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Taking social policy personally: How does neuroticism affect welfare state attitudes?

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Abstract

The role of the "Big Five" personality traits in driving welfare state attitudes has received scant attention in social policy research. Yet *neuroticism* in particular—a disposition to stress, worry, and get nervous easily—is theoretically likely to be an important driver of welfare attitudes precisely because welfare states deliver social "security" and "safety" nets. Using cross-sectional data from the German Socio-Economic Panel, we study three distinct attitude types (dissatisfaction with the social security system, feelings of personal financial insecurity, and preferences for state provision) and multiple social need contexts (including unemployment, ill health, old age, and nursing care). Controlling for established explanations such as self-interest, partisanship, and socialization, neuroticism does not systematically affect support for state provision. But it robustly increases general dissatisfaction with social security, as well as financial insecurity across various need contexts. Neurotic people are thus less happy with welfare state programmes across the board, yet they also appear to need these programmes more. This trait may be an important deeper layer driving other social attitudes.

KEYWORDS

"Big Five" personality traits, German Socio-Economic Panel, political psychology, public provision, social policy determinants, welfare state attitudes

1 | MOTIVATION

Understanding the determinants of welfare state attitude formation has been a central question in social policy research for decades. The literature on welfare attitudes has strongly, though not exclusively, focused on whether these attitudes mainly result from material (or economic) self-interest or from political socialization experiences. This article instead shifts the focus to the *psychological* foundations of welfare attitudes. We explore the links between neuroticism, as an element of personality traits, and altogether three distinct welfare attitude types or dimensions: general dissatisfaction with the social security system, feelings of personal financial insecurity, and a strong preference for welfare provision by the state rather than markets. Because social security systems are functionally complex institutions catering for different forms of risk, we also study attitudes on the latter two dimensions in the context of various social need contexts.

The general rationale for investigating the political attitudinal consequences of personality traits—what Jost et al. (2009, p. 317) refer to as the "bottom up psychological origins" perspective—is clear. Because personality traits show persistent correlation patterns with various social and political norms, attitudes, behaviours, and ideologies, they can be used for political prediction and manipulation purposes within certain confidence intervals. For instance, the manipulation of fear in contemporary populist politics has been amply documented, as has the relatively new development of "welfare chauvinism"—prowelfare policy platforms by extreme rightwing parties (Emmenegger & Klemmensen, 2013). Similarly, computational sciences have made big steps in very recent years towards the automated extraction of personality traits from digital footprints (Kosinski, Stillwell, & Graepel, 2013; Youyou, Kosinski, & Stillwell, 2015). Some personality traits are likely to be more prone than others to the manipulation of fear and other emotions and personality data for political or commercial purposes.

Psychologists have made substantial headway in measuring personality traits using personality questionnaire scores and showing their capacity to explain human behaviour (e.g., Boyce, Wood, & Powdthavee, 2013; Ozer & Benet-Martínez, 2006). Although there are different definitions of "personality" (Engler, 2009), a growing consensus has emerged around the view that personality can be broken into five dimensions, called the "Big Five." These are believed to capture relatively stable psychological characteristics that shape how individuals respond to a vast array of stimuli they encounter in the world (John and Srivastava, 1999, p. 103; Gerber et al., 2011, p. 266; see also Schäfer, 2017; Specht, Egloff, & Schmukle, 2011). As Ekehammar and Akrami (2007, p. 900) argue, personality traits "are based on genetic differences and/or early childhood experiences, with limited susceptibility to social and contextual influences later in life."

[1] The empirical search for personality traits is based on a lexical analysis (John & Srivastava, 1999). This involves the gathering of extensive lists of adjectives or phrases that can be used to describe enduring individual-level characteristics (Gerber et al., 2011, p. 266). Most analyses agree on a Big Five core: the so-called OCEAN model of Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism (Roccas et al., 2002, p. 792):

> Individuals who score high on *extraversion* tend to be sociable, talkative, assertive, and active; those who score low tend to be retiring, reserved and cautious. …(those) who score high on *agreeableness* tend to be good-natured, compliant, modest, gentle and cooperative. …(those) who score low on this dimension tend to be irritable, ruthless, suspicious, and inflexible. Individuals who score high on *openness* tend to be intellectual, imaginative, sensitive and open-minded. Those who score low tend to be down-to-earth, insensitive, and conventional. Individuals scoring high on *conscientiousness* tend to be careful, thorough, responsible, organized and scrupulous. Those who score low on this dimension tend to be irresponsible, disorganized and unscrupulous. Individuals scoring high on *neuroticism* tend to be anxious, depressed, angry and insecure. Those scoring low on neuroticism tend to be calm, poised, and emotionally stable.

Social scientists have occasionally incorporated insights from psychology, especially in their efforts to understand political elites. More recently, there have been significant advances in the study of the role of personality traits

in explaining *mass* political behaviour, such as political party identification, political participation (e.g., being registered to vote and talking to friends about politics), and political efficacy (Cooper, Golden, & Socha, 2013; Gerber et al., 2011). These studies explored the direct and indirect associations between personality traits and political ideology (Bakker, 2017; Gerber, Huber, Doherty, Dowling, & Ha, 2010), party preference (Mondak & Halperin, 2008; Schoen & Schumann, 2007), electoral turnout (Gerber et al., 2011; Schoen & Steinbrecher, 2013), and other forms of political participation (Jennstål, 2018; Mondak, Hibbing, Canache, Seligson, & Anderson, 2010) or prosocial behaviour (Kline, Bankert, Levitan, & Kraft, 2019).

This article further shifts the focus by exploring the relationships between specifically neuroticism (a disposition to not handle stress well, to worry a lot, and to get nervous easily) and three different types of *welfare state attitudes*. It is broadly acknowledged that understanding the determinants of support for welfare programmes is crucial for designing better service delivery as well as politically feasible reforms (Sabbagh & Vanhuysse, 2006, 2010). Yet, the psychological foundations of welfare state attitudes have received little scholarly interest thus far.[2] Not all five traits will be equally relevant when it comes to welfare state attitudes. The very nature of what welfare states do—providing social security and social safety nets in various forms—leads us to expect *neuroticism* to be a particularly strong driver of welfare attitudes. High levels of neuroticism have been found to increase support for parties offering protection against material and cultural challenges (Schoen & Schumann, 2007) and to be negatively correlated with economic conservatism (Bakker, 2017). But generally, neuroticism has been argued to be the *least political* personality trait. For instance, Cooper et al. (2013, pp. 77–79; table 5) find neuroticism to be the only Big Five trait that is insignificant in every one of their models investigating political ideology, party identification, political participation (e.g., being registered to vote and talking to friends about politics), and political efficacy, and they confirm this nonfinding in a review of prior research on similar dependent variables. Here, we make the exact opposite claim for welfare attitudes. We argue that neuroticism is likely to be especially relevant in explaining welfare attitudes precisely because of what welfare states do and represent. Neurotic people tend not to handle stress well, to worry a lot, and to get nervous easily. They psychologically crave insurance against all forms of stress that life throws at them. This is likely to include various social risks (e.g., unemployment and ill health) and life course risks (e.g., old age and dependency on others' nursing care).

