



<http://www.diva-portal.org>

Postprint

This is the accepted version of a paper published in *Personality and Individual Differences*. This paper has been peer-reviewed but does not include the final publisher proof-corrections or journal pagination.

Citation for the original published paper (version of record):

Bergh, R., Akrami, N. (2016)

Are non-agreeable individuals prejudiced?: Comparing different conceptualizations of agreeableness

Personality and Individual Differences, 101: 153-159

<https://doi.org/10.1016/j.paid.2016.05.052>

Access to the published version may require subscription.

N.B. When citing this work, cite the original published paper.

Permanent link to this version:

<http://urn.kb.se/resolve?urn=urn:nbn:se:uu:diva-305327>

- 1 This is the accepted draft for the published article. Citation and authoritative version:
- 2 Bergh, R., & Akrami, N. (2016). Are non-agreeable individuals prejudiced? Comparing
3 different conceptualizations of agreeableness. *Personality and Individual Differences*, 101.
4 <https://doi.org/10.1016/j.paid.2016.05.052>
- 5 © <2016>. This manuscript version is made available under the CC-BY-NC-ND 4.0
6 license [https://creativecommons.org/licenses/by-nc-nd/4.0/\(opens in new tab/window\)](https://creativecommons.org/licenses/by-nc-nd/4.0/(opens in new tab/window))

Are Non-agreeable Individuals Prejudiced?

Comparing Different Conceptualizations of Agreeableness

Robin Bergh^{1, 2}, Nazar Akrami²

¹Harvard University

²Uppsala University

Author Note

Robin Bergh, Department of Psychology, Harvard University, and Department of Psychology, Uppsala University; Nazar Akrami, Department of Psychology, Uppsala University. The Swedish Research Council (#437-2014-231 and #2011-1891) supported this research by grants to Robin Bergh and Nazar Akrami. Address correspondence to Robin Bergh, Department of Psychology, Harvard University, William James Hall, 33 Kirkland Street, Cambridge, MA 02138. E-mail: rbergh@fas.harvard.edu.

Abstract

Previous research has documented associations between prejudice and agreeableness, as well as openness to experience, from the five-factor model (FFM). Still, empathy/altruism and narcissism/honesty-humility are related traits and also potent predictors of prejudice. Thus, we examined whether there is an association between prejudice and agreeableness, as a global trait, or if the correlations depend on facets that are part of the broader FFM factor, but belong to other dimensions in the HEXACO model. We further analyzed how well the documented relations of agreeableness on prejudice hold up when entered alongside empathy/altruism and honesty-humility within the HEXACO framework. Results from Sweden and the United States showed that only FFM agreeableness, and not the HEXACO counterpart, correlates with an index of prejudice (racism and sexism). Furthermore, the negative relations of FFM agreeableness were absent or reversed in regression analyses with the other HEXACO predictors. Instead, we found negative effects of honesty-humility and empathy/altruism on prejudice. Thus, the effect of agreeableness on prejudice is directly contingent on its definition in relation to honesty-humility and empathy/altruism. In conclusion, we found little evidence of an association between a global agreeableness trait and prejudice.

Keywords: Prejudice, HEXACO personality, agreeableness, five-factor model

1. Introduction

It is a long-lived debate if personal characteristics make certain individuals more prone to prejudice than others. Some scholars dismiss that notion as erroneous altogether (e.g., Reynolds, Turner, Haslam, & Ryan, 2001), but this has not stopped others from compiling a

long list of individual difference variables that are related to prejudice. As reviewed by Hodson and Dhont (2015), this list includes (but is not limited to) authoritarianism (+ relation), religiosity (+), social dominance (+), system justification (+), self-enhancement values (+), agreeableness (−), low need for cognition (−), intelligence (−), and openness (−). Yet, a list like this inevitably raises a fundamental question: What are the interrelations between these predictive variables, and is there a way to organize them to make sure that we are not merely re-packaging old wine in new bottles?

One way to address that concern is to work with well-established personality models where surface traits are nested expressions of a limited number of core (/basic/global) traits (e.g., Paunonen, 1998). Agreeableness and openness fit the description of basic traits, and they represent two principle axes in the five-factor model of personality (FFM; e.g., McCrae, & Costa, 1999). Both of these factors have been found to be associated with so-called generalized prejudice, capturing the communalities in biases toward disadvantaged and/or dissident groups (e.g., Bergh, Akrami, Sidanius, & Sibley, in press; Sibley & Duckitt, 2008). More broadly, the existence of such tendencies initiated the very endeavor of linking prejudice to personality differences, because it suggested that some individuals carry bias with them, from one group context to another (Adorno, Frenkel-Brunswick, Levinson, & Sanford, 1950; Allport, 1954). Contemporary research shows that narrower constructs, conceptually closer to the outcome attitudes (authoritarianism and social dominance), represent intermediate variables by which agreeableness and openness influence prejudice (e.g., Ekehammar, Akrami, Gylje, & Zakrisson, 2004; Duckitt & Sibley, in press).

Despite these relations between FFM factors and prejudice, there are some dispositions related to prejudice that do not fit neatly within agreeableness and openness, and they also have less of an attitude flavor than authoritarianism and social dominance (e.g., empathic concern; McFarland, 2010). When such characteristics are modeled as part of

agreeableness (as typically done in the FFM), they introduce the question of whether there is a global relationship between this factor and prejudice.

