

What makes some persons more prejudiced than others? Modeling the role of social dominance, empathy, social desirability, and gender.

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Structural equation modeling on questionnaire data showed that different kinds of prejudice (concerning sexual orientation, ethnicity, gender, and impaired development) can be represented as a general prejudice factor. Specific variability related to classical and modern prejudice only increased model fit marginally. Several causal models of the relation between key individual difference variables and prejudice were tested. Social dominance orientation had a strong, empathy a moderate, and social desirability a comparably weaker direct effect on generalized prejudice. The effects of participant gender on the generalized prejudice factor, where the men scored higher, were almost completely mediated by empathy. The importance of empathy in causal models of prejudice, and of indirect measurement of prejudice, is discussed.

Key words: prejudice, empathy, social dominance

Prejudice involves holding a negative attitude towards the members of a group. Individual group members are judged on the basis of their group membership, and accordingly, by the attributes associated with the group rather than by their personal attributes. Understanding of the personal and social mechanisms behind prejudice is a major task of psychology. The present contribution is primarily concerned with individual difference factors. We are particularly interested in understanding individual differences in generalized prejudice, i.e. the tendency to dislike outgroup members no matter which particular group they belong to. That persons with a negative attitude towards one particular outgroup are likely to be unfavorably predisposed towards other outgroups as well was already claimed by Allport (1954), but we approach the issue with methods that were not available to him.

In contemporary social psychology, a distinction between classical and modern prejudice is often made. Classical prejudice involves stereotypical beliefs regarding the

attributes of a group, coupled with an explicitly negative attitude. Fortunately, expression of this kind of prejudice has gradually declined (Madon, Gyll, Aboufadel, Montiel, Smith, Palumbo & Jussim, 2001), but the decline can perhaps be explained by the fact that giving voice to blatantly prejudiced opinions is no longer socially acceptable. Prejudice may prevail, but in disguised forms where the negative attitude is denied or avoided. McConahay (1986) constructed a modern racism scale in order to capture this more subtle kind of prejudice, which may reveal itself, for example, in denying that the outgroup has any special problems or needs, in the resistance of all actions directed at the alleviation of such problems or needs, and in feeling that too much is heard of the outgroup and its putative problems or needs. Similar scales exist for the measurement of modern and classical sexism (Swim, Aikin, Hall & Hunter, 1995). The factor structure of classical and modern prejudice has been discussed in the literature, and although there are studies showing that classical prejudice is unifactorial, whereas modern prejudice has a more complex multifactorial structure (e.g. Morrison, Morrison, Pope, & Zumbo, 1999), most studies indicate that classical and modern prejudice are two separate but highly correlated constructs. Previous studies have also shown that prejudice towards different target groups may load together in a principal components analysis (McFarland, 2001), or constitute a latent variable in structural equation models (Ekehammar, Akrami, Gylje & Zakrisson, 2004; Guimond, Dambrun, Michinov, & Duarte, 2003). We test the hypothesis that measures of prejudice can be represented in terms of one generalized prejudice factor, and that method factors related to classical and modern prejudice scales contribute as well.

Social dominance theory (Sidanius & Pratto, 1999) describes how social inequalities emerge and are maintained. One aspect of the theory concerns how our beliefs affect prejudice; for example we may have strong ideas on how groups should be related to one another. The theory states that individuals differ in their *Social Dominance Orientation* (SDO; Pratto, Sidanius, Stallworth, & Malle, 1994), a general attitudinal orientation concerning intergroup relations that describes the extent to which one favors a hierarchical society, where strong groups dominate weaker ones (Sidanius & Pratto, 1999). People with strong SDO tend to hold such beliefs and values, and prefer such political programs that enhance and sustain clearly defined hierarchies. People with weaker SDO prefer an egalitarian society. Empirical studies have shown that SDO is one of the strongest predictors of prejudice against a wide array of target groups (Altemeyer, 1998). We therefore predict that SDO is strongly positively related to generalized prejudice. Its specific relation to modern and classical prejudice will be examined too.

