently of each other. Mondak and Halperin (2008, p. 339) argued that “full attention to the possible political significance in traits will require expanded exploration of possible indirect effects”. Lane (1955) already put forward that material self-interest and personality could interact in shaping political attitudes. Specifically, Lane (1955, p. 174) explained that “situations themselves provide either a broad or a narrow scope for the influence of personality” on political attitudes. The importance of personality is thereby “guided by the perceived economic, social, or political self-interest” of a person (Lane, 1955, p. 174). Lane (1955) demonstrated that driven by their material self-interest, lower educated respondents supported a large welfare state independently of their personality (e.g., authoritarianism). Higher educated individuals were, however, not driven by an immediate material self-interest to promote the welfare state. In the absence of a strong material self-interest personality shaped welfare state attitudes (Lane, 1955, pp. 185–186). The study by

Lane (1955) provides the first suggestion that material self-interest and personality interact in shaping political attitudes.

Recent research offers an explanation why material self-interest for some individuals constrains the effects of personality, whereas this effect is absent for others. In a series of experiments, Shah et al. (2012) demonstrated that poor participants focused their attention upon their most immediate needs and the most salient cues, while rich participants were capable of moving beyond these more immediate needs. Following up on this study, Mani et al. (2013) conducted a field experiment in which farmers performed worse on tasks of cognitive control and intelligence in the period right before the harvest when they were poor, compared with the period after the harvest when they were rich. This leads Mani et al. (2013, p. 976) to conclude that among poor individuals the “preoccupations with pressing budgetary concerns leave fewer cognitive resources available to guide choice and action”. Along these lines, Kraus et al. (2012, pp. 549–550) explain that individuals with a low income are more likely to focus upon their immediate needs, whereas individuals with a high income are motivated by internal states. These studies demonstrate that poor individuals focus upon their most immediate needs and look for the most salient cues, while these constraints on cognition and behavior of individuals disappear among richer individuals (Mani et al., 2013; Shah et al., 2012). In the latter case, individuals turn toward their inner states to guide their behavior.

I theorize that individuals with a low income are in immediate need for an increase of their income and consequently support the redistribution of income. They will express this support for redistribution irrespective of their personality traits. Individuals with a high income are not in immediate need for the redistribution of income and rely upon their internal states. Therefore, I expect that personality traits are associated with redistribution

attitudes among individuals with a high income. Specifically, I predict that high scores on Agreeableness direct individual's sympathy to the underprivileged and accordingly increase support for income redistribution. I predict that Openness is positively associated with support for redistribution as high scorers on Openness are willing to change the role of the government in a society and support equality. High scorers on Conscientiousness accept inequality and prefer the role of the government in a society to remain unchanged. Therefore, I expect that Conscientiousness correlates negatively with redistribution attitudes. Likewise, I expect that Neuroticism correlates positively with redistribution attitudes as the highly neurotic individuals support the redistribution of income in order to buffer against the experienced fear and insecurity. Lastly, I do not have directional expectations about the association between Extraversion and redistribution attitudes due to the weak and inconsistent associations documented so far.

Methods

I report the results of two studies conducted in Denmark and the United Kingdom. In Denmark, I rely upon a web survey of the Danish population. Out of their 400,000 member Internet panel, *Gallup Denmark* invited 8,012 panel members to participate in the survey. The sample was stratified by gender, age, region and education. Between May 25 and June 6 2010 a total of 3,612 Danish adults completed the questionnaire, equaling a 45% response rate (Dinesen, Klemmensen, & Nørgaard, 2014). In the UK, I rely upon the National Child Development Study 1958 which is an ongoing panel study of 17,415 individuals born in the UK in the first week of March 1958 (NCDS 1958; Power & Elliott, 2006). I rely upon the sixth wave of the NCDS 1958 when the panel members were 41-42 years old. In 2000, the survey

was distributed to 15,451 eligible panel member and 10,979 panel members responded, equaling a response rate of 71.1 percent (Plewis, Calderwood, Hawkes, & Nathan, 2004).

Redistribution attitudes were measured with equivalent measures. In the Danish sample two items tap into redistribution attitudes, namely “High income earners do not pay enough taxes” and “Income inequality is too great in this country – the greatest pay raise should be given to low income people.” Both items were scored from “agree completely” (1) to “disagree completely” (4). The items correlated highly ($r = 0.63$) and were internally consistent ($\alpha = 0.78$). Therefore, I created a scale to range from (0) strong disagreement with the redistribution of income through (1) strong agreement with the redistribution of income. In the UK sample, attitudes towards the redistribution of income were measured using one item. Participants were asked to indicate their agreement with the item “The government should redistribute income.” This item was scored on a five-point Likert-scale ranging from “strongly agree” (1) through “strongly disagree” (5). I recoded the scale to range from (0) strong disagreement through (1) strong agreement with the redistribution of income.

In both samples I make use of reliable and valid measures of the Big Five personality traits. In the Danish sample I rely upon the 60-item NEO PI-R Short Version which measures each trait using 12 items (Skovdahl-Hansen, Mortensen, & Schiøtz, 2004). In the UK sample, personality was measured using the 50-item International Personality Item Pool – Five Factor Model (IPIP-FFM; Goldberg, 1999) which measures each trait using 10 items. Importantly, the measures of personality employed in the two samples are equivalent (Gow, Whiteman, Pattie, & Deary, 2005). The descriptive statistics and item wording are provided in Supplementary Material A (Denmark) and B (UK). Note that the 50-item IPIP-FFM was not measured in the same wave as the attitudes towards redistribution. Instead, the 50-item IPIP-FFM was included in 2008 when wave eight of the NCDS 1958 was conducted. At this

time-point panel members were 50 years old. I do not expect this to be problematic as personality traits are stable in middle adulthood (Cobb-Clark & Schurer, 2012) and are stably associated with political attitudes over time (Bloeser, Canache, Mitchell, Mondak, & Poore, 2013).