1.1. Agreeableness, Openness, and Prejudice

Ekehammar and Akrami (2003) provided initial data on the associations of all the FFM factors with prejudice. Using the NEO-PI-R instrument, the results disclosed substantial associations for agreeableness and openness. Sibley and Duckitt (2008) corroborated that conclusion in a meta-analysis, but they also examined to what extent these associations vary with the operationalization of the FFM factors. Importantly, if the effects were global, then the exact item content should not matter much (for a broader discussion on this topic, see Vainik, Mõttus, Allik, Esko, & Realo, 2015). However, Sibley and Duckitt (2008) found that the so-called NEO operationalization of FFM agreeableness and openness (McCrae & Costa, 1997), and particularly the one with facets (NEO-PI-R), showed substantially stronger relations with prejudice than the Big-Five Inventory (BFI; see John, & Srivastava, 1999). Specifically, the correlations with prejudice for the NEO-PI-R variables were around .40. In contrast, the openness effect was .15 with the BFI, and only .10 for agreeableness. On the other hand, the differences could also be due to basic methodological issues, such as statement wording and the reliability of the instrument. In this paper we sought to compare two instruments that are similar in style – the NEO-PI-R and HEXACO-PI-R – but critically differing in the conceptual breadth of agreeableness.

Below the factor level, Ekehammar and Akrami (2007) showed that it is particularly the tender-mindedness within the agreeableness and the value aspect of openness that reveal the strongest facet relations with prejudice. In the case of openness this has, in part, been described as a method artifact, as reflecting content overlap between the values facet and authoritarianism (e.g., Jugert, Cohrs, & Duckitt, 2009). For example, the value facet asks whether religious authorities should guide moral judgments, and this is a central theme in

assessments of authoritarianism (see e.g., Altemeyer, 1998). Still, whereas Ekehammar and Akrami (2007), as well as Jugert et al., (2009), showed that the value items are likely to overestimate the relation of openness with prejudice and authoritarianism, both papers documented overall associations, aside from the most predictive items and facets. For agreeableness, however, it remains an unexplored question if there is any global relation, or if the associations only hold for certain aspects of the factor.

1.2. Beyond Agreeableness and Openness: The Role of Empathy and the Dark Triad

Empathy and the dark personality triad (Machiavellianism, narcissism, psychopathy; Paulhus & Williams, 2002) are both associated with agreeableness, but they do not load neatly onto that factor with the FFM (Ashton & Lee, 2007). More importantly, both empathic concern and the dark triad variables render agreeableness unrelated to prejudice, when entered together in regression analyses (see Hodson, Hogg, & MacInnis, 2009; McFarland, 2010). This provides yet another cue that the global trait of agreeableness is less important for understanding prejudiced attitudes, as compared to specific traits that fall in between agreeableness and other FFM factors.

1.3. The HEXACO Model and Prejudice

Ashton and Lee (2007) noted that the lexical data that paved the way for the FMM indicates a six-dimensional structure in at least a dozen languages. In their model, three of the factors have a similar meaning as in the FFM (extraversion, conscientiousness and openness/intellect). However, for the remainder of the personality gamut they proposed a re-organization of specific characteristics that would result in narrower neuroticism and agreeableness factors, and the emergence of a sixth factor – honesty-humility. Honesty-humility includes characteristics such as sincerity and fairness (the honesty part), as well as unpretentiousness and a lack of greed (the humility part; Ashton & Lee, 2007).

What is most important for our current purposes is exactly what differs between the HEXACO conceptualization of agreeableness factor, as compared to the FFM version. Specifically, characteristics dealing with sympathy, soft-heartedness, and generosity are no longer defining agreeableness in the HEXACO model, but rather an interstitial facet discussed as altruism (whereas aspects such as fairness load more firmly on honesty-humility). The altruism facet is described as positioned in between agreeableness, emotionality and honesty-humility (Ashton & Lee, 2007). Importantly, these are precisely the kind of characteristics known to be most predictive of prejudice within the FFM agreeableness factor (Ekehammar & Akrami, 2007). Furthermore, honesty-humility captures most of the common variance in the dark triad (Lee & Ashton, 2014), that is, the other set of variables that render agreeableness non-predictive of prejudice in regression analyses (Hodson et al., 2009)

To date, only one published study has examined the associations of all the HEXACO factors with prejudice (see Sibley, Harding, Perry, Asbrock, & Duckitt, 2010). Sibley et al. (2010) found that honesty-humility, but not agreeableness, was associated with prejudice. A similar pattern of results were observed by Bergh et al. (in press), but that paper did not compare the effects with FM counterparts, and it did not test the relative impact of the HEXACO variables. Furthermore, the study by Sibley et al. (2010) did not include the interstitial facet of altruism. This would seem a relevant drawback considering that empathic concern is one of the most powerful predictors of anti-minority prejudice (McFarland, 2010).

1.5. Rationales and Hypotheses

In this article, we systematically examined how the HEXACO variables agreeableness, openness, altruism, and honesty-humility are associated with prejudice, and we contrasted the agreeableness and openness associations with those from a FFM framework. Focusing on the communalities of two commonly studied prejudices, racism and sexism, we posed three questions. First, are the zero-order relations of agreeableness and openness with prejudice

different from a HEXACO versus FFM perspective (Q1)? If there was a global association, one could expect similar results even when some facets are removed from its operationalization (see Vainik et al., 2015), and so there should be converging results of FFM and HEXACO. However, based on the knowledge that the most prejudice-predictive facets in FFM agreeableness are not part of the HEXACO counterpart (see Sibley et al. 2010; Hodson et al., 2009), we predicted a substantially weaker association with prejudice in the latter case.

