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# Prejudiced Personalities Revisited

*On the Nature of (Generalized) Prejudice*

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### **Abstract**

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In the media, one type of prejudice is often discussed as isolated from other types of prejudice. For example, after Breivik's massacre, intolerance toward Muslims was intensely debated (for good reasons). However, his manifesto also disclosed extreme attitudes towards women and gays, a fact which passed without much notice. Still, in understanding why some individuals are so extremely intolerant compared to others, the psychological unity underlying different kinds of prejudice (e.g., racism, sexism) needs to be considered. This psychological unity, referred to as generalized prejudice, provided the starting point for personality theories on prejudice because it suggests that some people are simply more biased than other people in principle. Today it is well known that two basic personality characteristics, agreeableness and openness to new experiences, are powerful predictors of prejudice. However, more precisely what these variables can, versus cannot, explain has received little attention. Consequently, the aim of this thesis was to provide a more fine-grained analysis of generalized prejudice and its personality roots. Paper I demonstrated that personality mainly accounts for variance shared by several prejudice targets (generalized prejudice) whereas group membership mainly predicts unique variance in prejudice towards a particular target group. Thus, personality and group membership factors explain prejudice for different reason, and do not contradict each other. Paper II demonstrated, across three studies, that agreeableness and openness to experience are related to self-reported (explicit) prejudice, but *not* automatically expressed (implicit) biases. Personality seems informative about who chooses to express devaluing sentiments, but not who harbors spontaneous biases. Finally, Paper III examined the assumption that personality explains (explicit) generalized prejudice because some people simply favor their own group over all other groups (ethnocentrism). Providing the first direct test of this assumption, the results from three studies suggest that while agreeableness and openness to experience explain generalized prejudice, they do *not* account for purely ethnocentric attitudes. This indicates a fundamental difference between ethnocentrism and generalized prejudice. All in all, self-reported personality seems to have little to do with spontaneous group negativity or simple ingroup favoritism. However, personality strongly predicts deliberate and verbalized devaluation of disadvantaged groups.

*Keywords:* Prejudice, Personality, Explicit attitudes, Implicit attitudes, Ethnocentrism, Big Five, Agreeableness, Openness to Experience

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*To Elisabeth*



# List of Papers

This thesis is based on the following papers, which are referred to in the text by their Roman numerals.

- I Akrami, N., Ekehammar, B., & Bergh, R. (2011). Generalized prejudice: Common and specific components. *Psychological Science*, 22, 57-59. doi: 10.1177/0956797610390384
- II Bergh, R., Akrami, N., & Ekehammar, B. (2012). The personality underpinnings of explicit and implicit generalized prejudice. *Social Psychological and Personality Science*, 3, 614-621. doi: 10.1177/1948550611432937
- III Bergh, R., & Akrami, N. (2013). *The ethnocentric personality: A 60-year old myth?* Manuscript submitted for publication.

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# Contents

1. Generalized Prejudice: A Brief Illustration .....	9
2. Prejudice .....	10
2.1 Prejudice Defined .....	10
2.2 Explicit and Implicit Prejudice .....	13
2.3 Cultural versus Personal Associations .....	16
2.4 Generalized Prejudice .....	18
2.5 Ethnocentrism .....	19
3. The Person-Situation Debate .....	23
4. Personality and Ideology Explanations for Prejudice .....	25
4.1 Authoritarianism .....	26
4.2 Social Dominance Orientation .....	27
4.3 Ideology or Personality Constructs? .....	28
4.4 Core Personality .....	29
5. Aims .....	30
6. Methodology .....	32
6.1 Method overview .....	32
6.2. Sampling and Participants .....	32
6.3 Personality and Ideology Measures .....	32
6.3.1 Big Five personality .....	32
6.3.2 Right-Wing Authoritarianism .....	33
6.3.3 Social Dominance Orientation .....	33
6.3.4 Empathy .....	33
6.3.5 Honesty-Humility and Narcissism .....	35
6.4 Explicit Prejudice Measures .....	35
6.4.1 Ethnic Prejudice .....	35
6.4.2 Sexism .....	36
6.4.3 Prejudice toward People with Disabilities .....	36
6.4.4 Sexual Prejudice .....	36
6.4.5 Prejudice toward Overweight People .....	37
6.4.6 Prejudice toward Old People .....	37
6.5 Implicit Prejudice Measures .....	38
6.5.1 Implicit Association Test for Ethnicity .....	39
6.5.2 Implicit Association Test for Weight .....	40
6.5.3 Implicit Association Test for Age .....	40
6.5.4 Implicit Association Test for Sexual Prejudice .....	40

6.6 Minimal Group Experiments and Ethnocentrism.....	40
7. Empirical Papers.....	43
7.1 Paper I.....	43
7.1.1. Background and Aim.....	43
7.1.2 Method.....	45
7.1.3 Results.....	45
7.1.4 Discussion.....	48
7.2 Paper II.....	50
7.2.1 Background and Aim.....	50
7.2.2 Study 1.....	52
7.2.2 Study 2.....	54
7.2.3 Study 3.....	56
7.2.4 Additional Analyses (Not Included in Paper).....	58
7.2.5 Discussion.....	59
7.3 Paper III.....	63
7.3.1 Background and Aim.....	63
7.3.2 Study 1.....	64
7.3.3 Study 2.....	67
7.3.4 Study 3.....	70
8 General Discussion.....	76
8.1 Major Findings.....	76
8.2 Explicit and Implicit Prejudice Revisited.....	79
8.3 Prejudice-Controlling Personalities.....	80
8.4 Generalized Prejudice versus Generalized Warmth.....	82
8.5 Sub-dimensions in Generalized Prejudice?.....	82
8.6 Generalized Devaluation or Generalized Negativity?.....	85
8.7 Generalized Biases and Suitable Targets.....	87
8.8 Psychological Unity and <i>Non-Prejudiced</i> Ideology.....	89
8.9 Psychological Unity and <i>Prejudiced</i> Ideology.....	90
8.10 Personality and Prejudiced Ideology.....	91
8.11 Other Relevant Personalities?.....	92
8.12 Practical Implications.....	93
8.13 Closing Words.....	95
9 References.....	96
10. Acknowledgements.....	112
Appendix A.....	114
Appendix B.....	115
Appendix C.....	116



# 1. Generalized Prejudice: A Brief Illustration

Two years after embarking on this project, Anders Behring Breivik set off a bomb in central Oslo and followed up with a killing spree at Utøya. A total of 77 people were killed, most of them teenagers. In the aftermath of this tragedy, much was said and written about Breivik's mental health. In the political arena, intolerance toward Muslims was debated.

It is obvious that Breivik has a deep-rooted antagonism toward multiculturalism and "Islamisation", as well as those that he considers to support it. Still, did his intolerance toward Muslims really spring to life in isolation to attitudes toward other groups? If so, he would be quite unique in his constellation of attitudes, and it would be at odds with what we know from history (see Arnstad, 2012; Doty, Peterson, & Winter, 1991) and the psychological literature on prejudice.

From Breivik's own writing it is obvious that the multiculturalism issue is not the only thing that bothers him. Although I am reluctant to make reference to his manifesto, the following words are certainly telling for the subject of this dissertation: "What happens today to Europeans who suggest that there are differences among ethnic groups, or that the traditional social roles of men and women reflect their different natures, or that homosexuality is morally wrong?" (Berwick [Breivik alias], 2011, p. 10). Breivik goes on to argue that "Ladies should be wives and homemakers, not cops or soldiers, and men should still hold doors open for ladies. Children should not be born out of wedlock. Glorification of homosexuality should be shunned" (p. 11).

What is so telling about Breivik's intolerance is the pairing of ethnic, gender and homosexuality "problems". Considering this writing, Breivik's intolerance is not atypical; he is rather the archetype of a prejudiced individual. To understand individuals like Breivik it is perhaps necessary to revisit some of the oldest lessons in the prejudice literature in psychology.

One of the first lessons in this literature is that a person targeting one group with prejudice tends to express prejudice toward other groups as well (Allport, 1954; Hartley, 1946). Particularly racist people rarely dislike just one ethnic group, and people are more sexist than others tend to dislike gay people as well. Such sentiments, generalized across groups, are often referred to as generalized prejudice and this concept is the cornerstone of the current thesis. The generalized prejudice notion is certainly old, but there are nonetheless fundamental questions left unanswered. The current thesis aims to address some of these.

## 2. Prejudice

### 2.1 Prejudice Defined

Outside the scientific community, prejudice is often defined as being synonymous with prejudgment or preconceptions (e.g., Merriam-Webster, n.d.; Oxford Dictionaries, n.d.). Also, if such preconceptions would turn out to be “true”, then prejudice is considered a pseudo-problem (see Kjöllner, 2013). In psychological research the term has a more specific meaning and the problem is very real, especially for those belonging to groups persecuted or discriminated against (see e.g., Sidanius & Pratto, 1999). The scientific community is not especially concerned about the issue of “truth” because the kernel of prejudice, as we know it, is evaluative.

In psychology there are numerous definitions of prejudice. Still, Ashmore (1970) suggested that the essence of the concept is captured in the following statements: (1) Prejudice is an attitude, (2) it is a negative orientation, (3) it is bad and (4) it is an intergroup phenomenon. An attitude is most readily described as a tendency to make a positive or negative evaluation of an object (Eagly & Chaiken, 1993). However, much debate has focused on the question of whether attitudes include several components. A three-component view holds attitudes to reflect (a) a feeling about the attitude object (affect), (b) thoughts and beliefs about the object (cognition) and (c) behavioral dispositions toward it (see e.g., Ajzen & Fishbein, 1980; Duckitt, 1992; Eagly & Chaiken, 1993). Historically, the mainstream understanding of attitudes first moved from viewing attitudes simply as “the affect for or against a psychological object” (Thurstone, 1931, p. 261) via a two-component view, to a three-component view. However, the trend has turned back toward a single component view (see Duckitt, 1992) and the one feature in attitudes that is widely agreed upon is still an evaluation of an object (Gawronski, 2007). In parallel, the affects attached to groups are often considered the heart of matters when it comes to prejudice (see e.g., Duckitt, 1992; Fazio, Jackson, Dunton & Williams, 1995; Wittenbrink, 2004).

Although the trend has turned back toward a single component view on attitudes, the idea that our cognitions and beliefs about an object influence our evaluations is certainly alive. Prejudice is believed to be influenced by stereotypes and the stereotype concept is basically equivalent to a cognitive component in attitudes (Devine, 1989). A key ingredient in the stereotype concept is social categorization; people are categorized into groups with

certain attributes attached to them (e.g., Banaji & Greenwald, 1994; Devine, 1989). Just as people distinguish between penguins and gulls as categories of birds with different characteristics, the same kind of thinking applies to humans. From this perspective, stereotypes are simply conceptions of human categories (see, Judd & Park, 1993, see also Greenwald, Banaji, Rudman, Farnham, Nosek, & Mellott, 2002). An important note to make here is that people may be familiar with stereotypes within a society without agreeing with them personally (e.g., Devine, 1989). For example, there may exist a widespread belief in a society that immigrants are criminals (or that immigrants are overrepresented among criminals) and most citizens may be familiar with such a stereotype. However, not everyone agrees that this “portrait” of immigrants is accurate (or agree with the inference that immigrants would have a criminal “nature”). This distinction, between cultural associations and personal endorsement of them, is discussed in more detail under heading 2.3 and in Paper II.

Returning to Ashmore’s (1970) four defining features of prejudice, the second one states that it is bad. However, what makes prejudice “bad” has been the subject of much debate. As commented by Duckitt (1992), the field has moved away from using this as a defining aspect of the concept as it is inevitably normative and arbitrary. The third of Ashmore’s (1970) features states that prejudice is a negative orientation. Although group evaluations and stereotypes can be positive, they are most often not (see e.g., Akrami, Ekehammar, & Araya, 2006; Allport, 1954; Devine, 1989). Nonetheless, there are pitfalls in defining prejudice merely in terms of group negativity (see below, as well as heading 8.4 and 8.6).

Finally, the idea that prejudice is an intergroup phenomenon, targeting groups other than one’s own (outgroups), has traditionally been crucial for developing theories about its origin (see e.g., Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950; Sherif, 1966; Tajfel & Turner, 1979). The tendency to boast superiority of one’s own group, and look down upon outgroups, is also captured in the concept of ethnocentrism, which was coined by Sumner (1906). However, despite the influence of this line of thinking, there is a mismatch here between the theorizing about prejudice and how it is studied and measured. Prejudice is often measured as negativity or disparagement toward a group, but not necessarily toward an outgroup. For example, there is an extensive literature examining derogatory attitudes toward women (sexism) among both male and female participants (e.g. Glick & Fiske, 1996; Jost & Burgess, 2000; Sibley, Overall, & Duckitt, 2007). Also, empirics suggest that members of groups that enjoy high social status tend to be ethnocentric and hold negative attitudes toward low status groups. On the other hand, members of groups with low social status tend to be ambivalent both toward their own group and outgroups. Members of low status groups display negativity toward their own group as well as positivity toward high status groups (Dasgupta, 2004; Hinkle & Brown, 1990; Jost & Burgess,

2000; Stangor & Jost, 1997; Nosek, Banaji, & Greenwald, 2002). In line with this research, Glick and Fiske (2001) made an intriguing point by suggesting that “the crux of prejudice may not be antipathy but social inequality” (p. 110).

The discussions about the prejudice concept so far have been provided to set the stage for the definition adopted in this thesis. More to the point, I have used Ashmore’s (1970) feature to highlight both strengths and weaknesses surrounding traditional definitions. Prejudice certainly involves evaluations of groups, and so the concept of attitudes becomes fundamental in prejudice research. Still, Glick and Fiske (2001) make the compelling argument that prejudice is altogether reducible to group antipathy. In line with their argument, the current dissertation adopts the perspective that prejudice is a devaluing evaluation of a group (or an individual based on his/her group membership). The word devaluing is chosen instead of negative to emphasize that prejudice concerns biases, and most often unequal group relations: What prejudice does is to keep a group in place for the benefit of another (e.g., Glick & Fiske, 2001; Jost & Banaji, 1994; Sidanius & Pratto, 1999; Tajfel & Turner, 1979). The definition adopted here suggests that group negativity is not prejudiced unless at least one group is held in higher esteem, or receives more favorable evaluations than other groups.

To illustrate the point of defining prejudice as group devaluation, suppose that a person is holding a negative attitude toward people with dark skin. Some might be tempted then to directly infer that the person is a racist. However, if the person has an *equally* negative evaluation of people with light skin, this kind of conclusion becomes problematic.

Measures focusing on evaluations of two contrasting groups, and deriving a bias between these, provide a straight-forward demonstration of prejudice (although they may raise psychometric questions, see Blanton, Jaccard, Gonzales, & Christie, 2006). Such measures are best described as *relative* because prejudice is inferred from difference scores. However, many instruments aimed to assess prejudice focus on the evaluations of groups presumed to be held in lower esteem, without directly contrasting them with evaluations of the “high esteem” groups. For example, measures of sexism often focus on attitudes toward women in their own right, rather than biases between men and women. These could be referred to as *absolute* measures. Importantly, inferences about devaluation in these measures are not equally straight-forward. They can certainly pick up devaluating evaluations, but it is not guaranteed. These validity issues, being fundamental for the conclusions in this thesis, are dealt with in detail in the discussion.

## 2.2 Explicit and Implicit Prejudice

There has been a dramatic and well-documented decline in overt racism in Western societies for more than fifty years (e.g., Dovidio & Gaertner, 1986). However, social psychologists have been asking themselves whether people have actually become less prejudiced, or if societal pressure has merely made these attitudes more difficult to detect. Many researchers have emphasized the latter alternative leading to an increasing number of methods and various attempts to reveal such disguised attitudes. The Modern Racism Scale (McConahay, 1986), and the Modern Sexism Scale (Swim, Aiken, Hall, & Hunter, 1995) are two examples of self-reporting questionnaires designed for this purpose (see Method section heading 6.4.1 and 6.4.2).

Despite the efforts to adopt more covert instruments for self-reported prejudice, some researchers have argued that they are still reactive to social desirability concerns (e.g., Fazio et al., 1995). As a consequence, a number of alternative measures have been developed to reveal attitudes of which a person may be unable or unwilling to report openly. These have been called implicit attitude measures. The term implicit is best understood as a synonym to automatic (Brauer, Wasel, Niedenthal, 2000; De Houwer, Teige-Mocigemba, Spruyt, & Moors, 2009). In contrast, self-reports have been referred to as explicit, or controlled measures (Devine, 1989; Greenwald & Banaji, 1995).

The two most prominent types of implicit attitude measures are affective priming tasks and implicit association tests (De Houwer et al., 2009). The basic idea behind priming tasks as prejudice measures is that the exposure of a group has automatic effects on subsequent positivity/negativity evaluations. For example, being exposed to a black face makes white participant faster at responding that a word is negative, but slower at evaluating positive words (e.g., Fazio et al., 1995). The suggested explanation for this effect is that the black face automatically activates a negative evaluation, and when a word is congruent with that evaluation (i.e. negative), responding is facilitated. In contrast, when the word to be evaluated is incongruent (positive) with the evaluation of the prime stimulus (black face), then it takes longer to respond to the word.

In the class of association tests, the Implicit Association Test (IAT; Greenwald, McGhee & Schwartz, 1998) is by far the most frequently used, both within and outside the scientific community (a demo-version of the test is available at <https://implicit.harvard.edu/implicit/sweden/> as well as <https://implicit.harvard.edu/implicit/demo/>). Like priming tasks, the rationale for the IAT is also built on variable response times depending on the evaluative congruence or incongruence of stimuli. However, unlike priming tasks the IAT is not based on the automatic “spillovers” from being exposed to a social stimulus. Instead, it was developed to assess the associations between categories of social and evaluative stimulus in a set of sorting tasks. More

specifically, the IAT asks participants to sort stimuli belonging either to one of two social categories (e.g., black versus white people) or one of two evaluative categories (Good/Pleasant versus Bad/Unpleasant). The IAT is based on the idea that when a social and evaluative category comes to share the same response key, then congruent and incongruent combinations reveal biased associations. For example, the combinations White/Good and Black/Bad (congruent trials) leads to faster sorting by white participants compared to the combinations Black/Good and White/Bad (incongruent trials; see e.g., Greenwald et al., 1998).

More broadly, when it comes to automaticity or control there is widespread agreement in the literature that explicit and implicit prejudice measures differ (De Houwer et al., 2009; Fazio & Olson, 2003). In other words, there is much consensus regarding differences in prejudice *expressions*. However, researchers disagree on whether control is an integrated aspect of explicit prejudice. There is also disagreement on whether it is meaningful to discuss two types of prejudice, mirroring controlled versus automatic expressions (see e.g., Brauer, et al., 2000; Hofmann, Gawronski, Gschwendner, Le, & Schmitt, 2009). From one perspective, prejudice is a latent “something” that should not be equated with its expression or measurement (e.g., Fazio, 2007; see also Crandall & Eshleman, 2003). Fazio (2007) has argued that attitudes should be defined as a sum of evaluative associations to a social category and that (some) implicit measures provide a bona fide pipeline to these (see Fazio et al., 1995). In contrast, explicit measures are described as tapping “verbal behaviors”, potentially influenced by these associations as well as control factors. In other words, this perspective suggests that there is only one attitude construct and that (some) implicit techniques provide a more proximate assessment of these than explicit measures. Also, the so-called MODE model (e.g., Schuette & Fazio, 1995) posits that motivation and opportunities, in combination with attitudes help explain people’s behavior.

In contrast to the view that there is only one kind of attitude, others have argued that explicit and implicit measures map on to different kinds of evaluations. From this viewpoint, explicit and implicit not only refers to different measurement strategies, but to different kinds of attitudes. In this perspective, prejudice is defined by its expressions. Noteworthy, the described difference between implicit and explicit attitudes is much inspired by dual process models of human cognition and memory (see e.g., Chaiken & Trope, 1999; Evans, 2008; Sloman, 1996). For example, the human memory is thought to operate in two modes: Some of our memories are consciously available and possible to verbalize whereas others are not (e.g., Tulving, 2002). Likewise, explicit attitudes have been described as conscious, controllable, and propositional whereas implicit attitudes have been described as unconscious, automatic and associative (e.g., Devine, 1989; Gawronski & Bodenhausen, 2006; Greenwald & Banaji, 1995; Uhlmann, Poehlman, &

Nosek, 2012; Wilson, Lindsey, & Schooler, 2000). Notably, different aspects have been emphasized by different researchers. For example, some have focused heavily on the conscious-unconscious distinction (e.g., Banaji & Greenwald, 1994; Greenwald & Banaji, 1995) whereas others have focused on associative versus propositional information representations (Gawronski & Bodenhausen, 2006).

Empirically, much research has been concerned with the question of whether explicit and implicit attitude and stereotype measures correlate. The interest in this question presumably stems from the logic that two measures of the same construct should correlate (Campbell & Fiske, 1959). In other words, the correlation issue has virtually been treated as synonymous to settling the single versus dual construct debate (see e.g., Brauer et al., 2000).

Meta-analytic results from more than 12,000 participants suggest that the mean correlation between self-reports and IAT data is around .20 (Greenwald, Poehlman, Uhlmann, & Banaji, 2009; Hofmann et al., 2005). Noteworthy, this correlation is too strong to imply complete dissociation between scores on explicit and implicit instruments. However, it is also too weak to imply that the two types of measures are interchangeable. More importantly, the strength of the relation between self-reports and the IAT is crucially dependent on moderator variables. One often discussed candidate is self-presentation concerns (e.g., Akrami & Ekehammar, 2005; Fazio & Olson, 2003). Another candidate is spontaneity (Hofmann et al., 2005).

The impact of moderator variables clearly shows that there is no simple answer to the question of whether explicit and implicit attitude measures are related or not. It is also interesting to note that single and dual perspective proponents both find the moderating effects to be perfectly compatible with their viewpoints (e.g., Fazio, 2007; Uhlmann et al., 2012). This apparent oddity reflects different definitions of prejudice and different psychometric approaches to examine the question. A focus on convergent and discriminant validity of explicit and implicit measures has underpinned conclusion of dual constructs (e.g., Greenwald & Nosek, 2006; Nosek & Smyth, 2007; Uhlmann et al., 2012). However, from the viewpoint that explicit measures confound attitudes and motivation (see Fazio, 2007), it has been argued that once motivation is out of the picture, a unitary attitude construct appears more tenable. At the end of the day, the “right” answer to the single versus dual construct will depend on one’s definition of attitudes. In this thesis I will refer to what is assessed in explicit prejudice measures as explicit prejudice and what is measured in implicit measures as implicit prejudice. The consequences, pros and cons of doing so are dealt with in the general discussion (heading 8.2).

## 2.3 Cultural versus Personal Associations

Granted that the IAT measures associations (which is up for some debate; e.g., Fiedler, Messner & Bluemke, 2006), where do they come from? Just as some scholars have distinguished between cultural stereotypes and personally endorsed beliefs (e.g., Devine, 1989), the same argument has echoed in the research on implicit attitudes. More specifically, it has been argued that the IAT may reflect associations between a group and an evaluation that the person is familiar with, but potentially disagrees with (see e.g., Arkes & Tetlock, 2004; Han, Olson, & Fazio, 2006; Karpinski & Hilton, 2001; Olson & Fazio, 2004).

Olson and Fazio (2004; see also Han et al., 2004) provided one indication that the IAT might pick up on cultural knowledge that the person may not agree with, or act in accordance with. These researchers construed a “personalized” IAT and sought to demonstrate how it functioned differently compared to the standard IAT. Their results revealed less racial prejudice compared to the standard IAT, and also a stronger correlation with explicit measures. The fact that the effects were weaker than usual suggests that the effects in a standard IAT are bolstered by what Olson and Fazio (2004) called “extrapersonal associations”. Still, based on the logic that the difference between the standard and personalized IAT reflects extrapersonal associations, one should recognize that the remainder of the effect should be personal. Also, Nosek and Hansen (2008) have commented that Olson and Fazio’s (2004) findings can be explained on methodological rather than theoretical grounds. Finally, the effects in the IAT can hardly be explained solely on the basis of cultural stereotypes. Support for this claim comes from minimal group situations where participants have no previous experience either with the in- or outgroup, or any face-to-face contact with their members (see also heading 6.6). Even in such settings, where cultural influences have been stripped away completely, people tend to associate their own group with positive words and the outgroup with negative ones (Ashburn-Nardo, Voils, & Monteith, 2001).

Notably, priming techniques have not been targeted with the same criticism regarding cultural associations, presumably because these methods involve a task of personally evaluating some stimuli. In other words, it is obvious in these tasks that whatever the ultimate origin of the processes in the brain of the participant, there is an influence on individual decision making. This is not obvious in the IAT. Still, much research has been concerned with the question of whether scores on the IAT are linked to personal criterion outcomes. Notably, if the IAT solely reflected extrapersonal associations or cognitive confounds (see e.g., Mierke & Klauer, 2003; McFarland & Crouch, 2002), then it should not be predictive of such outcomes. In reality however, the IAT does predict a range of criteria variables (for a meta-analysis, see Greenwald et al., 2009).



Some scholars have suggested that the distinction between cultural and personal evaluations is uninformative (e.g., Banaji, Nosek, & Greenwald, 2004; Gawronski & Bodenhausen, 2006; Nosek & Hansen, 2008). For example, both Gawronski and Bodenhausen as well as Banaji and co-workers argued that personal endorsement is explicit per se. Banaji et al. further commented that the automatic functioning of implicit attitudes imply that associations, although possibly originating in cultural beliefs, may affect behaviors without a person's intent. Also, Gawronski and Bodenhausen argued that the distinction between cultural and personal beliefs imply two separate representations of associations in memory, depending on their origin. They argued that this idea is incompatible with research that the source of a memory is represented separately from its content (see e.g., Johnson, Hashtroudi, & Lindsey, 1993).

Despite that the arguments from the cited scholars in last paragraph are well-articulated and convincing, they still invite potential objections. Social categories have multiple attributes associated with them (see e.g., Devine, 1989), and reasonably different evaluations paired to them as well. Considering this, it is quite possible that some, but not all of these guide certain behaviors in a particular situation. For instance, a person might associate black people with musicality (see Wittenbrink, Judd, & Park, 1997), and this particular association may imply a positive evaluation. However, that does not necessarily have prejudice-relevant consequences at the behavioral level, such as approaching black people. Just because the IAT correlates with a relevant behavioral criterion, the conclusion is not warranted that all possible associations to the two groups determine behavior. Perhaps it is mainly (or only) those associations that are personally endorsed, at the explicit level, that have the potential to automatically influence at the implicit level. Another possibility is that non-endorsed associations only have momentary effects on behaviors. Thus, they may produce a temporary link between scores on the IAT and behavioral criterion. However, in the long run, individual differences in the behaviors resulting from such associations could very well be random. Importantly, both of these possibilities do not necessarily imply that there are two qualitatively different kinds of associations in our memory (see Gawronski & Bodenhausen, 2006). What they do imply is that mental representations about different groups vary in terms how easily they become activated, and the extent to which they influence behaviors (e.g., Fazio, 1993). This perspective is in line with recent research suggesting that propositional knowledge may also be activated automatically (see Hughes, Barnes-Holmes, & De Houwer, 2011). In other words, the distinction between automatic associative knowledge and elaborated propositional reasoning may not be as clear-cut as previously suggested.