Such forms of insurance or reassurance is what welfare states are in the business of providing. They offer replacement income through various programmes of social "security" and social "safety" nets through various forms of social assistance and poverty alleviation. We therefore expect neurotics, by virtue of being more easily worried, stressed, and nervous, to be both more dissatisfied about the state of the social security system and more personally worried about their financial security across various contexts of social need. In other words, the link between greater insecurity perceptions of neurotics and, specifically, the *insurance* function of welfare states (rather than, for instance, their social investment or redistribution function) is why we expect neuroticism to be particularly relevant for welfare attitudes. There is no a priori reason for expecting the other four traits to be equally important, although expectations of such noneffects depend to some extent on the availability of dependent variables (in our case, German Socio-Economic Panel [GSOEP] data).[3]

The article proceeds as follows. The next section discusses the theoretical linkages between established explanations, neuroticism, and welfare attitudes. The next two sections present our dataset and method of analysis and our main empirical findings. The final section concludes and discusses implications for further research.

2 | THEORY AND HYPOTHESES

2.1 | A deeper layer of the onion? Personality traits as an additional explanation of welfare attitudes

The formation of welfare state attitudes is a complex process. Established explanations can be broadly categorized in three groups: material self-interest, differential "sociological" or "political regime" socialization, and partisan ideology.

1. *Self-interest* explanations posit that individuals support those programmes that benefit them directly. Such theories have often been accused of ad hoc widening their definition of interest to include not just material net benefits but also certain social norms and altruistic, expressive, emotional, or psychological motivations (Spillman & Strand, 2013). It is easy to see how this may lead to tautology or circular reasoning: People do what they are observed to be doing; hence, it *must* serve their self-interest. We aim to nontautologically distinguish the explanatory power of psychological and self-interest motivations, as opposed to subsuming the former under the latter. As Satz and Ferejohn (1994, p. 72) point out, any explanatory power of interest-based explanations derives precisely "from structure-generated interests and not from actual individual psychology." We therefore adhere to a narrower conception of individual-level *material* self-interest. As applied to welfare attitudes, this means that individuals are held to evaluate positively those aspects of the welfare state from which they reap material gains. This in turn depends on individuals' position in the social structure and thus on whether they consume welfare goods and services or finance or produce them. Net recipients of particular welfare services, such as the elderly regarding pensions, the low-skilled regarding unemployment benefits, or young families regarding public childcare, are therefore more likely to favour those programmes, whereas net tax contributors are likely to have negative attitudes. Producers of welfare services, such as those working in public education, health care, and other social services, are also expected to display self-interested support for a larger welfare state (but see Tepe, 2012).
2. Differential *sociological socialization* arguments seek to explain welfare attitudes by means of the developmental processes by which children and adolescents acquire political cognition, attitudes, and behaviours (Powell 2003, p. 20). These experiences are expected to lead to different values and norms that explain welfare attitudes. Several indicators are proposed to describe the markers of differential socialization experiences, notably gender, education, and employment sector. Moreover, the impact of *political regime socialization* on political attitudes has received much attention in studies on democratic transitions (Tucker, Pacek, & Berinsky, 2002) and on policy feedback and welfare attitudes (Svallfors, 2010). From 1945 to 1990, East Germans lived under a socialist regime with heavy state intervention and extensive redistribution. Twenty years after the collapse of communism, this legacy is still present in the fact that East Germans, especially older ones, are more in favour of redistribution and state intervention than West Germans (Alesina & Fuchs-Schündeln, 2007; Svallfors, 2010).
3. *Partisan ideology* postulates that differences in political values explain individual welfare attitudes (Jost et al., 2009; Sears, Lau, Tyler, & Allen, 1980). The role and size of the state in providing welfare services is an issue that can clearly be attributed across the ideological positions of political parties (Goerres & Tepe, 2012). Leftwing governments generally advocate a larger role for the state in welfare provision than rightwing governments (Tepe & Vanhuysse, 2010).

We posit that compared with these three established explanations, (some) personality traits can offer an additional deeper "layer" explanation of welfare state attitudes. Personality traits capture more basic psychological foundations that influence how individuals generally perceive their environment and respond to the general political stimuli they encounter (Gerber et al., 2011, p. 269). Like the layers of an onion, social attitudes are similarly likely to be determined at different levels of psychological depth. Thus, rather than being exhaustive, various explanations of welfare attitudes (the onion) are also likely to operate at various levels (the layers). At a deep level, attitudes are psychologically rooted in personality traits, which are rigid and rather stable over time (Specht et al., 2011). Then follow early political regime experiences, which may affect the acquisition of a particular political ideology learnt early and which is also relatively rigid (Goerres and Tepe 2012, p. 7). Next, there are the differential socialization experiences, followed by material self-interest and partisan ideology, some of which is determined by one's position in the income distribution or age profile.

When personality traits enter the equation explaining welfare state attitudes, there are two distinct questions. First, do personality traits provide a distinct, value-added explanation of welfare attitudes? Second, how do they influence welfare state attitudes in specific contexts of social need? Welfare provision may be distinguished according to its recipients (e.g., the unemployed, the sick, the families, and the elderly) or its functional purpose

(e.g., insurance, redistribution, and social investment). We adopt the former approach, focusing on distinct social needs welfare states satisfy, as many real-world welfare programmes combine functional purposes.

Both for conceptual reasons and because of data availability constraints, we distinguish three types (or dimensions) of welfare state attitudes that operate on different layers: (1) Dissatisfaction with *social security in general*: These attitudes operate on a highly diffuse attitude level and capture a general sense of malaise or unhappiness with the welfare state. (2) Feeling *financially insecure* with respect to social needs catered for by specific welfare programmes: These attitudes are more closely related to a subjectively perceived issue salience. (3) Preferences for public (state) rather than private (market) provision of specific welfare state services. Because specific social policies cater for different forms of risk, we also study attitudes on the latter two attitude types in the context of various social needs: unemployment, ill health, old age, and need for nursing care for attitude types (2) and (3) and additionally family policy, childcare, and active labour market policy for attitude type (3).

As personality traits are believed to shape welfare state attitudes on a fundamental deep layer, the direct impact of personality traits may be stronger for (1) and (2) than for (3), as the latter—"state rather than market" preferences—are more political and therefore may be more strongly affected by the three established explanations. A full exploration of the multiple associations and potential dependencies between personality traits, self-interest, differential socialization experiences, and partisan attitudes goes beyond the scope of a single study, nor is there a consistent theoretical framework to do so. A theoretically more compelling and methodologically manageable question refers to the associations between neuroticism and various types of welfare attitudes, even after taking into account established explanations of welfare attitudes. Figure 1 presents our stylized theoretical model.

2.2 | Neuroticism's particular role in explaining welfare state attitudes

We expect neuroticism to be a particularly strong driver of welfare attitudes because of the very nature of what welfare states do—providing social security in various forms. Personality traits, however, may not have a singular effect but, rather, shape individual responses to a full range of stimuli (Gerber et al., 2011, p. 269). To the extent that these stimuli vary across contexts, the relationship between neuroticism and attitudes should vary too (Gerber et al., 2011, p. 283; Mondak and Halperin, 2008, p. 339). Examining contextual influences is therefore key (Rehm, Hacker, & Schlesinger, 2012). We do this by decomposing the effect of neuroticism on attitudes towards feelings of financial insecurity and the role of the state in welfare provision into various *areas of social need*: when sick, when unemployed, in old age, and when needing nursing care, and (where available) also help for families, for childcare, and for

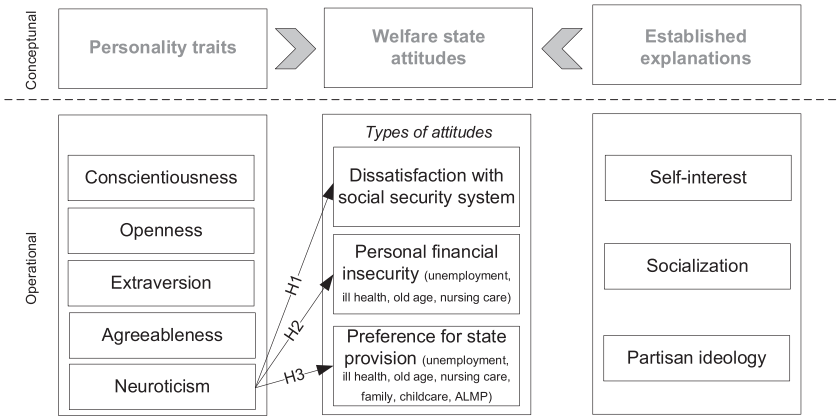


FIGURE 1 Stylized theoretical model

labour market activation. Thus, this study asks, what is the average association between neuroticism and need-specific types of welfare attitudes?