In both samples household income is used to gauge self-interest. I recoded household income to range from the lowest observed income through the highest income. I also control for education, gender, union membership, employment status and religiosity (Stegmueller, 2013). I only control for age in the Danish sample as all respondents in the UK sample were born in the same week in 1958.

Results

First, I discuss the association between attitudes towards redistribution and the Big Five traits. In the first model in each column of Table 1 I present the results of OLS regression models whereby I regress redistribution attitudes on the Big Five traits while controlling for income, employment status, religiosity, education, gender, and age.² In line with the expectations, there is a positive association between support for redistribution and the traits Agreeableness and Neuroticism. Conscientiousness is, in line with the expectations and some earlier research (Gerber et al., 2011, 2010), negatively correlated with support for the redistribution of income. Contrary to the expectations, but in line with some other null

² The dependent variable is scored on a five-point Likert-scale. One could argue that an Ordered Logistic Regression Model is appropriate to analyze this dependent variable in the UK sample. I demonstrate in Supplementary Material C that similar conclusions are reached for Ordered Logistic Regression models.

findings (Carney et al., 2008; Leeson & Heaven, 1999), Openness is unrelated with the support for income redistribution in both the Danish and UK sample. Lastly, Extraversion is positively associated with support for redistribution in Danish sample but negatively associated with support for redistribution in the UK.

The effects of the Big Five traits on redistribution attitudes are substantive as is illustrated by the effects of Agreeableness. Starting with the Danish sample, I report that respondents that score high (a standard deviation above the mean) on Agreeableness are more supportive of the redistribution of income (0.58 [95% CI = 0.57, 0.59]) compared to respondents that score low (a standard deviation below the mean) on Agreeableness (0.50 [95% CI = 0.48, 0.51]). This effect is only somewhat smaller compared with the differences between the redistribution attitudes of union members (0.57 [95% CI = 0.56, 0.59]) and non-union members 0.49 [95% CI = 0.48, 0.51]). Turning to the UK sample, high agreeable respondents are more supportive of the redistribution of income (0.57 [95% CI = 0.56, 0.58]) compared to respondents that score low on Agreeableness (0.52 [95% CI = 0.50, 0.53]). This effect is comparable to the difference in the predicted redistribution attitudes between union members (0.59 [95% CI = 0.57, 0.60]) and non-union members (0.54 [95% CI = 0.53, 0.54]).

To summarize, support for redistribution of income is associated with high levels of Agreeableness and Neuroticism but lower levels of Conscientiousness. Openness is unrelated to redistribution attitudes in both samples, whereas Extraversion is inconsistently associated with redistribution attitudes. The covariates behaved as expected. In line with extant research, income is negatively associated with support for redistribution in both samples. Christians are more opposed to redistribution compared with non-religious

respondents (Stegmueller, 2013). Lastly, disabled citizens tend to be more supportive of income redistribution.³

[Insert Table 1 – around here]

In the second model of each column in Table 1, I test whether Big Five traits and income interact in shaping redistribution attitudes. I test this by including an interaction term for each Big Five trait with income. In multiple unstandardized interaction models “coefficients are not effects” (Kam & Franzese, 2007, p. 43). Therefore, I cannot assess my expectations by simply relying upon the significance of the coefficients of the interaction between income and a personality trait. Instead, I have calculated the marginal effects of each personality trait on redistribution attitudes over the range of income along with 95 percent confidence intervals, while holding all other variables at their mean or mode (Brambor, Clark, & Golder, 2006). I expect that among the lower income levels the confidence intervals of the marginal effect of a personality trait overlap with zero. This would confirm that among low income earners there is no association between redistribution attitudes and personality traits (Kam & Franzese, 2007, pp. 46–47). As income increases, I expect that the confidence intervals lie outside zero which leads to the acceptance of the expectation that the personality trait are associated with redistribution attitudes among higher income earners. Note that I do not have a priori expectations about the exact income level from which a personality would exert an effect on redistribution attitudes. In order to facilitate further interpretation of my expectations, I will discuss the predicted redistribution attitudes among respondents with a low (5th percentile) and a high (95th percentile) income over the range of a Big Five trait. In

³ The Danish sample did not include an indicator for disabled persons.

these figures I include a histogram of the distribution of the specific personality trait (Berry, Golder, & Milton, 2012).

Figure 1 (panel A) displays the marginal effect of Agreeableness on redistribution attitudes across different income levels in the Danish sample. There is only a small marginal effect of Agreeableness on redistribution attitudes among respondents with lower levels of income. Yet, the effect of Agreeableness on redistribution attitudes becomes stronger as income increases. I turn to the predicted redistribution attitudes (Figure 1, panel B) and observe that respondents with a low income support redistribution of income irrespective of their levels of Agreeableness. Turning to the high income earners, I observe that high agreeable respondents with a high income are more supportive of redistribution (0.48 [95% CI = 0.45, 0.51]) compared to low agreeable respondents with a high income (0.33 [95% CI = 0.30, 0.36]).

In the UK sample, I observe that there is no marginal effect of Agreeableness on redistribution attitudes among respondents with lower income levels (see Figure 1, panel C). In line with the expectations, the marginal effect of Agreeableness on redistribution attitudes is statistically significant and positive among the higher income levels. In panel D of Figure 1, I turn to the predicted redistribution attitudes among respondents with a low (5th percentile) and high (95th percentile) income conditional upon the levels of Agreeableness. Respondents with a low income support redistribution regardless of their level of Agreeableness as is signaled by the horizontal slope of the solid line. Respondents with a high income that score a standard deviation above the mean on Agreeableness are more supportive of redistribution (0.53 [95% CI = 0.51, 0.55]) compared to respondents that score a standard deviation below the mean on Agreeableness (0.39 [95% CI = 0.36, 0.41]). To

summarize, I confirm my expectations concerning the interaction between Agreeableness and material self-interest in both samples.