McFarland (2001) investigated a long list of predictors of generalized prejudice, in fact all those that could be found in the research literature. It was argued that since so many disparate and theoretically unrelated variables were put to the test in that study, it would be premature to perform structural equation modeling. Using multiple regression models, four substantial and practically independent individual difference variables were found. These were social dominance, authoritarianism, empathy and gender. Now that the number of variables is reduced, the implementation of structural equation modeling is warranted. This has been successfully done by Ekehammar et al. (2004), however this study lacked a measure of empathy. In their major study on social dominance orientation, Pratto et al. (1994) found that empathy is negatively correlated to both prejudice and SDO; surprisingly this is one of the few studies that deal with the relationship between SDO, empathy and prejudice. McFarland (2001) also found strong correlations between empathy and prejudice, in particular in the *empathic concern* subscale of Davis's (1980) Interpersonal Reactivity Index (IRI) and to a lesser extent in the *perspective taking* subscale. Further, experimental research on perspective taking (Galinsky & Moskowitz, 2000) confirms that empathy is a prejudice reducing factor. Given that its relation to generalized prejudice is understudied and that previous research has shown it to be relatively independent of the Big 5 personality factors (Shafer, 1999), dispositional empathy will be an important part of our model. Empathy is expected to be negatively related to SDO as well as to generalized prejudice. Since empathy is considered a personality variable/ability that develops before SDO, which is considered a construct in the intersection between personality and attitudes, we test the hypothesis that part of the effect of empathy on prejudice is indirect (through SDO). Difficulties in putting oneself in a fellow human being's shoes seem to affect both how we perceive others and our willingness to accept non-egalitarian policies.

Gender differences, with men scoring higher on SDO and women scoring higher on empathy, is a standard finding in this area of research (Sidanius et al., 1994). Also in accordance with the general picture in prejudice research, men have been found to score higher on generalized prejudice (McFarland, 2001). Whitley (1999) found that a large portion of gender differences in prejudice is mediated by SDO. McFarland found that empathy was only a weak mediator of the gender effects on prejudice. We expect similar results in the present study, but our causal modeling approach allows testing of a related hypothesis which, to our knowledge, has not been previously tested, namely that the gender difference in SDO is mediated by empathy. We also explore whether men and women have different paths to generalized prejudice.

Social desirability is the tendency to portray oneself favorably. It is related to deliberately “faking good” on questionnaires, although it has been recognized that this could also occur by an unconscious self-deception mechanism (Paulhus & Reid, 1991). Research has shown that social desirability is an important personality characteristic in its own right (McCrae & Costa, 1983). It often works without conscious control and involves cognitive strategies to exclude painful experiences from consciousness, and to create an illusive, invulnerable, socially acceptable image of the self. Social desirability has also been related to predominant egalitarian and humanistic values (Dovidio & Gaertner, 1989). In the present study, socially desirable responding will be used to better understand the relation between SDO and prejudice. It is expected that social desirability either is an independent contributor to the prediction of explicit prejudice, or that it mediates the relation between SDO and explicit prejudice.

Method

Participants

Two hundred and seventy female and 186 male students aged 16-20 from three different high schools in southern Sweden participated in the study. Questionnaires were distributed to 600 students. Since participation was voluntary some were not returned. Of the 462 questionnaires returned, six were not used because they were only partially completed.

Materials and procedure

Prejudice scales. The scales for *classical and modern racism*, inspired by McConahay's (1986) scales, were constructed and validated by Akrami, Ekehammar and Araya (2000). The classical racism scale has 8 items and the modern 9 items. In regards to *classical and modern prejudice towards people with impaired development*, we used scales developed by Claesson (1999), for the Swedish context. The classical scale consists of 8 items and the modern of 11. Ekehammar and Akrami's (2002) scales on *attitudes towards female and male homosexuality* were included. These scales consist of 9 items each. Ekehammar, Akrami and Araya (2000) developed as well the Swedish *modern and classical sexism scales* that were used in this study. The scales are akin to those of Swim et al. (1995). The classical scale has 7 items and the modern 8.