Individual-level insecurity perceptions and economic worries substantially and independently affect support for a greater state role in providing help and buffering across a number of the same risk domains we investigate (Hacker, Rehm, & Schlesinger, 2013).[4] As said, the connection between the greater insecurity perceptions of neurotics and the *insurance* function of welfare states is at the heart of our hypothesis that neuroticism is particularly relevant for welfare attitudes. For the same reason, we expect neuroticism not just to (a) matter more than the other Big Four for welfare attitudes but also to (b) matter more for attitudes related to general social security worries and domain-specific economic worries than for attitudes related to the mechanism of provision (states versus markets) and to (c) matter more for support for state provision of social compensation than of social investment dimensions (Busemeyer & Garritzmann, 2018). Regarding our three different types of welfare state attitudes, we therefore hypothesize (also see Figure 1):

H1: Subjects reporting higher levels of neuroticism are more likely to be *dissatisfied* with the social security system.

H2: Subjects reporting higher levels of neuroticism are more likely to feel *financially insecure* across the four contexts of social need.

H3: Subjects reporting higher levels of neuroticism are more likely to *favour public provision through compensation-oriented programmes* than through social investment-oriented programmes.

3 | DATA AND ESTIMATION STRATEGY

3.1 | Dependent and independent variables

We combine the GSOEP waves 2002 and 2005. Respondents were asked about their welfare state attitudes in 2002 and about their personality traits in 2005. Although the Big 5 Personality Inventory has been asked in SOEP waves 2005, 2008, and 2013, the item battery on welfare state preferences has only been asked in 2002 and 1997. To have the smallest possible temporal gap between survey waves, we append the Big 5 Personality Inventory 2005 to the 2002 wave, which includes the item battery on welfare state preferences and all other contextual measures (income, education, etc.). Because research indicates that the Big Five personality traits are quite stable through the life cycle (Caspi, Roberts, & Shiner, 2005; Costa & McCrae, 1992; Gosling, Rentfrow, & Swann, 2003) we copied the BFI-15 items into the 2002 wave of the GSOEP. Moreover, because personality traits tend to be overwhelmingly stable after age 25 (Schäfer, 2017; Specht et al., 2011), we adopt a conservative strategy and restrict our sample to include only those subjects aged between 25 and 65 at the time of data collection.

We measure welfare state attitudes with three different dependent variables. First, respondents were asked on an 11-point scale "How satisfied are you with … insurance for: health care, unemployment, pension, and nursing care i.e. the social security net?" (0 *very dissatisfied*, 10 *very satisfied*). The reversed scale is used to measure overall subjective *dissatisfaction* with the social security net. Second, respondents were asked on a 5-point scale "How financially secure are you in the following situations? …when sick…when unemployed…in old age…when needing nursing care" (1 *Very good*, 2 *Good*, 3 *Satisfactory*, 4 *Poor*, 5 *Bad*). These dependent variables show a strong tendency towards the middle "satisfactory" category. To contrast strong feelings of *financial insecurity* with moderate and strong feelings of security, we dichotomize the variable by grouping the last two answer categories together to represent individuals feeling financially insecure across the four welfare domains. Third, respondents were asked: "At present, a multitude of social services are provided not only by the state but also by private free market enterprises, organizations, associations, or private citizens. What is your opinion on this? Who should be responsible for the following areas?" We use the answers to four areas of social need: in case of, respectively, unemployment, illness, old age, and persons needing care. The answers are given on a scale of 1 to 5, which correspond to "only the state," "mostly the state," "state and

private forces," "mostly private forces," and "only private forces." Again, these variables show a strong tendency towards the "neutral" category, "state and private forces" (Nowlis, Kahn, & Dhar, 2002). We therefore chose to dichotomize the dependent variables by grouping the first two answer categories together to represent individuals with a strong preference for an active role of *the state* in providing welfare and by grouping the last three answer categories together as those without strong prostate preferences. The dummy coding also eases the interpretation of coefficients and probabilities obtained from binary logit regression models.[5]

The psychological literature has suggested various item batteries to measure the Big Five. Costa and McCrae's (1992) 240-item battery can be considered as the "gold standard" (Muck, Hell, & Gosling, 2007, 166). Because this battery is too lengthy for general population surveys, researchers have suggested to measure personality traits with 60-item (Costa & McCrae, 1992), 44-item (John & Srivastava, 1999), 10-item (Gosling et al., 2003) and even 5-item batteries (Woods & Hampson, 2005). The GSOEP 2005 includes the 15-item battery constructed by von Gerlitz and Schupp (2005), the so-called BFI-15. In contrast to Gosling et al.'s (2003) Ten-Item Personality Inventory, which introduces new adjectival items based on a review of the existing Big Five instruments, Gerlitz and Schupp (2005) selected three items for each dimension from the BFI-44 battery by Costa and McCrae (1992). The 15 items are rated on a 7-step scale ranging from 1 "Does not apply to me at all" to 7 "Applies to me perfectly." After recoding the reversed items (see Online Appendix Table S1), the three items measuring the same personality trait dimension are summarized in an additive index. So we end up with five additive indices capturing the Big Five.[6]

Material self-interest is measured with three variables: age, annual household income, and the occupational status. Differential sociological socialization is captured with the following markers: gender, marital status, employment sector, and education. What matters theoretically to test political regime socialization is where subject grew up *before* the fall of the Berlin Wall. We operationalize socialist/communist political regime socialization by drawing on the "impressionable years" hypothesis in public opinion research (Etchegaray, Scherman, & Valenzuela, 2019) and welfare state research (Goerres & Tepe, 2012), which states that the historical context experienced between the age of 15 and 25 years has a lasting effect on individual political attitudes. Our measure therefore captures whether a person lived in the GDR between the ages of 15 and 25. It takes the value 1 if a respondent lived in the GDR between the age of 15 and 25 and 0 if the respondent lived on West Germany or East Germany after reunification at that age. For those respondents who did not spend the entire impressionable years period in the GDR (either because the GDR had not yet been founded or because the GDR had already stopped to exist before the respondent turned 25), we calculated the fraction of years spend in the GDR in the impressionable years (variables take the values 0, .1, .2, […], .9, 1).