[Insert Figure 1 – around here]

Turning to Openness, in the Danish sample there is no marginal effect of Openness on redistribution attitudes among respondents with a low income (see Figure 2, panel A). Yet, the effect is positive among higher income levels. The plot of the predicted redistribution attitudes (Figure 2, panel B), demonstrates that there is no association between Openness and the support for redistribution among low income earners. However, among the high income earners we observe a positive association between Openness and support for redistribution. High scorers on Openness are more supportive of redistribution (0.45 [95% CI = 0.42, 0.48]) compared to low scorers on redistribution attitudes (0.37 [95% CI = 0.33, 0.40]).

In the UK sample this pattern is replicated. First, there is no marginal effect of Openness on redistribution attitudes among respondents with a low income (see Figure 2, panel C). However, Openness has got a positive marginal effect on redistribution attitudes among the higher income levels. In panel C, Figure 2, I illustrate that low income earners are supportive of redistribution irrespective of their level of Openness. Yet, among the high income earners Openness correlates positively with redistribution attitudes. Respondents with a high income that score one standard deviation above the mean on Openness (0.49 [95% CI = 0.47, 0.51]) are more supportive of redistribution compared to respondents that score a standard deviation below the mean on Openness (0.46 [95% CI = 0.43, 0.48]).

[Insert Figure 2 – around here]

I do not find evidence for the expected interaction between income and the traits Conscientiousness and Neuroticism. This implies that irrespective of the level of income, neurotic respondents tend to be more supportive of redistribution compared to low neurotic respondents. Likewise, conscientious respondents tend to be more opposed to redistribution compared with low conscientious respondents irrespective of the income levels. I will discuss the implications of these findings in the discussion.

Lastly, for Extraversion I find mixed evidence across the samples. Specifically, in the UK sample there is no marginal effect of Extraversion on redistribution attitudes at the lower income levels, whereas there is a negative marginal effect of Extraversion on redistribution attitudes when income increases (see Figure 3, panel A). Second, panel B of Figure 3 demonstrates there is support for redistribution regardless of the level of Extraversion among the low income earners. Yet, high income earners that score one standard deviation below the mean on Extraversion are more supportive of redistribution (0.51 [95% CI = 0.49, 0.53]) compared with respondents that score one standard deviation above the mean on Extraversion (0.44 [95% CI = 0.41, 0.46]). These results are not replicated in the Danish sample. In the Danish sample, there is no association between Extraversion and attitudes toward redistribution whatsoever. I will discuss the implications of these inconsistent findings in the discussion.

[Insert Figure 3 – around here]

Before I turn to the conclusion of this study, I will discuss whether one should consider income as a mediator of the associations between personality traits and attitudes towards redistribution. There are at least two important limitations concerning this mediation argument. First, in order for mediation to occur it is important that the independent variable (e.g., personality trait) is associated with the mediator of interest (e.g., income). Yet, the association between income and the Big Five personality traits are inconsistent across different studies (see, Furnham & Cheng, 2013; Mueller & Plug, 2006; Ng, Eby, Sorensen, & Feldman, 2005; Sutin, Costa, Miech, & Eaton, 2009). Second, methodological advancements have pointed out that mediation analyses require a strong set of assumptions which are not met in cross-sectional observational studies (Bullock, Green, & Ha, 2010; Imai, Keele, Tingley, & Yamamoto, 2011). Regardless of these limitations, I did test the alternative argument that income mediates the association between personality and redistribution attitudes. I find that the associations between some of the Big Five traits and redistribution attitudes are only to a limited extent mediated by income (see Supplementary Material D). This implies that income is correctly treated as the moderator of the association between Big Five traits and attitudes towards redistribution.

Discussion

To conclude, I have demonstrated that Big Five traits directly and in interaction with material self-interest influence redistribution attitudes. First, I documented that across political contexts the support for redistribution of income is associated with high levels of Agreeableness and Neuroticism but lower levels of Conscientiousness. However, I theorized that material self-interest and personality traits interact in shaping redistribution attitudes. There is no association between redistribution attitudes and the traits Agreeableness and

Openness among the lower income levels. As income increases a different pattern is observed whereby Agreeableness and Openness correlate with redistribution attitudes. I thereby confirm that material self-interest and personality traits interact in shaping redistribution attitudes. I will discuss the implications of the direct associations as well as the interaction between personality and self-interest below.

I reported direct associations between personality traits and redistribution attitudes. Conscientiousness was in previous research inconsistently associated with economic attitudes (Carney et al., 2008; Gerber et al., 2011, 2010; Leeson & Heaven, 1999; Van Hiel & Mervielde, 2004). Yet, in two large samples, conducted in two different political contexts, I report consistent negative associations between Conscientiousness and support for redistribution. My conclusion thereby support the argument that the preference for order and structure as well as the reluctance to change are generally associated with right-wing political attitudes (Gerber et al., 2010; Hibbing et al., 2014; Jost, Glaser, Kruglanski, & Sulloway, 2003). However, I also find strong and consistent positive associations between support for redistribution of income and the traits Agreeableness and Neuroticism, while Openness was not directly associated with redistribution attitudes. This pattern of associations demonstrates that attitudes towards the redistribution indeed have a distinct set of psychological correlates (Feldman & Huddy, 2014; Feldman, 2013). Specifically, support for income redistribution is associated with a pattern of higher levels of Agreeableness and Neuroticism but lower levels of Conscientiousness.

I theorized that personality traits and material self-interest interact in shaping redistribution attitudes. I support this argument for the traits Agreeableness and Openness. The findings for Openness and Agreeableness align with Lane's (1955) study as he focused upon the interaction between authoritarianism and self-interest. Among the Big Five traits,

Openness and Agreeableness are generally seen as the strongest predictors of authoritarianism (Sibley & Duckitt, 2008). However, the traits Conscientiousness and Neuroticism do not interact with self-interest. This suggests that my argument is not generalizable to all Big Five traits. Perhaps, the tendency of neurotic individuals to worry and to feel insecure cannot be overridden by material self-interest, while the tender-mindedness and sympathy of agreeable citizens can be overridden by material self-interest. Future research should further theorize and assess whether there is indeed a scope condition to the extent that material self-interest and personality traits interact in shaping attitudes towards redistribution.