Second, we asked whether differences between FFM and HEXACO, in terms associations with prejudice, reproduce across cultures (Q2). Specifically, we compared the personality-prejudice associations in two countries (Sweden and the United States) and expected the patterns to be cross-culturally stable. Indeed, both the FFM and HEXACO are promoted as universal models of personality (McCrae & Costa, 1997; Lee & Ashton, 2008), and so their associations with commonplace prejudice in most societies (racism and sexism) could be hypothesized to be consistent as well. Further, the communalities of such prejudices, as well as their relation with FFM personality, are well documented throughout the Western world (Sibley & Duckitt, 2008; see also Meeusen & Kern, 2016). For the sake of parsimony, we focus on such a generalized prejudice here.

Finally, turning to an internal comparison of the HEXACO variables, we asked whether agreeableness would predict prejudice when controlling for altruism and honesty-humility (Q3). Based on previous findings that empathic concern and the dark triad characteristics render agreeableness non-predictive of prejudice (e.g., McFarland, 2010), we expected a null-effect of agreeableness when entered alongside honesty-humility and altruism. Specifically, this would seem likely as low honesty-humility parsimoniously describes the common variance in the dark triad (Ashton & Lee, 2007), and the altruism facet conceptually overlap with measures of empathic concern. Again, we expected a cross-culturally consistent pattern: Altruism and honesty-humility should overtake the predictive role of agreeableness in

both Sweden and the United States. Taken together, our main hypothesis was that there is no global association between agreeableness and generalized prejudice based on racism and sexism. Instead, the documented effects in the literature are reflections of characteristics specifically dealing with empathy/altruism and honesty-humility.

2. Method

2.1. Participants

The HEXACO and prejudice variables were studied in one Swedish ($N = 249$) and two American ($N = 423$ and 444) samples. Missing values in the predicted (prejudice) scores were handled using a full-information maximum likelihood (FIML) estimation, but we excluded observations if the participant completed less than 50% of the items in a construct (e.g., a person only answering one of four altruism items would have the mean-score variable coded as missing). Furthermore, as some participants completed the first American study very quickly, we introduced a screening for careless responding in the second American sample (using items such as “to monitor quality, please respond with a seven for this item”). 19 participants were excluded on this basis, and discarding largely incomplete data (see above), the analyzed were based on 246, 417, and 411 participants in the Swedish and two American samples, respectively.

The Swedish sample mainly comprised (non-psychology) students who were rewarded cinema vouchers (~\$13) for completing a larger battery of survey questions (see 2.2.). 61% were women and the median age was 24 ($SD = 8.38$). The American samples were recruited on Amazon Mechanical Turk, 56/56% women, Mdn age = 32/30 ($SD = 12.33/11.54$) in the respective sample. Participants in the first sample were given \$1.15 for completing the instruments for this paper, as well as piloting other measures. Participants in the second sample received \$2 for a data collection including a larger battery of instruments (see 2.2 for more information about these measures).

2.2. Instruments

16-item scales for Agreeableness, honesty-humility, and openness were taken from the 100-item HEXACO-PI-R (Lee & Ashton, 2004, α s > .80 in all studies). Each HEXACO study further included the four interstitial items for altruism (α s > .63). For comparison we also included Davis' (1983) empathetic concern scale in the American samples (α = .88 and .90). The Swedish HEXACO was translated for this study, and for validation purposes we included the remaining three factors as well (see Supplemental materials for psychometric properties).

Like the personality variables, prejudice was assessed with the same instruments in the United States and Sweden: The modern racism and sexism scales (see Akrami, Ekehammar, & Araya, 2000; Ekehammar, Akrami, & Araya, 2000). The Swedish racism scale asks about immigrants rather than Black people, but was introduced with the specific aim of providing a Scandinavian version of the modern racism scale (see McConahay, 1986). Similarly, the Swedish sexism scale is an adaptation of the modern sexism scale by Swim et al (1995). The introduction of the original scales for modern racism and sexism scales was based on research showing changes in the expression of prejudice, from blatant derogation (e.g., "Women are generally not as smart as men") to subtler attitudes, based on a resilience to achieve group equality (e.g., "discrimination against women is no longer a problem"). Old-fashioned and modern prejudice are highly correlated ($r \approx .60$, see e.g., Swim, Aikin, Hall, & Hunter, 1995). All measures in the American HEXACO samples were answered on a 7-point scale (1 = strongly disagree, 7 = strongly agree), whereas the Swedish scales were answered on 5- or 7-point scales depending on their original format (see references above). For the analyses (and to test to measurement invariance across samples, see supplemental materials) we transformed the Swedish personality responses into a 7-point format [$\text{Score}_7 = (((\text{Score}_5 - 1) / 4 * 6) + 1)$]. All α s for the prejudice measures were above .84. In the analyses, we used an aggregate mean of

(generalized) prejudice against ethnic minorities and women ($\alpha s > .75$). For more details about descriptive statistics, see Table 1.

All studies included additional variables used for the purposes of other papers (see e.g., Bergh et al., in press). For example, they all include measures of authoritarianism and social dominance and other kinds of prejudice (e.g., toward overweight people). Here we focused on prejudice measures that we could match with those from other (FFM) samples (see 2.3), and we did not analyze results for authoritarianism and social dominance as our focus was on basic personality (see introduction). The other instruments were consistently placed after the personality assessment, and intertwined with the racism and sexism measures in focus here (the exact order of different prejudices seems to have little effect on their personality correlates, as randomized and blocked designs generate similar results (see e.g., Akrami, Ekehammar, & Bergh, 2011; Bergh et al., in press)).