In this thesis I discuss cultural and personal associations in the IAT but it should be noted that I do not mean to suggest that they are qualitatively different. The point, based on the discussion in the previous paragraph, is rather

that associations presumably differ quantitatively in terms of how deep-rooted, stable, and interconnected they are. More importantly, as elaborated in Paper II, a personality psychological approach provides a framework for connecting these issues with the question of what the IAT actually measures.

Summing up, it seems to be a reasonable conclusion that some, but not all of the mental processes picked up in the IAT are predictive of discriminatory behaviors (e.g., McConnell & Leibold, 2001; but see also Blanton, Jaccard, Klick, Mellers, Mitchell, & Tetlock, 2009). At least over short time spans, the test seems to tell us something about the individual test taker. This arguably justifies the interest in the IAT, and implicit measures overall.

## 2.4 Generalized Prejudice

In his pioneering work on the nature of prejudice, Allport (1954) concluded that “one of the facts of which we are most certain is that people who reject one out-group will tend to reject other out-groups. If a person is anti-Jewish, he is likely to be anti-Catholic, anti-Negro, anti any out-group” (p. 68). Although the intergroup aspect is debatable (see next heading), his notion of a generalized response tendency across prejudice targets is a highly robust finding (e.g. Adorno et al, 1950; Asbrock, Sibley, & Duckitt, 2010; Bierly, 1985; Bratt, 2005; Bäckström & Björklund, 2007; Cunningham, Nezlek and Banaji, 2004; Duckitt & Sibley, 2007; Ekehammar & Akrami, 2003; 2007; Ekehammar, Akrami, Gylje, & Zakrisson, 2004; Guimond, Dambrun, Michinov, & Duarte, 2003; Hartley, 1946; Kogan, 1961; McFarland, 2010; McFarland & Crouch, 2002; Zick, Wolf, Küpper, Davidov, Schmidt, & Heitmeyer, 2008).

One of the first, and most important examinations of a generalized tendency underlying prejudice responses was provided by Hartley (1946). He had his participants evaluate 32 known ethnic and national groups and three fictitious groups (e.g., Pireneans). He found that the evaluations for the known groups were highly correlated with each other, but also with the evaluations for the fictitious groups. In other words, some individuals were more negative than others, not only toward most any known group, but also toward groups that did not exist. This suggests that some people have it “within them” to express more negativity than others toward most any prejudice target at hand.

The empirical evidence of a generalized response tendency across prejudice is clear and consistent, but the exact meaning of the term “generalized prejudice” is not. Sometimes it has been used to describe a latent factor underlying correlations between different types of prejudice (e.g., Ekehammar & Akrami, 2003). At other times, generalized prejudice has been defined as a “tendency to dislike outgroup members no matter which particular group they belong to” (Bäckström & Björklund, 2007, p. 10; see also McFarland,

2010). An advantage of using the term generalized prejudice in the first sense (as adopted here) is that it does not impose that the correlations reflect generalized outgroup bias or negativity. Importantly, this implies a difference between generalized prejudice and the concept of ethnocentrism (see next heading).

Despite that it was more than fifty years since Allport (1954) labeled generalized prejudice a certain fact, there are still a number of uncertainties surrounding it. For example, it has been extensively examined using self-reports but much less so for implicit attitude measures. In fact, beside one publication in this dissertation, there are only two published papers providing evidence of a generalized implicit prejudice factor. Besides these, there is one unpublished paper that I am aware of by McFarland and Mattern (2001).

McFarland and Mattern (2001) found a generalized implicit factor to account for common variance among five target groups (black people, women, gay people, foreigners, and poor people). Also, a set of three personality and ideological variables accounted for 60% of the variance in explicit generalized prejudice, but none of these variables predicted generalized implicit prejudice. In a follow-up paper, McFarland and Crouch (2002) found support for a generalized implicit prejudice in the IAT based on the targets of foreigners, black people, and gay people. However, they also found that this factor was substantially weakened when removing the influence of general processing speed in the IAT (see heading 6.5 for a solution to this problem). Finally, Cunningham et al. (2004) replicated a generalized implicit factor in the IAT and also examined its relation with generalized explicit prejudice. In two studies they found strong and significant correlations between a latent explicit and implicit prejudice factor ( $r = .37$  and  $.47$  in Study 1 and 2 respectively). Interestingly, they also found that implicit prejudice was indirectly and only weakly related to ideology and mental rigidity. Such correlates have been crucial for developing theories about the nature of prejudice in explicit measures (see heading 4).

## 2.5 Ethnocentrism

In theory, a closely related concept to generalized prejudice is ethnocentrism. Sumner (1906) described it as the “view of things in which one’s own group is the center of everything, and all others are scaled and rated with reference to it” (1906, p. 12). He suggested that people boast their own group’s superiority while looking down on outgroups with contempt and hate. Indeed, his description of ethnocentrism as a general intergroup bias is widely acknowledged in more recent discussions about the concept (see e.g., Bizumic, Duckitt, Popadic, Dru, & Krauss, 2009; Hammond & Axelrod, 2006; LeVine & Campbell, 1972). In this vein, it should be noted that several scholars have discussed additional defining aspects of ethnocentrism (e.g.,

Bizumic et al., 2009). Nonetheless, the most relevant aspect for this thesis, and the prejudice literature in general, is that the ingroup is favored at the expense of other groups. For example, giving more candy to an unknown ingroup member than an unknown outgroup member is a classic illustration of ethnocentrism (see e.g., Tajfel, Billig, Bundy, & Flament, 1971).

In this thesis the term ethnocentrism is treated as synonymous to (generalized) ingroup bias. While the term ingroup bias is frequently used among social psychologists (e.g., Mullen, Brown, & Smith, 1992), ethnocentrism has been the term traditionally used by prejudice researchers focusing on personality (e.g., Adorno et al., 1950). Consequently, as the latter literature is the central one in this thesis, their vocabulary is also the one adopted here.

A central question in this thesis concerns the difference between generalized prejudice and ethnocentrism (see Paper III). To recapitulate, in this dissertation generalized prejudice is referred to as a tendency to generally devalue groups. In contrast, ethnocentrism is defined as a general bias where outgroups are evaluated more negatively than a person's ingroup. The reason why it is important to make this conceptual distinction is simple: Ethnocentrism is a narrower concept than generalized prejudice and can be considered a particular kind of prejudice. In essence: All ethnocentrism is prejudiced or discriminatory (devaluing), but not all prejudice is ethnocentric (i.e., due to group membership). Crucially, different kinds of prejudice could correlate for other reasons than ethnocentrism.

In the existing literature there is a strong tendency for researchers to discuss ethnocentrism while actually examining generalized prejudice (as defined above). This mismatch can be traced all the way back to the classic work by Adorno et al. (1950). Adorno and associates (1950) followed Sumner (1906) in defining ethnocentrism as ingroup positivity combined with outgroup negativity and built much of their theorizing around this concept. Empirically however, this is not what they studied. For example, Adorno et al. included an item about "feminine positions" in their assessment of ethnocentrism and they used it in samples with women. This was done despite that they defined ethnocentrism as an intergroup phenomenon. In other words, their female participants who were supposedly ethnocentric, were in reality displaying negativity toward their own group. Notably, this mismatch between theoretical definitions and empirical data has been widely inherited in more recent work as well. For example, Cunningham et al. (2004) examined a generalized negativity toward black, poor and gay people. They discussed it as a general outgroup negativity and labeled it as ethnocentrism although they did not report any exclusion of gay or poor people from their sample.

Studies on ethnocentrism require that any prejudice or discrimination observed should be directed toward outgroups. Thus, any study including women when measuring sexism, for example, cannot be considered evidence of ethnocentrism. Also, blurry category boundaries become problematic

since group membership means everything in ethnocentrism. For prejudice targets such as overweight or old people it becomes necessary for the researcher to specify arbitrary group boundaries or to ask participants to provide their own. Such procedures have never been described in the generalized prejudice literature.

In addition to the problems associated with group membership, there is another objection against equating generalized prejudice and ethnocentrism: Ingroup bias is not the only possible explanation for correlations between different kinds of prejudice. For example, prejudice might be generalized across targets like immigrants and gay people because they are both minorities and stigmatized groups. The generalization does not necessarily have to do with the distinction between in- and outgroups. Indeed, as previously noted there is much data confirming that people can display prejudice toward their own groups, especially when belonging to a disadvantaged one (e.g., Jost, Banaji, & Nosek, 2004). Women endorsing conventional sexist attitudes provide a perfect example of why group membership cannot be held as the sole cause of prejudice (see Glick & Fiske, 2001).

It should be noted that a study on generalized prejudice that solely use “standard” (disadvantaged) groups as targets cannot isolate an in- versus outgroup effect. Correlations between different kinds of prejudice could even reflect individual differences that have nothing to do with prejudice. Consider for example two doctors, one of them providing poor care to people with dark skin while the other provides good care. Now, consider the possibility that both doctors treat light-skinned patients equally good or bad as the dark-skinned ones. This would suggest that one of them is a better physician, not that they differ in prejudice. The same argument goes for correlated attitudes: Some individuals might be negative toward all people whereas others are positive toward everyone (it is not even necessary to invoke group attitudes here). In fact, the level of abstraction could be even higher such that some people are just positive about everything they evaluate (people, food, places etc.) whereas others are negative about everything. Of course, these possibilities are not only problematic to infer ethnocentrism; they could potentially undermine the concept of generalized prejudice as well (see Graziano, Bruce, Sheese, & Tobin, 2007). This issue is dealt in length under heading 8.4. For now however, it should suffice to note that data support the discriminant validity of a generalized prejudice construct, as opposed to a broader response set. In contrast, claims about ethnocentrism underpinning correlations between prejudices are not substantiated by empirics to date.

Combining the arguments above it becomes evident that there is not a single study in the generalized prejudice literature (to my knowledge) that directly demonstrates ethnocentrism. The studies in this field all focus on disadvantaged groups, include participants from target groups, or fall short in defining in/outgroup boundaries (see e.g., Adorno et al., 1950; Asbrock et

al., 2010; Bierly, 1985; Bäckström & Björklund, 2007; Cunningham et al., 2004; Duckitt & Sibley, 2007; Ekehammar & Akrami, 2007, McFarland, 2010). Importantly, this is not to suggest that these inquiries are lacking merit, or that generalized prejudice is uninteresting. I am merely suggesting that the existing findings in this literature should be discussed as something other than ethnocentrism. In this thesis, a first direct test of basic personality effects on ethnocentrism is provided in Paper III.

### 3. The Person-Situation Debate

Being similar to the nature-nurture debate, the person-situation debate concerns the question of whether people's behaviors are best understood in terms of the characteristics of the person or the context. Schematically, there are three positions differing in their emphasis on person versus situation factors. The dispositional position has relied heavily on the person term, the situational position advocates the opposite, and finally the interactional position lies in between (see Ekehammar, 1974; Snyder & Cantor, 1998).

Regarding this debate in prejudice research, Hodson (2009) commented that "nowhere is the theoretical divide between person and situation more evident than the domain of prejudice research" (p. 247). Indeed, this debate is much reflected in the discussion about the nature of associations in the IAT (see heading 2.3). More broadly however, the major dispute in the field has concerned the role of personality versus social psychological theories for understanding prejudice and discrimination (see e.g., Altemeyer, 1998; Akrami, 2005; Tajfel & Turner, 1979; Turner, Reynolds, Haslam, & Veenstra, 2006). More specifically, the key players on the personality side are reviewed under the headings to come, and the main opponents have come from a social identity framework (see Abrams & Hogg, 2004; Tajfel & Turner, 1979; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). These different traditions have come with strikingly contradictory statements about what constitutes the most important factors for understanding prejudice. Still, it is crucial to note that the empirical evidence from each tradition rarely contradicts the empirical evidence from the other (see Akrami, Ekehammar, Bergh, Dahlstrand & Malmsten, 2009; Bergh, Akrami, & Ekehammar, 2012).

So how can personality and social psychologists contradict each other so much when their data do not? One answer is almost trivial; both traditions have focused on *one* main effect each and neither of these precludes the existence of the other (see Bergh et al., 2012). The different focuses of personality and social psychologists are reflected in the adoption of different statistical analyses. The personality research has relied heavily on statistical analyses that (mainly) focus on individual differences, for example correlation, factor and regression analyses. This research seeks to answer the following question: Why are some people more prejudiced than others?

In contrast to the personality approach, social psychologists have often built their arguments around experiments in which levels of prejudice or

discrimination vary as a function of some relevant (contextually dependent) predictor (e.g., identification with a group, see e.g., Abrams, Wetherell, Cochrane, Hogg, & Turner, 1990; Steele & Aronson, 1995; Tajfel et al., 1971). Contrary to the personality research, this tradition has normally adopted statistical methods such as t-tests and ANOVAs. Importantly, these methods treat individual differences as *error variance* and test hypotheses concerning *mean level differences*. This research can be summarized as seeking the answer to the following question: How do people *in general* (i.e., most anyone) become prejudiced?

Based on the extensive support for social identity explanations of prejudice (see e.g., Abrams & Hogg, 2004 for a review), there have been repeated claims that a personality approach to prejudice has been falsified (e.g., Turner et al., 2006). In contrast, personality psychologists have *not* been making the opposite claim that social identities, or other social psychological factors, are invalid explanations for prejudice. Instead, it has been argued that personality and social psychological factors complement each other (see Akrami et al., 2009; Bergh et al., 2012). The rationale for this argument is simple and based on a fundamental premise in personality psychology: There are different kinds of stability in personality, attitudes and behaviors (see Caspi & Roberts, 2001; Roberts, Walton, & Viechtbauer, 2006; Roberts, Wood & Caspi, 2008). One kind of stability concerns the rank-order of individuals; whether people keep their relative positions in comparison with others across two or more measurements. Another kind of stability concerns the mean level; whether a group of people have the same average level across two or more measurements. What is fundamental to understand here is that these two kinds of stability *can be completely independent of each other*. This is an undisputable mathematical fact (see Roberts et al., 2006) that some social psychologists have failed to acknowledge when criticizing personality explanations to prejudice (see Bergh et al., 2012 for a discussion on this topic). Also, Akrami and co-workers (2009) provided an empirical illustration of the compatibility of person and situation effects on the rank-order and mean level stability of prejudice. For example, they demonstrated that two individuals may both have an increase in prejudice when primed with information about the world being unsafe, while keeping their relative positions on prejudice and its predictive variables.



## 4. Personality and Ideology Explanations for Prejudice

Allport (1954) argued that the reason for correlations between different kinds of prejudice is a psychological unity – a prejudiced personality. The authoritarian personality theory was formed around similar observations of correlated attitudes. Indeed, the very opening sentence of the classic reading goes straight to this point:

The research to be reported in this volume was guided by the following major hypothesis: that the political, economic, and social convictions of an individual often form a broad and coherent pattern, as if bound together by a "mentality" or "spirit," and that this pattern is an expression of deeplying trends in his personality (Adorno et al., 1950, p. 1).

As is obvious from the writing by Allport (1954) and Adorno et al. (1950), a generalized tendency to devalue groups is the very foundation for examining personality roots of prejudice. Still, why is that? The logic is straightforward: If the same individuals always tend to be most prejudiced, virtually regardless of the target, then it makes sense to start looking for an explanation *within* the individual. In contrast, if different types of prejudice were null-correlated one would have to assume that individual differences in prejudice depend entirely on the target at hand. In other words, the question “who is most prejudiced?” depends on the situation; if the situation concerns potential biases toward, for example, a woman or an immigrant. Alternatively, there would have to be one racist kind of personality, one sexist kind of personality and so on. Although this latter alternative is possible in principle, it is not considered plausible and there are no major theories of prejudice assuming modalities for targets in which individual differences are coherent and stable (i.e., indicating personality effects).

Finally, the issue of modalities versus a generalized prejudice mentality is relevant to discussions about prejudice outside the academic world. Unfortunately, politicians and journalists often discuss prejudice issues as if they occurred in isolation of each other. For example, intolerance toward Muslims in Sweden is sometimes discussed in terms of whether or not it represents a rational response to a threat to a Swedish (or Western European) way of living. Still, this whole discussion is misguided from a psychological point of view. It is misguided because regardless of how “rational” intoler-

ance toward Muslims may be, there is no rationale in this rhetoric as to why individuals endorsing this argument also tend to be sexist and despise gay people. Here it is worth returning to the opening example of Breivik. One cannot explain his anti-Muslim attitudes merely on the basis of the current “situation” with Muslims in Europe and the supposed problem with “islami-sation”. To explain why he is not only extreme in these attitudes, but also in his attitudes toward women, gay men and lesbians, we need to look deeper. What is needed is a search for a “psychological unity” (see Allport, 1954).

## 4.1 Authoritarianism

The first attempt to explain a psychological unity within prejudiced individuals was provided by Adorno and co-workers (1950). They had found that anti-Semitism correlated with what they called general ethnocentrism. Strong relationships were also found with political and economic conservatism and they sought the genesis of these coherences. Their answer was a potentially fascist or pre-fascist personality; someone being “particularly susceptible to antidemocratic propaganda” (Adorno et al., 1950, p. 1).

In order to find empirical support for the theoretical authoritarian personality, a personality inventory called the F-scale was constructed. Unfortunately, the F-scale was a psychometric disappointment (e.g., Bass, 1955; Hyman & Sheatsley, 1954; Duckitt, 1992). At the theoretical level, the problems with the F-scale undermined the hypothesis that personality is responsible for coherence of political, economic and social attitudes. In the decades to follow, attention also shifted from a personality to a social psychological approach to explain prejudice (see e.g., Sherif, 1966; Tajfel & Turner, 1979). Notably, along with this shift, researchers changed focus from the question of why some are more prejudiced than others to the question of why most anyone can display prejudice.

The individual difference question had a renaissance when Altemeyer (1981) introduced his concept right-wing authoritarianism (RWA). He argued that the nine domains of characteristics in the F-scale were not coherent enough to represent a credible portrait of an authoritarian personality. Instead he suggested that three of the original classes of characteristics, authoritarian submission, authoritarian aggression, and conventionalism, alone form a unitary pattern of personality.

Perhaps the most elaborated account on the psychological mechanisms behind RWA as a predictor of prejudice was provided by Duckitt (2001, 2006). He suggested that the genesis of RWA is the belief that the world is a dangerous place. Based on the fear that the world is about to collapse under the pressure of evil forces, people high on RWA seek order and control. To get it, they turn to appropriate authorities. As loyal subordinates to these authorities, they aggress against those groups perceived to threaten the tradi-

tional order. For example, an illustration of viewing the world as inherently dangerous is readily available in the Breivik case. Consider the following portrait of Western Europe:

If a man of the 1950s were suddenly introduced into Western Europe in the 2000s, he would hardly recognise it as the same country. He would be in immediate danger of getting mugged, carjacked or worse, because he would not have learned to live in constant fear. He would not know that he shouldn't go into certain parts of the city, that his car must not only be locked but equipped with an alarm, that he dare not go to sleep at night without locking the windows and bolting the doors – and setting the electronic security system” (Berwick [Breivik alias], 2011, p. 12).

In line with this anecdotic evidence of a link between a RWA worldview and extreme intolerance, RWA has proven to be an extremely robust predictor of prejudice. Notably, the link between authoritarianism and prejudice has been documented in a vast number of countries (e.g., Australia, Belgium, Canada, Italy, New Zealand, South Africa, Sweden, USA), in convenience as well as representative national samples (see Altemeyer, 1981; 1998; Duckitt & Farre, 1994; Duckitt & Sibley, 2007; Duriez & Van Hiel, 2002, Ekehammar et al., 2004; Heaven & St Quintin, 2003; Pettigrew, 1958; Rattazzi, Bobbio, & Canova, 2007; Sibley & Duckitt, 2008; Sibley et al., 2013). Finally, people scoring high on RWA have been found to be particularly negative toward groups that are perceived to threaten security and traditional order in society (Duckitt, 2006; Duckitt & Sibley, 2007).

## 4.2 Social Dominance Orientation

In the 1990s, another theory was introduced to explain relations between social, economic and political attitudes in terms of personality. Social dominance theory (SDT; Sidanius, 1993; Sidanius & Pratto, 1999) starts from the premise that social relations between groups can vary on a dimension from strictly hierarchical to strictly egalitarian. The theory goes on to propose that some ideologies are hierarchy enhancing whereas others are hierarchy attenuating. One of the cornerstones in SDT is the idea that individuals differ in their inclination to adhere to such ideologies. This inclination is referred to as social dominance orientation (SDO; Pratto, Sidanius, Stallworth and Malte, 1994). SDO measures whether an individual prefers group relations to be equal or hierarchical in general.

Just like RWA, SDO is a powerful predictor of prejudice. These effects have also been replicated throughout many corners of the world and in both convenience as well as representative samples (e.g., Duckitt, 2001; Duckitt, Wagner, Du Plessis, & Birum, 2002; Duriez & van Hiel, 2002; Ekehammar et al., 2004; Heaven & St Quintin, 2003; Pratto et al., 1994; Sibley &

Duckitt, 2008; Sibley et al., 2013). Unlike RWA though, the prejudice of people scoring high on SDO is not driven by fear. Instead, the argument goes that it is driven by a motive to dominate others. In line with this argument it mainly targets disadvantaged groups and/or those competing for the same resources as the socially dominant person (see Duckitt, 2006; Duckitt & Sibley, 2007). Highlighting the different psychologies of RWA and SDO, Altemeyer (2004) provided the following description:

Right Wing Authoritarians [...] seem to be highly prejudiced mainly because they were raised to travel in tight, ethnocentric circles; and they fear that authority and conventions are crumbling so quickly that civilization will collapse and they will be eaten in the resulting jungle. In contrast, high SDOs *al-ready* see life as “dog eat dog” and – compared with most people – are determined to do the eating (p. 99).

The message key point in this quote is *not* that RWA and SDO are opposites and entirely incompatible. In fact, they are often found to display a weak or moderate (positive) correlation (e.g., Roccato & Ricolfi, 2005). Nonetheless, the crucial point is that they are essentially independent in their origins and predict prejudice for different reasons (see Duckitt, 2001; 2006; Duckitt & Sibley, 2007). More importantly, the additive effects of RWA and SDO account for the lion’s share of the individual variability in prejudice (Altemeyer, 1998; McFarland & Adelson, 1996).

### 4.3 Ideology or Personality Constructs?

Although both RWA and SDO have had a major impact on prejudice research, it should also be noted that the personality status of both constructs has been repeatedly challenged. Instruments argued to tap personality must display a reasonable stability over time and across situations as coherence in people’s thoughts, feelings, attitudes and behavior is fundamental for definitions of personality (e.g., Buss, 1987; Snyder & Cantor, 1998; Roberts et al., 2006). For RWA and SDO, this stability has been questioned and empirical data has indicated that levels on both constructs can be quite variable. For example, levels of RWA are known to be heightened when primed with a portrait of the world as a chaotic and unsafe place (Akrami et al., 2009; Duckitt & Fisher, 2003). SDO in turn, seems at least somewhat sensitive to the status of one’s own group in a social hierarchy (e.g., Guimond et al., 2003; Huang & Liu, 2005; Schmitt, Branscombe, & Kappen, 2003).

These demonstrations have led some social psychologists to view RWA and SDO with much skepticism (e.g., Turner et al., 2006). Still, personality oriented prejudice researchers have commented, in very general terms, that mean level changes only represent one of several aspects of stability (see

heading 3). Interestingly, the stability in relative position on RWA, SDO and prejudice has been found to be more promising than the stability in mean levels (e.g., Akrami et al., 2009; Bergh, Akrami & Ekehammar, 2010; Pettigrew, 1958; Sidanius, Pratto, van Laar, & Levin, 2004). Still, although there appear to be reasonable rank-order stability in RWA and SDO, their personality status has also been questioned on theoretical grounds. It has been argued that RWA and SDO tap ideological views and social beliefs rather than basic personality characteristics (e.g., Duckitt et al., 2002; Kreindler, 2005, Reynolds, Turner, Haslam, & Ryan, 2001).

## 4.4 Core Personality

In response to the criticism about the personality status of RWA and SDO, there has been a noticeable shift in personality research on prejudice toward more general theories and models of personality. In particular the five-factor (Big Five) model (e.g., McCrae & Costa, 2008) has become an important framework in this new era. The five-factor model describes the human personality in terms of five basic tendencies, and it is the most prominent model in the field today. The factors of this model are often discussed as agreeableness, conscientiousness, extraversion, neuroticism and openness to experience (henceforth openness).

As with most theories and models, the five-factor model is not unanimously adopted in the scientific community. There is a continued debate on the best way to represent the basic building blocks of the human personality. For example, the hexagon model of personality suggests a sixth fundamental dimension in terms of honesty-humility (e.g., Ashton & Lee, 2007). Also, in prejudice research, other individual differences have continued to draw attention outside the framework of the five-factor model. For example, McFarland (2010) has put a spotlight on (trait) empathy. Nonetheless, the interest in the five-factor model in prejudice research is probably due to the fact that two factors have been proposed as personality precursors to RWA and SDO.

Some psychologists have refrained from labeling RWA and SDO as measures of personality, but have simultaneously proposed that they have a psychological underpinning in more basic traits (e.g., Ekehammar et al., 2004; Sibley & Duckitt, 2008). More specifically, data indicates that Openness relates (negatively) to both RWA and SDO (more strongly to RWA) whereas Agreeableness relates (negatively) to SDO (Akrami & Ekehammar, 2006; Sibley & Duckitt, 2008). Agreeableness describes aspects of personality such as tender-mindedness, altruism and sympathy (e.g., Bergman, 2003). Openness describes people in terms of being, for example, unconventional and having a preference for novelty (McCrae & Costa, 2008). Thus, research has shown that people scoring high on RWA tend to be conventional and dogmatic. Likewise, those high on SDO tend to have little concerns

about the wellbeing of others. Both of these relations are clearly evident in meta-analytic data from more than 11,000 participants from a wide range of countries (Sibley & Duckitt, 2008).