Partisan ideology is measured with an ideological left–right scale constructed from subjects' self-reported party preference. Unfortunately, the SOEP does not include a continuous left–right scale to measure subjects' self-reported ideological orientation. Instead, the SOEP includes a unique two-stage approach to measure subjects' partisan preference, first asking whether subjects prefer any party and then asking which party the prefer. On the basis of these two items, we construct a continuous left–right scale. Those supporting no party where coded 0 whereas those naming a specific political party where coded on the ideological left–right scale (Left = –3, Green = –2, SPD = –1, CDU/CSU = 1, FDP = 2, DVU = 3)[7] in line with previous research on party manifestos.[8]

3.2 | Estimation approach

We use OLS to estimate the effect of neuroticism and the other traits on respondents' dissatisfaction with the social security net, the first of our three dimensions of welfare state attitudes. For the second and third dimension, we estimate a series of binary probit models (Long & Freese, 2006) for the set of dependent variables measuring respondents' feelings of financial insecurity towards our four social need contexts and preferences for state provision in the same four contexts.[9] To assess the overall importance of personality traits to explain subjects' attitudes towards the welfare state on the three dimensions outlined above (dissatisfaction with social security, feeling financially insecure,

and favouring public provision), we estimated two model specifications for each dependent variable—a model that includes personality traits and a second model including personality traits and the full set of variables capturing established explanations. Due to sampling design, the GSOEP explicitly requires the use of weights; we use the cross-sectional weight for wave 2002.

4 | EMPIRICAL FINDINGS

To get a preliminary impression of the explanatory power of personality traits, we ran a series of models employing only the Big Five as explanatory variables (Table 1). In line with our main expectation, neuroticism appears to be the most dominant trait. Higher scores on this trait are associated with more general dissatisfaction with the social security system (Model 1). More neurotic respondents also feel more financially insecure across all four contexts of social need (Models 2–5). They also more strongly favour state responsibility across three of these four contexts of social compensation for social needs (nursing care excepted; Models 6–9) and for two contexts of social investment—family policies and active labour market policies (Models 10–12). This supports our initial expectation that neuroticism may be particularly useful in predicting a broad range of welfare attitudes, especially on compensatory policies. In addition, there are some mixed and partially inconsistent findings for the other personality traits. For instance, more agreeable respondents are less dissatisfied with the social security net and record significantly more prostate attitudes in the case of unemployment and ALMP, whereas more conscientious respondents prefer strong state involvement in old age and when in need of nursing care.

To explore whether personality traits make a further contribution to the explanation for welfare attitudes, the statistical models in Table 2 include the full set of variables accounting for the established explanations. In a first step, we test the overall capacity of personality traits in explaining welfare state attitudes, compared with the three established lines of explanations. At the bottom of Table 2, we therefore report results of the Wald test (for Model 1) and Likelihood-ratio test (Models 2–12), to evaluate the difference between specifications with and without personality traits. The Wald- and Likelihood-ratio test restricts the parameter for these variables to zero, asking whether leaving out personality traits significantly reduces the fit of the model. In 8 out of 12 models, personality traits improve the model fit significantly (Models 1–5, 7, 10, and 12), whereas in two more models (Models 8 and 11), the likelihood-ratio test slightly fails to reach conventional levels of statistical significance.

Among the established explanatory variables, we find the most consistent effects for household income across the three welfare state dimensions. Individuals in richer households generally tend to be less dissatisfied with the social security system and to feel less financially insecure and to have *less* prostate preferences across our different social need contexts. Self-employment and unemployment status, by contrast, are associated with higher dissatisfaction with the social security system and greater feelings of financial insecurity during unemployment and ill health, whereas self-employment status also leads a consistently lower preference for a state role in the contexts of ill health, old age, and need for nursing and family and childcare provision. There is a systematic socialist regime socialization effect. Respondents with a socialist regime socialization are more dissatisfied with the social security net, feel more financially insecure in three out of four needs contexts, and more strongly favour public provision in all six out of seven needs contexts. Whereas the finding on state support confirms previous results by Alesina and Fuchs-Schündeln (2007), the other two dimensions show that respondents with a socialist regime socialization show remarkable levels of dissatisfaction and insecurity. Partisan attitudes, on the other hand, matter mainly as regards preferences for state provision across four of our seven needs contexts.

To test whether the effect of those variables capturing self-interest and political ideology changes depending on whether the regression model accounts for respondents' personality traits, Table S10a,b reports the 12 models from Table 2 with and without the full set of personality traits (2×12 models). In addition, Table S10a,b reports test statistics for the cross-model hypothesis that the effect of log household income, age, and political ideology is significantly different in the model without personality traits compared with the model with personality traits. In total,

TABLE 1 Regressions without "established explanations"

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12
	Dissatisfaction with social security system	Personal financial insecurity…				Preference for state provision…						
	Unem-ployment		Ill health	Old age	Nursing care	Unem-ployment	Ill health	Old-age	Nursing care	Family	Childcare	ALMP
Conscientiousness	0.00019	0.013	−0.0087	0.012	0.024	−0.035	0.032	0.12**	0.082*	0.055	0.031	0.089
	[0.060]	[0.060]	[0.087]	[0.053]	[0.053]	[0.055]	[0.051]	[0.052]	[0.050]	[0.054]	[0.052]	[0.054]
Openness	−0.042	0.033	0.040	0.12**	0.070	−0.082	0.018	0.017	0.049	−0.060	−0.024	−0.14***
	[0.053]	[0.059]	[0.084]	[0.053]	[0.056]	[0.060]	[0.051]	[0.053]	[0.051]	[0.053]	[0.054]	[0.050]
Extraversion	0.074	0.031	−0.052	0.016	0.032	0.035	−0.0093	0.028	0.0094	0.053	0.090*	0.17***
	[0.058]	[0.055]	[0.064]	[0.052]	[0.053]	[0.057]	[0.050]	[0.052]	[0.051]	[0.053]	[0.051]	[0.053]
Agreeableness	−0.16***	−0.021	−0.033	0.051	0.063	0.12**	0.0013	0.014	0.036	0.016	−0.032	0.093*
	[0.057]	[0.056]	[0.083]	[0.052]	[0.054]	[0.054]	[0.049]	[0.051]	[0.049]	[0.052]	[0.052]	[0.051]
Neuroticism	0.13***	0.10**	0.26***	0.19***	0.19***	0.10**	0.19***	0.12***	0.045	0.16***	0.064	0.22***
	[0.049]	[0.052]	[0.068]	[0.047]	[0.049]	[0.050]	[0.046]	[0.046]	[0.045]	[0.048]	[0.046]	[0.047]
Constant	4.76***	−0.34***	−1.85***	−0.19***	0.20***	0.75***	−0.26***	−0.39***	−0.075*	−0.60***	−0.42***	−0.40***
	[0.049]	[0.051]	[0.068]	[0.047]	[0.048]	[0.050]	[0.046]	[0.046]	[0.045]	[0.047]	[0.046]	[0.046]
Observations	5,421	4,535	5,326	5,124	4,761	5,406	5,406	5,410	5,409	5,404	5,400	5,403
(Pseudo) R^2	0.0103	0.002	0.011	0.009	0.008	0.004	0.007	0.005	0.003	0.005	0.002	0.015

Note: Model 1 OLS regression, Models 2–12 Logit regressions. *p* values in brackets.
***Significant at, or below, 1%.
**Significant at, or below, 5%.
*Significant at, or below, 10%.