2.3. Comparison Samples and Instruments

The HEXACO effects in the Swedish data were compared with a dataset from the published literature, using the NEO-PI-R FFM inventory ($N = 861$; see Akrami et al., 2011). This comparison sample also involved the same prejudice measures as in the Swedish HEXACO study. As an American comparison, we similarly chose a FFM study from the literature that would provide the closest possible match to our HEXACO samples (i.e. using similar measures of prejudice as well as the NEO inventory). Thus, we compared our results with effects reported by McFarland (2010, study 3) using the NEO-FFI and an index of generalized prejudice (including racism and sexism).

3. Results

3.1. Preliminary Results

In the introduction, we suggested that measures of empathic concern can be substituted with HEXACO altruism, and that the dark triad can be replaced with HEXACO honesty-humility, when predicting anti-minority prejudice. Whereas it has been shown that the communal variance in the dark triad is well captured in honesty-humility (Ashton & Lee, 2007), the nature of the HEXACO altruism facet has not received as much attention. Thus, in the American samples we examined the relation between altruism and Davis' (1983) measure of empathic concern. In both samples, the correlations were strong, $r = .81$ and $.77$, $ps < .001$ (see also Bergh et al., in press). In fact, these constructs overlapped perfectly when the correlations were corrected for attenuation ($rs > .98$). Thus, the altruism facet is empirically synonymous to empathic concern, and this set the premises for modeling all major prejudice predictors in the literature within the HEXACO framework.

3.2. HEXACO Compared to FFM

We compared the HEXACO effects on prejudice for agreeableness and openness with effects established for NEO-PI-R inventories in both Sweden and the United States. In this comparison, we focused on bivariate relations. After z -transforming all correlations, we analyzed the contrasts between the HEXACO and NEO FFM relations with prejudice.

As summarized in Table 2, there was a clear pattern in terms of how the different conceptualizations of agreeableness were associated with prejudice. Specifically, the HEXACO effects were significantly lower than the FFM NEO effects in both the Swedish and American samples. As for openness, the pattern varied somewhat between Sweden and the United States. In Sweden, the NEO instrument again generated stronger effects, but in the United States, the effects similar for HEXACO and FFM (see Table 2).

3.3. Agreeableness Compared to Other HEXACO Predictors

The previous section of results was concerned with testing the association between agreeableness and prejudice with a FFM and HEXACO framework (Q1). Here we turned to compare predictors within the HEXACO framework (Q2). Using a multi-group (multi-sample in this case) regression model, we examined if altruism and honesty-humility are better predictors of prejudice than agreeableness. We focused on manifest variables, as latent construct would boost the correlations between the independent variables (i.e. increase multicollinearity), and especially the ones with altruism. An equivalent structural equation model, testing (and verifying) measurement invariance in the three samples, is reported in the supplemental materials. We ran these analyses in Mplus using robust maximum likelihood estimator (MLR) to account for skewed prejudice distributions and missing data (the skew varied between 0.44 and 1.32, all significant

With two exceptions, all examined HEXACO variables significantly predicted prejudice. The standardized effects are presented in Figure 1. Specifically, the agreeableness effect in the Swedish sample and honesty-humility effect in the second American sample were not quite significant (both $ps = .06$). However, in terms of effect sizes they were only marginally weaker than in the other samples. In fact, we formally tested to what extent the personality coefficients differ between the three samples, by comparing our initial regression model with one assuming equal regression coefficients (e.g., agreeableness $B_{Sweden} = B_{USA1} = B_{USA2}$). This assumption was associated with a non-significant fit difference, $\Delta\chi^2(8) = 13.13, p = .11$, suggesting that all the differences between the samples were within the expectation of random variation. Finally, and most importantly, agreeableness was *positively* related to prejudice in all three cases. Thus, HEXACO agreeableness displayed a reverse relationship with prejudice, as compared to what is known for the FFM counterpart (see Sibley & Duckitt, 2008). Follow-up analyses were concerned with the possibility of suppressor effects by altruism and honesty-humility.

3.4. Suppressor Analyses

Suppression is indicated by a regression effect that either increases in strength, or reverses in sign, with the introduction of additional covariates. As such, suppression is tested in the same statistical manner as mediation and confounding (see MacKinnon, Krull, & Lockwood, 2000). Thus, we estimated direct and indirect effects of HEXACO agreeableness via altruism and honesty-humility using bias-corrected bootstraps based on 5000 draws. To parallel the regression analyses above, we included openness as a covariate but without specifying any indirect effects. Non-overlapping confidence intervals for the direct and indirect effects would indicate suppression in the case of agreeableness (if the direct effect was stronger or of opposite sign).

In the Swedish sample there was evidence of suppression for the agreeableness effect by altruism ($\beta_{\text{direct}} = 0.13$, 95% CI [-0.01, 0.26], $\beta_{\text{indirect}} = -0.17$, 95% CI [-0.25, -0.10]) and marginally by honesty-humility ($\beta_{\text{indirect}} = -0.05$, 95% CI [-0.10, 0.00]). The same pattern was evident in the first American sample, for altruism ($\beta_{\text{direct}} = 0.14$, 95% CI [0.03, 0.24], $\beta_{\text{indirect}} = -0.06$, 95% CI [-0.12, 0.00]) as well as honesty-humility ($\beta_{\text{indirect}} = -0.04$, 95% CI [-0.08, -0.01]). Finally, the results were very similar the second American sample as well, $\beta_{\text{direct}} = 0.18$, 95% CI [0.08, 0.28], $\beta_{\text{indirect}} \text{ altruism} = -0.07$, 95% CI [-0.13, 0.00], and $\beta_{\text{indirect}} \text{ honesty-humility} = -0.04$, 95% CI [-0.08, 0.00]. Taken together, the positive regression coefficients for HEXACO agreeableness seem to be due to suppression by altruism and honesty-humility.