Just as RWA and SDO have been related to Agreeableness and Openness, the same is true for prejudice (e.g., Ekehammar et al., 2004; Sibley & Duckitt, 2008). For generalized prejudice, Agreeableness and Openness have been found to predict as much as 30-40% of variance (Ekehammar & Akrami, 2003; 2007). Structural equation modeling points to the possibility that the impact of Agreeableness and Openness on prejudice is mediated by RWA and SDO. More specifically, low Openness is argued to lead to high levels of RWA, which in turn leads to high levels of prejudice. Likewise, low Agreeableness is argued to lead to high social dominance, and eventually to high levels of prejudice (see Ekehammar et al., 2004).

A forerunner to these ideas was introduced by Duckitt (2001; see also Duckitt et al., 2002) in his dual process model of ideology and prejudice (DPM). He suggested that RWA is rooted in a socially conforming personality whereas SDO is rooted in a tough-minded personality. In light of the findings that RWA is negatively related to Openness, and SDO negatively related to Agreeableness, later discussions on DPM have incorporated these two Big Five factors into the model (as analogous to the tough-minded and conforming personalities, see e.g., Sibley & Duckitt, 2008).

Summing up, a strong communality in the theory-driven DPM model, and the more exploratory work by Ekehammar and associates (2004) is the idea of two trajectories leading to prejudice: One from Agreeableness via SDO, and one from Openness via RWA. The causal relations proposed between these variables have also, in part, been confirmed in longitudinal studies (see Asbrock et al., 2010; but see also Sidanius, Kteily, Sheehy-Skeffington, Ho, Sibley, & Duriez, 2013).

## 5. Aims

The overall aim of the current thesis is to examine the notion of generalized prejudice with more scrutiny than in the existing literature. In essence, the thesis concerns the question of when and why prejudice can be generalized, and what personality and ideology can, and cannot explain. Notably, the “cannot” part should not be neglected. First of all, this note is important for the general person-situation debate because the current findings do *not* seek to invalidate social psychological explanations for mean level changes in prejudice (see heading 3). Instead, some of the work could be viewed as ways to bridge the knowledge from the personality and social identity perspectives.

The current thesis is “only” concerned with the question of why some people are more inclined to prejudice than others. Considering individuals

like Breivik, this question is arguably challenging and important enough in its own right. Second, it is also important to note that not all individual differences in prejudice are systematic or rooted in personality differences (see Allport, 1954).

The current thesis is based on three papers, together comprising seven empirical studies. As the aims and hypotheses for each study are described elsewhere, the focus here will be to briefly present the guiding ideas for each paper. One of the specific aims with the current thesis was to distinguish between target-specific versus target-*unspecific* variance and to examine how these variance components would relate to personality. More specifically, in Paper I it was hypothesized that personality should be related to prejudice at an abstract level, making it a stronger predictor of target unspecific than specific variance. Importantly, other variables should instead predict the target specific component of variance. Notably, some variance in prejudice is neither abstract nor random errors, and this variability should be related to factors such as group membership. In sum, the novelty here is the notion that the distinction between abstract and specific components essentially maps onto person versus situation effects.

The second specific aim of the thesis was to examine the robustness of a generalized prejudice factor for implicit measures. More important was the question of whether such a factor would have the same personality and ideological underpinnings as the generalized prejudice factor found for explicit measures. Based on the evidence of dual constructs underlying explicit and implicit prejudice measures, it seemed reasonable that they would also differ in their relations to personality. These questions were tackled in Paper II.

The final specific aim was to examine whether personality predicts prejudice in a situation where bias can only be based on group membership. In other words, the question is whether ethnocentrism in isolation mirrors the findings for generalized prejudice in relation to personality. This could provide an indication of whether personality differences in generalized prejudice reflect that people are ethnocentric to different degrees. Notably, this has been assumed for over almost 60 years (see Allport, 1954), but it has never been directly tested (see heading 2.5). Thus, Paper III centered on the question if experimentally induced ethnocentrism is explained by Agreeableness and Openness, just like generalized prejudice.

## 6. Methodology

### 6.1 Method overview

Paper I and II were based on survey data whereas Paper III focused on ethnocentrism in minimal group experiments. All studies, with the exception of the very last one, focused on the same personality and ideological variables. These could essentially be described as the “usual suspects” in the literature (see Sibley & Duckitt, 2008), and are detailed under heading 6.3. Explicit prejudice was assessed with self-report instruments and implicit prejudice in Paper II was assessed with the IAT (see heading 6.4 and 6.5). The targets of prejudice varied somewhat across studies, but the main focus was on an index of generalized prejudice extracted from their shared variance. An overview of all variables used in the Papers and their respective studies is found in Table 1.

### 6.2. Sampling and Participants

Although no random sampling procedures were adopted, efforts were made to use samples that were at least somewhat more heterogeneous than usually found in social psychological research. Psychology students were always excluded from participating because of their special insights about this area of research. Also, candidate participants were asked if they had been taking part in other studies on social and political attitudes. If so, they were excluded. Instead we recruited students from other departments and faculties and advertising was posted on several student campuses at Uppsala University. Advertising was also posted to recruit non-student participants, for example, in food stores and the local job center.

### 6.3 Personality and Ideology Measures

#### 6.3.1 Big Five personality

Agreeableness and Openness from the five-factor model (see heading 4.4) were assessed with the official Swedish translation of the NEO-PI-R (see Bergman, 2003). The NEO-PI-R measures each of the five factors with 48



statements each, half of them reversed. These 48 items are evenly distributed between six subfactors, or facets. Agreeableness includes items such as “when I’ve been insulted, I just try to forgive and forget” and “I’m suspicious when someone does something nice for me” (reversed coding). Examples of items from Openness are “I have a very active imagination” and “I’m pretty set in my ways” (reversed coding). Responses were given on a Likert-type scale ranging from 1 (Is absolutely not true) to 5 (Is absolutely true).

### 6.3.2 Right-Wing Authoritarianism

A Swedish adaptation to Altemeyer’s (1981) original RWA scale was used in these studies. Specifically, Zakrisson (2005) developed 15 items (7 reversed) with the goal of making the statements more concise, less extreme and less specific about certain groups compared to the original scale. Zakrisson’s scale includes items such as “there are many radical, immoral people trying to ruin things; the society ought to stop them” and “it is better to accept bad literature than to censor it” (reversed coding).

### 6.3.3 Social Dominance Orientation

Pratto and coworkers (see Pratto et al., 1994; Sidanius & Pratto, 1999) developed several versions of an SDO scale, and the so-called SDO-6 became the standard after its introduction. This is the scale adopted here. It includes 16 items (8 reversed), two examples being “some groups of people are simply inferior to other groups” and “group equality should be our ideal” (reversed coding). Unlike the RWA scale, there is no Swedish translation that has been validated and published as such. Nonetheless, the translated instrument used here has proven to be a good predictor of prejudice in previous studies in Sweden and results are consistent with findings from other countries (see e.g., Akrami & Ekehammar, 2006; Ekehammar et al., 2004; Sibley & Duckitt, 2008).

### 6.3.4 Empathy

Study 3 of Paper III followed McFarland (2010) by including two dimensions of Davis’s (1983) Interpersonal Reactivity Index to assess two dimensions of empathy. More specifically, this study included empathic concern and perspective taking. For more information on the psychometric properties and validity of the Swedish translation, see Cliffordson (2002). Each one of the two dimensions was assessed with seven items. An example item for empathic concern was “I often have tender, concerned feelings for people less fortunate than me” and an example for perspective taking was “before criticizing somebody, I try to imagine how I would feel if I were in their place”.

Table 1. *Overview of Variables Used in the Papers and Their Respective Studies*

Paper Variable/Study	Paper 1	Paper 2			Paper 3		
		1	2	3	1	2	3
<b>Personality</b>							
Agreeableness	X	X	X	X	X	X	X
Openness to Experience	X	X	X	X	X	X	X
Right-Wing Authoritarianism	X	X	X	X		X	X
Social Dominance Orientation	X	X	X	X		X	X
Empathic Concern							X
Empathic Perspective-taking							X
Honesty-Humility							X
<b>Explicit Prejudice</b>							
Ethnic Minorities	X	X	X	X		X	X
Women	X						X
Mentally Disabled People	X						X
Homosexuality (10 items)	X						
Gay men (7 items)		X	X	X			
Lesbians (7 items)		X					
Old People			X	X		X	X
Overweight people			X	X		X	X
<b>Implicit Prejudice</b>							
Ethnic Minorities		X	X	X			
Gay men		X	X	X			
Lesbians		X					
Old People			X	X			
Overweight People			X	X			
<b>Ethnocentrism</b>							
Adjective Ratings					X	X	X
Social Distance							X
<b>Method Variance Controls</b>							
Coca-Cola Explicit Attitudes				X			
Pepsi Explicit Attitudes				X			
Coca-Cola/Pepsi IAT				X			

### 6.3.5 Honesty-Humility and Narcissism

Seven items were included to assess honesty-humility and narcissism in Study 3 of Paper III. The items used here were translated from materials developed for the New Zealand Attitudes and Values Study 2009 (see Sibley, 2009). In this material, the items for assessing honesty-humility and narcissism partly overlapped (two items). The combined use of these items was validated by Sibley et al. (2010). Sibley et al. (2010) selected these items from measures by Ashton and Lee (2008) as well as Campbell, Bonacci, Shelton, Exline, and Bushman (2004). We administered all items available for both characteristics, including ones dropped in the final survey for the New Zealand Attitudes and Values Study 2009 (see Sibley, 2009). Two items used were “I would get a lot of pleasure from owning expensive luxury goods” (primarily honesty-humility) and “I feel entitled to more of everything” (primarily narcissism).

## 6.4 Explicit Prejudice Measures

### 6.4.1 Ethnic Prejudice

A measure of ethnic prejudice was used in all studies except one (Paper III, Study 1). This instrument was introduced by Akrami, Ekehammar and Araya (2000) to assess so-called modern prejudice toward ethnic minorities in a Swedish/Scandinavian context. The scale used here had nine items of which five were reversed.

Modern prejudice scales were introduced in the 1980's (see McConahay, 1986; Sears, 1988) based on the observation that overt, blatant prejudice had been declining over time. The idea was that prejudice had not really disappeared; it had merely undergone a change in its expression. The modern prejudice scales were meant to tap these new, more subtle, expressions of prejudice. Such manifestations of prejudice would include a denial of ongoing discrimination or an opposition to help disadvantaged groups (see Sears, 1988). Thus, the scale developed by Akrami et al. (2000) includes items such as “discrimination against immigrants is no longer a problem in Sweden” and “special programs are needed to create jobs for immigrants” (reversed coding).

Modern prejudice scales have been criticized for confounding racism (or sexism) with conservative ideology (e.g., Sniderman & Tetlock, 1986). However, it is important to note that the current instrument has been validated as a measure of prejudice by demonstrating convergent validity with a classical racism scale ( $r_s > .60$ , see Akrami et al., 2000). In other words, to a large extent it is the same people that are opposed to job programs for immigrants that agree with statements that immigrants are dirty, immoral and unintelligent. Thus, even if the modern scales tap some general political sentiments

about opposing special favors, there is little doubt that they also map individual differences in racism.

### 6.4.2 Sexism

Just as it has been argued that racism has become more subtle, and therefore requires new measurement strategies, the same argument has been put forward with regards to sexism (Swim et al., 1995; Tougas, Brown, Beaton, & Joly, 1995). In line with this research, Ekehammar, Akrami and Araya (2000) developed a Swedish modern sexism scale.

The modern prejudice instrument by Ekehammar et al. (2000) was adopted when assessing self-reported sexism. The scale had eight items, three reversed. The items were construed along the same principles as the measure for modern racism and include statements such as “discrimination of women is no longer a problem in Sweden” and “better measures should be taken to achieve equality in workplaces” (reversed coding).

### 6.4.3 Prejudice toward People with Disabilities

Paper I adopted a third measure of modern prejudice, targeting people with intellectual disabilities. The instrument was introduced by Akrami, Ekehammar, Claesson, and Sonnander (2006) and comprises 11 items (5 reversed). Items include “there have been enough societal efforts in favor of people with intellectual disabilities” and “It is right that people with intellectual disabilities sometimes get special support from society to find appropriate jobs” (reversed scoring).

### 6.4.4 Sexual Prejudice

Another type of prejudice commonly studied in the psychological literature is the one targeting people with different sexual orientations other than a heterosexual one (e.g., Herek, 1984; Hudson & Ricketts, 1980; Whitley, 1999). Specifically, this research mainly focuses on attitudes toward gay men and lesbians. As discussed by Herek (2000), sexual prejudice is preferable to the more common term homophobia as it does not presuppose that such prejudice stems from fear.

A total of 26 items were available from previous research by Ekehammar and associates. Ten of these assessed attitudes toward homosexuality whereas the remaining items were made up of two mirror instruments for gay men and lesbians (7 items each). These three instruments have been found to be highly correlated when modeled as latent factors ( $r_s > .80$ ) and their reliability and validity are discussed by Ekehammar, Bergh, and Akrami (2013).

In Paper I, the 10-item instrument was used as there was more data available for these statements. Paper II (Study 1) instead focused on attitudes

toward gay men and Lesbians. Study 1 used both the gay men and lesbians instrument whereas Study 2 and 3 only used the items for gay men. An example item from Paper I was “there is nothing strange about homosexual relationships” (reversed coding) and an example from Paper II was “gay men [/Lesbians] do not fit into our society”.

#### 6.4.5 Prejudice toward Overweight People

For all the types of prejudice presented so far there are strong norms against openly expressing them. A good illustration comes from the Swedish discrimination law. All of these scales center on groups for which it is formally illegal to discriminate against (SFS 2008:567, 2008). In vivid contrast, it is not illegal to discriminate against overweight people in Sweden.

Because prejudice toward overweight people is not strongly associated with social desirability concerns, it does not require a “modern” scale. There is simply no pressure toward more subtlety (Crandall, 1994). For that reason, negativity toward overweight people provides an important piece in the assessment of generalized prejudice. Specifically, it speaks to the scope and nature of generalized prejudice. Notably, if all instruments used here were “modern” then the common variance extracted from them could be defined as generalized modern prejudice, and perhaps even with the emphasis on the “modern” part. In contrast, a latent factor cutting across subtle and blatant expressions suggests that the essence of it all is actually prejudice (see also heading 8.8).

In paper II and III a measure was construed by adopting items from existing scales for prejudice toward overweight people. Specifically, items were selected from Allison, Basile, and Yaker (1991), Crandall (1994), Crandall and Biernat (1990), as well as Morrison and O’Connor (1999) and somewhat modified (e.g., shortened) for the current studies. Notably, none of these scales was adopted in its entirety because they also included statements about, for example, the respondent’s attitudes about attractiveness or his/her own weight. Also, as none of the existing scales were balanced, a number of statements were reworded to arrive at reversed items. The final scale is presented in Appendix A, along with some comments on its dimensionality and validity as a prejudice measure.

#### 6.4.6 Prejudice toward Old People

The final explicit prejudice instrument used in this dissertation targeted old people. One of the most widely used scales in the literature is Kogan’s (1961) Attitudes toward Old People Scale and it was validated in Swedish by Söderhamn, Gustavsson, and Lindencrona (2000). Their instrument included as many as 34 items and 16 of these (7 reversed) were selected to arrive at a scale of manageable size for the current studies. A couple of these were

shortened or somewhat reworded. The dimensionality and some notes on the validity of final instrument are dealt with in Appendix B. This appendix also includes a table with the items in the current scale.

## 6.5 Implicit Prejudice Measures

In the current dissertation the IAT was used to assess implicit prejudice. Considering the wide range of implicit prejudice measures available today, a few words seem warranted as to why the current thesis adopted the IAT. For one reason, it was considered a good starting point as it is clearly in the centre of research focusing on automatically detected prejudice today (see e.g., De Houwer et al., 2009). Also, the IAT was chosen because our studies required each participant to complete tests for prejudice toward several different targets. Priming techniques that could have been an alternative, comes with the potential problem of “spillover” effects across tasks. Furthermore, the IAT has generally been found to have higher/stronger reliability than priming techniques (see e.g., Fazio & Olson, 2003) and its validity has been more closely examined than any other implicit prejudice measure. Admittedly, these examinations have revealed a number of drawbacks with the technique. Still, many of these drawbacks concern the meaning of implying certain levels of bias for certain IAT scores (see Arkes & Tetlock, 2004; Blanton & Jaccard, 2006; Fiedler et al., 2006). In contrast, the current thesis solely focuses on relative positions, not absolute levels, in prejudice.

A general description of the IAT procedure is that people are asked to respond as quickly as possible to a number of sorting tasks. For example, in the original paper introducing the method (see Greenwald, et al., 1998), American college students were asked to sort names as either typical of black or white people. They were instructed to press the left key for a name associated with black (e.g., Ebony) and the right key for a name associated with white people (e.g., Susan). In a second block of trials, participants were asked to sort words as either pleasant (e.g., love) or unpleasant (e.g., disaster). In the third block, the categories from the previous trials were combined so that both the categories “Black” and “pleasant” appeared to the left and the categories “White” and “unpleasant” appeared to the right. In other words, participants were to respond with the left key for either “Ebony” or “love” but press the right key for either “Susan” or “disaster”. Following this task only names were sorted a second time, but with the categories in switched places with “White” on the left and “Black” on the right. The final (fifth) block combined “White” and “pleasant” on the left and “Black” and “unpleasant” on the right, thus opposite combinations compared to the third task.

Today, the recommendation is to use an IAT with seven blocks, rather than the five originally used (Greenwald, Nosek, & Banaji, 2003). More

specifically, the blocks combining sorting of evaluative and social stimuli are repeated twice for each combination (first with 20 trials and then directly followed by 40 new ones). For example, the test taker completes two blocks (number 3 and 4 in the procedure) with White/Pleasant and Black/Unpleasant and two blocks (number 6 and 7 in the procedure) for White/Unpleasant and Black/Pleasant.

The general hypothesis underlying IAT is that people are faster at sorting items when the categories on the respective side are associated (e.g., Nosek, Greenwald, & Banaji, 2005). For example, most participants are faster at sorting items when White is combined with Pleasant on one side and Black and unpleasant on the other compared with the opposite combinations (White + unpleasant and Black + pleasant). This has been taken as an indication that people are implicitly more negative towards black people than they are towards white people (Greenwald et al., 1998). The difference in response time between the two combinations is also considered an index of the strength of the association (e.g., Lane, Banaji, Nosek & Greenwald, 2007).

This difference is calculated as a so-called *D*-score for each test taker. The *D*-score reflects the mean difference between two test blocks (i.e., with opposite combinations of evaluative and social categories) divided by the standard deviation of all the latencies in these blocks. Using two blocks for each combination, two *D*-scores are calculated (based on block 3/6 and 4/7) and then averaged. The *D*-score comes in a number of versions, differing in their treatments of errors and extreme latencies (see Greenwald et al., 2003). The *D*<sub>6</sub> version was used in the studies of this dissertation. An important note about the *D*-score is that it removes much excessive error variance compared to older scoring algorithms. Specifically, general processing speed and associated cognitive skills have been discussed as a validity threat in the IAT (e.g., McFarland & Crouch, 2002), but the *D* scoring algorithm reduces the magnitude of this problem substantially (see Cai, Sriram, Greenwald, & McFarland, 2004; Mierke & Klauer, 2003).

All IAT stimuli used in this dissertation are also used at the Swedish demonstration website for the IAT. Thus, there are equivalent tests available at <https://implicit.harvard.edu/implicit/sweden/> for all specific IATs described below. As for the online tests, all IATs used the following words to represent the category 'Good': Joy, love, peace, wonderful, pleasure, glorious, laughter, and happy. The category 'Bad' was represented by agony, terrible, horrible, nasty, evil, awful, failure, and hurt. For more information about the material used in these tests, see for example Nosek et al. (2007).

### 6.5.1 Implicit Association Test for Ethnicity

To mimic the explicit measure for ethnic prejudice, implicit race biases were assessed with an IAT for white versus black people. Each group was represented by six facial images, three depicting men and three depicting women.

### 6.5.2 Implicit Association Test for Weight

12 images were used to represent thin and overweight people in the implicit measure corresponding to the self-report scale for prejudice toward overweight people. Half of the images depicted thin people and the other half depicted heavily overweight people. Within each category (thin/overweight), half of the images depicted men and the other half depicted women.

### 6.5.3 Implicit Association Test for Age

Old and young people were represented by 12 images (6 for each category) in the implicit measure for prejudice toward old people. Pictures of men and women were equally frequent within and across the two social categories (young/old).

### 6.5.4 Implicit Association Test for Sexual Prejudice

Finally, there were two versions to assess implicit sexual prejudice, one for gay men and one for lesbians. These were constructed to mirror each other. Both of these included the words “heterosexual” and “straight” as well as two images to represent the category heterosexual. The first of these images displayed a figure of a wedding couple with a man and a woman. The second displayed symbols often used for men and women’s restrooms combined into one image. Similarly, the category homosexual was represented by the words “homosexual” and “gay” and two pictures representing gay men or lesbians depending on the task. To represent gay men, the wedding figures from the heterosexual category were replaced with a corresponding figure of two men. Likewise, the “restroom symbol” image instead depicted two men. To represent lesbians, the wedding figure included two women and the image with “restroom symbols” had two women.

## 6.6 Minimal Group Experiments and Ethnocentrism

In Paper III, minimal group experiments were used to examine ethnocentrism. More specifically, the aim of the third paper required a method that would isolate the role of group membership as the sole basis for prejudice (see heading 2.5). Here it is worth noting that for such an inquiry, real groups are associated with many challenges. They are, for example, inevitably associated with status and power differences as well as established stereotypes. In contrast, novel groups provide an opportunity to control for such confounding variables. Also, prejudice between novel groups is arguably very abstract. If a person does not know anything about the groups except his/her own membership, and still displays ingroup bias, it is reasonable to



conclude that this bias will target *most any outgroup*. In other words, prejudice between novel groups provides a straight-forward demonstration of ethnocentrism.

The minimal group paradigm was introduced by Tajfel and associates (see e.g., Tajfel et al., 1971) to isolate the effect of social categorization on discriminatory behavior. To that end, Tajfel et al. (1971) described six characteristics of their experiments. First, there should be no face-to-face interaction within or between groups. Second, participants should not have any knowledge about the membership of particular individuals (i.e. complete anonymity should be assured). Three, the basis for assigning group membership should not provide a rational link to the response scale. These three criteria could be described as defining the “minimal” features of the groups studied: In an anonymous setting, without face-to-face interaction, participants are left with minimal information to guide their thoughts, feelings and behaviors toward these groups. They can only rely on the information that they supposedly share something with some people (the ingroup) but not others (the outgroup).

The remaining three criteria set up by Tajfel et al., (1971) dealt with requirements for the dependent variable when studying discriminatory behaviors (such as eliminating self-interest as an explanation for resource allocations). Nonetheless, as summarized by Bourhis, Sachdev and Gagnon (1994), the essence of the minimal group procedure is that “subjects are randomly categorized as members of one of two arbitrary groups specifically created for the purpose of the experiment” (p. 209, see also Brewer, 1979; Sidanius, Pratto, & Mitchell, 1994; Tajfel, 1970). For example, Tajfel and coworkers (1971) used a test for art preferences with unfamiliar paintings to (randomly) assign participants to either a Kandinsky or Klee group.

Reynolds, Turner, Haslam, Ryan, Bizumic, and Subasic (2007) compared alternative criteria for assigning group membership to their participants. They demonstrated that participants are most biased, and identify strongest with their group, when group membership is assigned based on a supposedly meaningful criterion (as opposed to self-chosen or explicitly random). For participants to believe that their group membership was meaningful, Reynolds et al. informed them that it had been determined by their responses in an earlier questionnaire. In other words, participants were led to believe that they had similar personalities and attitudes as their fellow ingroup members. A similar cover story was adopted in the last two studies of Paper III.

Minimal group provides premises for studying ethnocentrism, but the actual assessment of bias is close to a chapter in itself. Minimal group studies have traditionally focused on discriminatory behaviors (see e.g., Tajfel & Turner, 1979), but in this case we were interested in ethnocentric attitudes. As discussed in the aim section, we sought to examine the equivalence of generalized prejudice and ethnocentrism in terms of their personality roots. The interest was specifically directed to the role of group membership. Con-

sequently, a behavioral expression of ethnocentrism would confound this focus with the difference between attitudes (evaluations) and behaviors.

To assess ethnocentrism as attitudes we used adjective ratings in relation to the minimal groups. Specifically, we asked participants to rate how descriptive a number of adjectives were of both the experimentally induced groups. The rationale was simple: holding positive adjectives to be more characteristic of the own group (compared to the outgroup), and negative ones to be more characteristic of the outgroup (compared to the ingroup), would indicate ethnocentrism. Thus, the outgroup ratings would be subtracted from the ingroup ratings (after reversing negative adjectives) to arrive at an index of ethnocentrism. Noteworthy, a similar approach was successfully adopted by Sidanius and co-workers (1994).

In Study 1 and 2 of paper III, the following 12 adjectives were used: *Ambitious, intelligent, caring, trustworthy, kind, honest, nice, lazy, stupid, unkind, dishonest, and careless*. In Study 3 we extended the list to also include: *incompetent, cold-hearted, unhelpful, egoistic, efficient, and clever*. This was done to balance the list in terms of characteristics referring to dimensions of warmth and competence. These two dimensions are argued to represent something of a “Big Two” in person evaluations (see e.g., Fiske, Cuddy, Glick, & Xu, 2002). All adjectives were rated on a scale from 1 (*not at all descriptive*) to 5 (*highly descriptive*) in Study 1 and 2. A 7-point scale was used in Study 3 with the same endpoint text labels as in the previous studies.

Finally, Study 3 of Paper III also included a measure for social distance (see e.g., Sidanius et al., 1994). Social distance is a classic type of prejudice assessment, indicating the degree to which a person seeks to keep a social distance in various domains toward a particular group. In this particular study, we made the items relative to indicate to which degree the person would prefer a person from their own group over a person from the other in four different contexts. One referred to dating preferences (reverse coded), one concerned the subletting of an apartment, one involved neighbor relations, and the last involved a work project (reverse coded). For example, one of the items was phrased in the following manner: “if I was to put an apartment out for rent, I would probably prefer a tenant of my own GHP-type [minimal group] rather than the other one”.

## 7. Empirical Papers

### 7.1 Paper I

#### 7.1.1. Background and Aim

As previously noted, prejudice research in psychology tends to fall into one of two classes. One focuses on person effects and the other on situation or contextual effects. Unfortunately, this research gives the impression that prejudice is a matter of *either* persons *or* situations. For example, considerable efforts have been made to advance the argument that prejudice is *not* in any way a reflection of stable dispositions within a person (e.g., Brown, 2010; Hogg & Abrams, 2001; Reynolds et al., 2001). Nonetheless, an overarching aim of the research by Ekehammar, Akrami and associates has been to move beyond such disputes and instead acknowledge strengths from both sides of the debate.