The results for Extraversion differed across the two samples. There are at least two possible explanations for the inconsistencies across the two samples. First, unknown contextual differences between the Denmark and the UK could underlie the different patterns for Extraversion. For instance, Malka and colleagues (2014) demonstrated that the political discourse influences the association between psychological constructs and economic attitudes. Second, the differences in measurement of the independent and dependent variables could explain the different patterns across the two samples. It is beyond the scope of this study to speculate about which of the two explanations is correct. Future research, using fully equivalent measures across political contexts, will have to address the association between this trait and redistribution attitudes.

I will discuss four additional opportunities for future research. First, this study has focused upon attitudes towards the redistribution of income. This is one of the central issues of the economic attitude dimension (Treier & Hillygus, 2009; Van Der Brug & Van Spanje, 2009). Future research could, using equivalent measures, focus upon the associations between Big Five traits and a broader range of economic attitudes. In doing so, it will

become possible to test the assumption that the here outlined associations between Big Five traits and redistribution attitudes indeed generalize to the economic attitude dimension more broadly.

Second, the question arises whether material self-interest interacts with other factors in shaping redistribution attitudes? In a recent study, Margalit (2013) demonstrated that material self-interest can crowd-out the effects of ideology on attitudes towards supporting the poor and unemployed. Future research could focus upon other non-economic explanations of redistribution attitudes such as egalitarianism and humanitarianism. Based upon the results in this study, one should expect that egalitarianism and humanitarianism are unrelated to redistribution attitudes among the lower income levels, whereas egalitarianism and humanitarianism are associated with redistribution attitudes among the higher income levels.

Third, I have observed that the marginal effects of personality traits on redistribution attitudes are present at different levels of income for the different traits, and across the two different political contexts. Future research will have to theorize and test at what income level a personality trait is associated with redistribution attitudes. In addition, further research should address why the size of the effects of the personality traits differs across traits and across political contexts.

Fourth, in this study I have built upon the assumption that personality traits shape political attitudes. This assumption is supported by studies documenting that childhood personality affects political attitudes in adulthood (Block & Block, 2006; Fraley, Griffin, Belsky, & Roisman, 2012). Political attitudes might, however, also develop before adulthood and influence personality traits (Kandler, Bell, Shikishima, Yamagata, & Riemann, 2014; Verhulst, Eaves, & Hatemi, 2012). Longitudinal studies should explore to what extent

personality traits and political attitudes influence each other over the course of the development of an individual.

To conclude, widespread attention has been devoted to the direct effects of material self-interest on redistribution attitudes. I have documented that Big Five traits are an important antecedent of attitude towards income redistribution. Moreover, I have theorized and demonstrated that material self-interest interacts with personality in shaping redistribution attitudes. The conclusion that material self-interest and personality traits jointly relate to redistribution attitudes may spark future research addressing the correlates of redistribution attitudes and political attitudes more broadly.

References

- Alesina, A. F., & Angeletos, G.-M. (2005). Fairness and redistribution. *American Economic Review*, 95(4), 960–980.
- Alesina, A. F., & La Ferrara, E. (2005). Preferences for redistribution in the land of opportunities. *Journal of Public Economics*, 89(5-6), 897–931.
- Bechtel, M. M., Hainmueller, J., & Margalit, Y. M. (2014). Preferences for international redistribution: The divide over the Eurozone bailouts. *American Journal of Political Science*, 58(4), 835–856.
- Benabou, R., & Tirole, J. (2006). Belief in a just world and redistributive politics. *The Quarterly Journal of Economics*, 122(2), 699–746.
- Berry, W. D., Golder, M., & Milton, D. (2012). Improving tests of theories positing interaction. *Journal of Politics*, 73(3), 653–671.
- Block, J., & Block, J. H. (2006). Nursery school personality and political orientation two decades later. *Journal of Research in Personality*, 40(5), 734–749.
- Bloeser, A. J., Canache, D., Mitchell, D.-G., Mondak, J. J., & Poore, E. R. (2013). The temporal consistency of personality effects: Evidence from the British Household Panel Survey. *Political Psychology*. doi:10.1111/pops.12067
- Brambor, T., Clark, W. R., & Golder, M. (2006). Understanding interaction models: Improving empirical analyses. *Political Analysis*, 14(1), 63–82.
- Bullock, J. G., Green, D. P., & Ha, S. E. (2010). Yes, but what's the mechanism? (don't expect an easy answer). *Journal of Personality and Social Psychology*, 98(4), 550–558.
- Carney, D. R., Jost, J. T., Gosling, S. D., & Potter, J. (2008). The secret lives of liberals and conservatives: Personality profiles, interaction styles, and the things they leave behind. *Political Psychology*, 29(6), 807–840.
- Cobb-Clark, D. A., & Schurer, S. (2012). The stability of big-five personality traits. *Economics Letters*, 115(1), 11–15.
- Costa, P. T., & McCrae, R. R. (1992). Four ways five factors are basic. *Personality and Individual Differences*, 13(6), 653–665.
- Costa, P. T., McCrae, R. R., & Dye, D. A. (1991). Facets scales for agreeableness and conscientiousness: A revision of the NEO personality inventory. *Personality and Individual Differences*, 12(9), 887–898.
- Digman, J. M. (1990). Personality structure: Emergence of the five-factor model. *Annual Review of Psychology*, 41(1), 417–440.