3.5. Relative Importance Analyses

All the results so far suggest that the relation between agreeableness and prejudice is null or positive, net of the effect of altruism and honesty-humility. However, these analyses do not speak directly to the relative importance of agreeableness as compared to altruism and honesty-humility. Specifically, as independent variables become increasingly correlated, it is well known that regression coefficients become less informative about relative predictability

(e.g., Kraha, Turner, Nimon, Zientek, & Henson, 2012). Thus, we also examined relative importance weights for the HEXACO predictors of prejudice, using the Excel implementation provided by Braun and Oswald (2011). The results showed that openness was the most important predictor in the American samples, whereas Altruism was the most important predictor in the Swedish sample. Most notably, agreeableness was the least important predictor of prejudice in all samples, and only responsible for 6% (at best) of the total predictability by the personality variables (see Figure 2).

4. Discussion

Previous research on the FFM and prejudice has disclosed evidence of a negative relations between agreeableness and prejudice (Sibley & Duckitt, 2008), but we asked if that link is better characterized by associations with more specific personality characteristics. We predicted that an agreeableness factor operationalized without particular facets (e.g., soft-heartedness) should be unrelated to generalized prejudice toward women and ethnic minorities (addressing Q1 in the aim section), and that the actual associations are better captured by HEXACO honesty-humility and altruism (addressing Q3). Overall, the results from one Swedish and two American samples supported both of these suggestions.

First, we scrutinized the agreeableness and openness associations with prejudice by contrasting HEXACO correlations in this paper with ones from previous FFM studies. In both Sweden and the United States, there were strong correlations between FFM agreeableness and prejudice, whereas the HEXACO agreeableness correlations were close to null in all our samples. The contrasts between the FFM and HEXACO correlates were consistently significant. Thus, in line with our predictions, correlations with conventional prejudice do not seem to apply to agreeableness globally, but varies distinctly with the inclusion/exclusion of particular facets. Still, whereas the comparison of bivariate correlations suggests that the particular operationalization of agreeableness has a major impact on its relation with prejudice

(see also Sibley & Duckitt, 2008), they do not localize exactly where the discrepancy lies. The comparison of predictors within the HEXACO model was meant to address that question.

We anticipated that the most relevant aspects of FFM agreeableness, when predicting prejudice, would be the ones that the HEXACO model places under the honesty-humility factor and the interstitial altruism facet. Results disclosed that the prejudice index was robustly associated with altruism, especially in Sweden, whereas the unique effect of agreeableness was completely reversed, as compared to the findings in the existing literature (see e.g., Sibley & Duckitt, 2008). The reversal should be interpreted with caution, as there was evidence of suppressor effects. Nonetheless, it would at least be safe to note that there is no evidence of a *negative* relation between agreeableness and generalized prejudice toward blacks/immigrants and women, net of the effects of altruism and honesty-humility. Also, when comparing the relative importance of the HEXACO variables, agreeableness was consistently the least important one. In contrast, the previously documented effects for FFM openness held up quite well in the HEXACO framework.

Others before us have shown that the relation between agreeableness and prejudice is weakened by the introduction of other variables (e.g., Hodson et al., 2009; McFarland, 2010). However, this research advances that literature by showing that two sets of these “other variables” (empathy and the dark triad traits) can be studied within the framework of a single basic personality model (HEXACO), as opposed to a expanding a “laundry list” of ad hoc predictors. In fact, the preliminary analyses show that Davis’ empathic concern scale is perfectly redundant with the HEXACO altruism facet. More importantly, this research illustrates, in a more systematic way, just how little agreeableness matters, as a global trait, for understanding individual difference communalities in racism and sexism.

Limitations and Future Directions

Obvious limitations in this work come from the use of self-reports and cross-sectional data. Still, previous research suggests that the personality and ideology predictability of prejudice is, at least in part, causal in nature (for a review of the longitudinal evidence for this notion, see Duckitt & Sibley, in press). Previous studies also show that the findings are similar in self- and peer reports (Cohrs, Kämpfe-Hargrave, & Riemann, 2012), and not due to social desirability (Ekehammar et al., 2004). Thus, the real question here is whether we should expect the HEXACO association to be an exception from what is known at large in the personality-ideology-prejudice literature. Only additional data can tell, but we find it unlikely that the HEXACO factors would be associated with more self-report artifacts than the FFM, or that the HEXACO model turns the causality of the personality-ideology-prejudice relations on its head.

Limitations that are more specific to this paper center on the validity of translated personality inventories, the scope of prejudice targets, statistical issues, and how to treat the altruism facet when predicting external criteria from the HEXACO model. Our psychometric evaluation of the Swedish HEXACO instrument showed good reliability and a factor structure replicating the original HEXACO model (see Supplementary materials). These auxiliary analyses also demonstrated strong measurement invariance in Sweden and the United States, both in terms of personality and prejudice. Nonetheless, a lack of comprehensive validity data for the Swedish measure is a limitation of this study. Further, a broader range of prejudice measures would add to the validity of our findings. Still, while we cannot draw conclusions about most any type of prejudice, we deliberately focused on the communality of two forms of bias that are commonplace in most parts of the world, that is sexism (against women) and racism (against ethnic minorities). The relation of personality with such generalized prejudice is well documented in a wide range of contexts (e.g., Meeusen & Kern, 2016; Sibley &

Duckitt, 2008), suggesting that the (absent) role of agreeableness here is likely to apply to anti-minority prejudice more broadly.