In the literature, there are some attempts to analyze prejudice from a classic person  $\times$  situation position in which personality and contextual interact (e.g., Sibley et al., 2013). Still, a simpler way to acknowledge the importance of both person and situation factors is to consider the possibility of two essentially independent main effects. Without downplaying studies centering on interactions, it should be noted that they are not as common as one might expect. In addition, these effects tend to be small in size and/or challenging to replicate (e.g., Bergh et al., 2010, 2012). In contrast, the respective main effects of either personality or social psychological variables are strikingly robust (e.g., Mullen et al., 1992; Sibley & Duckitt, 2008).

If personality and social psychological variables provide independent main effects on prejudice (e.g., Akrami et al., 2009) it suggests that they account for separate shares of variance. In this study we sought to provide a schematic distinction between two components of variance that could, in principle, differentiate between personality and social identity explanations. The underlying rationale for our predictions was derived from the generalized prejudice literature. More specifically, strong correlations between different kinds of prejudice imply that a substantial amount of the variance can be explained without considering the specific target at hand. Thus, there seems to be a within-individual component in prejudice that is largely independent of the target or social context (a common component). Of course, prejudice as a phenomenon requires a set of baseline contextual premises

(e.g., the perceived existence of multiple groups), so the point is not that prejudice occurs in a social vacuum. The point is that once these baseline premises are fulfilled, it is the same individuals that will set themselves aside as bigots in essentially any situation. In other words, these individual differences observed depend on what people bring into each evaluation they make of a (disadvantaged) group. That is, their personality.

In contrast to the common component, we reasoned that another component of variance in prejudice is specific to a particular target and require target-specific explanations. Noteworthy, studies on generalized prejudice extract the variance shared between all measured types of prejudice while the residuals receive little attention. Still, the residual variance in factor analysis can be schematically divided into two parts, one being reliable but specific to a particular indicator (target) and another being random and unreliable (e.g., Little, Cunningham, Shahar, & Widaman, 2002; Little, Preacher, Selig, & Card, 2007). At a more fine-grained level, the specific variance can also be divided into a “pure” specific component and a “dirty” component. The “dirty” component taps variance shared by some indicators, but not all (Little et al., 2002).

As noted in the previous paragraph, personality research throws the baby out with the bathwater when it comes to understanding specific components in prejudice. In contrast, social psychological research tends to focus on explaining types of prejudice in isolation while not being explicit about “pure” and “dirty” components (or a more global communality between types of prejudice, see e.g., Glick & Fiske, 1996; Sears, 1988). More to the point, factors such as group membership should be particularly important to the “pure” specific component, but less important for the “dirty” and broadly communal component. For example, a person’s ethnic identity should be particularly relevant for understanding the purely ethnic aspects in an assessment of ethnic prejudice. In contrast, ethnic identity should matter less for aspects of ethnic prejudice shared with for example sexism. Notably, this reasoning is in principle implied in influential social psychological explanations for prejudice that emphasize intergroup dynamics and identification with one part (e.g., Sherif, 1966; Tajfel & Turner, 1979). Still, it has not been formally hypothesized in these perspectives that the explanatory value of group membership and identification lies in the specific component of prejudice. Based on this background, we hypothesized that personality would relate to the common component in prejudice, but much less so to the specific components. Equally importantly, we hypothesized group membership, in terms of gender, should be more strongly related to a specific component of (sexist) prejudice.

## 7.1.2 Method

### 7.1.2.1 Participants

The sample analyzed consisted of eight subsamples, comprising a total of 861 participants (612 women). One of the subsamples ( $n = 170$ ) was also included in a previous publication by Ekehammar and Akrami (2007, Study 1). In addition, Study 1 in Paper II partly overlap with one of the subsamples here ( $n = 60$ ). The partial overlap came about because the current study was analyzed before the data collection for Study 1 of Paper II was finalized. The remaining subsamples (combined  $n = 631$ ) have not appeared in other publications. The median age was 23 years ( $SD = 11.46$ ).

### 7.1.2.2 Measures and Procedure

Participants responded to personality and ideology scales measuring Agreeableness and Openness ( $\alpha = .90$  and  $.87$  respectively), RWA ( $\alpha = .81$ ) and SDO ( $\alpha = .88$ ). Prejudice was assessed with scales for sexism ( $\alpha = .77$ ), ethnic prejudice ( $\alpha = .84$ ), prejudice toward disabled people ( $\alpha = .76$ ), and sexual prejudice ( $\alpha = .92$ ). Having reversed appropriate items, scale scores were formed by averaging across items. Data collection was computerized and participation was voluntary and confidential.

## 7.1.3 Results

### 7.1.3.1 Main Analysis

After confirming that the four types of prejudice were correlated ( $r_s > .30$ ,  $p_s < .01$ ), we derived the common and specific component of variance for each prejudice measure. To do so, we regressed each prejudice measure on the other three, and saved the residuals as the specific components. Consequently, the specific components included target specific variance and random error. The common components were derived from bivariate regressions of the original scores of each prejudice type on its residual. In other words, this component included variance shared by all targets, but also covariance shared between two or three of them.

In the next step we conducted three canonical analyses with Agreeableness and Openness as independent variables and the four variables representing the (a) common or (b) specific component as dependent variables. Including all canonical roots, the redundancy index (see Hair, Black, Babin, & Anderson, 2010) revealed that the personality variables explained 30% of the variance in the common [ $\chi^2(8) = 391$ ,  $p < .001$ ], and 4% in the specific components [ $\chi^2(8) = 389$ ,  $p < .001$ ].

To examine if personality relates differently to the common and specific component, the zero-order personality-prejudice (after  $z$ -transformations) correlations were tested against the corresponding part correlations for each type of prejudice controlling for the other three. A dependent  $t$ -test disclosed that the mean part correlation ( $-.11$ ) was significantly [ $t(7) = 15.88, p < .001$ ] lower than corresponding mean zero-order correlation ( $-.32$ ).

Finally, we examined the relation of gender with the common and specific component of sexism. We examined this relation with partial correlations. Specifically, we controlled for Agreeableness and Openness as there are systematic gender differences in these traits (see Costa, Terracciano, & McCrae, 2001). The correlation between dummy-coded gender (female = 0, male = 1) and the specific component ( $r = .27$ ) was significantly higher [ $t(858) = 3.43, p < .001$ , single sample] than the corresponding relation with the common component ( $r = .11$ ).

### **7.1.3.2 Additional Analyses (not Included in Paper)**

The canonical correlation analyses presented above were also run with RWA and SDO included. Combining SDO and RWA with Agreeableness and Openness, the explained variance was 48% in the common components, and 9% in the specific components ( $ps < .001$ ).

An alternative demonstration that personality mainly relates to a common component in prejudice, while gender predicts uniquely sexist prejudice is to use structural equation modeling (SEM). Specifically, prejudice could be modeled as hierarchically structured with a latent variable for each type of prejudice mapping onto a higher order construct representing generalized prejudice. First of all, relations for Agreeableness, Openness and gender with the variance shared by all types of prejudice (i.e. a common component) could be examined. More importantly, such an analysis would also allow an examination of the predictability for sexism, after accounting for the shared variance with the other types of prejudice (i.e. the variance *not* shared by all sorts of prejudice). This approach is more complex than the statistical procedures described in the main analyses, but it has the advantage of specifying a more reliable specific component. Specifically, the SEM approach removes error variance from the specific aspects of each type of prejudice by placing it at the item (or parcel) level.

To run such an analysis, the items of each prejudice measure were randomly split into three parcels (see Little et al., 2002 for a discussion on parceling). Consequently, three composite score for each construct were created by averaging responses within each parcel. Factors were modeled for each type of prejudice with the three composite scores as (manifest) indicators. These latent prejudice factors were in turn modeled as indicators of a generalized prejudice construct (set to have equal loadings). Finally, paths were specified from Agreeableness, Openness and gender (all manifest) to the generalized prejudice and sexism factors. The specific prejudice factors were

uncorrelated for model identification. A mean-adjusted maximum likelihood estimator was adopted as it is robust to non-normality in the data, and some prejudice measures displayed somewhat skewed distributions. The analysis was executed in Mplus (Muthén & Muthén, 2012).

The model fit was acceptable, Satorra-Bentler  $\chi^2(83) = 396.86, p < .001$ ,  $CFI = .93$ ,  $RMSEA = .07$ , 90% CI [.06, .07],  $SRMR = .08$ . In line with the canonical correlations, Agreeableness and Openness displayed rather strong relations with the generalized prejudice factor. Also, after accounting for generalized prejudice, Agreeableness and Openness provided little explanatory value for sexism. In contrast, gender displayed a reversed pattern. Although much less pronounced, the trend was the same as in the correlational analysis where gender was more closely related to unique sexism than generalized prejudice (for more detailed results, see Figure 1). Still, there is a problem of comparing the strength of the association between gender and sexism here with the correlation reported in the main analyses. More specifically, the SEM analysis allows the effect of gender on sexism to be accounted for by generalized prejudice. Thus, any mediation or confounding effect of generalized prejudice would weaken the direct path between gender and sexism. Consequently, to arrive at a SEM analysis more equivalent to the canonical analysis, the model was re-specified to only include a direct path from gender to sexism. In this analysis, the effect of gender on sexism was virtually identical to the one reported in the main analysis ( $\beta = -.26, p < .001$ ). Also, in this analysis the personality variables accounted for 43% of the variance in generalized prejudice ( $p < .001$ ).

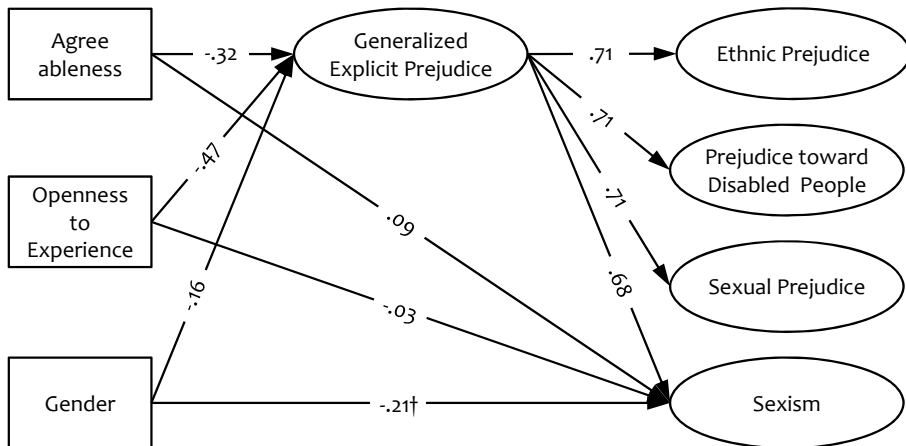


Figure 1. Structural equation model depicting the relations for Agreeableness, Openness and gender with common and specific aspects of prejudice. Gender is dummy coded (men = 0, women = 1). Shown estimates are standardized and based on a mean-adjusted (robust) maximum likelihood method. All estimates have p-values less than .001 except the path between Agreeableness and sexism ( $p = .002$ ) as well as Openness and sexism ( $p = .28$ ). † Path estimated to  $-.26$  when excluding the relation between gender and generalized prejudice.

#### 7.1.4 Discussion

The findings disclosed that personality was related to the common rather than the specific component of prejudice. In contrast, gender was more closely associated with the specific component in sexism. Notably, the latter finding, concerning the link between group membership and prejudice being target specific, is crucial for the validity of our reasoning. More specifically, it could be argued that *any* variable should be more closely related to the common component because our splitting procedure essentially puts all error variance in the specific component. In other words, it is not surprising that personality displayed stronger relations with the common component considering this reliability issue. Still, the results disclose that specific components in prejudice are more than just noisy leftovers from extracting common aspects. This claim is much substantiated by the additional SEM analysis. The SEM analysis demonstrates that even when error variance has been factored out from the specific aspects of prejudice, the same patterns of results emerge as in the canonical correlations. Importantly, when modeling gender as only having a direct effect on sexism, the relation is almost identical to what was found in the main analyses based on correlations.

The congruent results from the canonical and SEM analyses also suggest that personality mainly explains variance shared by all prejudice types included, rather than variance shared among two or three targets. For this discussion it should be recalled that Little et al. (2002) used the term “dirty” variance for covariance shared by some, but not all, indicators of a latent construct. The term “dirty” refers to the fact that it is neither specific to an individual indicator nor true variance indicative of a modeled latent factor. Instead, it dilutes the boundaries between communality and specificity. Returning to the results, it could be argued that the canonical correlations boost the personality relations with the common component because of “dirty” variance. Indeed, this is a reasonable reservation considering how we derived the common and specific components. By regressing one type of prejudice on all others, *all* covariance (including the “dirty” one) is placed in the common component. Consequently, the common factor is unconventionally broad-spanning (compared to generalized prejudice derived from factor analysis). In other words, if personality predicts dirty variance rather than the core of all types of prejudice, the explained variance would be higher in the canonical analyses compared to a SEM. However, the personality variables provided high predictability of the narrower and more conservative common component in the SEM analyses (i.e., generalized prejudice). Thus, it seems reasonable to conclude that personality mainly predicts aspects of prejudice shared by all the targets here, rather than covariance between two or three of them.



Ideally, the impact of group membership on a specific component in prejudice should have been investigated for several targets. Here, we only analyzed the link between gender and sexism, as the available data did not allow us to test for other group membership effects. Still, the specific component in prejudice toward disabilities would be difficult to analyze based on group membership, even with an aim of doing so. Furthermore, with regards to ethnicity and sexual orientations, we did not collect data on these variables for all participants.

Even if we had collected data on ethnicity and sexuality, the proportion of immigrants and non-heterosexual people would have been too small to provide reliable results. For example, among the participants whose ethnicity was known, only 4% were immigrants. Assuming the same proportions in the sample overall, we would have had approximately 35 immigrants. In the end, the only group membership that we had full data on, and that provided large enough groups, was gender. Thus, in their current form the results suggest that group membership *can* explain specific aspects of prejudice, but not necessarily that it generally does so. Still with this caveat in mind, it is one of the most intriguing findings of this study that group membership may account for variance that is most often considered noise in studies on generalized prejudice. Consequently, we demonstrate that personality and social psychological variables may account for different components of variance in prejudice. This in turn provides a novel way of thinking about a compatibility of person and situation effects in prejudice.

A similar hypothesis as ours, about personality being most predictive of generalized forms of prejudice, was proposed and subsequently confirmed by Sibley and Duckitt (2008). Their rationale was largely equivalent to the notion generalized attitudes best explain patterns (aggregated indices) of behaviors, while specific attitudes explain specific behaviors (see e.g., Davidson & Jaccard, 1979; Fishbein & Ajzen, 1974). Following Sibley and Duckitt's reasoning, the relation between personality and prejudice should increase in a linear fashion the more abstract the assessment of prejudice. In reverse, the more specific the prejudice measure is, the more room there is left for "specific sources of information and experiences" (Sibley & Duckitt, 2008, p. 269).

The current findings were largely in agreement with those of Sibley and Duckitt (2008). However, the current study extends their analyses in several ways. First, we hypothesized about different explanations for prejudice mapping onto different components of variance. The study shows that when the common component is out of the picture, then there is very little left for personality to predict. Importantly, this essentially implies a categorical difference between what personality can and cannot explain, rather than a linear decrease with more specific targets. The perspective put forward here suggests that prejudice towards, for example, Romani people and immigrants (broader category) should be equally hard to map onto personality once a

common component has been removed. Second, our perspective is informative about the variance in prejudice presumably accounted for by explanations other than personality. More to the point, it is a novel proposition that group membership and group identification should explain a specific component in prejudice. Importantly, we would also expect this to be true at different levels of abstraction. For example, a specific component in prejudice toward Romani people and immigrants would be accounted for by non-Romani identity and non-immigrant identity respectively.

## 7.2 Paper II

### 7.2.1 Background and Aim

The aim of the second paper was to examine personality relations with both generalized explicit and implicit prejudice, as assessed with the IAT. Noteworthy, there are very few studies on generalized implicit prejudice and no studies relating it to basic personality tendencies (see introduction). Also, from a more theory-oriented point of view, such an endeavor provides important insights about (a) what kind of prejudice that personality predicts, and (b) the nature of implicit prejudice and the responses in the IAT.

Starting with the first point, the generalized prejudice literature is almost exclusively focused on explicit prejudice. However, the findings in this tradition are not discussed as being limited to controlled expressions of prejudice. Instead, they are broadly discussed as personality effects in prejudice, with little focus on the nature of the measures adopted. Paying attention to the notion that controlled and automatic expressions of prejudice differ, this begs a fundamental question: Does personality tell us anything about who is more or less biased in his/her spontaneous evaluative associations to different groups, or does it first and foremost tell us who is willing to verbally express such sentiments?

Importantly, Devine (1989) suggested that the presence of a prejudice target group (or member of it) elicits automatic negative associations for essentially everyone. The reason for this uniform reaction, she argued, is that negative (implicit) cultural stereotypes about groups are equally accessible for prejudiced and non-prejudiced individuals. From this viewpoint, the important difference between more and less prejudiced individuals concerns the will to inhibit or exhibit the cultural heritage of negative stereotypes. In other words, being systematically prejudiced is to endorse the cultural stereotype. This idea, that the meaningful individual differences in prejudice are controlled ones, could indicate that personality only comes into play for explicit measures. Other research also hints to the possibility that personality matters for explicit, but not implicit prejudice. More specifically, Cunningham et al. (2004) found that ideology and mental rigidity were only indirectly and

weakly related to generalized implicit prejudice. This could suggest that explicit prejudice transfer causal effects of personality onto implicit prejudice. However, it is equally possible, statistically speaking, that explicit prejudice is a confound providing a spurious relation between personality and implicit prejudice.

In Devine's (1989) perspective, being a prejudiced individual is essentially defined as being *explicitly* prejudiced (while prejudiced and non-prejudiced individuals alike harbor automatic associations). In this regard, other prominent scholars disagree. For example, Fazio et al. (1995) as well as Banaji and Greenwald (1994; Greenwald & Banaji, 1995) have taken the stance that automatic biases are just as relevant (or more) as their controlled counterparts. This brings us to the question about the nature of implicit prejudice.

Both priming techniques and the IAT have been found to be related to behaviors (see e.g., Fazio & Olson, 2003; Greenwald et al., 2009). Thus, researchers focusing on implicit measures have been successful in showing that manifestations of prejudice do not have to follow the route of controlled processes. Another question, however, concerns how malleable the associations in these tests are. As discussed under heading 2.3 it has been suggested that the IAT picks up cultural stereotypes or "extrapersonal" associations (e.g., Karpinski & Hilton, 2001; Olson & Fazio, 2004). Although it is indeed difficult to disentangle personal and cultural associations (e.g., Banaji et al., 2004), they have different implications at the behavioral level. Importantly, contextual associations do not preclude behavioral effects, but these effects should be different from the ones observed for personal associations. If an association is contextual in nature, then it should cease to exercise an influence on behaviors when the context changes. In contrast, the influence of personal associations should be systematic as long as the person remains the same. Thus, personal associations should be more coherent and stable. For this discussion it is also worth noting that Fazio and Olson (2003) comment on implicit measures as having low reliability. The IAT tends to do better than priming techniques in this regard, but they both display less systematic variability than explicit measures.

Speaking of stable person effects, it is not a long leap to discuss the role of personality. If implicit measures of prejudice were linked to personality just as explicit are, then we could conclude that people have it within them to different degrees to develop automatic biases. However, if implicit measures were not linked to personality then it suggests that individual differences in automatic biases may not be as systematic as assumed. Instead it would point to greater changeability and more contextual influences.

Generalization of prejudice across targets is in itself telling about the person versus contextual effects in implicit prejudice. Personality is by definition based on consistencies over time and situations (e.g., Larsen & Buss, 2008). Thus, if implicit prejudice overall reflected personality differences, then it should be generalized across targets. In contrast, if automatic associa-

tions were unrelated across targets then it would point toward contextual or cultural factors for determining who is more or less biased. All in all, the existence of a generalized prejudice factor for implicit measures, and relations with personality, could indicate whether automatic biases are as systematic or not, and more important, personal or cultural.

In the three studies of this paper, we examined in parallel the relations of self-reported Agreeableness and Openness with explicit and implicit generalized prejudice. Based on previous findings, relatively strong relations were expected with explicit prejudice. For implicit prejudice, the approach was exploratory at the onset of this inquiry. Both the possibility that personality primarily relates to explicit prejudice, *and* the contradictory prediction that personality relates to implicit prejudice, seemed possible from the existing literature.

## 7.2.2 Study 1

### 7.2.2.1 Method

#### 7.2.2.1.1 Participants

One hundred (70% women) students and nonstudents representing various academic disciplines and professions participated in the study (*Mdn* age = 23 years, *SD* = 8.99).

#### 7.2.2.1.2 Measures and procedure

Each test session started with three IATs, one related to ethnicity (black people – white people) and two related to sexuality bias (lesbian/gay people versus straight). The order of the three IATs was randomized for each participant. Also, within each IAT the order of the test blocks was counterbalanced. That is, in the ethnicity IAT for example, half of the participants first sorted Black/Pleasant and White/Unpleasant whereas the other half started with the combination White/Pleasant and Black/Unpleasant. Furthermore, the positions of the Pleasant and Unpleasant categories (left/right) were also randomly assigned.

Split-half reliabilities for the IAT were calculated based on a *D*-score derived from block 3 and 6 and a second *D*-score based on block 4 and 7. We used Rulon's formula to estimate the reliability of the test as the two *D*s can be considered nonparallel (see Crocker & Algina, 1986). The reliabilities were .46, .72, and .64 for the race, gay men, and lesbian IATs, respectively.

Further, participants responded to scales measuring Agreeableness and Openness from the NEO-PI-R (48 items each; Bergman, 2003). For the personality scales, all 96 items were randomized in terms of presentation order (for all scales one item at the time was displayed on the screen). Next, participants completed the RWA and SDO scales, presented in random order and items randomized within scales. Finally, a self-report measure for ethnic

prejudice and two measures of sexual prejudice (toward gay men and lesbians respectively) were completed (see heading 6.4). All explicit prejudice items were presented in randomized order.

After reversing appropriate items, scale scores were formed by averaging across items. Cronbach's  $\alpha$  reliabilities were .88, .86, .83, .80, and .70, for Agreeableness, Openness, explicit attitudes toward immigrants/ethnic groups, gay men, and lesbians, respectively. Participants completed the study individually in the laboratory.

### 7.2.2.3 Results and Comments

The results included four types of analyses (these were the same in all three studies). First, preliminary results included correlations between key variables (e.g., between prejudices and relations with personality). Second, principal components analyses were run to examine the existence of a single generalized prejudice factor in explicit and implicit prejudice respectively. Third, a SEM analysis examined the personality relations with explicit and implicit prejudice using latent variables (to put explicit and implicit prejudice on more even terms with their different reliabilities). Forth, canonical correlations were used to get an overall index of explained variance in explicit and implicit prejudice. The focus here is mostly on the last two as they are arguably the most important and they verify the key points from the initial analysis. For example, without correlations between prejudices (for explicit and implicit respectively), and latent factors accounting for them, the SEM model would not fit the data.

The exploratory analyses indicated a latent prejudice factor for both explicit and implicit prejudice, but it was stronger for the explicit measures (the explained variance was 62 and 50% in the explicit and implicit measures respectively). Having established this, the SEM analysis followed. This analysis included four latent variables, *Agreeableness*, *Openness*, *explicit prejudice*, and *implicit prejudice*. Items for Agreeableness were split into two parcels at random. Responses within each parcel were averaged to arrive at two composite scores that were subsequently used as manifest indicators of latent Agreeableness. The same procedure was repeated for Openness. The three self-report prejudice scales (targeting ethnic, gay men and lesbian respectively) were modeled as indicators of explicit prejudice. Likewise, implicit prejudice had the corresponding IATs as indicators.

The results revealed that the model fit the data very well,  $\chi^2(29) = 31.97$ ,  $p = .32$ ,  $RMSEA = .03$ , 95% CI [.00, .09]. Openness displayed a moderately strong relation with explicit prejudice. The relation with implicit prejudice was instead marginal. Agreeableness turned out to be unrelated to both explicit and implicit prejudice (see Figure 2). The absent relation with explicit prejudice was surprising considering the robust relations typically found in the literature (see Sibley & Duckitt, 2008). Finally, a significant relation between the explicit and implicit prejudice factors also emerged.

An additional SEM analysis suggested that the personality relations with explicit prejudice did not differ from the relations with implicit prejudice. Specifically, we tested a model in which the path from Agreeableness to explicit prejudice was constrained to be equal to the path from Agreeableness to implicit prejudice. Likewise, the two Openness paths were also set as equal. Noteworthy, the significance level of the difference would correspond to the probability of obtaining the free estimates under the null hypothesis that they are equal in reality (i.e.,  $p | \beta_{\text{Agreeableness, generalize explicit prejudice}} = \beta_{\text{Agreeableness, generalized implicit prejudice}}$  and  $\beta_{\text{Openness, generalize explicit prejudice}} = \beta_{\text{Openness, generalized implicit prejudice}}$ ). This model had a fit to the data that was close to the original one,  $\chi^2(31) = 33.76$ ,  $p = .34$ ,  $RMSEA = .03$ , 95% CI [.00, .08], and the difference was non-significant,  $\Delta\chi^2(2) = 1.79$ ,  $p = .41$ . This outcome showed that overall, the personality-explicit paths were not significantly different from the personality-implicit paths.

Canonical correlation analyses revealed that the personality variables significantly explained 22% of the variance in the explicit prejudice measures,  $\chi^2(6) = 30.5$ ,  $p < .001$ . In contrast, personality only explained 3% of variance in the implicit measures, and with these variables the overall test was non-significant,  $\chi^2(6) = 4.9$ ,  $p = .56$ .

In sum, the canonical correlation analyses offered support for core personality being related to explicit, but not implicit prejudice. Still, the SEM results were mixed. With regards to Openness the discrepancy between explicit and implicit relations seemed non-negligible. However, the overall predictability of explicit versus implicit prejudice for both the personality variables was not significantly different. It should be noted though that Agreeableness underperformed in predicting explicit prejudice in this study. This unusually weak relation might have diluted an otherwise clear discrepancy between explicit and implicit prejudice in relation to personality. In Study 2 and 3 we sought to turn this speculation into an empirical inquiry by seeking an answer to the underperformance of Agreeableness in this study.