- Dinesen, P. T., Klemmensen, R., & Nørgaard, A. S. (2014). Attitudes toward immigration: The role of personal predispositions. *Political Psychology*. doi:10.1111/pops.12220
- Edmonds, G. W., Goldberg, L. R., Hampson, S. E., & Barckley, M. (2013). Personality stability from childhood to midlife: Relating teachers' assessments in elementary school to observer- and self-ratings 40 years later. *Journal of Research in Personality*, 47(5), 505–513.
- Esarey, J., Salmon, T. C., & Barrilleaux, C. (2012). What motivates political preferences? Self-interest, ideology, and fairness in a laboratory democracy. *Economic Inquiry*, 50(3), 604–624.
- Feldman, S. (1982). Economic Self-Interest and Political Behavior. *American Journal of Political Science*, 26(3), 446–466.
- Feldman, S. (1984). Economic self-interest and the vote: Evidence and meaning. *Political Behavior*, 6(3), 229–251.
- Feldman, S. (2013). Political ideology. In *Oxford Handbook of Political Psychology* (pp. 590–626). New York: Oxford University Press.
- Feldman, S., & Huddy, L. (2014). Not so simple: The multidimensional nature and diverse origins of political ideology. *Behavioral and Brain Sciences*, 37(3), 312–313.
- Feldman, S., & Johnston, C. D. (2014). Understanding the determinants of political ideology: Implications of structural complexity. *Political Psychology*, 35(3), 337–358.
- Fong, C. (2001). Social preferences, self-interest, and the demand for redistribution. *Journal of Public Economics*, 82(2), 225–246.
- Fraley, R. C., Griffin, B. N., Belsky, J., & Roisman, G. I. (2012). Developmental antecedents of political ideology: A longitudinal investigation from birth to age 18 years. *Psychological Science*, 23(11), 1425–31.
- Furnham, A., & Cheng, H. (2013). Factors influencing adult earnings: Findings from a nationally representative sample. *The Journal of Socio-Economics*, 44, 120–125.
- Gerber, A. S., Huber, G. A., Doherty, D., & Dowling, C. M. (2011). The big five personality traits in the political arena. *Annual Review of Political Science*, 14(1), 265–287.
- Gerber, A. S., Huber, G. A., Doherty, D., & Dowling, C. M. (2013). Assessing the stability of psychological and political survey measures. *American Politics Research*, 41(1), 54–75.
- 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(1), 111–133.

- Goldberg, L. R. (1992). The development of markers for the big-five factor structure. *Psychological Assessment*, 4, 26–42.
- Goldberg, L. R. (1999). A broad-bandwidth, public-domain, personality inventory measuring the lower level facets of several Five-Factor models. *Personality Psychology in Europe*, 7, 7–28.
- Gow, A. J., Whiteman, M. C., Pattie, A., & Deary, I. J. (2005). Goldberg's "IPIP" Big-Five factor markers: Internal consistency and concurrent validation in Scotland. *Personality and Individual Differences*, 39(2), 317–329.
- Hibbing, J. R., Smith, K. B., & Alford, J. R. (2014). Differences in negativity bias underlie variations in political ideology. *Behavioral and Brain Sciences*, 37(3), 297–307.
- Imai, K., Keele, L., Tingley, D., & Yamamoto, T. (2011). Unpacking the black box of causality: Learning about causal mechanisms from experimental and observational studies. *American Political Science Review*, 105(4), 765–789.
- Jost, J. T., Glaser, J., Kruglanski, A. W., & Sulloway, F. J. (2003). Political conservatism as motivated social cognition. *Psychological Bulletin*, 129(3), 339–375.
- Kam, C. D., & Franzese, R. J. J. (2007). *Modeling and interpreting interactive hypotheses in regression analysis*. Ann Arbor: University of Michigan Press.
- Kam, C. D., & Nam, Y. (2008). Reaching out or pulling back: Macroeconomic conditions and public support for social welfare spending. *Political Behavior*, 30(2), 223–258.
- Kandler, C., Bell, E., Shikishima, C., Yamagata, S., & Riemann, R. (2014). The genetic foundations of attitude formation: The case of left-right political orientations. In R. A. Scott & S. M. Kosslyn (Eds.), *Emerging Trends in the Social and Behavioral Science: Interdisciplinary Directions* (pp. 1–24). Wiley.
- Kandola, S. S., & Egan, V. (2014). Individual differences underlying attitudes to the death penalty. *Personality and Individual Differences*, 66, 48–53.
- Kluegel, J. R., & Smith, E. R. (1986). *Beliefs about inequality. Americans' views of what is and what ought to be*. New York: Aldine Publishing Company.
- Kraus, M. W., Piff, P. K., Mendoza-Denton, R., Rheinschmidt, M. L., & Keltner, D. (2012). Social class, solipsism, and contextualism: How the rich are different from the poor. *Psychological Review*, 119(3), 546–572.
- Lane, R. E. (1955). Political personality and electoral choice. *American Political Science Review*, 49(1), 173–190.
- Leeson, P., & Heaven, P. C. L. (1999). Social attitudes and personality. *Australian Journal of Psychology*, 5(1), 19–24.