There are also statistical issues in this paper that are worth consideration. Specifically, the simultaneous inclusion of agreeableness, altruism and honesty-humility in our models introduces increased multicollinearity and suppressor effects. On the other hand, as we see it, the practical solution is to drop agreeableness when studying prejudice against disadvantaged groups, because it does not have much predictability anyway. However, dropping agreeableness does not resolve the problem that honesty-humility and altruism are still highly interrelated, due to the latter being (partially) nested within the former. Furthermore, in hierarchical personality models it is conventional to view factors as causally primary to facets (Kandler, Zimmermann, & McAdams, 2014), so altruism might be thought of as an intermediate variable that partially mediates the effect of honesty-humility on prejudice. Indeed, empathy seems to be on par with social dominance in causal (longitudinal) modeling (Sidanius, Kteily, Sheehy-Skeffington, Ho, Sibley, & Duriez, 2013). Still, the implied path model here, positioning altruism as a mediator between honesty-humility and prejudice, is statistically indistinguishable from a regression model where the variables are placed “side by side”. Thus, longitudinal studies involving all three variables (honesty-humility, altruism, and prejudice) are indispensable to address this question. Nevertheless, this caveat does not change the primary conclusion, and the central tenet of this paper, namely that a global agreeableness trait is of little relevance in the puzzle of how personality relates to prejudice.

Concluding Remarks

Taken together, this research suggests that the role of agreeableness in prejudiced attitudes may have been overstated, and that altruism and honesty-humility are more important. More broadly, the findings further illustrate a key difference between five- and six-dimensional models of human personality, and the question of whether agreeableness is

422 associated with prejudice receives very different answers from these two perspectives. In the
423 FFM framework, the most appropriate answer would seem to be “it depends [on specific
424 items/facets]”, whereas the answer in the HEXACO framework is a clear-cut “no.” Either
425 way, it has been noted that the association between agreeableness and group attitudes could be
426 underpinned by a desire “maintaining positive relations with others” (Graziano, Bruce,
427 Sheese, & Tobin, 2007, p. 567). Yet this paper suggest that this tendency, which is a core
428 feature of agreeableness in both the FFM and HEXACO frameworks, is in itself irrelevant for
429 understanding communalities in common prejudices, such as racism and sexism.

References

- Adorno, T. W., Frenkel-Brunswik, E., Levinson, D. J., & Sanford, R. N. (1950). The authoritarian personality. New York, NY: Harper.
- Akrami, N., Ekehammar, B., & Araya, T. (2000). Classical and modern racial prejudice : A study of attitudes toward immigrants in Sweden. *European Journal of Social Psychology*, 30, 521-532.
- Akrami, N., Ekehammar, B., & Bergh, R. (2011). Generalized prejudice: common and specific components. *Psychological Science* , 22, 57-59.
- Allport, G. W. (1954). *The nature of prejudice*. Cambridge, MA: Addison-Wesley.
- Altemeyer, B. (1998). The other “authoritarian personality”. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 30, pp. 47–92). New York, NY: Academic Press.
- Ashton, M. C., & Lee, K. (2007). Empirical, theoretical, and practical advantages of the HEXACO model of personality structure. *Personality and Social Psychology Review*, 11, 150-166.
- Bergh, R., Akrami, N., Sidanius, J., & Sibley, C. (in press). Is Group Membership Necessary for Understanding Generalized Prejudice? *Journal of Personality and Social Psychology*.
- Braun, M. T., & Oswald, F. L. (2011). Exploratory regression analysis: A tool for selecting models and determining predictor importance. *Behavior Research Methods*, 43, 331–339.
- Cohrs, J. C., Kämpfe-Hargrave, N., & Riemann, R. (2012). Individual differences in ideological attitudes and prejudice: Evidence from peer-report data. *Journal of Personality and Social Psychology*, 103, 343–361.
- Davis, M. H. (1983). Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of Personality and Social Psychology*, 44, 113–126.
- Duckitt, J. & Sibley, C. G. (in press). The Dual Process Motivational Model of Ideology and Prejudice. In C. Sibley, & F. Barlow (Eds.), *Cambridge handbook of the psychology of*

455 *prejudice*. Cambridge University Press.

456 Ekehammar, B., & Akrami, N. (2007). Personality and prejudice: from Big Five personality
457 factors to facets. *Journal of Personality*, 75, 899–925.

458 Ekehammar, B., Akrami, N., & Araya, T. (2000). Development and validation of Swedish
459 classical and modern sexism scales. *Scandinavian Journal of Psychology*, 41, 307–314.

460 Ekehammar, B., Akrami, N., Gylje, M., & Zakrisson, I. (2004). What matters most to
461 prejudice: Big Five personality, social dominance orientation or right-wing
462 authoritarianism? *European Journal of Personality*, 18, 463–482.

463 Graziano, W. G., Bruce, J., Sheese, B. E., & Tobin, R. M. (2007). Attraction, personality, and
464 prejudice: Liking none of the people most of the time. *Journal of Personality and Social*
465 *Psychology*, 93, 565–582.

466 Hodson, G., & Dhont, K. (2015). The person-based nature of prejudice: Individual difference
467 predictors of intergroup negativity. *European Review of Social Psychology*, 26, 1–42.

468 Hodson, G., Hogg, S. M., & MacInnis, C. C. (2009). The role of “dark personalities”
469 (narcissism, Machiavellianism, psychopathy), Big Five personality factors, and ideology
470 in explaining prejudice. *Journal of Research in Personality*, 43, 686–690.

471 John, O.P., & Srivastava, S. (1999). The Big Five trait taxonomy: History, measurement, and
472 theoretical perspectives. In L.A. Pervin & O.P. John (Eds.), *Handbook of personality:*
473 *Theory and research* (2nd ed., pp. 102–138). New York: Guilford.