SDO, empathy and social desirability. The 16-item version of the *social dominance scale* from Pratto et al. (1994) was used. *Davis Interpersonal Reactivity Index* (IRI; Davis, 1980) has 28 items and measures four aspects of empathy: empathic concern, perspective

taking, fantasy, and personal distress. Cliffordson (2002) reports that the Swedish version is psychometrically comparable to the original. A 14-item (short form) of the *Marlowe-Crowne Social Desirability Scale*, including the items of the version developed by Rudmin (1999), was used to measure social desirability.

The items were scrambled and compiled into two different versions of the instrument. Both versions were distributed to three different schools in the Scania area of southern Sweden, where several teachers at each school administered them to their respective students. It took about an hour to complete the questionnaire. All items were rated on Likert-scales ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). For the racism, homosexuality and sexism scales high scores indicated stronger prejudice, whereas high scores on the impaired development scale indicated less prejudice. The latter scale was, therefore, reversed before the SEM-analysis.

Structural equation modelling was performed with LISREL 8.54 (Jöreskog & Sörbom, 1993). The STREAMS program (Gustafsson & Stahl, 2000) was used as an aid to simplify the process of defining the models and generating start values. The fit between data and a model was estimated by χ^2 , by the fit index Root Mean Square Error of Approximation (RMSEA), and the Comparative Fit Index (CFI). In Table 1, a number of other well-known indexes are shown (Jöreskog & Sörbom, 1993). The RMSEA estimates the lack of fit in a model, in comparison to a perfect model. Low values indicate good fit and it takes parsimony into account. The CFI estimates the proportion of variance accounted for by the estimated population covariance matrix, and just like the other indexes in Table 1, it indicates good fit when close to 1. In some cases we compared models, and accordingly, we used $\Delta\chi^2$, i.e., the difference in χ^2 between models. All statistics presented here were estimated with the maximum likelihood method based on the covariance matrix[†].

Results

Measurement model

Indicators based on three items each were formed to create latent variables related to the prejudice scales. The first measurement model treated the six prejudice scales, modern and classical variants of racism, impaired development, and sexism scales, as six independent factors (Model 1a). As expected, this model revealed poor fit, with $\chi^2 = 1556.90$; $df = 135$; $p < 0.001$; $RMSEA = 0.167$; $CFI = 0.85$. The misfit was attributed to the strong correlation

[†] The covariance matrix is usually recommended, but the models were estimated based on the correlation matrix as well. Overall the differences were small and did not influence the models significantly.

between latent variables. A single generalized prejudice factor was defined, having paths from all six latent prejudice variables. This model (Model 1b) increased fit considerably, $\chi^2 = 601.97$; $df = 129$; $p < 0.001$; RMSEA = 0.092; CFI = 0.95. Even if this model was considerably better, there was still significant variance not accounted for, as revealed by the high RMSEA. To account for this, covariation between prejudice scales measuring the same object was freed. Inclusion of these covariances (Model 1c) led to a clearly improved fit, the fit indexes suggesting the model to be well suited to the data ($\chi^2 = 284.22$; $df = 126$; $p < 0.001$; RMSEA = 0.051; CFI = 0.98). Another, more simple model, was tested (Model 1d) having equal restriction for the latent prejudice variables on the general prejudice factor. This model increased the fit somewhat (see Table 1) according to the fit indexes including those taking parsimony into account ($\Delta\chi^2 = 0.59$; $\Delta df = +5$; $p > 0.20$; RMSEA = 0.049; CFI = 0.95).

To define this model (Model 2a), we created a new latent variable with paths to all the modern latent variables. All paths to this latent variable had an equality restriction. This model revealed a better fit ($\Delta\chi^2 = -30.28$; $\Delta df = 1$; $p < 0.001$; RMSEA = 0.044). Data thus confirms that there was specific variance related to a modern prejudice factor. Adding an additional latent variable related to a classical prejudice factor (Model 2b) did increase the fit somewhat ($\Delta\chi^2 = -5.51$; $\Delta df = 1$; $p < 0.02$; RMSEA = 0.044).