- Malka, A., Soto, C. J., Inzlicht, M., & Leles, Y. (2014). Predictors of cultural and economic conservatism. *Journal of Personality and Social Psychology*, 106(6), 1031–1051.
- Mani, A., Mullainathan, S., Shafir, E., & Zhao, J. (2013). Poverty impedes cognitive function. *Science*, 341(6149), 976–980.
- Margalit, Y. M. (2013). Explaining social policy preferences: Evidence from the Great Recession. *American Political Science Review*, 107(1), 80–103.
- McClosky, H. (1958). Conservatism and personality. *American Political Science Review*, 52(1), 27–45.
- McCrae, R. R. (1996). Social consequences of experiential openness. *Psychological Bulletin*, 120(3), 323–337.
- Meltzer, A. H., & Richard, S. F. (1981). A rational theory of the size of government. *Journal of Political Economy*, 89(5), 914–927.
- Milfont, T. L., & Sibley, C. G. (2012). The big five personality traits and environmental engagement: Associations at the individual and societal level. *Journal of Environmental Psychology*, 32(2), 187–195.
- Mondak, J. J., & Halperin, K. D. (2008). A framework for the study of personality and political behaviour. *British Journal of Political Science*, 38, 335–362.
- Mueller, G., & Plug, E. (2006). Estimating the effect of personality on male and female earnings. *Industrial and Labor Relations Review*, 60(1).
- Napier, J. L., & Jost, J. T. (2008). The “antidemocratic personality” revisited: A cross-national investigation of working-class authoritarianism. *Journal of Social Issues*, 64(3), 595–617.
- Ng, T. W. H., Eby, L. T., Sorensen, K. L., & Feldman, D. C. (2005). Predictors of objective and subjective career success: a meta-analysis. *Personnel Psychology*, 58(2), 367–408.
- Owens, L. A., & Pedulla, D. S. (2014). Material welfare and changing political preferences: The case of support for redistributive social policies. *Social Forces*, 92(3), 1087–1113.
- Page, B. I., Bartels, L. M., & Seawright, J. (2013). Democracy and the policy preferences of wealthy Americans. *Perspectives on Politics*, 11(1), 51–73.
- Plewis, I., Calderwood, L., Hawkes, D., & Nathan, G. (2004). National Child Development Study and 1970 British Cohort Study technical report: Changes in the NCDS and BCS70 populations and samples over time.
- Power, C., & Elliott, J. (2006). Cohort profile: 1958 British birth cohort (National Child Development Study). *International Journal of Epidemiology*, 35(1), 34–41.

- Rehm, P. (2009). Risks and redistribution: An individual-level analysis. *Comparative Political Studies*, 42, 844.
- Rehm, P. (2010). Risk inequality and the polarized American electorate. *British Journal of Political Science*, 41(02), 363–387.
- Riemann, R., Grubich, C., Hempel, S., Mergl, S., & Richter, M. (1993). Personality and attitudes towards current political topics. *Personality and Individual Differences*, 15(3), 313–321.
- Schlozman, K. L., & Verba, S. (1979). *Injury to insult*. Cambridge: Harvard University Press.
- Schmitt, D. P., Allik, J., McCrae, R. R., & Benet-Martinez, V. (2007). The geographic distribution of big five personality traits: Patterns and profiles of human self-description across 56 nations. *Journal of Cross-Cultural Psychology*, 38(2), 173–212.
- Schoen, H. (2007). Personality traits and foreign policy attitudes in German public opinion. *Journal of Conflict Resolution*, 51(3), 408–430.
- Sears, D. O., & Funk, C. L. (1991). The role of self-interest in social and political attitudes. In M. P. Zanna (Ed.), *Advances in Experimental Social Psychology*. San Diego: Academic Press Inc.
- Sears, D. O., Lau, R. R., Tyler, T. R., & Allen, H. M. (1980). Self-interest vs. symbolic politics and presidential voting. *American Political Science Review*, 74(3), 670–684.
- Shah, A. K., Mullainathan, S., & Shafir, E. (2012). Some consequences of having too little. *Science*, 338(6107), 682–685.
- Sibley, C. G., & Duckitt, J. (2008). Personality and prejudice: A meta-analysis and theoretical review. *Personality and Social Psychology Review*, 12(3), 248–79.
- Sibley, C. G., Osborne, D., & Duckitt, J. (2012). Personality and political orientation: Meta-analysis and test of a Threat-Constraint model. *Journal of Research in Personality*, 46, 664–677.
- 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.
- Soroka, S. N., & Wlezien, C. (2014). Economic crisis and support for redistribution in the United Kingdom. In N. Bermeo & L. Bartels (Eds.), *Mass Politics in Tough Times: Opinions, Votes and Protest in the Great Recession*. Oxford University Press.
- Stegmüller, D. (2013). Religion and redistributive voting in Western Europe. *Journal of Politics*, 75(4), 1064–1076.
- Sutin, A. R., Costa, P. T., Miech, R., & Eaton, W. W. (2009). Personality and career success: Concurrent and longitudinal relations. *European Journal of Personality*, 23, 71–84.

- Treier, S., & Hillygus, D. S. (2009). The nature of political ideology in the contemporary electorate. *Public Opinion Quarterly*, 73(4), 679–703.
- Van Der Brug, W., & Van Spanje, J. (2009). Immigration, Europe and the “new” cultural dimension. *European Journal of Political Research*, 48(3), 309–334.
- Van Hiel, A., & Mervielde, I. (2004). Openness to experience and boundaries in the mind: Relationships with cultural and economic conservative beliefs. *Journal of Personality*, 72(4), 659–686.
- Van Lange, P. A. M., Bekkers, R., Chirumbolo, A., & Leone, L. (2012). Are conservatives less likely to be prosocial than liberals? From games to ideology, political preferences and voting. *European Journal of Personality*, 26(5), 461–473.
- Verhulst, B., Eaves, L. J., & Hatemi, P. K. (2012). Correlation not causation: The relationship between personality traits and political ideologies. *American Journal of Political Science*, 56(1), 34–51.
- Yamagata, S., Suzuki, A., Ando, J., Ono, Y., Kijima, N., Yoshimura, K., ... Jang, K. L. (2006). Is the genetic structure of human personality universal? A cross-cultural twin study from North America, Europe, and Asia. *Journal of Personality and Social Psychology*, 90(6), 987–998.