TABLE 2 Regressions with "established explanations"

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12
	Dissatisfaction with social security system	Personal financial insecurity…				Preference for state provision…						
		Unem-ployment	Ill health	Old-age	Nursing care	Unem-ployment	Ill health	Old-age	Nursing care	Family	Childcare	ALMP
Conscientiousness	−0.035	0.0061	−0.014	0.035	0.035	−0.064	0.011	0.12**	0.083	0.049	0.0080	0.078
	[0.551]	[0.921]	[0.870]	[0.532]	[0.529]	[0.255]	[0.838]	[0.024]	[0.111]	[0.384]	[0.880]	[0.170]
Openness	−0.026	0.037	0.076	0.15***	0.080	−0.048	0.054	0.058	0.080	−0.025	0.016	−0.090*
	[0.631]	[0.523]	[0.315]	[0.009]	[0.178]	[0.439]	[0.301]	[0.293]	[0.136]	[0.642]	[0.769]	[0.075]
Extraversion	0.056	−0.0020	−0.080	−0.045	−0.014	0.0049	−0.035	0.013	0.0033	0.024	0.098*	0.12**
	[0.301]	[0.971]	[0.203]	[0.418]	[0.799]	[0.933]	[0.501]	[0.801]	[0.949]	[0.653]	[0.052]	[0.018]
Agreeableness	−0.16***	−0.038	−0.058	0.032	0.011	0.084	−0.046	−0.012	0.015	−0.016	−0.019	0.049
	[0.006]	[0.497]	[0.468]	[0.569]	[0.851]	[0.135]	[0.376]	[0.815]	[0.772]	[0.768]	[0.717]	[0.353]
Neuroticism	0.12**	0.067	0.19***	0.17***	0.13**	0.040	0.12**	0.071	0.022	0.13***	0.077	0.13***
	[0.021]	[0.207]	[0.004]	[0.001]	[0.014]	[0.433]	[0.016]	[0.134]	[0.636]	[0.009]	[0.111]	[0.007]
Soc. regime socialization	0.51***	0.42***	0.25	0.59***	0.49***	0.67***	0.45***	0.57***	0.16	0.68***	0.35***	0.34***
	[0.000]	[0.001]	[0.112]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.148]	[0.000]	[0.001]	[0.002]
Age	−0.0037	0.0045	0.016**	−0.021***	−0.0040	−0.0069	−0.0068	−0.0093*	−0.012**	−0.021***	−0.0058	−0.0069
	[0.472]	[0.461]	[0.043]	[0.000]	[0.489]	[0.252]	[0.210]	[0.095]	[0.027]	[0.000]	[0.291]	[0.213]
College	−0.28	−0.18	−0.32	−0.40	−0.63**	−0.51	−0.61**	−0.77***	−0.27	−0.011	−0.23	−0.48*
	[0.358]	[0.532]	[0.363]	[0.201]	[0.035]	[0.126]	[0.026]	[0.006]	[0.329]	[0.970]	[0.417]	[0.080]
Vocational training	−0.19	−0.047	−0.079	−0.38	−0.47*	−0.27	−0.31	−0.53**	−0.068	−0.14	−0.031	0.14
	[0.507]	[0.860]	[0.798]	[0.199]	[0.091]	[0.388]	[0.219]	[0.037]	[0.793]	[0.574]	[0.908]	[0.583]
Secondary schooling	−0.49	0.48	−0.25	−0.34	−0.44	−0.63	−1.00***	−0.92**	−0.75**	−0.59*	−0.081	−0.29
	[0.228]	[0.245]	[0.565]	[0.387]	[0.247]	[0.100]	[0.003]	[0.010]	[0.025]	[0.100]	[0.818]	[0.393]
Intermediate schooling	−0.24	0.084	0.34	−0.20	−0.52*	−0.014	−0.16	−0.41	−0.16	0.012	0.14	0.36
	[0.455]	[0.783]	[0.323]	[0.543]	[0.097]	[0.967]	[0.571]	[0.156]	[0.593]	[0.968]	[0.647]	[0.205]

TABLE 2 (Continued)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12
	Dissatisfaction with social security system	Personal financial insecurity…				Preference for state provision…						
		Unem-ployment	Ill health	Old-age	Nursing care	Unem-ployment	Ill health	Old-age	Nursing care	Family	Childcare	ALMP
Male	0.038	−0.11	−0.10	0.016	−0.17	−0.087	−0.25**	−0.11	0.10	0.0055	0.27***	−0.37***
	[0.718]	[0.328]	[0.480]	[0.883]	[0.110]	[0.450]	[0.014]	[0.299]	[0.318]	[0.958]	[0.009]	[0.000]
Married	0.035	0.035	−0.27	−0.25*	−0.15	0.20	0.27*	0.036	0.26*	0.12	0.24	0.099
	[0.801]	[0.826]	[0.192]	[0.093]	[0.341]	[0.214]	[0.063]	[0.806]	[0.072]	[0.407]	[0.107]	[0.507]
Divorced	0.31*	0.37*	0.55**	0.32	0.12	0.31	0.15	−0.036	0.12	0.17	0.42**	0.22
	[0.090]	[0.077]	[0.033]	[0.106]	[0.537]	[0.141]	[0.421]	[0.847]	[0.522]	[0.362]	[0.025]	[0.254]
Married but separated	0.68	−0.10	−0.18	0.38	0.15	0.46	−0.39	0.12	0.092	−0.065	−0.17	−0.47
	[0.177]	[0.750]	[0.626]	[0.241]	[0.653]	[0.186]	[0.197]	[0.726]	[0.806]	[0.846]	[0.552]	[0.207]
Widowed	0.26	0.36	−0.18	−0.28	−0.049	0.24	−0.012	−0.31	0.45	0.47	0.24	−0.0074
	[0.544]	[0.399]	[0.713]	[0.499]	[0.910]	[0.574]	[0.974]	[0.454]	[0.233]	[0.216]	[0.555]	[0.985]
LR partisan	0.032	0.012	0.18**	−0.0029	−0.041	0.016	−0.082*	−0.090*	−0.18***	−0.082*	0.0077	0.0066
	[0.540]	[0.825]	[0.015]	[0.952]	[0.409]	[0.767]	[0.094]	[0.069]	[0.000]	[0.092]	[0.874]	[0.896]
Log household income	−0.22**	−0.33***	−0.26**	−0.23**	−0.31**	−0.20	−0.31***	−0.20*	−0.27***	−0.17*	−0.014	−0.31***
	[0.041]	[0.002]	[0.043]	[0.043]	[0.026]	[0.104]	[0.009]	[0.054]	[0.001]	[0.077]	[0.874]	[0.000]
Self-employed	0.75***	1.66***	0.67***	0.15	0.042	−0.21	−0.38*	−0.61**	−0.40*	−0.48**	−0.48**	−0.17
	[0.000]	[0.000]	[0.008]	[0.447]	[0.838]	[0.323]	[0.084]	[0.011]	[0.061]	[0.041]	[0.026]	[0.416]
White collar worker	0.061	−0.022	0.089	0.24*	0.41***	0.17	0.034	−0.23*	−0.17	−0.056	−0.20	−0.30**
	[0.565]	[0.870]	[0.618]	[0.053]	[0.001]	[0.190]	[0.776]	[0.054]	[0.151]	[0.651]	[0.105]	[0.014]
Unemployed	0.35*	0.43**	0.77***	0.76***	0.39*	0.31	0.19	−0.046	−0.15	−0.046	−0.25	−0.071
	[0.092]	[0.028]	[0.002]	[0.000]	[0.079]	[0.158]	[0.303]	[0.807]	[0.426]	[0.808]	[0.212]	[0.726]
Maternity	−0.036	0.42	0.60*	0.59*	1.02***	0.42	−0.31	−0.029	−0.074	0.23	0.047	0.054
	[0.909]	[0.171]	[0.099]	[0.053]	[0.001]	[0.172]	[0.321]	[0.924]	[0.802]	[0.457]	[0.880]	[0.846]

(Continues)