Table 1

Chi-square, p-values and Fit Indexes for the Different Models

Model	χ^2	df	p	RMSEA	GFI	CFI	NFI	PGFI	ECVI
Model 1a	1556.90	135	<0.001	0.167	0.69	0.85	0.84	0.54	4.31
Model 1b	601.97	129	<0.001	0.092	0.87	0.95	0.94	0.65	1.64
Model 1c	284.22	126	<0.001	0.051	0.94	0.98	0.98	0.69	0.88
Model 1d	284.81	131	<0.001	0.049	0.94	0.98	0.97	0.72	0.86
Model 2a	254.53	130	<0.001	0.044	0.94	0.99	0.97	0.72	0.80
Model 2b	249.02	129	<0.001	0.044	0.94	0.99	0.97	0.71	0.79
Model 3	1914.90	523	<0.001	0.075	0.80	0.95	0.93	0.71	4.62
Model 3a	1772.00	521	<0.001	0.072	0.82	0.95	0.94	0.71	4.33
Model 3b	1213.90	517	<0.001	0.055	0.86	0.97	0.96	0.75	3.21
Model 4	2525.90	1145	<0.001	0.078	0.72	0.94	0.89	0.91	6.57

Note. RMSEA = Root Mean Square Error of Approximation. GFI = Goodness of Fit Index. CFI = Bentler's Comparative Fit Index. NFI = Bentler's Normed Fit Index. PGFI = Parsimony Goodness of Fit Index. ECVI = Expected Cross-Validation Index.

Two more scales, one measuring prejudice towards male and another towards female homosexuality, were included. They were not included previously since the homosexuality scales consisted only of the classical prejudice scale-type items. The new scales, when added to Model 1b, showed rather high standardized coefficients to the generalized prejudice factor (0.77 and 0.59). The amount of covariation between scales having the same object of prejudice was, in this model, estimated at 0.57, 0.38, 0.10, and 0.38 for the scales measuring prejudice against immigrants, the disabled, women and homosexuality, respectively.

From these results it could be concluded that a generalized prejudice factor was important. In addition, covariation was found in the relation between scales having the same target group and the scales having the same kind of items, e.g. modern and classical variants. The latter contribution was comparably weaker, with the contribution of the general factor and the factors related to specific prejudice objects dominating the estimations.

Causal model

The next step in the analysis was to model the relationship between social dominance, empathy and social desirability in the prediction of prejudice. Indicators based on about three items each were formed to create latent variables related to social dominance and social desirability. Empathy was measured with the four facets of the IRI. As in previous analyses with this scale (Cliffordson, 2002), it was found that only three of them contributed to the latent empathy variable, whereas *personal distress* did not. In all the forthcoming estimations, the generalized prejudice factor was defined to have the same loadings to all latent prejudice variables.

In the first model, the three predictors had paths only to the generalized prejudice factor. In this model (Model 3a, based on model 1d), all latent variables were considered independent. The fit of this model was rather good: $\chi^2 = 1914.90$; $df = 523$; $p < 0.001$; $RMSEA = 0.075$; $CFI = 0.95$. The standardized coefficients from Social dominance, Empathy, and Social desirability were 0.83, -0.33, and 0.15, respectively. This suggests that social dominance is a very strong predictor of generalized prejudice. It also suggests that empathy adds a unique prediction to generalized prejudice. When the path between empathy and generalized prejudice was excluded, the fit was clearly worse ($\Delta\chi^2 = 56.20$; $\Delta df = 1$; $p < 0.001$; $RMSEA = 0.077$). Social desirability added somewhat to the prediction of generalized prejudice ($\Delta\chi^2 = 12.60$; $\Delta df = 1$; $p < 0.05$; $RMSEA = 0.075$). Note that social desirability had a positive coefficient, suggesting that subjects high on this variable were more prejudiced when variance related to social dominance and empathy had been accounted for.