474 Jugert, P., Cohrs, J. C., & Duckitt, J. (2009). Inter- and intrapersonal processes underlying
475 authoritarianism: The role of social conformity and personal need for structure. *European*
476 *Journal of Personality*, 23, 607–621.

477 Kandler, C., Zimmermann, J., & McAdams, D. P. (2014). Core and Surface Characteristics
478 for the Description and Theory of Personality Differences and Development. *European*
479 *Journal of Personality*, 28, 231–243.

- Kraha, A., Turner, H., Nimon, K., Zientek, L.R., Henson, R.K. (2012). Tools to support interpreting multiple regression in the face of multicollinearity. *Frontiers in Psychology*, 3, 1-16
- Lee, K., & Ashton, M. C. (2004). Multivariate Behavioral Psychometric Properties of the HEXACO Personality Inventory Psychometric Properties of the HEXACO Personality Inventory. *Multivariate Behavioral Research*, 39, 329–358.
- Lee, K., & Ashton, M. C. (2008). The HEXACO personality factors in the indigenous personality lexicons of English and 11 other languages. *Journal of Personality*, 76, 1001-1053.
- Lee, K., & Ashton, M. C. (2014). The Dark Triad, the Big Five, and the HEXACO model. *Personality and Individual Differences*, 67, 2-5.
- MacKinnon, D. P., Krull, J. L., & Lockwood, C. M. (2000). Equivalence of the mediation, confounding and suppression effect. *Prevention Science*, 1, 173-181.
- McFarland, S. (2010). Authoritarianism, Social Dominance, and Other Roots of Generalized Prejudice. *Political Psychology*, 31, 453–477.
- McConahay, J. B. (1986). Modern racism, ambivalence, and the Modern Racism Scale. In J. F. Dovidio & S. L. Gaertner (Eds.), *Prejudice, discrimination, and racism* (pp. 91–125). New York: Academic Press.
- McCrae, R. R., & Costa, P. T., Jr. (1997). Personality trait structure as a human universal. *American Psychologist*, 52, 509-516.
- McCrae, R. R., & Costa, P. T., Jr. (1999). A five-factor theory of personality. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and research* (2nd ed., pp. 139–153). New York: Guilford.
- Meeusen, C., Kern, A. (2016). The relation between societal factors and different forms of prejudice: a cross-national approach on target-specific and generalized prejudice. *Social*

505 *Science Research*, 55, 1-15.

506 Paulhus, D. L., & Williams, K. (2002). The Dark Triad of personality: Narcissism,
507 Machiavellianism, and psychopathy. *Journal of Research in Personality*, 36, 556-568.

508 Paunonen, S. V. (1998). Hierarchical organization of personality and prediction of behavior.
509 *Journal of Personality and Social Psychology*, 74, 538–556

510 Reynolds, K. J., Turner, J. C., Haslam, S. A. & Ryan, M. K. (2001). The role of personality
511 and group factors in explaining prejudice. *Journal of Experimental Social Psychology*,
512 37, 427-434.

513 Sibley, C. G., & Duckitt, J. (2008). Personality and Prejudice: A Meta-Analysis and
514 Theoretical Review. *Personality and Social Psychology Review*, 12, 248–279.

515 Sibley, C. G., Harding, J. F., Perry, R., Asbrock, F., & Duckitt, J. (2010). Personality and
516 prejudice: Extension to the HEXACO personality model. *European Journal of*
517 *Personality*, 24, 515-534.

518 Sidanius, J., Kteily, N., Sheehy-Skeffington, J., Ho, A. K., Sibley, C., & Duriez, B. (2013).
519 You're Inferior and Not Worth Our Concern: The Interface Between Empathy and Social
520 Dominance Orientation. *Journal of Personality*, 81, 313–323.

521 Swim, J. K., Aikin, K. J., Hall, W. S., & Hunter, B. A. (1995). Sexism and racism: Old-
522 fashioned and modern prejudices. *Journal of Personality and Social Psychology*, 68, 199-
523 214.

524 Vainik, U., Möttus, R., Allik, J., Esko, T., & Realo, A. (2015). Are Trait-Outcome
525 Associations Caused by Scales or Particular Items? Example Analysis of Personality
526 Facets and BMI. *European Journal of Personality*, 29, 622–634.

Table 1

Basic Statistics and Correlations Among Main Variables (as in Main Diagonal)

Sample/Variable	Correlations/Reliabilities					<i>M</i>	<i>SD</i>
	1	2	3	4	5		
Sample 1 (Sweden, <i>N</i> = 246)							
1. Generalized Prejudice	.79					2.68	1.12
2. Agreeableness	-.14*	.86				4.01	0.96
3. Openness	-.29*	.21*	.78			4.70	0.95
4. Honesty-humility	-.32*	.33*	.20*	.83		4.56	1.05
5. Altruism	-.43*	.44*	.17*	.43*	.62	5.50	1.11
Sample 2 (USA, <i>N</i> = 417)							
1. Generalized Prejudice	.78					2.67	1.20
2. Agreeableness	-.01	.87				4.05	0.94
3. Openness	-.37*	.16*	.83			4.99	0.96
4. Honesty-humility	-.24*	.29*	.23*	.86		4.72	1.02
5. Altruism	-.26*	.42*	.38*	.45*	.67	5.26	1.11
Sample 3 (USA, <i>N</i> = 411)							
1. Generalized Prejudice	.75					2.66	1.19
2. Agreeableness	.00	.89				4.11	0.98
3. Openness	-.38*	.21*	.85			4.86	0.97
4. Honesty-humility	-.22*	.31*	.27*	.86		4.74	1.01
5. Altruism	-.24*	.48*	.40*	.50*	.69	5.30	1.08