Table 1 Redistribution attitudes, Personality and Income in Denmark and the United Kingdom

	Denmark		United Kingdom	
	1	2	1	2
Openness	0.05 (0.04)	-0.14* (0.07)	0.02 (0.02)	-0.06 (0.04)
Conscientiousness	-0.19* (0.04)	-0.15 (0.08)	-0.11* (0.02)	-0.08* (0.04)
Extraversion	0.08 (0.04)	0.18* (0.08)	-0.05* (0.02)	0.06 (0.04)
Agreeableness	0.45* (0.04)	0.32* (0.08)	0.14* (0.02)	-0.03 (0.04)
Neuroticism	0.22* (0.04)	0.17* (0.08)	0.11* (0.02)	0.15* (0.03)
Income	-0.29* (0.02)	-0.56* (0.19)	-0.14* (0.01)	-0.33* (0.09)
Personality X Income				
Openness X Income ^Δ	-	0.46* (0.14)	-	0.19* (0.09)
Conscientiousness X Income ^Δ	-	-0.10 (0.16)	-	-0.06 (0.08)
Extraversion X Income ^Δ	-	-0.25 (0.16)	-	-0.27* (0.08)
Agreeableness X Income ^Δ	-	0.29* (0.15)	-	0.39* (0.09)
Neuroticism X Income ^Δ	-	0.11 (0.16)	-	-0.08 (0.07)
Female	-0.00 (0.01)	-0.00 (0.01)	-0.02* (0.01)	-0.02* (0.01)
Age	0.00* (0.00)	0.00* (0.00)	-	-
Education	-0.02* (0.00)	-0.02* (0.00)	0.00 (0.00)	0.00 (0.00)
Employment (ref. Employed)				
Unemployed	0.03 (0.04)	0.04 (0.04)	0.06* (0.02)	0.05* (0.02)
Retired	-0.04* (0.02)	-0.04* (0.02)	-0.10 (0.10)	-0.10 (0.10)
Homemaker	-0.03 (0.11)	-0.02 (0.11)	-0.02 (0.01)	-0.02 (0.01)
Student	-0.08* (0.02)	-0.08* (0.02)	0.01 (0.04)	0.02 (0.04)
Disabled	-	-	0.08* (0.02)	0.08* (0.02)
Union member	0.08* (0.01)	0.08* (0.01)	0.05* (0.01)	0.05* (0.01)
Religiosity (Ref. Not-religious)				
Christian	-0.07* (0.01)	-0.07* (0.01)	-0.04* (0.01)	-0.05* (0.01)
Other	0.02 (0.04)	0.03 (0.04)	-0.02 (0.02)	-0.02 (0.02)
Constant	0.33* (0.06)	0.46* (0.10)	0.58* (0.02)	0.66* (0.04)
N	3,146	3,146	7,394	7,394
R ²	0.17	0.18	0.06	0.06
ΔF		3.95		6.62

OLS regression coefficients with standard errors are reported in the parentheses. * $p < 0.05$

^Δ I am primarily interested in the effect of personality over the range of income. Following Brambor and colleagues (2006, p. 71), I cannot assess my expectations judging the significance of the interaction effects. I have calculated the marginal effect of a personality trait over the range of income in order to assess my hypotheses and present these results in Figure 1-3.

* $p < 0.05$

Figure 1 Marginal effect of Agreeableness on Redistribution Attitudes over the range of income and Predicted Redistribution Attitudes among high and low income earners over the range of Agreeableness in the Danish sample (panel A & B) and the UK sample (panel C & D)