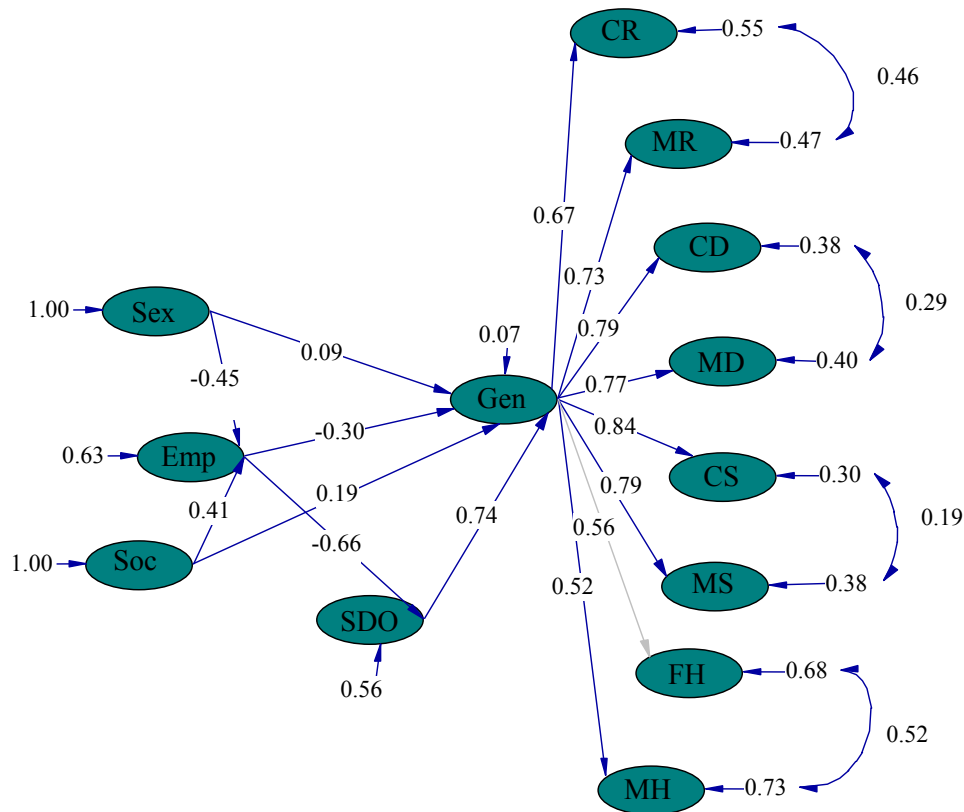


Figure 1. Model of predictors and indicators of generalized prejudice.

Excluding social dominance from this model changed the other coefficients dramatically. The fit decreased substantially ($\Delta\chi^2 = 264.80$; $\Delta df = 1$; $p < 0.001$; RMSEA = 0.079), the coefficient between empathy and generalized prejudice was increased to -0.79, and the coefficient between social desirability and generalized prejudice was almost zero (0.03). Social dominance was clearly an important factor in the prediction of generalized prejudice. On the other hand, this model suggests that empathy was very important too. Behind the dramatic changes in the coefficient of empathy, there was obviously high co-variation between empathy and social dominance.

To account for this co-variation a new model was created. In this model (Model 3b), empathy and social desirability were defined to have paths to social dominance. The estimation of this model revealed a better fit than Model 3a ($\chi^2 = 1772.00$; $df = 521$; $p < 0.001$; RMSEA = 0.072; CFI = 0.95). The coefficients to Social dominance from empathy and social desirability were -0.62 and -0.16, respectively. This model revealed somewhat lower coefficients between empathy and generalized prejudice (-0.26) and between social dominance and generalized prejudice (0.75). In addition, the contribution of modern and

classical prejudice was tested. A model including paths from Social dominance, Empathy and Social desirability to a modern prejudice latent variables increased the fit marginally ($\Delta\chi^2 = 8.70$; $df = 3$; $p < 0.05$). The same test with the classical prejudice variables did not reveal better fit.