## 7.2.2 Study 2

### 7.2.2.1 Rationale

From the results of Study 1, we hypothesized that the poor predictability of Agreeableness was due to an overly narrow generalized prejudice construct. As two of the three prejudice measures targeted gay people, our generalized factor may not have been that “general” after all. Importantly, as personality is better at predicting a common component in prejudice (see Paper I), Agreeableness could be expected to be more predictive with a more well-defined generalized prejudice factor (i.e. extracted from a broader range of targets). In extension, a more pronounced difference between the explicit versus implicit prejudice relations with personality also seemed plausible.

In Study 2 we aimed to address a limitation of Study 1 by adopting an improved index of generalized prejudice. We sought to expand the generality of the prejudice factors by including biases toward four social groups being clearly distinct. Specifically, in Study 2 we included prejudice measures for ethnicity, age, weight, and sexuality.

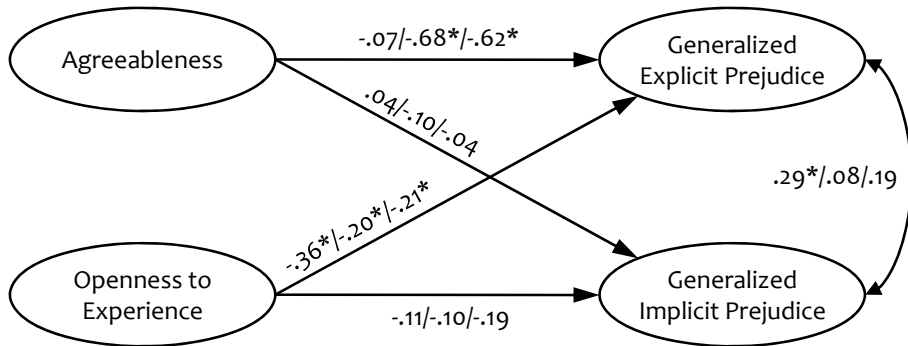


Figure 2. Structural model and standardized path coefficients for relations between personality and generalized implicit and explicit prejudice (Study 1/Study 2/Study 3, \* $p < .05$ ).

## 7.2.2.2 Method

### 7.2.2.2.1 Participants

One hundred and four (61% women) students and nonstudents representing various academic disciplines and professions participated in the study (*Mdn* age = 23 years, *SD* = 9.64).

### 7.2.2.2.2 Measures and procedure

First, participants responded to four IATs for ethnicity, age, weight and sexuality (heterosexuals versus gay men here). Again, the order of the IATs was random. Also, the order of the critical blocks was counterbalanced as in Study 1. The reliabilities for the IAT scores, computed as in Study 1, were .66, .32, .50, and .49 for the race, age, weight, and gay IATs respectively.

Further, participants responded to the scales as in Study 1 for Agreeableness, Openness, RWA and SDO as well as ethnic and sexual prejudice. In addition, participants responded to scales measuring prejudice toward old and overweight people. The order of scales and the presentation of items was the same as in Study 1. Cronbach  $\alpha$  reliabilities were .88, .88, .87, .80, .82 and .82, for Agreeableness, Openness, and explicit attitudes toward immigrants/ethnic groups, gay men, overweight and elderly people, respectively. Participants completed the study individually in the laboratory.

### 7.2.2.3 Results and Comments

Principal components analyses revealed a generalized prejudice factor for both explicit and implicit prejudice. Again, the explicit factor was stronger,

accounting for more common variance across targets (56 and 41% for the explicit and implicit factor respectively). Subsequently, SEM analyses were run as in Study 1, except each latent prejudice construct now having four indicators.

The initial model (no paths constrained as equal) had excellent fit,  $\chi^2(48) = 39.15, p = .81, RMSEA = .00, 95\% CI [.00, .04]$ . This time, both Agreeableness and Openness predicted explicit, but not implicit prejudice (see Figure 2). With these findings in hand, we proceeded with a new model constraining the paths to explicit and implicit prejudice as equal for each personality construct (see Study 1). Although this model had a good fit as well,  $\chi^2(50) = 56.85, p = .24, RMSEA = .04, 95\% CI [.00, .08]$ , it was significantly worse than the initial model,  $\Delta\chi^2(2) = 17.70, p < .001$ . This suggests that the personality-explicit paths are significantly stronger than the personality-implicit paths.

Results from the canonical correlation analyses indicated that the personality variables explained 40% of the variance in the explicit prejudice measures,  $\chi^2(8) = 54.4, p < .001$ . Corresponding analysis showed that personality only explained 6% of the variance in the implicit measures and the overall test was non-significant,  $\chi^2(8) = 8.4, p = .40$ .

If the results from Study 1 were somewhat mixed, the results from this study were clear. These results provide support that a person's self-reported basic personality is much more telling about verbally expressed prejudice than the biases picked up in the IATs. The difference between the constrained and unconstrained SEM models suggests that the predictability of explicit versus implicit prejudice is significantly different. The canonical correlations provide a good idea about how big this difference actually is in terms of explained variance.

### 7.2.3 Study 3

#### 7.2.3.1 Rationale

Despite some clear results from the first two studies, it is an obvious limitation that the findings could be questioned on the basis of shared method variance (see Campbell & Fiske, 1959). Noteworthy, both the personality and explicit prejudice measures were based on self-reported questionnaire data whereas the implicit prejudice measure was based on response times. In other words, stronger relations between personality and explicit prejudice could be due to methodological similarity rather than conceptual relations.

To address this issue, we introduced explicit and implicit control measures in Study 3 that should be conceptually unrelated to prejudice. Specifically, we constructed self-report measures for attitudes toward Pepsi and Coca-Cola as well as an IAT for the preference between these beverages. By examining the relation of self-reported soda attitudes with the personality



and explicit prejudice measures, we could estimate shared method variance in the self-report data. Likewise, with the soda IAT it would be possible to estimate how much variance in the IAT that is attributable to the method rather than prejudice.

### **7.2.3.2 Method**

#### *7.2.3.2.1 Participants.*

One hundred and forty-two (62% women) students and nonstudents representing various academic disciplines and professions participated in the study (*Mdn* age = 22 years, *SD* = 4.18). One participant was excluded from all analyses as excessive errors made the person's IAT scores unavailable on three of the tests.

#### *7.2.3.2.2 Measures and Procedure*

This study adopted the same design and measures as Study 2 with the addition of control variables for attitudes toward Coca-Cola and Pepsi. Two self-report measures for attitudes toward Coca-Cola and Pepsi were developed. These were mirror instruments and had six items each. An example item was "Coca-Cola [/Pepsi] should be served at all restaurants". Three items in each scale were reversed and the scales were answered on the same 5-step Likert-like scale as the prejudice measures. After reversing appropriate items, scale scores for each participant were formed by averaging across items indicating positive attitudes toward Coca-Cola and Pepsi. In the following these measures are referred to as explicit soda attitudes.

For the Coca-Cola/Pepsi IAT, we used the same evaluative words as in the prejudice measures, and introduced four Coca-Cola and four Pepsi items (pictures of two cans, a bottle, and the company brand). For each participant, we calculated a  $D_6$  score reflecting implicit bias toward Pepsi (which in the following are referred to as implicit soda attitudes).

Cronbach  $\alpha$  reliabilities for the personality, explicit prejudice and soda measures were .90, .87, .81, .81, .73, .84, .87, and .82, for Agreeableness, Openness, and explicit attitudes toward immigrants/ethnic groups, gay men, the elderly, overweight people, Coca-Cola, and Pepsi, respectively. The reliabilities for the IAT (computed as in Study 1) were .50, .35, .19, .43, and .20, for the race, gay, age, weight, and Coca-Cola/Pepsi IATs, respectively.

### **7.2.3.3 Results and Comments**

Preliminary analyses revealed pronounced skewness for explicit prejudice toward gay men in this sample (Pearson's skewness = 3.66). Thus it was dropped from all analyses. The remaining measures displayed results that were highly consistent with Study 1 and 2 in terms of the principal component analyses. A generalized prejudice factor was evident for both explicit

and implicit prejudice, and for the third time the explicit one was stronger (62 versus 36% explained variance for explicit and implicit measures).

Except for the additional measures for soda attitudes, the SEM analyses were run as in Study 1 and 2. Explicit soda attitudes were represented by a latent factor with the instruments for Coca-Cola and Pepsi as indicators. On the implicit side, the Coca-Cola/Pepsi-IAT served as a manifest control variable. To examine shared method variance, we included paths from Agreeableness and Openness to explicit as well as implicit soda attitudes. Also, the explicit prejudice factor was modeled as correlated with explicit soda attitudes and implicit prejudice was correlated with implicit soda preferences.

Again, the model had excellent fit to the data,  $\chi^2(67) = 69.15$ ,  $p = .40$ ,  $RMSEA = .02$ , 95% CI [.00, .05] and both Agreeableness and Openness were related to explicit, but not implicit prejudice (Figure 2). Next, we examined the model with paths to explicit and implicit prejudice set as equal for each personality trait. This model had a good fit too,  $\chi^2(69) = 80.21$ ,  $p = .17$ ,  $RMSEA = .03$ , 95% CI [.00, .06], but it was significantly worse than the initial one,  $\Delta\chi^2(2) = 11.06$ ,  $p < .01$ . Once again, this outcome shows that the personality-explicit relations are significantly higher than the personality-implicit counterparts. Also, all relations with the prejudice-irrelevant attitudes were very weak and insignificant. For the explicit measures, the relations with the soda factor were never higher than .08. The relation between implicit prejudice and implicit soda preferences was .16.

In the canonical correlation analyses the personality variables explained 34% of the variance in the three explicit prejudice measures,  $\chi^2(6) = 64.1$ ,  $p < .01$ . In stark contrast, only 2% of the variance in the four implicit measures was accounted for by personality. Once more the overall test was non-significant,  $\chi^2(8) = 5.7$ ,  $p = .68$ .

The findings of Study 3 corroborate the findings from Study 2. This further strengthens the conclusion that self-reported personality matters a great deal for understanding explicit prejudice, but hardly at all for the implicit counterpart. As for the effect of shared method variance, it turned out to have minimal impact. Thus, the disclosed relationships between various prejudices and the personality-explicit-prejudice relationship can be considered conceptual rather than methodological.

#### 7.2.4 Additional Analyses (Not Included in Paper)

As a first set of analyses, the additional explanatory value of RWA and SDO for generalized explicit and implicit prejudice was examined. Specifically, the canonical analyses from each study were repeated with RWA and SDO (as well as Agreeableness and Openness) as independent variables. The personality and ideology variables together accounted for 46, 58, and 53% ( $ps < .001$ ) of the variance in generalized explicit prejudice in Study 1, 2 and 3 respectively. In contrast, these variables only explained 9, 7, and 8% (all *ns*)

of the variance in generalized implicit prejudice in Study 1, 2 and 3 respectively.

Additional SEM analyses were also run in Mplus (Muthén & Muthén, 2012) to examine the robustness of the presented findings with other parceling strategies, and another estimator. In these analyses, two alternative parceling strategies were used. First, four parcels per personality trait with items randomly assigned to these after stratification for facets. Second, analyses were also carried out with two parcels (aggregated from the newly created four) for each personality construct. These were constrained to have equal (unstandardized) loadings to help model identification and to minimize free parameters. Notably, the two-parcel analyses with equal loadings minimize the possibility that a subset of items drive the effects in predicting prejudice. Also, instead of the standard maximum likelihood estimator, a mean-adjusted version was chosen as it is more robust to non-normal data.

All the additional models tested had good fit (see Appendix C for complete results). For example, the Comparative Fit Index (CFI) was never below .95, and the Root Mean Square Error of Approximation (RMSEA) was never above .06. More importantly, the structural relations were highly consistent with the ones reported in the main analyses. This attests to the robustness of the findings in these three studies: They hold up well, both across different parceling strategies and estimators.

### 7.2.5 Discussion

The major aim of the current studies was to examine the relations of basic personality with both explicit and implicit generalized prejudice. The findings were highly consistent in showing that our assessment of personality was related to generalized explicit, but not implicit prejudice. The unique contribution of Agreeableness and Openness in Study 1 versus 2 and 3 is of course noteworthy. However, for the contrast between explicit and implicit prejudice in overall predictability, the results could hardly be clearer. Naturally, one cannot exclude the possibility that other personality constructs (or other types of assessments) than the ones examined here explain implicit prejudice. Nonetheless, it is striking that the pillars of the (explicit) generalized prejudice literature in terms of basic personality (see Sibley & Duckitt, 2008), seem irrelevant for implicit prejudice.

As described in the introduction to this paper, the non-existence of a link between personality and implicit prejudice here is important for two reasons. First, it tells us something about the nature of prejudiced personalities. Second, it tells us something about the nature of implicit prejudice. Starting with the second issue, the findings are much in line with the suggestion that implicit and explicit prejudice represent different (albeit related) constructs (e.g., Greenwald & Banaji, 1995). Noteworthy, Fazio and Olson (2003) have argued that both the IAT and explicit measures confound constructs (e.g.,

motivation + prejudice in explicit ones), but the results nonetheless convey the same principal message: Explicit and implicit measures have different psychological underpinnings. Whether we have picked up on two, three or four construct is irrelevant in that regard, the conclusion holds that there is not a single construct behind it all. If explicit and implicit prejudice were just two sides of the same coin, then they should have the same personality roots. Obviously, they do not. The findings indicate that perhaps the most important, or at least most systematic individual differences in prejudice are those that center on controlled expressions. In contrast, individual differences in implicit prejudice seem less systematic, and with the possible lack of personality roots, they would seem more contextually dependent.

The variance accounted for by a generalized prejudice factor in explicit and implicit prejudice in these studies is also informative when it comes the discussion about person versus contextual effects. As commented in the background to this paper, generalization across targets indicates person (as opposed to contextual) effects. Noteworthy, not only did explicit prejudice display much stronger relations with the personality variables, but the generalized prejudice factor also accounted for more variance. This would indicate a stronger person account in explicit than implicit measures. On the other hand, it was not the case that a generalized prejudice factor was lacking entirely on the implicit side. Considering the low reliabilities in these studies for the IAT, the variance accounted for by the factor was considerable. So could this not be considered an indication that there is indeed a personal component in the IAT?

The simple answer to that question is yes, the latent factor for the IATs is indicative of person effects. Indeed, the argument is not that the IAT is completely uninformative about the person. However, the big question when it comes to the IAT is *what* the test tells about the person. Here it should be noted that some scholars distinguish between cognitive abilities and personality traits. For example, Penke, Denissen, and Miller (2007) described the former as concerning “maximal performance in solving cognitive tasks” (p. 550) whereas personality traits have to do with behavioral trends or dispositions. If one accepts this distinction then it follows that not all person effects are personality effects. Indeed, critics of the IAT have often pointed it out that the IAT mainly picks up cognitive abilities (e.g., Fiedler et al., 2006). Still, as previously commented, this view on the IAT does not explain why it predicts attitude-relevant behaviors (see e.g., Greenwald et al., 2009).

Discussing person and personality effects in the IAT, it is also relevant to discuss the stability or coherence within the individual tests. In some cases in these studies, the implicit attitudes were highly unreliable. Importantly, this should not be undermining the inquiry about personality relations in these studies, as error variance is factored out from the structural relations examined with latent variables (for a discussion on this topic, see Cunningham, Preacher, & Banaji, 2001). However, while reliability problems can be side-

stepped in theoretical inquiries (Cunningham et al., 2001) they cannot be sidestepped in explaining everyday behaviors. For understanding why people differ in their behaviors, time after time, reliable attitude measures will always have the upper hand. To illustrate the point, consider two screening procedures for cancer, one being highly reliable ( $\alpha = .95$ ) and the other being highly unreliable ( $\alpha = .20$ ). Given the choice between these two as a diagnostic tool it would be extremely unwise to choose the latter one. Reliability simply cannot be corrected for when making inferences about individual behaviors or consequences. Thus, even when these implicit attitude measures reveal strong latent relations, it is most unlikely to perform well as a diagnostic tool (and the IAT has been proposed to be used for diagnostic purposes, see e.g., Gray, MacCulloch, Smith, Morris, & Snowden, 2003).

Still, what is puzzling about explicit and implicit prejudice in relation to behaviors is that implicit measures provide equally, and sometimes better predictability (Greenwald et al., 2009). In other words, even when the IAT works against the odds that are associated with lower reliability, it still comes out at the top in some comparisons. The question then, is how implicit prejudice influences people's behavior.

One possible answer to the question about behavioral predictions is that explicit and implicit prejudice influence different kinds of behaviors. It has been found that explicit prejudice explains controlled behaviors, whereas implicit prejudice explains spontaneous behaviors (Dovidio, Kawakami, Johnson, Johnson, & Howard, 1997; Neumann, Hülßenbeck, & Seibt, 2004). Interestingly, parallel findings have been established for different assessments of personality. Asendorpf, Banse, and Mücke (2002) found that an IAT measurement of a shy personality predicted spontaneous shy behaviors whereas self-reported personality predicted controlled shy behaviors. Thus, just as people might have dual attitudes, we could potentially have dual personalities as well – one spontaneous and one controlled. Possibly then, people's "spontaneous personality" might do a better job at predicting implicit prejudice. For example, it is not unthinkable that there is such a thing as an implicit open-minded personality, characterized by spontaneously trying new things (as opposed to choosing new experiences after thorough deliberation, i.e. "explicit Openness"). Such a person might reveal less biased behaviors and attitudes when they are also spontaneous or implicit in nature (e.g., spontaneously choosing to sit beside a person with a different skin color). Possibly then, the difference between explicit and implicit prejudice is not that one relates to personality while the other does not. Instead it might be the case that they relate to different kinds of personality constructs, distinguished by their controllability. This perspective, however, is built on the premise that the low reliabilities obtained for the implicit measures here were coincidental. If it is impossible to determine who is more biased in the IAT, even from one block to another, then it is difficult to leverage the argument for an implicitly prejudiced personality.

As for the nature of prejudiced personalities, the most important conclusion from the studies is that neither (self-reported) Agreeableness nor Openness predisposes people to form spontaneous biases. Instead, these basic personality characteristics seem to predict, and strongly too, who will openly exhibit prejudice. In other words, prejudiced personalities, as we know them, are largely a matter of how different people *want* to think and feel about groups of people. This naturally leads us to the issue of social desirability.

The results demonstrate that the self-reported method is not in itself the explanation for the relations between personality and explicit prejudice. However, these measures for Agreeableness, Openness and prejudice, are all potentially associated with social desirability. It is socially desirable to be non-prejudiced and it is also socially desirable to be agreeable, and (perhaps to a lesser extent) open-minded. It could be argued that the reason why we do not find a relation with implicit prejudice is because it is not contaminated with social desirability. Indeed, some would probably suggest that what I refer to as prejudiced personalities are just personalities not concerned with what others think.

There are several counterarguments to this explanation for the current findings. First, Ekehammar and associates (2004) have shown the relation between personality and explicit generalized prejudice remains largely unmoved when statistically controlling for a social desirability measure. Second, different kinds of prejudice vary dramatically in normative acceptance (see Crandall, Eshleman, & O'Brien, 2002), and on this topic the factor loadings for generalized explicit prejudice tell an important story. Specifically, if generalized explicit prejudice was in reality a social desirability factor, then overweight people should have the lowest factor loading in Study 2 and 3 (as it is the target for which it should be most acceptable to be prejudiced against, see heading 6.4.5). In reality, overweight people had the *highest* loading on generalized explicit prejudice in both Study 2 and 3 (.76 and .83 in the respective study, see also online complementary material for Paper II). Taken together, this renders the social desirability explanation for the current findings unlikely.

Summing up Paper II, the results suggest that self-reported Agreeableness and Openness explain who openly exhibits prejudice, but not who has more automatic biases between groups. The findings also indicate that individual differences in explicit prejudice may be more systematic than in implicit prejudice. Alternatively, people might have dual personality constructs with controlled aspects guiding controlled attitudes and behaviors while an “implicit personality” guides spontaneous (implicit) attitudes and behaviors.

## 7.3 Paper III

### 7.3.1 Background and Aim

Ethnocentrism is fundamental to theories trying to explain prejudice (e.g., Adorno et al., 1950; Tajfel & Turner, 1979), and introductory texts use the phrase “prejudice is an intergroup phenomenon” as a mantra (e.g., Brown, 2010). Indeed, the personality approach to prejudice is no exception when it comes to the fixating on outgroups as targets of prejudice. As elaborated on in the introduction, most scholars in this tradition treat ethnocentrism and generalized prejudice as synonyms. I have suggested that they should be distinguished because in the standard way generalized prejudice has been studied (as a latent factor underlying responses across targets), an ethnocentric mechanism has never been proven. Consequently, in the current state of affairs the idea of an ethnocentric personality may be nothing but a myth. The idea has been kept alive by conventional wisdom rather than empirical data. So the question then is whether the generalized prejudiced personality is actually an ethnocentric personality.

A good starting point in the search for an ethnocentric personality is arguably to examine if ethnocentrism, in its pure form, is predicted by the same variables as generalized prejudice. Studying “pure” ethnocentrism is the same as studying prejudice under conditions where group membership is the *only* possible premise for bias. This makes minimal group studies ideal for examining ethnocentric personality tendencies. Importantly, using groups of which the participants have no previous experience implied that any observed bias is blind to *real* group characteristics. In other words, observed biases could be presumed to target *most any outgroup*, which is exactly what personality theorists should study to substantiate the idea of an ethnocentric personality. Admittedly, RWA and SDO have been examined in relation to minimal group biases (e.g., Amiot & Bourhis, 2005; Reynolds et al., 2007; Sidanius et al., 1994), but their questionable personality status clouds these findings. Also, the effects found for these variables have been systematically weak, especially in comparison to the impressive effects observed for generalized prejudice. Also, as RWA and SDO are typically more predictive of prejudice than basic personality tendencies, it is an open question if the latter variables can add anything for the understanding of ethnocentrism. To get to the bottom of this, we examined whether Agreeableness and Openness explain biases in three minimal group studies.

These studies are unique in combining predictors that are widely accepted as measures of personality with a design that isolate ethnocentrism. Thus, the current studies could be considered the first direct test as to whether ethnocentrism is rooted in people’s basic personality. Study 1 only included ethnocentrism and the personality variables Agreeableness and Openness. In

Study 2 and 3 we also included an index of generalized prejudice to better answer the question as to whether the personality predictability of generalized prejudice and ethnocentrism converge or not.

## 7.3.2 Study 1

### 7.3.2.1 Method

#### 7.3.2.1.1 Participants

Study 1 included 55 (35 women) participants, rewarded with a cinema voucher (~10\$). The median age was 22 years ( $SD = 4.02$ ). Most participants were (non-psychology) students from various disciplines. In the SEM analyses, two participants were removed as they represented multivariate outliers (displaying high Cook's D values).

#### 7.3.2.1.2 Procedure and Material

Agreeableness and Openness were measured shortly before the manipulation. Cronbach's  $\alpha$  was .88 for Agreeableness and .83 for Openness. In the following minimal group manipulation, participants read a cover story that the study concerned differences between two broad categories of people in the population: GHP-type1 and GHP-type2. They were also informed that research had shown many differences between the groups and that the current study examined how people from the respective groups interact with, and perceive each other. Such cover stories, leading participants to believe that the group membership is meaningful, have been shown to increase group identification and ingroup bias (see Reynolds et al., 2007).

After reading the cover story, participants were told that their group membership could be determined from an art preference test. They were subsequently asked to rate their liking of five paintings on a scale from 1 to 5 (see Tajfel et al., 1971 for a similar approach). After completing the test, they received feedback that their supposed result indicated membership to either the GHP-type1 or GHP-type2 category. They were not given any information on how their GHP-type had been calculated. In reality, participants were randomly assigned to one of two fictional groups (i.e. the GHP-types). Before moving on to the dependent variable, participants familiarized themselves with the categories by making sorting tasks with figures representing the two groups.

Ethnocentrism was assessed with adjective ratings. More specifically, we asked participants how descriptive 12 adjectives (see Method section, heading 6.6) were of GHP-type1 and GHP-type2 individuals (see also Sidanius et al., 1994). We expected to find a bias indicated by positive words being thought to be more descriptive of the ingroup and negative word to be more descriptive of the outgroup. For the final instrument, answers on negative



words were reversed, and an ingroup bias score for each adjective was computed by subtracting the outgroup rating from the ingroup one ( $\alpha = .83$ ).

### 7.3.2.1.3 Analytic strategy

Although regression analysis would provide a straight-forward answer about the personality relations with ethnocentrism, we opted for SEM (not just in this study, but throughout this paper). We did so because we were interested in the statistical fit between the empirical data and the assumption of relations between personality and ethnocentrism. More importantly, we sought to compare this to the fit of a model assuming no such relations to exist. Noteworthy, this approach is more informative than just regressing ethnocentrism on Agreeableness and Openness: A good fitting “null-model” suggests that reality can be successfully represented by three psychological constructs in which the third is independent of the other two.

The downside with the SEM approach is that it is primarily recommended for relatively large samples (e.g., Hair et al., 2010). However, small models require fewer participants. Consequently, we aimed to have the simplest model possible, and a minimum of free parameters while still estimating latent variables. We kept the free parameters to a minimum by using only two parcels per construct and constraining (unstandardized) factor loadings as equal. We adopted a mean-adjusted Maximum Likelihood estimator as ethnocentrism scores departed somewhat from normality.

### 7.3.2.2 Results and Comments

To assess the effectiveness of the manipulation, we first examined the original adjective ratings using a 2 (Group membership: GHP-type1 vs. GHP-type2) by 2 (Group rating: GHP-type1 vs. GHP-type2) mixed ANOVA. The critical effect was the interaction. We expected members of GHP-type1 to be more positive toward GHP-type1 than GHP-type2, and the opposite to hold true for members of GHP-type2. Indeed, the interaction was significant and indicated that members of both groups displayed ingroup bias,  $F(1, 53) = 10.68, p = .002$ , partial  $\eta^2 = .17$  (Figure 3).

Having established that our participants indeed displayed ingroup biases, SEM analyses were run to examine the relations of Agreeableness and Openness with ethnocentrism (see previous heading for how the constructs were modeled). The model had excellent fit to the data, Sattora-Bentler  $\chi^2(9) = 7.29, p = .61, CFI = 1.00, RMSEA = .00, 90\% CI [.00, .13]$ . Still, neither one of the personality paths to ethnocentrism was significant, the overall predictability was relatively low,  $R^2 = .14, p = .35$ , see Figure 4. In fact, an alternative (confirmatory factor) model assuming no personality relations with ethnocentrism had an excellent fit as well,  $\chi^2(11) = 10.91, p = .45, CFI = 1.00, RMSEA = .00, 90\% CI [.00, .14]$ . Equally important, the two models did not differ significantly. The Sattora-Bentler Scaled Chi-Square Difference,  $TRd(2)$  was 3.32,  $p = .19$ . These findings suggest that Agreeableness

and Openness are not as good predictors of ethnocentrism as they typically are for generalized prejudice.