TABLE 2 (Continued)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12
	Dissatisfaction with social security system	Personal financial insecurity…				Preference for state provision…						
		Unem-ployment	Ill health	Old-age	Nursing care	Unem-ployment	Ill health	Old-age	Nursing care	Family	Childcare	ALMP
Non-working	−0.17	−0.077	0.021	−0.040	−0.018	−0.053	−0.14	−0.088	−0.0027	0.18	−0.13	−0.14
	[0.435]	[0.773]	[0.940]	[0.843]	[0.929]	[0.788]	[0.429]	[0.630]	[0.988]	[0.320]	[0.461]	[0.441]
Training	−0.73*	−0.42	0.48	0.14	−0.12	0.39	0.91***	0.74**	0.50	−0.15	−0.13	0.31
	[0.096]	[0.306]	[0.251]	[0.767]	[0.807]	[0.307]	[0.003]	[0.023]	[0.116]	[0.667]	[0.691]	[0.381]
Other nonworking	−0.085	−0.11	0.035	0.85***	0.89***	0.36	−0.22	−0.55*	−0.35	0.47	−0.44	0.30
	[0.842]	[0.746]	[0.922]	[0.008]	[0.004]	[0.321]	[0.436]	[0.091]	[0.235]	[0.145]	[0.153]	[0.307]
Constant	7.18***	2.63**	0.075	3.22***	3.91***	3.07**	3.40***	2.63**	3.14***	1.94*	−0.21	3.25***
	[0.000]	[0.013]	[0.954]	[0.006]	[0.006]	[0.014]	[0.005]	[0.012]	[0.000]	[0.058]	[0.821]	[0.000]
Observations	5,421	4,535	5,326	5,124	4,761	5,406	5,406	5,410	5,409	5,404	5,400	5,403
(pseudo) R-squared	0.044	0.052	0.059	0.053	0.041	0.028	0.035	0.034	0.023	0.032	0.017	0.052
(pseudo) R-squared without big five	0.033	0.051	0.051	0.046	0.038	0.026	0.032	0.030	0.020	0.029	0.014	0.046
Wald / LR test	15.23***[0.00]	14.02*** [0.02]	28.04*** [0.00]	23.95 [0.00]	24.81*** [0.00]	7.67 [0.18]	17.68** [0.01]	9.13 [0.11]	8.86 [0.14]	22.43*** [0.00]	8.39 [0.14]	27.20*** [0.00]

Notes: Model 1 OLS regression, Models 2–12 Logit regressions. Wald = Wald test on the five personality traits (for Model 1); LR = Likelihood-ratio test on the five personality traits (for Models 2–12). *p* values in brackets.

***Significant at, or below, 1%.

**Significant at, or below, 5%.

*Significant at, or below, 10%.

these auxiliary regressions show that previous findings on the effect of self-interest and political ideology on welfare state attitudes are rather robust towards the inclusion of personality traits. In other words, the effects of log household income, age, and ideology reported in previous regressions of welfare state attitudes are likely not to be flawed or biased by the fact that personality traits were not included. In technical terms, personality traits explain parts of the variance in subjects' welfare state attitudes that is not captured by self-interest or political orientation. In substantive terms, these results suggest that personality traits provide an additional explanation of welfare state attitudes, rather than a rival or conflicting explanation.

Next, we turn attention to the empirical findings regarding the central research question: How is neuroticism associated with the three dimensions of welfare state attitudes? Findings from Table 1 on neuroticism are largely confirmed in the full control models of Table 2 only for our first two welfare state dimensions—dissatisfaction with social security and feelings of personal financial insecurity. For instance, even after controlling for income and education, neurotic people are more dissatisfied with the social security system and feel more financially insecure when sick, when old, and when in need of nursing care (though not when unemployed) than less neurotic individuals. But with the exception of one compensation policy (ill health) and two social investment policies (family and active labour market help), the effect of neuroticism actually disappears now for all other needs contexts in the fully specified models on public provision. The positive effect of neuroticism on public health care provision may be because this is a service everyone needs and which caters for a risk that is spread throughout the entire population. In this case, the deservingness heuristic is likely to be particularly powerful as compared with policy fields such as unemployment, old age, and nursing care, where risk is likely to be more concentrated.

We know that individual insecurity and worries substantially and independently affect support for a greater state role in providing help and buffering across a number of risk domains (Hacker et al., 2013; Rehm et al., 2012). Moreover, these worries themselves are strongly related to actual exposure to substantial economic shocks (Hacker et al., 2013). Similarly, individuals exposed to social risks may oppose benefits and services from which they do not benefit, making self-interest effects more salient. The effect of neuroticism could therefore be moderated by self-interest, making the effect of neuroticism on policy attitudes risk specific.[10] Although we have no data on the incidence of domain-specific risk and worries of the kind used by Rehm et al. (2012), Figures S1–S3 visualize how the effect of income on, respectively, dissatisfaction with the welfare state, feelings of financial insecurity, and preference for state provision is conditioned by neuroticism. Such interaction effects with income are clear, and varied, in certain cases. For instance, whereas there is essentially no such effect for low or medium neurotic people, highly neurotic people on *low* incomes are especially likely to be strongly dissatisfied with the social security system. On the other hand, when it comes to support old age and unemployment risk, it is lowly neurotic people on low incomes, who are especially likely favour state provision.

Findings on the other four traits, on which we were theoretically agnostic, are more haphazard (if often plausible post hoc). For instance, agreeableness decreases general dissatisfaction with the social security system and increases preference for state provision of unemployment benefits, whereas more conscientious subjects are more strongly in favour of state provision in old age.

In order to ease the interpretation of regression results and compare effects between traits, Figures 2–4 show marginal effect plots comparing the effect of personality traits in the models with (Table 2) and without (Table 1) the full set of control variables from the OLS and binary logit models. Higher levels of neuroticism increase (and higher levels of agreeableness decrease) dissatisfaction with the social security system in both sets of models (Figure 2). None of the other four personality traits exerts a systematic association with feeling financially insecure. But higher levels of neuroticism are associated with financial insecurity feelings across three of these four social need contexts (Figure 3). Remarkably, neuroticism's marginal effect does not even decrease in models with a full set of control variables accounting for established explanations of welfare attitudes. This indicates that neuroticism exerts a unique and robust effect on respondents' financial insecurity in three contexts of social need. This trait's substantive effects of neuroticism are large too, generally larger, for instance, than those of education, gender, socialist regime socialization, and marriage status, and partisan ideology.

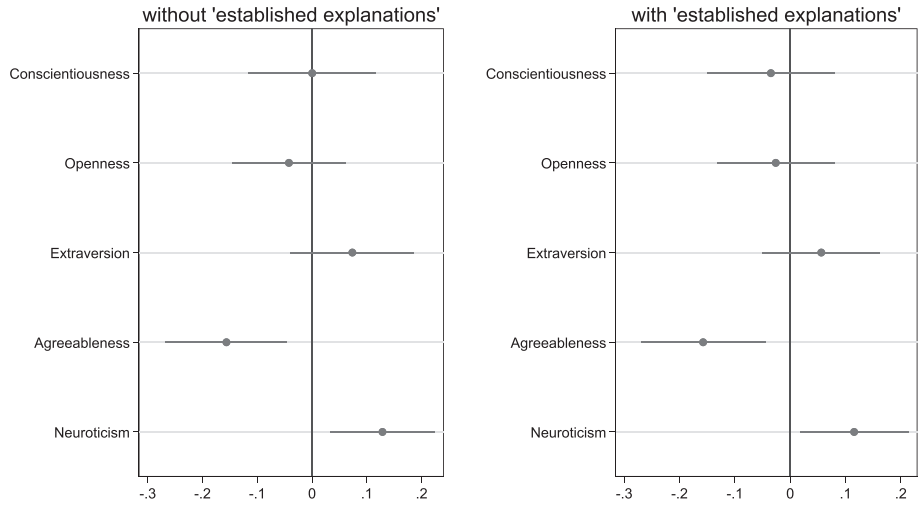


FIGURE 2 Dissatisfaction with social security system. Note: Based on OLS Models 1 in Tables 1 and 2. *X*-axis represents average marginal effects with 90% confidence intervals