**p* < .05

Table 2

Comparison of the HEXACO and Five Factor Models for Bivariate Relations of Agreeableness and Openness with Prejudice

Model/Instrument	Sample (Origin)	N	Agreeableness	Openness
HEXACO				
HEXACO-PI-R	Sample 1 (Sweden)	246	-.14 * ^a	-.29 * ^a
HEXACO-PI-R	Sample 2 (USA)	417	-.01 ^a	-.37 * ^a
HEXACO-PI-R	Sample 3 (USA)	411	.00 ^a	-.38 * ^a
Five Factor Model				
NEO-PI-R	Control 1 (Sweden)	861	-.40 * ^b	-.54 * ^b
NEO-FFI	Control 3 (USA)	200	-.34 * ^b	-.37 * ^a

Note. Contrasts calculated between each HEXACO Agreeableness and Openness coefficient and the respective coefficients from the FFM reported in the control samples within each country. Different subscripts within columns denote significant ($ps < .001$) differences. Prejudice was operationalized as a mean score of modern racism and sexism in the HEXACO studies.

* $p < .05$.

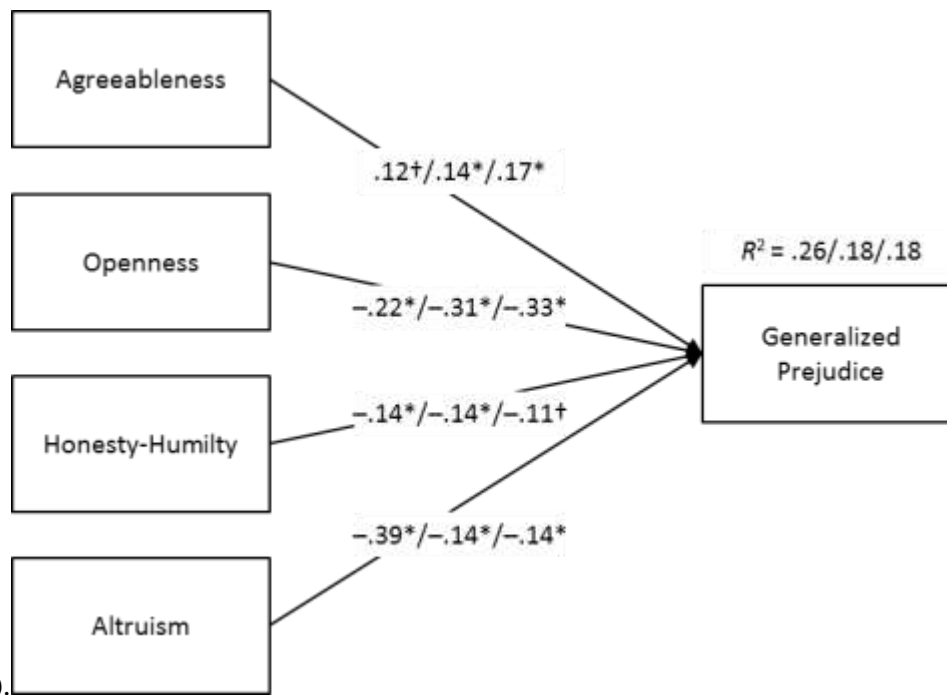


Figure 1. Standardized relations between HEXACO-personality variables and generalized prejudice in Sample 1/ Sample 2/Sample 3 (Sweden/ USA-1/USA-2). * $p < .05$, † $p = .06$.

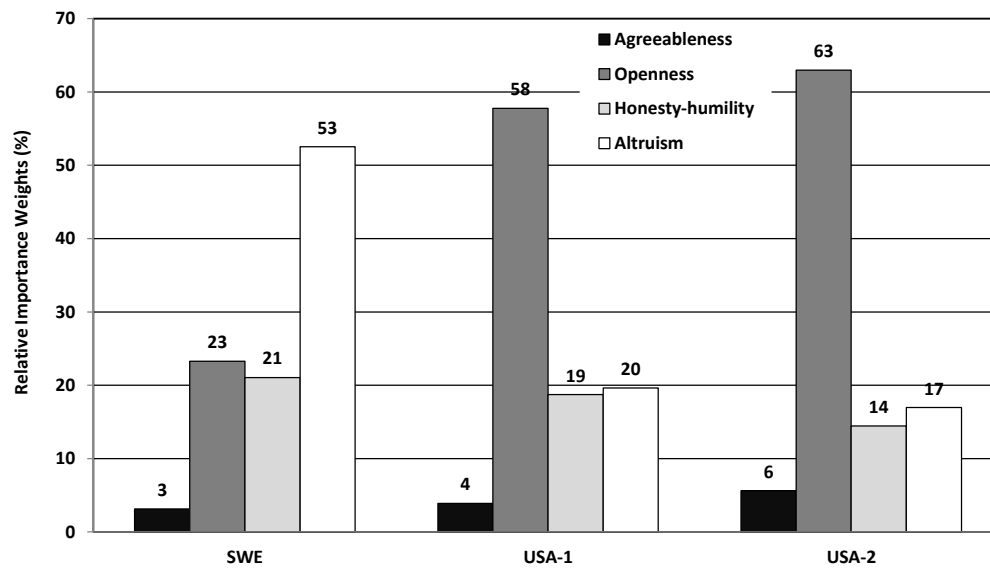


Figure 2. Relative importance weights showing a proportion of total prejudice variance, as explained by the personality variables.