An important caveat about these findings is that they could depend on the operationalization of ethnocentrism. For example, research indicates a difference between discriminating *for the ingroup* and discriminating *against outgroups* (Brewer, 1999). This reasoning has several implications, one being an asymmetry between positive and negative outcomes in intergroup attitudes and behaviors. Possibly, personality matters for assigning more positive attributes to the ingroup, but not for assigning more negative attributes to the outgroup. Noteworthy, even though people generally display more biases on positive outcomes (Brewer, 1999), it is also possible that personality mainly come into play for understanding devaluation on negative traits. Either way, separate analyses on positive and negative adjectives seemed called for. Finally, it could be the case that personality explains *absolute* sentiments (concerning only *one* group) rather than prejudice measures based on biases (*between* two groups). Noteworthy, explicit prejudice measures are largely based on an absolute assessment (see also heading 8.7 in the general discussion). Examining all these possibilities, we ran separate path analyses for *positive adjectives*, *negative adjectives*, and *absolute outgroup negativity*. In these path analyses, personality explained 1 to 8% of the variance. None of these  $R^2$  estimates were significant.

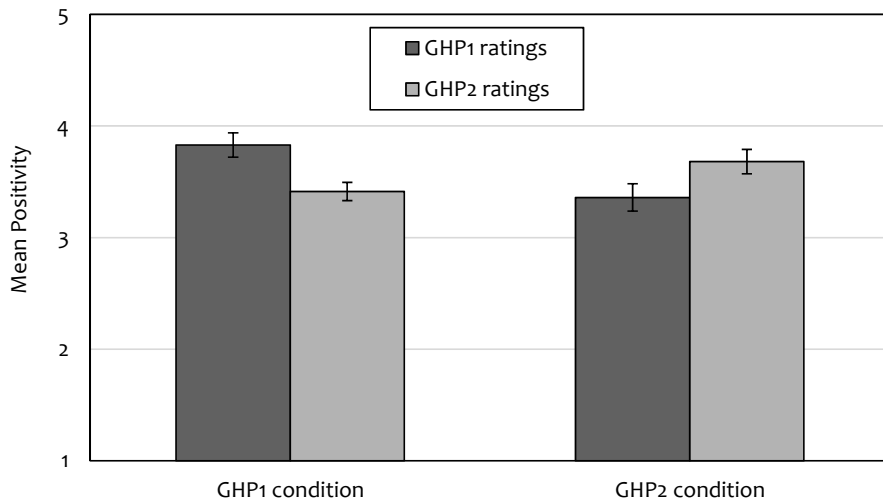


Figure 3. Mean positivity ratings and standard errors of GHP-type1 and GHP-type2 for participants from the respective group in Study 1.

In conclusion, Agreeableness and Openness were of little value for understanding ethnocentrism in this study. In other words, it would seem that when group membership is the sole criterion for displaying prejudice, basic

personality does not tell much of the story. The relatively low predictability of ethnocentrism is especially telling when put in contrast to the findings for generalized prejudice. Nonetheless, it is an obvious drawback that we did not directly compare how well personality predicts ethnocentrism and generalized prejudice in the same study. Study 2 aimed to address this shortcoming by including both ethnocentrism and generalized prejudice.

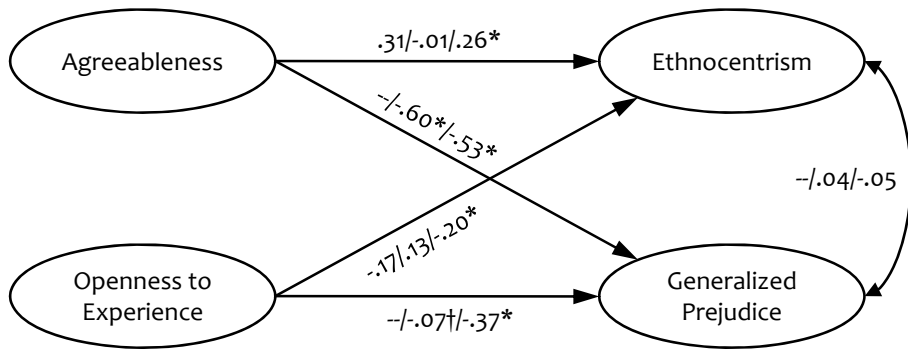


Figure 4. Structural equation model depicting standardized relations of Agreeableness and Openness to experience with ethnocentrism and generalized prejudice (Study 1/Study 2/Study 3). Unstandardized factor loadings for each construct, except generalized prejudice, were modeled as equal. † Zero-order relation (based on manifest variables) estimated to  $-.22$ .  $*p < .01$ .

### 7.3.3 Study 2

#### 7.3.3.1 Method

##### 7.3.3.1.1 Participants

76 (44 women) participants took part in Study 2 and they were rewarded two cinema vouchers and a snack coupon (~25\$) for taking part in two data-collections (see Procedure). In this sample, the median age was 23 ( $SD = 4.19$ ). As in Study 1, most participants were (non-psychology) students from various disciplines. Two multivariate outliers (displaying high Cook's D values) were removed from the SEM analyses.

##### 7.3.3.1.2 Procedure and Material

The procedure of Study 2 was identical to that of Study 1 with a few notable exceptions. This study was based on two data-collections, and part one constituted Study 3 of Paper II. The responses to Agreeableness ( $\alpha = .89$ ), Openness ( $\alpha = .86$ ) and generalized prejudice came from that dataset. Generalized prejudice was indexed by self-report measures targeting ethnic minorities, overweight, and old people. The second data collection was a follow-up study focusing on the minimal group manipulation and the subse-

quent assessment of ethnocentrism. These data-collections were separated in time by approximately 14 months. Only the responses from participants completing the follow-up study were included in the analysis.

The minimal group manipulation was similar to that of Study 1. However, in Study 2, participants were told that their GHP-type had been determined from their answers at time 1. In other words, the criterion for determining the GHP-type was supposedly different, but everything else was the same. In this study, 34 participants were randomly assigned to GHP-type1 and 42 were assigned to GHP-type2. Ethnocentrism was measured just as in Study 1 ( $\alpha = .79$ ).

### 7.3.3. 2 Results and Comments

First, the effectiveness of the minimal group manipulation was examined using the same  $2 \times 2$  mixed ANOVA as in Study 1. Again, the interaction revealed that both groups displayed ingroup bias,  $F(1, 74) = 31.03, p < .001$ , partial  $\eta^2 = .30$  (see Figure 5).

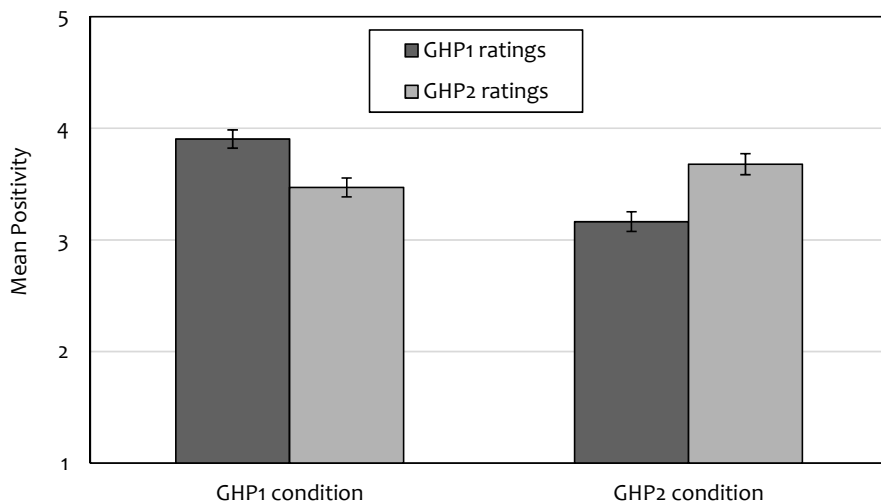


Figure 5. Mean positivity ratings and standard errors of GHP-type1 and GHP-type2 for participants from the respective groups in Study 2.

As in Study 1 the main analyses centered on SEM. The data was modeled as in Study 1 except that we added generalized prejudice as latent variable with three indicators (prejudice toward ethnic minorities, overweight, and old people). The loadings for these indicators were free to vary and generalized prejudice was correlated with ethnocentrism. The model provided excellent fit to the data,  $\chi^2(24) = 22.28, p = .56, CFI = 1.00, RMSEA = .00, 90\% CI [.00, .09]$ . All structural relations from this analysis are presented in

Figure 4. Noteworthy, the correlation between generalized prejudice and ethnocentrism was remarkably low,  $r = .04$ ,  $p = .83$ . More importantly, the personality variables only explained 2% ( $p = .56$ ) of the variance in ethnocentrism but 39% ( $p < .001$ ) in generalized prejudice.

It should be mentioned that although personality overall was highly predictive of generalized prejudice in the original model, Openness only contributed marginally. From Paper II it could be expected that Agreeableness would be more predictive with these targets, but the path from Openness was nonetheless expected to reach significance. The fact that it was so weak is especially surprising considering that this study partly used the same participants as in Study 3 of Paper II (where we found an Openness effect). Possibly, we were “unfortunate” with the subsample that continued to take part in this study. Still, this puzzling finding called for some additional attention. More specifically, the scatterplot of the zero-order relation between Openness and generalized prejudice indicated covariance between the variables. Thus, we speculated that in this sample, Agreeableness and Openness candidate to explain the same variance in generalized prejudice. Noteworthy, when two predictors account for the exact same variance in a dependent variable in multiple regression analyses (and SEM), the result is a “winner takes it all” effect for the predictor having the strongest zero-order relation.

To test this possibility, we ran a step-wise regression. First, we regressed generalized prejudice on Openness. In a second step, we added Agreeableness. In line with our suspicion, Openness had a marginally significant zero-order relation with generalized prejudice,  $r = -.22$ ,  $p = .06$ , which disappeared ( $\beta = -.06$ ,  $p = .53$ ) when Agreeableness was introduced. Thus, it would seem that in this particular sample, the generalized prejudiced individuals are low on *both* Agreeableness and Openness (or only Agreeableness, instead of having the usual “either-or” situation).

Perhaps the most important analyses in this study centered on a model assuming the personality relations with ethnocentrism to be equal to the corresponding relations with generalized prejudice. Thus, the path from Agreeableness to ethnocentrism was set as equal to the path from Agreeableness to generalized prejudice and the same was done for the Openness paths. We aimed to compare this constrained model with an unconstrained one in which all these paths were free to vary. Crucially, if the constrained model would fit (significantly) worse than the original model it would suggest that it is implausible in reality with equally strong relations (and of the same sign) for ethnocentrism and generalized prejudice (see also Paper II). The constrained model had reasonable fit,  $\chi^2(26) = 34.37$ ,  $p = .13$ ,  $CFI = .97$ ,  $RMSEA = .07$ , 90% CI [.00, .12], but the unconstrained one was significantly better, Sattora-Bentler Scaled Chi-Square Difference  $TRd(2) = 10.59$ ,  $p < .01$ . In other words, the personality relations with generalized prejudice were significantly stronger than the corresponding ethnocentrism relations.

Finally, we repeated the additional analyses on *positive adjectives*, *negative adjectives*, and *absolute outgroup negativity* respectively. Personality explained 0.4 to 8% of the variance in these outcomes. None of the  $R^2$ 's were significant. Summing up, the results once again showed that the effect of personality on ethnocentrism is small. In contrast, the overall effect of personality on generalized prejudice was significant and markedly higher.

### 7.3.4 Study 3

The variance accounted for by personality differed dramatically between generalized prejudice and ethnocentrism in Study 2. However, this contrast could, at least in part be due to the temporal proximity between the assessments of the constructs. More specifically, personality and generalized prejudice were assessed close in time whereas ethnocentrism was examined much later. This in turn would have given generalized prejudice the upper hand when examining the relations with personality. The major aim of Study 3 was to address this issue. In addition, we employed a much larger sample, and included additional personality and prejudice variables.

On the personality side we added variables to address the possibility that there are personality effects in ethnocentrism beyond Agreeableness and Openness. Beyond the standard Big Five factors, we considered empathy and honesty-humility to be the first candidates in line (for further discussions on this issue, see heading 8.11; see also McFarland, 2010; Sibley, Harding, Perry, Asbrock, & Duckitt, 2010).

As for the prejudice measures, there were two rationales for expanding the scope of variables. First, as shown in Paper II, the relative importance of Agreeableness and Openness varies with the selection of targets to represent generalized prejudice. Consequently, we hypothesized that a broader generalized prejudice factor would reveal the usual effect of Openness that we failed to establish in Study 2.

The second rationale for expanding the number of prejudice measures had to do with the operationalization of ethnocentrism. Although we construed several outcome variables for ethnocentrism in Study 1 and 2, they were nonetheless all based on adjective ratings. Here we aimed to establish if the lacking personality effects in Study 1 and 2 were confined to this particular expression of ethnocentrism. Consequently, we added a social distance measure (see heading 6.6) in addition to the adjective ratings as an index of ethnocentrism between the minimal groups.

#### 7.3.4.1 Method

##### 7.3.4.1.1 Participants

For this study we aimed to employ a community sample. Consequently, the study was advertised on message boards online as well as in several Swedish

towns. 159 participants (100 women) with a median age of 24 ( $SD = 6.07$ ) completed the study. The majority of these were students. Participants were rewarded with two cinema vouchers (~20\$). Nine participants were excluded from all analyses because of multiple entries and/or familiarity with the minimal group experimental method.

#### *7.3.4.1.2 Procedure and Material*

The study had two parts and both were done online via SurveyMonkey. The assessment of personality constituted the first part whereas part two centered on the minimal group experiment and generalized prejudice. The second part took place approximately one week after the first one.

Agreeableness ( $\alpha = .91$ ) and Openness ( $\alpha = .88$ ) were measured as in Study 1 and 2. Two instruments for empathy were included following McFarland (2010). Specifically, the study included the empathetic concern ( $\alpha = .86$ ) and perspective taking ( $\alpha = .84$ ) subscales from the Davis's (1983) Interpersonal Reactivity Index (see also heading 6.3.3). Finally, a measure for honesty-humility/narcissism (see heading 6.3.4 for details) was included. For this instrument, one item was dropped that substantially lowered the reliability ( $\alpha = .70$  for the remaining six items). Items from all personality instruments were presented in a randomized order.

Part two started with the minimal group manipulation. As before, participants received a cover story about GHP-types and they were informed that their type had been determined from their answers in part one. Minor changes were done compared to Study 1 and 2. For example, in this study the GHP-types were referred to as GHP-type J and GHP-type P instead of type 1 and 2. This change was motivated by the notion that type-1 might indicate some kind of primacy over type-2.

After the manipulation the adjective ratings ( $\alpha = .87$  for the bias scores) followed. Compared to Study 1 and 2, the list was extended to include 18 items, and this time they were answered on a 7-point scale (rather than the 5-point scale used in the previous studies). Following the adjective ratings, participants completed the measure of social distance toward the other GHP-type (see heading 6.6 for details on the adjectives and social distance items). An initial inspection of the social distance items indicated that the non-reversed items alone produced a reliable scale ( $\alpha = .75$ ). Thus, only these items were used in the analyses.

Finally, participants answered scales underlying generalized prejudice. These included the measures from Study 2 (targeting ethnic minorities, overweight, and old people,  $\alpha = .90$ ,  $.88$ , and  $.79$ , respectively). In addition, participants answered scales for prejudice toward women ( $\alpha = .85$ ) and people with disabilities ( $\alpha = .78$ , see also heading 6.4.2 and 6.4.3).

### 7.3.4.2 Results and Comments

The same manipulation check as in the first two studies was adopted here, revealing once more a pronounced interaction effect between group membership and group rating,  $F(1, 158) = 93.23, p < .001$ , partial  $\eta^2 = .39$  (see Figure 6). Next we tested the same initial SEM model as in Study 2, only this time generalized prejudice had five indicators (free loadings).

The model provided acceptable fit to the data, Sattora-Bentler  $\chi^2(41) = 75.06, p < .001, CFI = .95, RMSEA = .07, 90\% CI [.05, .10]$ . For the second time, the correlation between generalized prejudice and ethnocentrism was remarkably low,  $r = -.05, p = .63$ . More importantly, the personality variables explained 54% ( $p < .001$ ) of the variance in generalized prejudice but only 7% ( $p = .10$ ) in ethnocentrism. This time, both Agreeableness and Openness were strongly related to generalized prejudice,  $\beta = -.53$  and  $-.37$  respectively,  $ps < .001$ . Also, Openness displayed a weak negative relation with ethnocentrism, and Agreeableness a positive one (see Figure 4).

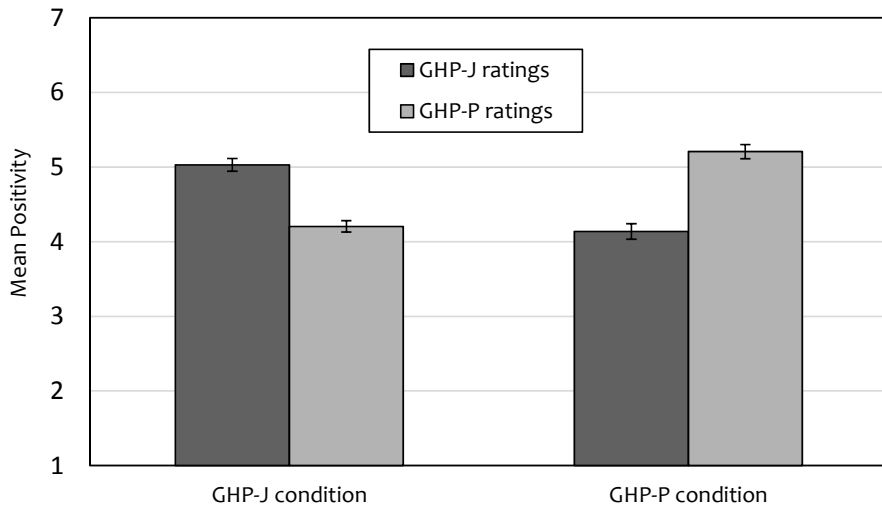


Figure 6. Mean positivity ratings and standard errors of GHP-type J and GHP-type P for participants from the respective groups in Study 3.

As in Study 2, we proceeded by examining the impact of setting the personality effects on generalized prejudice to be equal to the corresponding effects on ethnocentrism. This resulted in a poorly fitting model, Sattora-Bentler  $\chi^2(43) = 123.30, p < .001, CFI = .89, RMSEA = .11, 90\% CI [.09, .14]$ , and the original model was significantly better, Sattora-Bentler Scaled Chi-Square Difference,  $TRd(2) = 60.17, p < .001$ .

With the overall pattern from Study 2 replicated, a new SEM analysis followed where the adjectives were replaced with social distance to represent ethnocentrism (two indicators with equal loadings). As for the adjectives, the



fit was satisfactory, Sattora-Bentler  $\chi^2(41) = 63.71$ ,  $p = .01$ ,  $CFI = .97$ ,  $RMSEA = .06$ , 90% CI [.03, .09]. The personality variables explained 3% of variance ( $p = .36$ ) in ethnocentrism, and none of the paths were significant. As for the correlation between generalized prejudice and this operationalization of ethnocentrism, it turned out very low again,  $r = .14$ ,  $p = .23$ .

For the third time, we also ran regression analyses for *positive adjectives*, *negative adjectives*, and *absolute outgroup negativity* (again with robust maximum likelihood estimation). However, this time we included all personality variables available as predictors. Together, the personality variables accounted for 5 to 13% of the variance in ethnocentrism. Empathic concern was positively related to bias on both positive and negative adjectives,  $\beta = .28$  and  $.29$  respectively,  $ps = .01$ . No other personality effects were found in these analyses. In other words, the Agreeableness effect observed in the initial SEM analysis gave way to an empathy effect here. Finally, a follow-up analysis revealed that empathic concern (but none of the other personality variables) predicted absolute ingroup positivity ( $\beta = .32$ ,  $p = .01$ ).

Summing up, personality again explained a very large proportion of variance in generalized prejudice, but a very modest amount of variance in ethnocentrism. Importantly, this general principle held equally well across variations in the operationalization of ethnocentrism and the addition of more personality predictors.

#### 7.3.4.3 Discussion

These studies were based on the observation that researchers have assumed, but not verified, that generalized prejudice is directly equivalent to ethnocentrism, and that prejudiced personalities are ethnocentric personalities. Putting these assumptions to a first direct test, they did not hold up well. The variance in ethnocentrism accounted for by Agreeableness and Openness was consistently modest (14, 2 and 7% in Study 1, 2 and 3). Indeed, the modesty of the overall effect is particularly striking when compared with corresponding results for generalized prejudice in these studies (39 and 56% in Study 2 and 3) or, more broadly, in the literature overall ( $R^2 > .30$ , see e.g., Ekehammar & Akrami, 2003).

The second major finding here centered on the correlation between ethnocentrism and generalized prejudice; it was virtually non-existing. This is remarkable considering that the concepts have been viewed as synonymous, and hence could be expected to be highly correlated. Taken together, the explained variance and correlation issues constitute an important challenge to the notion that generalized prejudice reflects ethnocentric personality tendencies.

Of the three studies, the third is without much doubt the strongest, and it corroborates conclusions from the first two studies that would otherwise invite skepticism. For example, temporal proximity between the variables represents a threat to the conclusion in Study 2 that personality is highly

predictive of generalized prejudice, but not ethnocentrism. Based on the results from Study 3, however, the temporal proximity argument can be discarded as implausible. Also, Study 3 suggests that the surprisingly low relation between Openness and generalized prejudice in Study 2 is due to “unfortunate” sampling, possibly in combination with an overly narrow factor (see also Paper II). Finally, Study 3 provided more reliable estimates of the individual coefficients in our models, as it was based on a larger sample. For one thing, the bigger sample provided more confidence in the SEM analyses overall. Although simpler models can be estimated in small samples (see Hair et al., 2010), it was nonetheless comforting to observe that a bigger sample provided consistent results.

In Study 3 we were able to pick up on a positive relation with ethnocentrism for Agreeableness, and subsequently empathic concern. It is also noteworthy that the Agreeableness effect gave way to the empathy effect when entered together, suggesting an indirect or confounding influence of empathy. Nonetheless, these relations suggest that Agreeableness and empathy may influence ethnocentrism in an opposite fashion compared to what is known for generalized prejudice. Specifically, agreeable individuals are typically less prejudiced than others (e.g., Sibley & Duckitt, 2008), but if the coefficient from Study 3 is to be trusted, then they are paradoxically more ethnocentric. The same argument goes for empathy; empathic individuals are usually low on prejudice (e.g., McFarland, 2010) but they simultaneously seem more ethnocentric. Also, these biases are mirrored in a tendency for empathic individuals to view the ingroup more positively (compared to individuals low on empathy), but *not* in a tendency to view the outgroup more negatively. Possibly then, agreeable and empathic people typically like almost everyone, but particularly the people closest to them. More broadly, this fits with Brewer’s (1999) idea that intergroup biases can be underpinned by favorable attitudes and behaviors toward the ingroup, rather than particularly negative ones directed toward outgroups. Still, these findings with regards to empathy should be subjected to replication before any firm conclusions are made.

Agreeableness displayed a similar positive relation with ethnocentrism in Study 1, but in this case the statistical power was insufficient to render it significant. However, speaking of statistical power, it is important to remember that for the overall predictability (for the  $R^2$  values), the power was not embarrassingly low in any of the studies. More to the point, the power was always sufficient to establish an overall effect size for ethnocentrism comparable to that for generalized prejudice ( $1 - \beta = .99$  for  $R^2 = .30$ ,  $\alpha = .05$  and  $N = 53^1$ ).

An important note on the low predictability of ethnocentrism was the fact that it was not limited to a particular operationalization of the construct. Re-

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<sup>1</sup> Analyzed in G\*Power 3.1, see Faul, Erdfelder, Lang, & Buchner, 2007)

ardless if the focus was on biases on positive or negative attributes, absolute outgroup negativity or social distance, the principal message was the same: Personality provides limited insights about ethnocentrism in itself. Also, this conclusion is not limited to the influence of Agreeableness and Openness but also a broader set of personality variables in Study 3.

The results from this paper stress that if an ethnocentric personality exists, it is at least different from the generalized prejudiced personality. This in turn has two implications for the literature. First, it calls for researchers to reconsider what exactly it is that personality predicts in prejudice. Indeed, this is a central theme throughout the general discussion of this thesis. Second, the possibility that weak or non-existing personality effects in ethnocentrism represent something of a universal principle is intriguing from a social identity perspective on prejudice.

Possibly, when prejudice is stripped down to *only* concern ingroup bias, then group identification becomes the cardinal variable (see e.g., Reynolds et al., 2007). That is not to suggest though that a social identity perspective is superior to a personality approach in general. It falls short of explaining, for example, why racists tend to be negative toward gay people as well. However, as far as ethnocentrism goes, social identity theorists might be right about personality having little explanatory value for these attitudes. If taking this position, the current paper strikes a middle ground in the battle between personality and social identity researchers regarding the best way to explain prejudice. It suggests that personality matters a lot for understanding (generalized) prejudice, but may contribute very little for understanding ethnocentrism.

## 8 General Discussion

### 8.1 Major Findings

It is not much of a question anymore whether personality predicts prejudice (see Sibley & Duckitt, 2008). Exactly what personality predicts has not been given much attention though. With the overarching aim to shed some light on the “what” issue, the current dissertation provides some important insights. Some of these turn long-standing assumptions about the nature of generalized prejudice upside down.

Paper I provides a novel way of thinking about the compatibility of personality and group membership or identity effects on prejudice. We found an almost categorical difference in terms of how these predictors relate to prejudice: Personality explains a common component in prejudice whereas group membership explains a group-specific component. The unique contribution of this study is that Agreeableness and Openness versus gender displays *opposite results* in relation to the common and specific component.

Many researchers view personality and social identity perspectives as incompatible and contradictory. The current findings suggest that regardless if one approaches prejudice from a personality or social identity perspective, the explanation is *literally* just half the story in terms of variance components. Approaching prejudice from a psychometric viewpoint and distinguishing between common and specific aspects of variance, we showed that personality and group membership tell very different stories and that they can be compatible. This idea is just as overlooked as it is simple, and this is also why it is important.