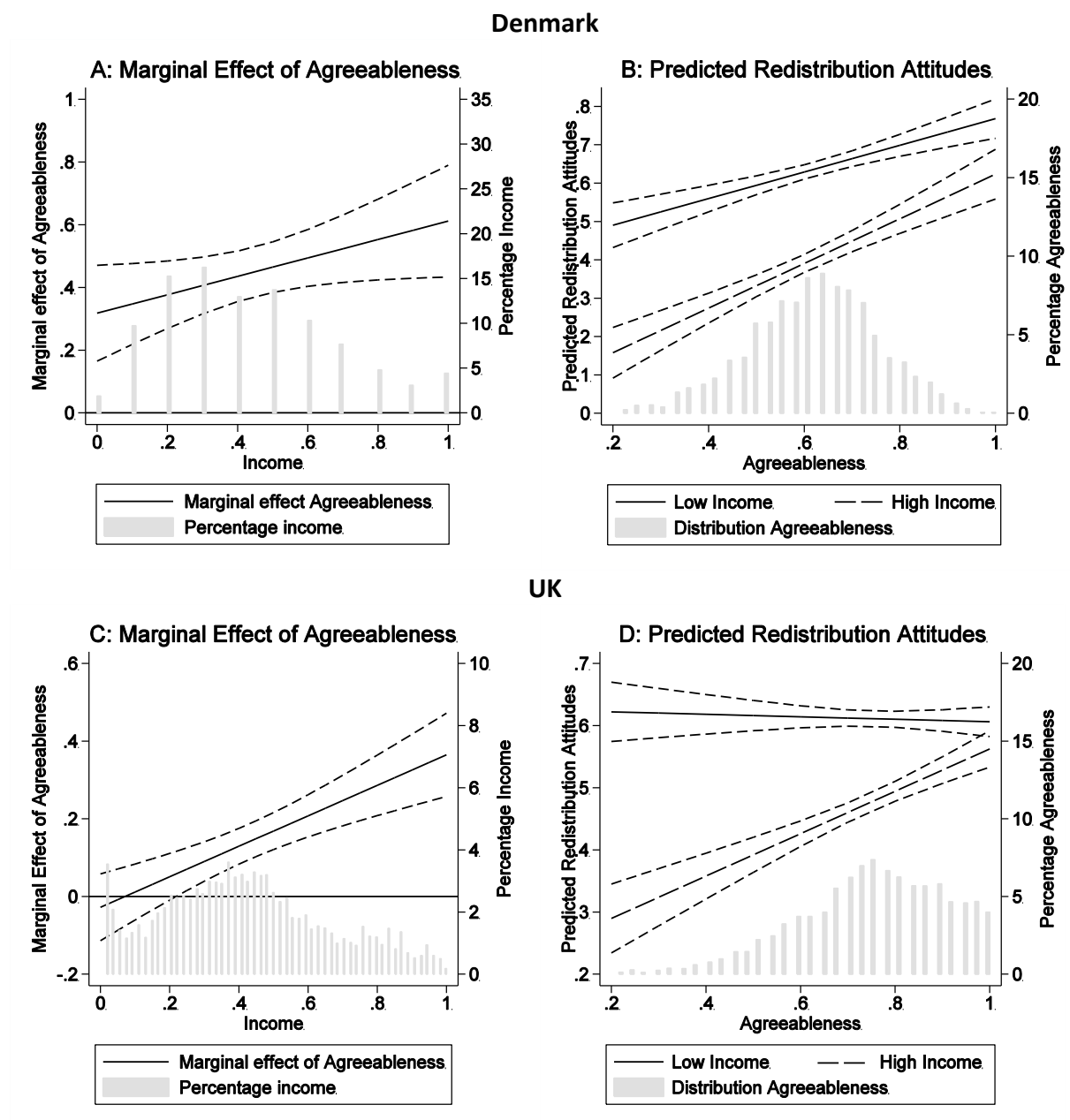
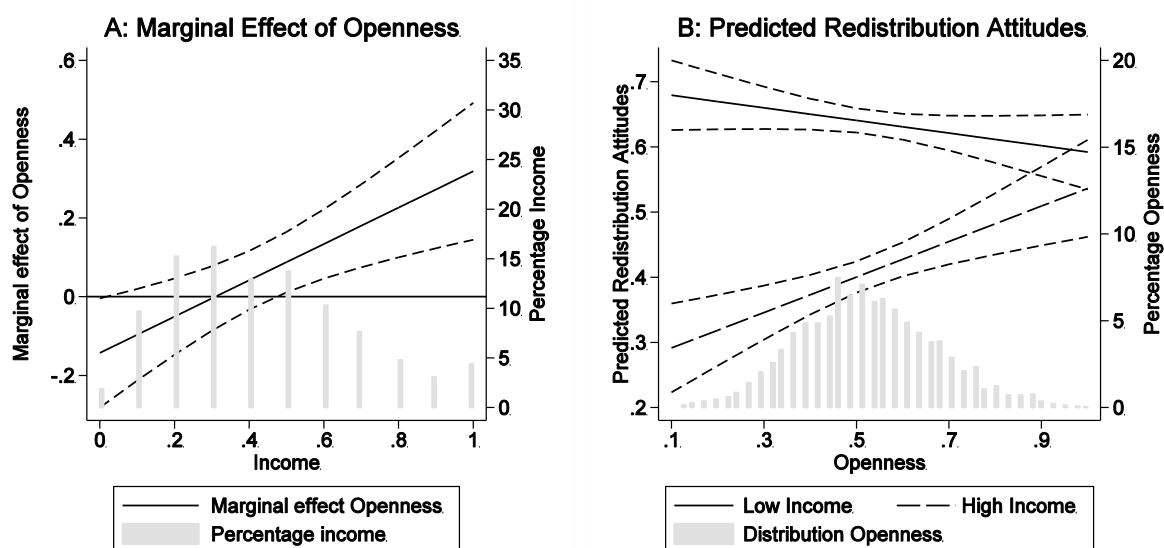


Figure 2 Marginal effect of Openness on Redistribution Attitudes over the range of income and Predicted Redistribution Attitudes among high and low income earners over the range of Openness in the Danish sample (panel A & B) and the UK sample (panel C & D)

Denmark



UK

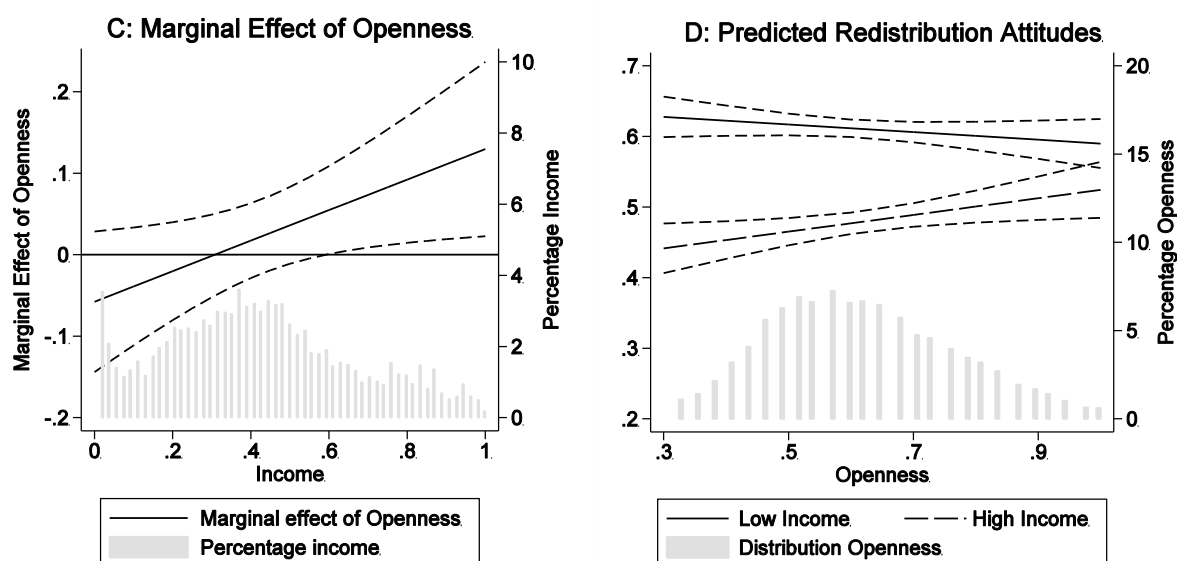


Figure 3 Marginal effect of Extraversion on Redistribution Attitudes over the range of income and Predicted Redistribution Attitudes among high and low income earners over the range of Extraversion in the UK sample