None of the path models had an impressive overall fit, one reason being covariation between latent variables estimating the same attitude object. Freeing this covariation in Model 3b increased the fit considerably (Model 3c: $\chi^2 = 1213.90$; $df = 517$; $p < 0.001$; RMSEA = 0.055; CFI = 0.97).

Another hypothesis was related to participant sex. Two different kinds of models were tested. The first kind was based on separate analyses of men and women. As a base model, the last model from the single group analysis (Model 3c) was estimated with separate covariance matrices with constraints over groups (Model 4; $\chi^2 = 2525.90$; $df = 1145$; $p < 0.001$; RMSEA = 0.078; CFI = 0.94). Freeing the group constraint made a substantial increase in fit, suggesting that there were sex related differences in the covariation structure ($\chi^2 = 1729.50$; $df = 1032$; $p < 0.001$; RMSEA = 0.053; CFI = 0.97). There was a rather large decrease in degrees of freedom in this model, and the PGFI values decreased from 0.91 to 0.84, indicating a less parsimonious model on the whole. The most interesting differences between men and women were the coefficients between empathy and social dominance. This relation was much stronger for men (-0.70) than for women (-0.46). The contribution to generalized prejudice from empathy was similar for men and women (-0.31; -0.36). The path coefficient from Social desirability to generalized prejudice was somewhat higher for men (0.29) than for women (0.18).

The other kind of model tested used the same covariance matrix for men and women, but included the sex variable as a predictor. Based on Model 3c, the sex variable was added to the model and was defined to have paths to generalized prejudice, social dominance, empathy and social desirability. As expected from the hypothesis that empathy mediates gender differences in generalized prejudice, the strongest path was found for the relation between sex and empathy (-0.46), suggesting that men (coded as 2) were lower on this variable than women (coded as 1). There was a rather weak path between sex and generalized prejudice. This path turned insignificant when direct paths were defined from gender to three of the specific prejudice variables, classical (0.40) and modern (0.36) sexism and male homosexuality (0.33). Sex was significantly related to social dominance (0.11). All these paths were significant ($p < 0.05$). Together this suggests that differences in prejudice between men and women are mainly related to differences in empathy. In addition there are specific differences regarding sexism and male homosexuality.

We also examined paths between the predictors and the specific prejudice variables. Starting with Model 3c the paths were tested one at a time. A number of significant paths were found, the strongest being prejudice against homosexuality. It should be remembered that the relations presented are based on partial coefficients controlling for all other factors in the model, including generalized prejudice. Subjects high in SDO were relatively more prejudiced against male ($\Delta\chi^2 = 51.70$; $\Delta df = 1$; $p < 0.001$) than against female ($\Delta\chi^2 = 15.00$; $\Delta df = 1$; $p < 0.001$) homosexuality. The opposite pattern was found for empathy. Note that the variance in prejudice toward homosexuality explained by SDO was the same variance as was explained by empathy.

Finally, we tested whether there is a difference in the prediction of classical and modern prejudice. To make the estimation, the general prejudice latent variable was excluded and two new latent variables were added, one measuring classical and one modern prejudice. We explicitly tested whether the coefficients were different between the predictors and the two latent factors, but no differences were found except for a weak sex-related one.

Discussion

The present research extended Allport's (1954) idea that different kinds of prejudice flock together in a single factor. A causal model with a single generalized prejudice factor showed an impressive fit. Consideration of the method factors (modern vs. classical) improved fit marginally. The finding of an almost identical pattern of predictor-coefficients for modern and classical prejudice further corroborated the limited importance of the method factor. In other words, variation having to do with particular attitude objects and generalized prejudice mattered most. Four predictors of the generalized prejudice factor were identified. Social Dominance Orientation (SDO; Pratto et al., 2004) accounted for the most variance, followed by empathy, social desirability, and gender.