The take-home message from paper II is that self-reported personality is related to controlled (explicit) expressions of prejudice, but not automatic biases in the IAT. Put differently, self-reported Agreeableness and Openness scores are not informative about who will harbor spontaneous biases but rather who will verbally exhibit devaluing group sentiments. This in turn indicates that individual differences in explicit prejudice might be more systematic and stable than individual differences in implicit prejudice.

The demonstration that both the personality and generalized explicit prejudice measures are unrelated to soda attitudes is important for the interpretation of the results. It is not the case that any self-report will correlate with other self-report instruments simply because people have general response sets shining through in all such measures. Thus, the explicit-implicit distinc-

tion is not primarily about the characteristics of the measure (direct versus indirect) but the psychological constructs tapped by these. Whatever psychological processes picked up in explicit and implicit prejudice measures, they do not have the same personality underpinnings.

Paper III demonstrated that ethnocentrism is not predicted by the same basic personality characteristics as generalized prejudice. Across all three studies, the explained variance by Agreeableness and Openness in ethnocentrism was modest, especially compared to corresponding estimates for generalized prejudice. Also, this finding was highly robust across different operationalizations of ethnocentrism. Finally, the explained variance did not increase by much when adding additional personality variables in Study 3. This suggests that it might be difficult to find personality effects in prejudice once it has been stripped down to mere ingroup bias.

Another important finding in Paper III was the strength of the relation between ethnocentrism and generalized prejudice. Considering that many researchers assume these concepts to be synonymous, it is staggering that our data suggests virtually complete dissociation. This in turn suggests that generalized prejudice is not directly equivalent to being negative toward most any *outgroup*. Taken together, the findings from Paper III are theoretically important because they challenge 60-year old assumptions about the nature of generalized prejudice and prejudiced personalities. Or, to phrase it in a bolder fashion: The current findings point to the possibility that ethnocentric personalities represent nothing but a myth. Finally, the results help to bridge a clash between personality and social identity researchers. Specifically, the results point to the possibility that identification trumps personality in understanding ethnocentrism (see also Reynolds et al., 2007), but not necessarily in understanding prejudice overall.

An important note about the findings throughout this thesis is their robustness. Paper I adopted a very large sample, and in Paper II and III we sought to replicate the principal ideas three times each. Arguably, we did so with much success overall. Except replicating the effects in different samples, the findings were also robust across methodological and statistical variations to test the hypotheses (see additional analyses in the respective papers). For example, the results remained consistent across parceling strategies and the choice of estimator in the statistical analyses. Likewise, the general picture remained the same when changing the target groups used. Noteworthy, the relative importance of Agreeableness and Openness did display some systematic variance depending on targets used, but the combined predictability was very reliable. The relations among the key variables were also highly consistent in the number of additional analyses conducted outside the scope of the published papers.

An attempt to convey an overall take-home message from the different papers and to capture the essence of the arguments in this thesis is provided in Figure 7. This figure provides a schematic illustration of the most funda-

mental principles on what personality seem to predict, and what it has not been shown to predict in these studies.

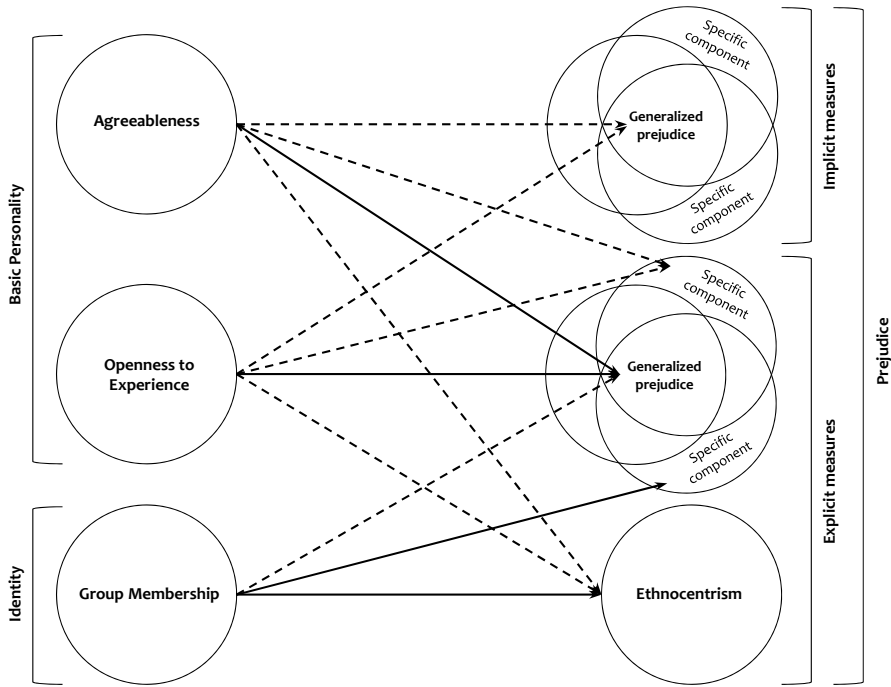


Figure 7. Schematic illustration of what basic personality traits and group membership have been found, versus have not been found, to predict in the studies of this thesis. Solid lines indicate established effects in prejudice, dotted lines indicate unsubstantiated relations.

Taken together, the lessons from these studies tend to center on two things. First, the effects of personality and social psychological (or sociological) variables explain different aspects of prejudice. As such, they should not be considered directly contradictory as some scholars argue (see heading 3). Second, it does not seem to be the case that personality predisposes some people to develop a negative or biased psyche toward most any (out)group. Personality rather seems to tell us who will, versus will not endorse and verbally exhibit devaluating sentiments about “suitable” targets. Within this statement there are several points of departure for further discussions. The issue of endorsing and exhibiting is one. The issue of target suitability is another. Thus, upcoming sections in the discussion deal with additional thoughts on these topics, approaching them from a couple of different angles that connects the current findings with the broader literature.

## 8.2 Explicit and Implicit Prejudice Revisited

Throughout this dissertation, explicit and implicit *measures* have often been discussed in terms of explicit and implicit prejudice. However, Fazio and Olson (2003) argued that it is meaningful to discuss explicit and implicit measures of prejudice, but not explicit and implicit prejudice as two constructs. I agree that distinguishing between the measurement and conceptual issue is informative, but the question is whether this changes the interpretation of the current findings.

Most scholars today agree that explicit and implicit measures tap different things, but do these two types of measures map onto two (and only two) distinct psychological constructs? For explicit prejudice, some argue that it taps the psychological construct of explicit prejudice, often defined as controlled prejudice. Others argue that explicit measures tap at least two *separate* factors: Prejudice (e.g., defined as evaluative associations) and some kind of motivation/control. In the latter view, control or motivation is not an integrated aspect of prejudice. What view to adopt hinges on the philosophical question of how to define a psychological construct. Viewed as hypothetical waypoints on a map for understanding the psyche, it does not matter much which perspective one adopts. However, one could also approach attitudes as “entities within the individual” (Fazio, 2007, p. 606) that really “exist” in participants brains (as opposed to prejudice researchers’ own ones). Fazio (2007) argued quite persuasively that a response to explicit measures do not warrant the conclusion of a single “entity” producing it. However, the same argument about lacking evidence of an “entity” construct could be levered at against Fazio (2007) when discussing attitudes as summary evaluations associated with an object. What is the evidence that evaluations are simply *summarized* for objects in peoples’ brains? Certainly, there are models for cognitive algebra (e.g., Anderson, 1974; Bettman, Capon, & Lutz, 1975) but these are “maps” for how people construe attitudes, not theories of “entities”. Also, it is not for certain that the biases picked up in priming (or IAT) studies are based on associations (see Hughes et al., 2011).

Gawronski and Bodenhausen (2006) made the intriguing argument that attitudes involve both associative and propositional processes, hence suggesting that there are two (equally real) “entities”. Although the consideration of both propositional and associative processes for attitudes is promising, it should be acknowledged that it is in its infancy. Future research will surely tell us more about this possibility. Nonetheless, in the current state of affairs, the concept of an attitude as an entity can still be described as “an unknown something” (DeFleur & Westie, 1963, p. 24). As such, I leave the discussion about the “true” nature of explicit and implicit prejudice measures be. Instead it should be noted that viewed as hypothetical constructs, the “true” nature of prejudice does not matter to the conclusions here. Regardless if one adopts Fazio’s (2007) perspective, or Devine’s (1989), or another

dual construct viewpoint (e.g., Greenwald & Banaji, 1995), the interpretation of the current data remains the same: Self-reported personality relates to verbal exhibition of prejudice, but it does not tell us who displays spontaneous biases in the IAT. Perhaps more importantly, at least for the overall theme of this thesis, is what the different perspectives suggest about the notion of a prejudiced personality.

### 8.3 Prejudice-Controlling Personalities

As noted under the previous heading, it has been argued that responses to explicit measures of prejudice involve at least two psychological processes; prejudice and some sort of motivation or control (e.g., Fazio, 2007; Fazio & Olsen, 2003; Crandall & Eshleman, 2003; Crandall et al., 2002). As it turns out, this discussion is crucial for how to think about prejudiced personalities: Does personality explain control rather than “genuine prejudice” as proposed by Crandall and Eshleman (2003)? Or is it more meaningful to think of control as an integrated aspect of one type of prejudice (explicit), and simply conclude that personality explains this type?

In all essence “genuine prejudice”, as described by Crandall and Eshleman (2003, p. 415-417), is strikingly similar to how other scholars define implicit prejudice: It is an automatic (uncontrolled) negative emotion toward a group. In their perspective, control over prejudice is instead found in the proposed factors of suppression and justification, moderating the link between genuine prejudice and its expressions (for a similar line of thinking, see Fazio, 2007). Suppression factors act as brakes on prejudice, whereas justification factors work as catalysts.

In Crandall and Eshleman’s (2003) perspective, personality does not disposition people to have spontaneous negative emotions toward groups (i.e. prejudice in their view). Personality instead predisposes individuals to suppress or justify these beliefs. Obviously, the idea of a “justification personality” or “low-suppression personality” (p. 437) fits very well with the data from Paper II and my interpretation of these. Indeed, personality explains individual differences in the controlled (explicit), but not spontaneous (implicit) measures. The point of disagreement concerns the most fruitful way to think about control.

The perspective that control is distinct from prejudice comes with two assumptions. First, prejudice should be causally prior to suppression and justification, and naturally its eventual expression. Although Crandall and Eshleman (2003) acknowledge recursive effects on prejudice itself, the essence of the model is that “underlying ‘raw’ prejudices almost always go through the processes of suppression and justification before they are reported and before they are accepted into one’s own self-belief system” (p. 417).



In a nutshell, Crandall and Eshleman's (2003) perspective suggests that genuine prejudice is stable while expressions of prejudice are changeable (because of control factors). However, this fits poorly with the empirical reality that explicit measures are more reliable and consistent than implicit prejudice measures. If genuine prejudice is a deep-rooted motivational force, and defined similarly as implicit prejudice, then the opposite should hold true. Also, correction literally implies a change of mind. How do we know that such a change takes place? It is an unwarranted inferential leap to go from the observations of variable prejudice expressions to the idea of a persistent raw material that gets molded differently across situations. Unlike the notion of "genuine prejudice" it seems beyond reasonable doubt today that expressions of prejudice differ in terms of automaticity/control. Perhaps then, it is more fruitful to talk about two types of prejudice (defined by expression) and to add that personality explains the kind of prejudice that we willingly choose to report.

A second assumption implied by Crandall and Eshleman's (2003) view is that the relation between personality and prejudice should vary depending on pressure toward not expressing biases. If personality comes into play as tendencies to justify or suppress existing prejudice, then it should matter most when it is the least okay to be prejudiced. Such situations simply call for more justification and less suppression for prejudice to come out in the open. However, empirics suggest that pressure against expressing prejudice (e.g., social desirability) has very little, if any, impact on the relations with personality (see Akrami et al., 2009; Ekehammar et al., 2004; see also heading 7.2.5).

The perspective put forward by Crandall and Eshleman (2003) is also at odds with generalized prejudice in its own right. Individual differences in expressed prejudice are most often presumed to be systematic across targets because of personality. However, if the influence of personality varied as implied by Crandall and Eshleman, there should not be much consistency to talk about. More specifically, only for targets being (similarly) normatively unacceptable to be prejudiced against should form a generalized factor and be predicted by personality. However, this is not the case. The current work clearly demonstrates that generalized prejudice is not limited to normatively unacceptable targets. It also includes targets such as overweight people. According to Crandall and associates' own writing, this is a perfect example of a group for which it is acceptable to be prejudiced against (see Crandall, 1994; Crandall and Biernat, 1990).

In conclusion, evaluating the idea of a low-suppressing or high-justifying personality as proposed by Crandall and Eshleman (2003) is associated with much ambivalence. On one hand, I do not think the discussion about "genuine" prejudice is informative. In addition, their definition of prejudice as merely being negative toward a group is associated with another problem that is dealt with under heading 8.6. On the other hand, the notion that per-

sonality differences in the expression of prejudice has to do with suppression or justification, is truly intriguing. In fact, I would describe it as one of the most enlightening ideas to date in the personality literature on prejudice.

## 8.4 Generalized Prejudice versus Generalized Warmth

Generalization of attitudes across groups suggests that there is a psychological unity to explore (see Allport, 1954). However, the question is *what* unity. Correlations between absolute prejudice measures (see heading 2.1) could reflect generalized devaluations such that some people, for example, hold Swedes in higher esteem than immigrants and men in higher esteem than women. Crucially, this is the unity that generalized prejudice is supposed to tap into (according to the definition adopted in this thesis). However, correlations between measures of this kind could also reflect more broad-spanning unities. For example, people may differ in the positivity toward most anything they evaluate (food, birds, people etc.). Still, such a global response set seems unlikely in light of the results with the soda variables in Paper II. More pressing is the possibility that some people evaluate *all groups* negatively and others evaluate *all groups* positively (e.g., men, women, Swedes and immigrants alike). Instead of generalized prejudice, I would refer to this as generalized group warmth.

There is no data in this thesis that directly refutes this possibility empirically. However, data from a forthcoming paper addresses this question (see Bergh & Akrami, 2013). More specifically, this paper shows that attitudes toward “normal” prejudice targets (ethnic minorities, women, overweight and gay people) all load onto the same latent factor, whereas attitudes toward rich people load a separate (uncorrelated) factor. Furthermore, the findings also suggest that attitudes toward rich people have fundamentally different personality underpinnings compared to the “standard” generalized prejudice factor. These findings show that non-agreeable and dogmatic (i.e., low Openness) individuals do not dislike all groups indiscriminately, and the psychological mechanisms behind disliking high and low status groups are very different. Indeed, Adorno’s (1951) description of prejudiced individuals as cyclists summarizes it well; they bow at the top and kick at the bottom (see Altemeyer, 1998; MacInnis, Busseri Choma, & Hodson, 2013).

## 8.5 Sub-dimensions in Generalized Prejudice?

The boundaries of generalization in generalized prejudice represent an important question. Just as a broader response set could be responsible for the latent factor found, there is an opposite validity issue: Generalization at a

lower level of abstraction, with sub-dimensions of generalized prejudice, might be more meaningful.

This argument was introduced by Duckitt (2006) and later elaborated further on by Duckitt and Sibley (2007). Duckitt and Sibley (2007) argued that RWA and SDO should predict different kinds of prejudice. More specifically, they argued that RWA (but not SDO) should predict negativity toward groups threatening societal cohesion or a person's security (e.g., terrorists). In contrast, they hypothesized that SDO (but not RWA) should predict negativity toward low status/power groups (e.g., mentally handicapped people). These classes of groups were labeled as dangerous and derogated, respectively. Duckitt and Sibley also considered the possibility that factor analysis would disclose a third class of targets being characterized as both threatening and low in status/power (e.g., protestors), and being predicted by both RWA and SDO. To test these ideas, they made a list of clearly different groups that should fit into the respective factors. Subsequently, participants rated their warmth toward these 24 groups. Overall, the findings were much in line with the predictions. Thus, Duckitt and Sibley argued that a unidimensional generalized prejudice factor is an illusory product of studying targets that are both threatening and low in social status.

Taken at face value, Duckitt and Sibley's (2007) argument would seem strikingly problematic for the unidimensional approach taken on in this thesis. However, it is important to note that their findings do not rule out the existence of a higher-order generalized factor accounting for covariance between subfactors. By the same logic, facets (subfactors) in the five-factor model do not in any way falsify the higher-order factor structure that the model centers on. Indeed the three factors in Duckitt and Sibley's data displayed much covariance with each other, rendering a higher-order construct likely. Importantly, the existence of higher-order construct, predicted by both RWA and SDO (and Openness and Agreeableness in extension), would harmonize the current findings with those of Duckitt and Sibley.

An empirical test of these ideas was made possible thanks to Chris Sibley, who kindly provided data from the discussed paper. As it turns out, modeling a higher-order generalized prejudice construct for derogated and dissident groups (and correlated with the dangerous factor<sup>2</sup>), provided equally good fit as the original three-factor model proposed by Duckitt and Sibley (2007)<sup>3</sup>. Also this factor was predicted by both RWA and SDO, and no less so than the separate factors in the original reporting of the data.

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<sup>2</sup> The dangerous groups were modeled separate because the use of warmth ratings for these groups is problematic in my opinion. See heading 8.6 for detailed discussion on this topic.

<sup>3</sup> A correlated three-factor prejudice model provided in the following fit statistics: Satorra-Bentler  $\chi^2(293) = 833.63$ ,  $p < .001$ ,  $CFI = .825$ ,  $RMSEA = .093$  (90% CI .086-.101),  $SRMR = .105$ . The alternative hierarchical model had the following fit statistics: Satorra-Bentler  $\chi^2(271) = 813.38$ ,  $p < .001$ ,  $CFI = .818$ ,  $RMSEA = .097$  (90% CI .090-.105),  $SRMR = .109$ .

Another interesting note about the pattern of attitudes when using as many as 24 groups being clearly divergent from each other is that both models had poor fit. Thus, regardless if one assumes three attitudinal factors or a two-level structure, the relations between these warmth ratings are more heterogeneous in reality. Still, J. Duckitt (October 29, 2013, personal communication) provided insightful comments that the poor fit could have a simpler, and instead statistical, explanation. More specifically, he rightfully pointed out that most any model based on item-level data, with so many indicators per construct, is likely to result in a poor fit. Indeed it is well-known that item-based models typically have poorer fit than parcel-based ones (Little et al., 2002).

Following these comments, I ran additional models in which I instead created three parcels for the dangerous, derogated, and dissident groups respectively. Again, both models provided roughly equivalent fit statistics. Still, both of them ended up having relatively poor fit in these analyses as well<sup>4</sup>. As could be expected, the fit statistics were somewhat better overall compared to the item-level models, but still not good. This suggests that even aggregating away random errors for individual items, the heterogeneity in these warmth ratings is extensive. In other words, when sampling targets like these and assuming a simple structure of warmth toward them, one violates the empirical reality and the psychological unity is lost. Perhaps then, it would be more meaningful to adopt a more specific definition of prejudice (than group negativity) and to study a narrower range of attitudes that one can really make sense of. Noteworthy, prejudice defined as group devaluing narrows the prejudice concept to a more meaningful scope than assuming all negativity to be the same (see next heading).

In the end, a unidimensional generalized prejudice perspective is arguably of value if one's interest is in understanding the reproduction of individual differences across prejudice targets (as it is in this thesis). This becomes especially clear when considering operationalizations of prejudice. Specifically, when prejudice is given a more specific meaning than group negativity, a unidimensional view holds remarkably well (see Papers I-III). However, if one wishes to compare the *relative impact* of personality and ideological predictors, then it is certainly relevant to consider the specific nature of the targets at hand. Indeed, the theorizing by Duckitt and Sibley (2007) makes much sense for understanding relative importance of Agreeableness and Openness for different indices of generalized prejudice in these studies. In conclusion, I readily acknowledge the merits of Duckitt's (2001) DPM

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<sup>4</sup> Using parcels, the correlated three-factor prejudice model provided in the following fit statistics: Satorra-Bentler  $\chi^2(44) = 122.135, p < .001, CFI = .932, RMSEA = .092$  CI [.072, .111],  $SRMR = .095$ . Likewise, the alternative hierarchical model, in which I had to introduce additional constraints for model convergence, had the following fit statistics: Satorra-Bentler  $\chi^2(38) = 108.767, p < .001, CFI = .939, RMSEA = .094, 90\% \text{ CI} [.073, .115], SRMR = .065$ .

model for understanding different personality and ideological routes to prejudice while maintaining that a unidimensional view on generalized prejudice has its value.

## 8.6 Generalized Devaluation or Generalized Negativity?

Imagine a person answering questions on a scale from 0 to 100 about how warm he or she feels about, for example, murderers or pedophiles. Based on a low score (indicating negativity), should we then conclude that a person is prejudiced? Or imagine the following response to an open-ended question asking about what people think about women: “I love women! They are so beautiful. And even if there are certainly things best left to men to handle, they are great at cleaning, cooking and taking care of kids”. How are we to interpret a person’s prejudice from these responses? On a thermometer rating, it is not unlikely that the person in the second example would provide a high score, indicating a supposed absence of sexism. I would argue that these two examples illustrate two different, and equally fundamental problems with defining generalized prejudice as generalized group negativity.

As for the first example, Crandall and co-workers (2002) have argued that the only difference between disliking pedophiles and black people is normative acceptance. In their perspective, both attitudes are examples of prejudice, defined as negative group evaluations. To this comment they added that one must assume that the psychological states and processes are the same. Still, why is it necessary to assume this? The notion of variable normative pressure on different kinds of group attitudes by Crandall and associates is certainly intriguing and important. However, their assumption about uniform states and processes for all group attitudes is neither necessary nor true. Despite of holding their work in a high regard overall, I respectfully disagree with them on this. As a matter of fact, Duckitt and Sibley (2007) clearly demonstrated that attitudes toward, for example, terrorists and overweight people involve different psychological processes. Likewise, whereas Crandall and Eshleman (2003) suggest that the psychology behind negativity toward high and low status groups is the same, empirics suggest otherwise. For example, the data discussed under heading 8.4 shows that negativity toward rich people is fundamentally different from attitudes toward devalued groups. They do *not* share the same underlying psychology.

Crandall et al. (2002) also suggested that “in the case of prejudices, social norms are constantly changing” (p. 366). Because of this, it is argued that group evaluations should not be disqualified as prejudice simply because they are acceptable (Crandall & Eshleman, 2003). I certainly agree that the acceptability of prejudice changes, both in general and the specific acceptability of certain targets. However, that is not to say that all group negativity

is the same in this regard. I leave it to the reader to speculate as to whether child molesters will ever receive positive or even neutral evaluations.

In contrast to the perspective that all negativity is the same, it could certainly be argued that there is indeed a fundamental difference to consider. Research on morality suggests that some moral principles are universal, others are not (see e.g., Haidt, Koller, & Dias, 1993). Universal moral concerns values and beliefs that are agreed upon in every culture that you can find. Killing someone for no reason, for example, would fall into this category. However other principles are different, they are culturally dependent. For example, among Hindu it is morally wrong to eat a cow, among Muslims it is the pig that is taboo. When it comes to group attitudes, the difference between universally versus non-universally accepted attitudes is clearly evident as well. It just so happens that the top-10 list of most accepted “prejudices” of Crandall et al. (2002) are groups that by definition harm other people. Is this a coincidence?

The issue of groups that harm others is also relevant in the study by Duckitt and Sibley (2007) on sub-dimensions of generalized prejudice. As a matter of fact, most groups loading on the dangerous factor harm others *by definition* (e.g., violent criminals, terrorists, drug dealers). The point about groups that harm others is *not* that they cannot be targeted by prejudice. The point is that warmth ratings are unsuitable for these groups, as negativity here could represent something other than prejudice. To elaborate somewhat on these ideas, a simple observation about prejudice is informative: Group boundaries tend to be blurry, and/or the negative evaluations are extrapolated from the group membership. In addition, stereotypes vary in terms of accuracy across members of a group (even if the stereotype could be true when discussing mean differences between groups). What constitutes an old or overweight person is blurry, but what constitutes a murderer is not: Either a person has, or has not killed someone without provocation.

If one was to ask a prejudiced person *why* he or she dislikes overweight people, the answer is unlikely to be “because they are fat” (tautology). More likely, he or she might respond with “because they are lazy” (a common stereotype about overweight people, see Crandall, 1994). In contrast, asking why people dislike murderers, a probable answer is “because they harm others”. The argument here goes that the latter statement is diagnostic, the former is not. Also, the first statement includes an extrapolation, the second does not. For example, holding the stereotype that immigrants are criminal and being negative toward immigrants includes an extrapolation of transferring the reaction to criminals onto immigrants. In contrast, being negative toward violent criminals requires no extrapolation.

Leaving the harm issue I will briefly return to the example with sexism and negativity. As noted by Glick and Fiske (2001), sexism is not marked by overall negativity, but rather ambivalence. Instead, what makes sexism prejudiced is that it is patronizing and devaluing. Crandall and associates are

perfectly right when commenting that what is called prejudice should have a common psychology to it. On the other hand, I strongly agree with Glick and Fiske, that mere antipathy or negativity is not that denominator. Pretending that people were perfectly honest, the one question that would be diagnostic about an individual's prejudice is not "are you negative toward this group?". Instead it is this question: "Do you look down upon this group?". When prejudice is approached this way, rather than as negativity, a common psychology indeed appears.

In sum, when prejudice is approached as group devaluing, it makes sense to incorporate sexism, but not (mere) negativity toward murderers, as part of its expressions. Murderers are presumably feared and hence rated negatively, but they are not necessarily devalued (think of a Godfather character in the mafia). Women, on the other hand, are not negatively evaluated overall, but they are devalued.

## 8.7 Generalized Biases and Suitable Targets

Generalized prejudice is all about psychological unity (Adorno et al., 1950; Allport, 1954) but the question is *what* unity. Much has been written in this thesis about what it is not. As for explicit prejudice, it is not general warmth and it is not all about ethnocentrism. As for implicit prejudice, it is not a reflection of (self-reported) core personality in terms of Agreeableness and Openness.

Defining prejudice as devaluation suggests that some groups are held in *higher* esteem than others. This brings about two questions. First, if prejudice is all about biases, then should it not be measured as such? Second, what groups could be expected to be held in high versus low esteem?