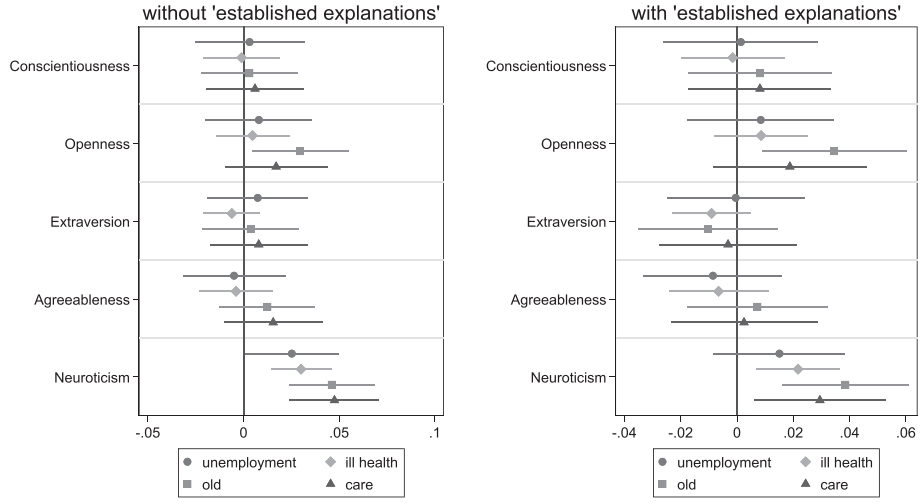


FIGURE 3 Feeling financially insecure. Note: Based on logit Models 2–5 in Tables 1 and 2. *X*-axis represents average marginal effects with 90% confidence intervals

To evaluate the substantive effect of neuroticism, in particular compared with the established explanations in Models 2–12 from Table 2, we used the *prchange* command from the SPost Package (v13) by Long and Freese (2006) to calculate the change in predicted probabilities if neuroticism resp. other explanatory variables increases from its minimum to its maximum (see Table S4). If neuroticism increases from its minimum to its maximum, the probability of feeling financially insecure when in ill health, old age, and nursing care need increases by, respectively, 11, 21, and 16 percentage points, whereas the probability of favouring public provision in the domain of ill health, family, and ALMP increases by, respectively, 15, 16, and 16 points. Compared with effect of income (a proxy for self-interest), these effects are small. If the log household income increases from its minimum to its maximum, the probability of feeling financially insecure decreases by 66 (unemployment), 43 (ill health), 51 (old age), and 52 (nursing care)

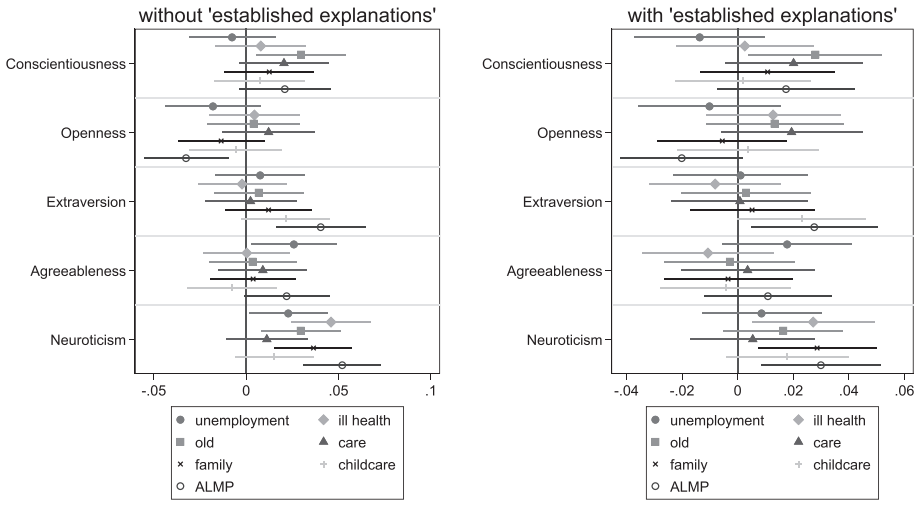
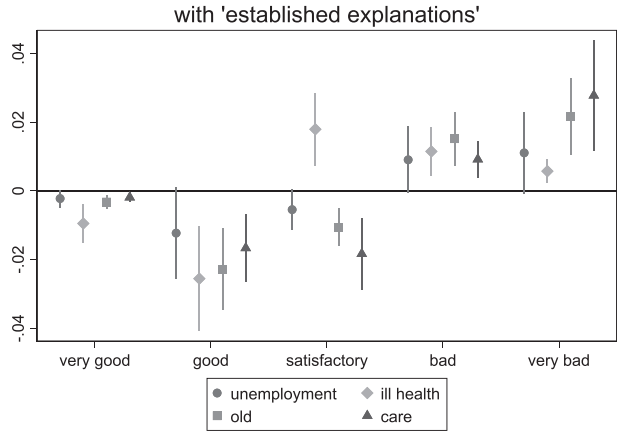


FIGURE 4 Favouring public provision. Note: Based on logit Models 6–12 in Tables 1 and 2. *X*-axis represents average marginal effects with 90% confidence intervals

FIGURE 5 Feeling financially insecure (for neuroticism). Note: Based on ordered logit Models 2–5 in Table S3 (with "established explanations"). *Y*-axis represents average marginal effects with 90% confidence intervals



points, the probability of favouring public provision decreases by 63 (ill health), 46 (old age), 55 (nursing care), 41 (family), and 65 (ALMP) percentage points. But compared with partisan ideology, a major driver in many political economy explanations, and differential socialization, in particular socialist regime socialization, the substantive effect of neuroticism is of equal size or even stronger.

Figure 4 shows that none of the other personality traits systematically exerts a statistically significant association with respondents' preference for state provision but neither does neuroticism, except in the case of ill health, family provision, and childcare provision. To explore in further depth whether neuroticism as a construct matters, or only some of its subdimensions, we reestimate Table 2 using the three subitems that are used to construct the neuroticism index. The "worries a lot" item matters more than "deals well with stress" and "somewhat nervous" but does not matter exclusively (see Table S6).

As part of the robustness analysis, we have reestimated the logit model presented in Table 2 using an ordered logit estimator (Table S3). This has the advantage that we do not have to dichotomize the dependent variables. Because the representation of marginal mean effects from ordered logit models becomes more complex, Figures 5 and 6 focus on the marginal mean effect of neuroticism. Neuroticism increases the chance that respondents consider

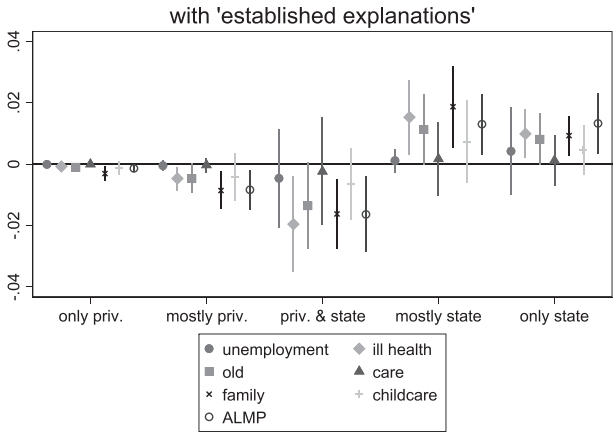


FIGURE 6 Favouring public provision (for neuroticism). Note: Based on ordered logit Models 6–12 in Table S3 (with "established explanations"). *Y*-axis represents average marginal effects with 90% confidence intervals

their financial security as bad or very bad in ill health, old age, and care (Figure 5) and that they mostly or only prefer state provision in ill health, family, and ALMP (Figure 6). All in all, these auxiliary analyses confirm the previously found pattern on the relationship between neuroticism and types of welfare attitudes in different need context.