The fact that the modern and classical prejudice factors only marginally increased the fit, less than could be expected from previous research, raises questions regarding the validity of the distinction between modern and old-fashioned prejudice in questionnaire measures. Although the distinction has not been heavily criticized in the literature, it is reasonable to assume that establishing the two-factor structure becomes more difficult over time, as egalitarian and social desirability pressures gradually make subtle prejudice appear less subtle. The current results do not call into question the theories concerning modern forms of prejudice but rather the instruments related to them. A solution may not be easy to find. It may be more promising to consider indirect measurement methods such as priming techniques or the IAT (Greenwald, McGhee, & Schwartz, 1998) to capture prejudice. It

should be noted however, that research on implicit and explicit attitudes shows them to be generally dissociated. On the other hand, there is evidence that both kinds of attitudes predict behavior, and theories that describe the mechanisms that may moderate the relationship between implicit and explicit measures (Fazio & Olson, 2003; Hofmann, Gschwendner & Schmitt, 2005; Wilson, Lindsey & Schooler, 2000). We see this issue as one of the most important and challenging in the research on attitudes and prejudice.

As expected, Social Dominance Orientation was a very strong predictor of individual differences in generalized prejudice. Having anti-egalitarian attitudes is associated with disliking outgroups. Empathy contributed further to the prediction of generalized prejudice. As hypothesized, empathy was strongly related to SDO, thereby affecting generalized prejudice indirectly. But there was also a substantial direct effect of empathy on generalized prejudice. Not putting oneself into another person's situation appears to be related to both anti-egalitarian views and plain prejudice.

As hypothesized, when the path from gender to empathy was included in the model, it mediated the relation between gender and SDO. Excluding the gender to SDO path did not change the model significantly. Exploratory analysis of men and women's prejudice also provided interesting results. First, the relation between empathy and SDO was stronger for men than for women. But also the relation between social desirability and generalized prejudice was somewhat stronger for the men.

Ekehammar et al. (2004) concluded in their study that the social desirability factor had a marginal impact on the ratings. Our results differ. We expected social desirability to either have a direct relation to generalized prejudice or to mediate the relation between SDO and generalized prejudice. It was found that social desirability affected empathy relatively strongly, and that it had both an indirect (through empathy) and a direct effect on generalized prejudice, but it did not mediate the relation between SDO and generalized prejudice. Interestingly enough, the effect of social desirability on generalized prejudice was a positive one (when empathy and SDO are part of the model). Given the strong norms against expression of prejudice in our society, one would expect a direct negative effect. Controlling for motivation to avoid appearing bigoted seems to have been the rationale for using the variable in previous research on prejudice.

One limitation of the present study is the lack of an individual difference factor that has been studied extensively in prejudice research, namely Right Wing Authoritarianism (RWA; Altemeyer, 1998). This concept has its historical roots in research on the authoritarian personality (Adorno, Frenkel-Brunswik, Levinson and Sanford, 1950), and is characterized by hostility, submission to authority, and narrow-minded conservatism. Its relationship to

prejudice is substantial, and it is distinct from SDO both theoretically (Pratto et al., 1994) and empirically (but more strongly so in American than European samples, as reported by Ekehammar et al., 2004). A complete structural analysis of the individual difference variables behind generalized prejudice should include SDO, RWA, empathy and gender. But even such a model would be limited, since only personality factors are considered. Although some authors seem to argue that personality is the main causal factor behind prejudice (Altemeyer, 1998; Whitley, 1999), others emphasize contextual factors. Guimond et al. (2003) argued, and showed experimentally by manipulating participants' social positions, that SDO can serve as a mediator of the contextual influence on prejudice. Of course, for a full understanding of the relative importance of personality and social factors on generalized prejudice, they need to be studied together, in one and the same model. The research by Guimond et al. (2003) and Akrami and Ekehammar (2004) are promising steps in this direction.

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