It could be argued that if prejudice is always relative, then it should be measured in a relative fashion too. Importantly, most explicit prejudice measures are absolute and center on evaluations of a single group. In contrast, implicit prejudice measures are often relative, assessing the difference between evaluations of two groups. Likewise, ethnocentrism is relative by definition, and in Paper III, it was operationalized as the difference between the ratings for the two minimal groups. Here, an observant reader might note that the types of prejudice not accounted for by personality are all based on relative measures. Perhaps then, what personality variables predict are absolute sentiments, not biases. There are several arguments against this notion. First, in Paper III we also tested the predictability of absolute negativity toward the outgroup and the results remained the same. Second, a meta-analysis on the relation between explicit and implicit prejudice measures has indicated little impact of measurement type (in terms of relative versus absolute; see Hofmann et al., 2005). To these arguments it could be added that absolute measures can still assess prejudice under certain circumstances.

More specifically, not granting a particular group a right that is obviously granted for others, makes mirror instruments and difference calculations superfluous. For example, agreeing with sentiments such as “gay couples should not be allowed to adopt” is arguably biased, as heterosexual couples are de facto granted this right. Likewise, a single statement can measure an implied bias between two groups without the explicit mentioning of either of them (e.g., “better measures should be taken to achieve equality [between the sexes] in workplaces”, see Ekehammar et al., 2000). Nonetheless, when possible, it would be advantageous to use explicit prejudice measures that clearly assess biases, because absolute sentiment could introduce noise variance in terms of general warmth (see heading 8.4).

The second question posed before, about what groups that could be expected to be held in high versus low esteem, is a delicate one. While I criticize the definition of prejudice as negativity or outgroup biases, it could be argued that the devaluing perspective is ad hoc and overly vague. I previously suggested that individuals with prejudiced personalities display generalized devaluation of “suitable” targets. So what represents suitable targets and what do they have in common?

One thing that makes groups available as prejudice targets should be low social status and power. Of course, it is possible to have more favorable feelings and thoughts toward a low status group than a high status one. However, the point of my reasoning is that such views should not be produce systematic individual differences. Instead, such attitudes might be better thought of as “noise” in personality approaches to prejudice.

A key prediction here is that people low on Agreeableness and Openness (and high on RWA and SDO) typically devalue groups having low social status/power but not groups in the opposite position. Indeed, the results discussed under heading 8.4 support this claim. Also, in line with the current argument, Levin and Sidanius, (1999) demonstrated that SDO displays relations of opposite signs with attitudes toward groups being high versus low in social status. In other words, the disapproval of high versus low status groups attracts people with opposite ideological beliefs.

If “suitable” target means low status/low power groups, then Jews represent a classic and obvious exception to this principle. As this example shows, groups could certainly be devalued even when they are high in social status and/or power. The answer to this critical argument is that status and power represent one principle for “suitability”, but not the only one. The proposition here is that targets of prejudice are either currently disadvantaged (e.g., women, people with disabilities) and/or prescribed by authorities (e.g., Jews, see also heading 8.9). Also, most of the time the easiest targets to prescribe prejudice against (the “scapegoats”) would be the ones that are already in a low power/status position.



## 8.8 Psychological Unity and *Non-Prejudiced* Ideology

It is difficult to discuss generalized prejudice without also discussing right-wing political ideology. The question though is *how* ideology underpins findings of generalized prejudice. A conservative person might agree with statements such as “there have been enough programs designed to create jobs for immigrants” simply because he/she disagree with special favors, *regardless of whom they help*. Crucially, opposing special favors for *any group imaginable* is not prejudiced from my point of view. It is not prejudiced, because there is no bias involved. Consequently, I believe it is meaningful to make a distinction between non-prejudiced and prejudiced ideological beliefs. In contrast to non-prejudiced (non-biased) ideological beliefs, prejudiced ideologies would be those that grants rights, or special favors to some groups (often high status ones), but not others (often low status ones).

The possible imprint of non-prejudiced ideological beliefs in prejudice measures deserves attention. More to the point, a person opposing special favors for women and immigrants would come off as generally prejudice *even if* he/she also opposed special favors for men and Swedes. Consequently, the correlations between different prejudice measures could be superficially inflated by non-prejudiced ideological beliefs. The empirical question is how extensive this impact is. Luckily, an answer to that question could be provided by comparing generalized prejudice factors based on modern versus non-modern scales (see heading 6.4.1 for a brief introduction to modern prejudice scales).

If generalized prejudice was largely a matter of non-prejudiced political attitudes, then the factor should be weaker when modern scales are excluded. More importantly, if personality only predict political attitudes and not prejudice, then the relations with personality should disappear (or at least be dramatically reduced) when deriving generalized prejudice solely from non-modern scales. Likewise, by the same logic the personality relations should be even stronger when the generalized prejudice factor is all about modern prejudice. However, these ideas were not supported by the current data. Specifically, modeling a purely modern generalized prejudice scale based on the data from Paper I (toward immigrants, women and mentally handicapped people), the personality variables explained 44% of the variance. This could be compared with the 43% for a factor including both modern and non-modern instruments. Likewise, a completely non-modern factor based on data from Paper II (Study 3), with overweight and old people as indicators, disclosed an explained variance of 40%. Taken together, these results suggest that the personality relations with generalized prejudice have little to do with non-prejudice ideological beliefs (see also Ekehammar & Akrami, 2003). At most, such factors account for a couple of percent of the variance, which should be compared to nearly half of the common variance in our prejudice measures. More broadly, these findings fit with an extensive litera-

ture in political psychology suggesting that opposition toward special favors, more often than not represent biased attitudes (e.g., Sears, 1988; Sidanius & Pratto, 1999).

## 8.9 Psychological Unity and *Prejudiced* Ideology

I have argued that the common denominator for individual differences prejudice is generalized devaluation, not mere negativity or non-prejudiced ideology. Still, granted that the glue that holds generalized prejudice together is indeed devaluation, one fundamental question still remains for understanding its personality underpinnings: Where does generalization across RWA and SDO (and in extension Openness and Agreeableness) “domains” of prejudiced attitudes come from? If the personality and ideological explanations for prejudice follow two distinct paths, it makes intuitive sense to expect a duality in prejudice as well. Here I readily acknowledge that it is not without reason that Duckitt’s (2001) dual process model is most influential to date for understanding the personality roots of prejudice. A limitation in this model though is a lack of an explanation for why most “real” prejudice targets tend to be perceived as both threatening and derogated. So the question is really, where does the higher-order consistency come from?

One potential explanation builds on the integration of established ideas about the nature of RWA and SDO. First of all, people high on RWA are followers by definition (i.e., authoritarian submission, see Altemeyer, 1981). Also, another definitional aspect of RWA is authoritarian aggression. That is, high RWA individuals are expected to aggress in the service of the authority, or to protect societal systems that in turn protect the position of their authorities. Considering this, the prejudice displayed by individuals high on RWA, should first and foremost be directed toward the targets *prescribed* by authority. For example, if church is a respected authority, then gay people might be high on this list of most suitable prejudice targets. Jews or Muslims might be other examples in some Christian communities.

As for SDO, people being eager to occupy an authority position tend to be more dominant (see Altemeyer, 2003, 2004; Son Hing, Bobocel, Zanna, & McBride, 2007). In other words, the most readily accessible prejudices for high RWA individuals may very well be provided by high SDO people. Also, authorities supported by high RWA individuals tend to be conservative and preach for the natural order of social hierarchies. For example, a conservative interpretation of many religions is a justification of patriarchy, and religion is a key authority in the theorizing about RWA (see e.g., Altemeyer, 2006). Crucially, patriarchy should be equally appealing to dominant (high SDO) religious leaders and submissive (high RWA) followers.

Although speculative, the suggested synergic effect of authorities preaching for social hierarchies and loyal subordinates fit with established observa-

tions in the RWA and SDO literature. First, it has been suggested that what RWA and SDO have in common is prejudice (see Duriez & Van Hiel, 2002). Second, the relation between RWA and SDO is stronger in countries with strong left-wing parties where economic and cultural conservatism collapse into the same unidimensional right-left political continuum (e.g., Duckitt, 2001; Duriez, Van Hiel, & Kossowska, 2005; Roccato & Ricolfi, 2005). In addition to these observations it should be noted that RWA is associated with cultural conservatism whereas SDO is associated with economic conservatism (e.g., Duckitt, 2001). All in all, this suggests that when culturally conservative leaders are also economically conservative, they are likely to be high on SDO and appeal to high RWA individuals. In extension, RWA and SDO could be hypothesized to become correlated because people adhering to either belief-system come to share the same prejudices.

## 8.10 Personality and Prejudiced Ideology

If generalized prejudice comes about from synergetic effects of high SDO leaders and high RWA “followers”, why not focus on these variables instead of Agreeableness and Openness? The answer is that Agreeableness and Openness appear to constitute (part of) the roots of these ideological beliefs (e.g., Ekehammar et al., 2004). In other words, even if RWA and SDO represent proximate explanations of generalized prejudice, they do not preclude Agreeableness and Openness as more distal explanations.

Mediation models, assuming RWA and SDO to transfer the effect of basic personality onto prejudice, have been the very center of personality research on prejudice in the last decade (e.g., Asbrock et al., 2010; Ekehammar et al., 2004; Sibley & Duckitt, 2008). Consequently, there is little novelty in including these variables in relation to generalized *explicit* prejudice. Still, no one has examined indirect effects with these variables when it comes to implicit prejudice or ethnocentrism. Consequently, such inquiries might be thought of as natural extensions in this field. However, simple mediation effects cannot be established without first establishing zero-order effects between the independent variable and the dependent variable (Hayes, 2009). Noteworthy, this research has failed to establish such effects for implicit prejudice or ethnocentrism.

In the absence of baseline relations for Agreeableness and Openness (IVs) with generalized implicit prejudice or ethnocentrism (DVs), there is no point in looking for mediation effects. Interestingly though, multiple mediating effects of opposite signs may cancel each other out to produce a non-existing overall relation (see Hayes, 2009). In other words, for generalized implicit and ethnocentrism, it might be the case that a combination of mediation effects disguise overall relations with Agreeableness and Openness. This possibility could be an interesting inquiry for future research.

In sum, the role of ideology in understanding the relation between personality and prejudice is not a closed chapter. For explicit generalized prejudice, the existing literature suggests that RWA and SDO mediate the effects of basic personality. The current data are important in demonstrating that this model does not seem to apply to implicit prejudice or ethnocentrism. Here the two pathways are insufficient on their own for mapping individual differences in the biases observed.

## 8.11 Other Relevant Personalities?

An obvious limitation of this thesis centers on the number of personality variables and the way they were measured. Starting with the measurement issue, only self-report measures of prejudice were used. Considering that there are IAT measures for the Big Five factors today (e.g., Schnabel, Banse, & Asendorpf, 2006) it would be relevant to include them in future studies. This would be especially relevant in relation to implicit prejudice (see Paper II). As commented in that paper, it is possible that indirect measure would fare better in explaining the biases picked up in the prejudice IATs. As speculated, it might be the case that peoples' personality could be described in terms of controlled versus spontaneous/automatic traits, just as it has been proposed for attitudes.

As for the variable issue, all studies except the very last one focused exclusively on two personality dimensions. The choice to focus on these was quite simple: Agreeableness and Openness belong to well-established model for describing the core aspects of human personality (see McCrae & Costa, 2008), the alternatives do not (with one exception). In other words, although I cannot possibly reach a conclusion about most any personality effect, they at least allow conclusions about effects for some of the most fundamental human characteristics.

Beyond the Big Five there are numerous other measures, proposed to map personality differences that are related to prejudice. For example, there is a plethora of instruments to assess mental rigidity and intolerance of ambiguity (e.g., Budner, 1962; Cacioppo & Petty, 1982; Rokeach, 1960; Webster & Kruglanski, 1993). Interestingly, most of them are related to Openness in the five-factor model, and they are largely redundant with each other (see Ekehammar & Akrami, 2013). Likewise, Machiavellianism would be another (non-rigidity related) candidate, but is not completely dissimilar to Agreeableness as it is defined in terms such as "manipulation and exploitation of others, cunning, cold affect, and a lack of sincerity or ethical concern" (Hodson, Hogg, & MacInnis, 2009, p. 686). Thus, the loss of not including these measures did not seem overwhelming.

Although there are arguments for not including rigidity variables, there are at least two variables in addition to Agreeableness and Openness that are

good candidates to include. The first is empathy and the second is honesty/humility. Empathy is not a pillar in its own right in any comprehensive and widely recognized model of human personality. Instead, aspects of empathy seem to overlap, or at least relate to several of the Big Five factors (del Barrio, Aluja, & García, 2004; Jolliffe & Farrington, 2006). In theory, it should mainly fall under the Agreeableness factor. Indeed, empathy typically correlates highest with this Big Five factor (del Barrio et al., 2004; Graziano, Habashi, Sheese, & Tobin, 2007). Although overlapping with Agreeableness and other Big Five factors, the status of empathy is different than that of the cognitive rigidity measures or Machiavellianism. What makes it special is the fact that it is the only predictor of generalized (explicit) prejudice still standing (and producing reliable results) when RWA and SDO have been taken into account (see McFarland, 2001, 2010). Moreover, the explained variance by empathy is substantial (see e.g., McFarland, 2001, 2010; McFarland & Mattern, 2001). It is interesting to note though that McFarland and Mattern (2001) showed that empathy is unrelated to generalized implicit prejudice.

As for honesty-humility, it is one of the six factors in the hexagon model of personality (Ashton & Lee, 2007, 2008). The hexagon model came about from the observation that studies on the factor structure of personality often reveal six factors in cross-cultural replications (for a review, see Ashton & Lee, 2007). Honesty-humility is defined “by such traits as sincerity and fairness versus conceit and greed” (Ashton & Lee, 2008, p. 1217). Greater interest in honesty-humility seems warranted as it overlaps with narcissism (see Sibley et al., 2011), which has been found to be related with prejudice (Hodson et al., 2009).

Considering that we did not find any systematic personality effects in either implicit measures or ethnocentrism, it might also be worth reconsidering the other Big Five factors in these regards. Broadly speaking, the fact that the “usual suspects” were not involved here basically puts the personality approach back at square one when it comes to spontaneous biases and ethnocentrism. Implicit prejudice and ethnocentrism are not predicted by the *same* personality variables as generalized explicit prejudice, but this does not rule out personality effects overall. Perhaps it is the case that these types of prejudice are not predicted by personality in principle, or they have other explanations than the ones that we have examined. Either way, personality oriented prejudice researchers need to throw a wider net in the future to examine these possibilities.

## 8.12 Practical Implications

Perhaps the most important question for pragmatic readers of this thesis is not what it tells us about what previous research has assumed, overlooked

and potentially been wrong about. Instead some people would first and foremost ask the following: So what can we do with this knowledge?

The point of this kind of research is that it has the potential to counteract misguided, and sometimes treacherous debates about prejudice. After Breivik's acts almost everyone condemned his behaviors, *even* politically active individuals considered xenophobic by most others. However, on the extreme political right, it did not take long before people were commenting that Breivik may have been wrong in his deeds, but he was right with regards to his worldviews (see Salö, 2012; Sultan, 2013). Of course, whether Breivik's worldviews are "right" is a matter of opinion. However, there are aspects of the debates surrounding his views that are matters of fact. Attitudes about immigrants rarely appear in isolation of other attitudes. It is an empirical fact that people seeing problems with immigrants also tend to be sexist, and display prejudice toward gay and mentally handicapped people. This fact is further corroborated in this thesis, and I have sought to provide more insights on what this generalization across targets represents.

The generalized prejudice literature tells a great deal about the people endorsing and exhibiting anti-immigrant sentiments. It provides us with information about individuals like Breivik, but probably more importantly, the people supporting his views. When the debate ends up at the home field of these individuals, the discussion becomes centered on "problems" with particular groups" and "rational solutions" to these. The current thesis is important because it highlights how such a debate disguises an uglier reality with a psychological unity going far beyond the "problems" with immigration. People being anti-immigration are very careful not to come off as racist, but if they are not prejudiced, then why would they dislike overweight people as well? In essence, work on generalized prejudice is important because it provides an empirically grounded reason to call the bluff.

The value of research on generalized prejudice is not only relevant for society to handle right-wing extremism (and this thesis is not intended as a bat to for politicians to swing at each other). It is also relevant to call a more subtle bluff in the media about the nature of prejudice. Prejudice as truism is echoed today by well-renowned journalists. To be as explicit as possible, the following quote summarizes it well: "Prejudice is considered bad. Life experience is considered positive. But are they not the same?" (Kjöllér, 2013, para 1). Kjöllér wrote this in the editorial pages of Sweden's biggest newspaper (Dagens Nyheter). It was written as a comment on vivid discussion about subtle (and not so subtle) racism today, and she argued that people should not underestimate the value of life experiences. She went on to argue that supposed expressions of prejudiced are often functional and accurate. With rhetorical skill, she also posed the question of what we should do instead, and added that we cannot function like blank slates (her idea of being unprejudiced). Now the argument is not that Kjöllér is particularly prejudiced, the argument is that her rhetoric question is misleading and potentially

dangerous. It is potentially dangerous because it justifies prejudice: If it is solely functional, who would not want to be prejudiced?

In response to arguments such as Kjöller's, this work simply begs the question: Where do individual differences come into the picture? If prejudice is just adaptive, then it follows that generally prejudiced individuals are more adapted. As it turns out individuals with prejudiced dispositions are no more adapted, they are not better at picking up information about groups that could be functional to act upon. People readily and systematically exhibiting prejudice are not different from others in that they have more biased associations, which might be argued to be adaptive (i.e., implicit prejudice, see Paper II). Neither is it the case that they have a stronger (and potentially rational) fear of the unknown, as represented by outgroups (see Paper III). What separates them from people expressing less prejudice is self-constraint. Unlike systematically prejudiced individuals, some people practice self-constraint not to explicitly devalue groups like immigrants, women or mentally disabled people. So when Kjöller asks what we should do instead, perhaps the simple answer based on this work is that we should try not to let our biases run the show. Trying to practice restraint about devaluing others should certainly be an alternative to encourage people to following their gut feeling about groups of people.

## 8.13 Closing Words

The notion of generalized prejudice is fascinating in all its simplicity: Group sentiments can be generalized across targets. As it turns out, it is not so simple, and I would argue that it is not what researchers have presumed it to be. Certainly, generalized group sentiments can be mapped by personality differences, but not all of them. These distinctions between what personality *can*, and *cannot* predict in prejudice forms the essence of this dissertation.

In a sense, the current thesis brings up more questions than it answers. In some ways, it even brings research in this area back to square one. If systematically prejudiced individuals are neither spontaneously biased nor ethnocentric, then what are they? I have proposed that individuals with a disposition toward prejudice are those that take the opportunities given to openly devalue "suitable" targets. Still, to a major extent it remains to be examined in future research how well this reasoning holds up. Although this may seem a pessimistic summary of several years of work, it is also an exciting thought. In Popper's (1969) view on science, progress is everything, and progress is spelled falsification (or simply discarding the implausible). In other words, scientific understanding of something comes from knowing what it is not. So even if the prejudice puzzle may never be completely solved, the current work is hopefully a step in the right direction.

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# Appendix A

The items of the final instrument for prejudice toward overweight people are presented in Table A1. Principal components analysis on these items (based on data from study 2 and 3 of Paper II), indicate a sharp break between the first and second factor in a scree plot. This attests to a uni-dimensional structure of the scale. Noteworthy, the highest loading item (.74) on this factor was “I don’t like fat people much”. This is a good indication of the scale measuring what it is supposed to; this item is without question evaluative and derogatory.

Table A1. *Items Used to Measure Prejudice toward Old People*

Item number	Statement
01	I don’t like fat people much.
02	If I were an employer looking to hire, I might avoid hiring a fat person.
03	Some people are fat because they have no willpower.
04	I feel uncomfortable when I associate with obese people.
05	Obese people should not expect to lead normal lives.
06	Obese people tend to have family problems.
07	On average, fat people are no lazier than thin people. R
08	Overweight people are just as smart as anyone else. R
09	Overweight people are just as organized as anyone else. R
10	In general, overweight people are no more untidy than others. R
11	Overweight people are just as nice as other people. R

*Note.* R = Reverse coded items.

## Appendix B

The items of the final instrument for prejudice toward old people are presented in Table B1. Principal components analysis indicated a unidimensional structure of this scale as well. Specifically, the scree plot of eigenvalues revealed a sharp break between the first and second factor. The highest loading item (.67) was “there is something different about most old people: it's hard to figure out what makes them tick”. As for the scale for overweight people, the marker item is vague and unverifiable.

Table B1. *Items Used to Measure Prejudice toward Overweight People*

Item number	Statement
01 (07)	In order to maintain a nice residential neighborhood, it would be best if too many old people did not live in it.
02 (09)	Most old people tend to let their homes become shabby.
03 (15)	Most old people get set in their ways*.
04 (19)	There are a few exceptions, but in general most old people are pretty much alike.
05 (21)	Most old people spend too much time prying into the affairs of others and giving unsought advice.
06 (24)	Most old people makes one feel ill at ease.
07 (26)	There is something different about most old people: it's hard to figure out what makes them tick.
08 (32)	Most old people make excessive demands for love and reassurance.
09 (34)	Most old people bore others by their insistence on talking about the "good old days".
10 (01)	It would probably be boring if most old people lived in residential units with people of their own age. R*
11 (02)	Most old people are cheerful and agreeable. R*
12 (10)	Most old people are clean and neat. R*
13 (11)	Most old people are neither irritable, nor grouchy, nor unpleasant. R*
14 (13)	It is evident that most old people are very different from one another. R
15 (16)	Most old people can generally be counted on to maintain a clean home. R*
16 (18)	You can count on finding a nice residential neighborhood when there is a sizeable number of old people living in it. R

*Note.* Item numbers in parenthesis correspond to those of Söderhamn et al. (2000). \* Shortened or reworded items. R = Reverse coded items.

## Appendix C

This appendix provides more detailed results from the additional analyses for Paper II. Specifically, extra SEM analyses were run to examine the robustness of the presented findings with (1) other parceling strategies, and (2) another estimator. As for the parceling issue, four new parcels for Agreeableness and Openness respectively were created for each study. Prejudice was modeled as in the published article. Personality items were randomly assigned to parcels with stratification for facets. Analyses were also carried out with two parcels (aggregated from the newly created four) for each personality construct. These were constrained to have equal (unstandardized) loadings to help model identification and to minimize free parameters. Notably, the two-parcel analyses with equal loadings minimize the possibility that a subset of items drive the effects in predicting prejudice. All these analyses were run in Mplus and a mean-adjusted maximum likelihood estimator was chosen.

In study 1, a constrained two-parcel solution had good fit and it was very similar to the one in the main analysis. The path from Openness to explicit generalized prejudice was the only significant structural relation, thus mirroring the reported findings. Modeling personality with four freely estimated parcels per personality provided highly consistent results. For model fit statistics for all the additional SEM analyses, see Table 4. Standardized structural relations between personality and prejudice are presented in Table 5.

In study 2, the constrained two-parcel solution had satisfactory fit (Table X), just as it did in study 1. Both structural relations with generalized explicit prejudice were significant, and virtually identical to the reported ones. The relations with implicit prejudice were systematically very low. Agreeableness and Openness explained as much as 56% ( $p < .001$ ) of the variance in generalized explicit prejudice. In contrast, only 2% ( $p = .60$ ) was explained in generalized implicit prejudice. The unconstrained model had a slightly worse fit but revealed virtually identical structural relations.

As for study 3, the constrained two-parcel solution had very good fit. As in the main analysis, the structural relations strongly resembled those from study 2. Agreeableness and Openness displayed significant relations with generalized explicit prejudice, but not with generalized implicit prejudice. The explained variance in generalized explicit prejudice was again impressive,  $R^2 = .46$  ( $p < .001$ ). The corresponding result was very modest for generalized implicit prejudice,  $R^2 = .05$  ( $p = .35$ ). Also, adding the soda varia-

bles, as in the main analysis, the fit improved further. However, none of the correlations among the explicit variables was higher than .07 (*ns*). Likewise, the relation between generalized implicit prejudice and implicit soda preference was also very low,  $r = .15$  ( $p = .16$ ). Just as in the main analyses, this suggests that shared method variance is not an explanation for the findings. Finally, the four-parcel solution fit well to the data and structural relations were highly consistent with both main analyses and the constrained two-parcel model. Agreeableness and Openness were related to generalized explicit prejudice but not generalized implicit prejudice.

Table C1. *Fit statistics for Supplementary Structural Equation Models*

	<i>Adj. <math>\chi^2</math> (df)</i>	<i>P</i>	<i>CFI</i>	<i>RMSEA [90% CI]</i>	<i>SRMR</i>
Study 1					
2 parcels*	36.97 (31)	.21	.98	.04 [.00, .09]	.08
4 parcels	94.49 (71)	.03	.95	.06 [.02, .09]	.08
Study 2					
2 parcels*	66.02 (50)	.06	.96	.06 [.02, .09]	.06
4 parcels	129.56 (98)	.02	.96	.06 [.02, .08]	.06
Study 3					
2 parcels*	47.06 (40)	.21	.98	.04 [.00, .07]	.04
2 parcels + soda	80.28 (71)	.21	.98	.03 [.00, .06]	.05
4 parcels	92.93 (84)	.24	.99	.03 [.00, .06]	.05

*Note.* \* All models with two parcels were tested with the loadings constrained as equal.  $\chi^2$  values are mean-adjusted as proposed by Satorra and Bentler (2001). CFI = Comparative Fit Index, RMSEA = Root Mean Square Error of Approximation, SRMR = Standardized Root Mean Square Residual.

All in all, the results from the supplementary SEM analyses were highly consistent with the ones reported in the main analyses. This attests to the robustness of the findings in these three studies: They hold up well, both across different parceling strategies and estimators.

Table C2. *Standardized Structural Relations for Agreeableness and Openness with Generalized Explicit and Implicit Prejudice*

	Explicit Prejudice		Implicit Prejudice	
	A	O	A	O
	$\beta$ ( $p$ )	$\beta$ ( $p$ )	$\beta$ ( $p$ )	$\beta$ ( $p$ )
<b>Study 1</b>				
2 parcels*	-.12 (.31)	-.29 (.001)	.05(.71)	-.20 (.13)
4 parcels	-.12 (.26)	-.32 (.001)	.03(.84)	-.15 (.22)
<b>Study 2</b>				
2 parcels*	-.67 (<.001)	-.21 (.01)	-.05(.71)	-.12 (.34)
4 parcels	-.67 (<.001)	-.21 (.03)	-.05(.75)	-.11 (.47)
<b>Study 3</b>				
2 parcels*	-.61 (<.001)	-.19 (.03)	-.12(.38)	-.16 (.15)
4 parcels	-.62 (<.001)	-.18 (.03)	-.10(.46)	-.17 (.13)

*Note.* \* All models with two parcels were tested with the loadings constrained as equal. A = Agreeableness, O = Openness to Experience. Estimates based on a robust (mean-adjusted) maximum likelihood method,  $p$ -values in in parentheses.



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