5 | CONCLUSIONS AND DISCUSSION

Personality traits can add to established approaches in explaining key welfare attitudes. Precisely because welfare states deliver a degree of social security (insurance) and social safety (assistance), we proposed that neuroticism could be a particularly important driver of welfare state attitudes. We hypothesized that more worrying, nervous, and stressed respondents would be likely to be simultaneously more unhappy with the system (H1) and more financially insecure in various contexts of social need (H2) and more in favour of state provision especially compensation type programmes (H3). We found that taking this personality trait into account significantly improves model fit for explaining general dissatisfaction with the social security system and feelings of financial insecurity, though not for explaining attitudes towards the form of welfare provision (public vs. private).

Although empirical support for H3 was weak, we have found that neuroticism increases general dissatisfaction with the social security system and subjective financial insecurity across three different needs contexts. Neurotic people are thus less happy with welfare state programmes across the board, yet they *also* appear to need these programmes more. This by and large supports the first two hypotheses. These results hold even after controlling for a large range of variables capturing alternative explanations of attitudes, such as self-interest, socialization, and partisan ideology. In other words, neuroticism explains some part of the variance in these two types of welfare state attitudes that has not been captured with previous self-interest variables or political orientation. Although neuroticism is thus related to feelings of financial insecurity and general dissatisfaction, interestingly, these fears do not systematically translate into preferences for state provision. When it comes to the question of whether welfare services should be provided by the state or the market, the effect of self-interest and partisan ideology tends to superimpose that of personality traits.

This article has admittedly provided only the starting point for a more rigorous analysis of neuroticism in social attitudes research. Future research might study more specifically the role of personality traits in the context of welfare state reform, as "openness," for example, could be expected to play a key role for reform support. Similarly, although we have shown that personality traits can provide an additional, rather than rival, explanation of citizens' welfare attitudes (an independent extra layer of the onion), the next step would be to think more seriously about the *moderating* effect of personality on welfare state attitudes. Personality traits might moderate how the experience of,

for instance, having unemployed parents during the impressionable years, lastingly affects welfare state attitudes. Another, methodologically challenging, next step would be to explore the causal pathways through which neuroticism or other personality traits and welfare programme stimuli (e.g., unemployment and medical treatment) shape need-specific welfare state preferences.

The evidence presented here makes us confident about the theoretical potential for future in-depth explorations of the added value of neuroticism in particular. For instance, our finding that neuroticism is coupled with dissatisfaction with the social security net and financial insecurity might be particularly valuable in political campaigning and targeted political communication. Youyou et al. (2015) show that a deep learning algorithm applied to a generic digital footprint (Facebook "likes") offers a more accurate prediction of subjects' personality than a questionnaire filled out by the participants' "real" Facebook friends. In the wake of automated scraping and analysing of digital footprints (cf. the Cambridge Analytica scandal[11]), future research might explore how knowledge about the linkage between neuroticism and welfare state attitudes can be (ab)used to send customized political messages to voters. Similarly, neuroticism seems relevant in the context of the manipulation of fear in contemporary populist politics and the "welfare chauvinism" platforms by extreme rightwing parties. Our findings lead us to speculate that neurotic voters may be a key target group for such parties. For now, our results strengthen the argument that if welfare attitudes resemble a multilayered onion to be unpeeled layer by layer, neuroticism can be fruitfully considered as a deeper level layer.

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CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

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ENDNOTES

[1] For further evidence that the Big Five personality traits have some genetic basis, see Plomin, DeFries, McClearn, and McGuffin (1990); but see Boyce et al. (2013). Some scholars find evidence of more than five trait dimensions (Ashton & Lee, 2005) or fewer dimensions (Musek, 2007). Other components of personality, such as values, interests, and self-concepts, are considered to be variable over the life cycle (McAdams & Pals, 2006).

[2] A highly controversial exception is Perkins (2016, p. 18), who claims that the welfare state induces a misdevelopment of the personality of welfare claimants. Perkins (2016, p. 2, 19) alleges that "the welfare state (…) risks increasing the number of citizens who develop an aggressive, antisocial and rule-breaking personality profile" and increases the number of citizens with an "employment-resistant personality," characterized by low conscientiousness and agreeableness.

[3] People scoring high on openness, for instance, are more likely to favor new forms of government involvement in the economy, to support left and/or socially liberal parties, and to record higher levels of political participation (Mondak & Halperin, 2008; Schoen & Schumann, 2007; Gerber et al., 2011). Openness appears to matter for economic policy attitudes, at least among the more engaged (Malka et al., 2017). But the role of this trait for welfare attitudes is harder to hypothesize in a non-ad hoc way. Because openness refers to how persons cope and respond to novel stimuli in their lives, its association with welfare attitudes might depend on whether the entitlement or use of certain welfare services is seen as representing a novelty. Extraversion in turn is weakly associated with higher turnout (Gerber et al., 2011, pp. 269, 274) and socially liberal parties (Schoen & Schumann, 2007). But we have no theoretical expectations about how more talkative, sociable, and pro-active individuals might differ from others in their welfare attitudes. By contrast, agreeableness has been found to lead to higher preferences for left-wing policies (Bakker, 2017; Gerber et al., 2010). By

virtue of what it captures—a propensity to care, trust and cooperate—it could also be expected to increase general satisfaction with the welfare state and support for state provision, if perhaps not necessarily feelings of personal insecurity.

[4] Moreover, support for (compensation-type) policies such as unemployment insurance tends to decrease, where there is a greater *correlation* between insecurity (risk) and disadvantage (income; Rehm et al., 2012).

[5] Not dichotomizing the dependent variables and using an ordered logit model instead does not alter any of the findings reported for the effect of personality traits. See Appendix Tables S2 and S3.

[6] Alternatively, we have conducted five principal component factor analyses; one for each trait dimension. In each instance, the principal component factor analyses revealed the three items per trait dimension entail a single factor. Using these factors instead of the additive indices does not alter any of the substantive results (see Appendix Table S8, also see Appendix Table S9).

[7] As an extremist rightwing party, the DVU might not be properly placed on the ideological left–right scale. Hence, as part of the robustness analysis, we excluded DVU voters from the sample. This does not alter any substantive findings.

[8] Because the assignment of parties on this continuous scale may not entirely non-arbitrary, we reestimated Table 2 including a full set of dummy variables for political parties. Subjects that report to have no party preference serve as the reference category. Using this specification, reported in Appendix Table S7, does not alter any results.

[9] Binary logit has been used to ease the interpretation of coefficients and the graphical representation of estimation results. As part of the robustness analysis, all binary logit models have been reestimated using an ordered logit model specification, which allows us not to dichotomize the dependent variables. This does not alter any of the findings reported in Tables 1 and 2. Estimation results from the ordered logit models are represented in Appendix Tables S2 and S3.

[10] We are grateful to our reviewers for pointing this out.

[11] The Cambridge Analytica scandal in the aftermath of the 2016 Brexit referendum and the 2016 U.S. presidential election revealed that voters' personality traits had been extracted from their social media accounts and used for the targeting of political campaign massages.

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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section at the end of this article.

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