

Personality, Identity Styles and Authoritarianism: An Integrative Study among Late Adolescents

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Abstract

The relations between five personality factors, three identity styles, the prejudice dispositions of right-wing authoritarianism (RWA), social dominance orientation (SDO) and racial prejudice were investigated in a Flemish-Belgian late adolescent sample (N = 328). Results show that Openness to Experience and Agreeableness relate to racial prejudice but that these relations were fully mediated by RWA and SDO. In addition, results show that whereas RWA relates to Conscientiousness and lack of Openness to Experience, SDO relates to lack of Agreeableness and lack of Openness to Experience. The relation between Conscientiousness and RWA and between Openness to Experience and SDO was fully mediated by the identity styles. However, Openness to Experience had a direct influence on RWA and Agreeableness had a direct influence on SDO. The implications of these findings are discussed. Copyright © 2006 John Wiley & Sons, Ltd.

Key words: personality; identity styles; right-wing authoritarianism, social dominance orientation

INTRODUCTION

Authoritarian submission and authoritarian dominance have repeatedly been shown to be by far the most important prejudice dispositions (e.g. McFarland, 2001), and several studies have examined the relations between these dispositions and Costa and McCrae (1978, 1992) Five-Factor Model, which is currently the most widely accepted model of personality structure. The present research elaborates on this research tradition by investigating the interplay of personality factors, identity styles (Berzonsky, 1990), authoritarianism and racial prejudice. In spite of the fact that only few studies have addressed the relationship between the processes involved in adolescent identity development and authoritarianism (Marcia, 1967, 1980; Soenens, Duriez, & Goossens, 2005), Duckitt (2001) has stressed the importance of these processes by launching the

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thesis that the attitudes that are captured in authoritarianism scales are formed in (late) adolescence rather than early childhood, as was assumed in the original theory of the authoritarian personality (Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950).

First, we will introduce the authoritarianism concept and review research on its relation with the personality factors of the Five-Factor Model. In line with recent research, we will distinguish authoritarian submission from authoritarian dominance (Altemeyer, 1998) and pay attention to their possibly different genesis (cf., Duckitt, 2001; Duckitt, Wagner, du plessis, & Birum, 2002). Second, we will introduce the identity style concept and review research on its relation with personality traits and authoritarianism. Finally, we will propose an integrated model in which the relations between the personality factors and racism are mediated by authoritarianism, and in which the relations between the personality factors and authoritarianism are mediated by the identity styles.

Authoritarianism

Two research lines have dominated the quest for the antecedents of prejudice. The first has viewed prejudice as resulting from group processes (e.g. Tajfel & Turner, 1979). The second has regarded it as a result of dispositional factors making people more or less likely to adopt prejudice. And although it is clear that group and other contextual factors that determine whether either the personal or the social identity is salient can affect prejudice; it has been shown that, even when social instead of personal identity is most salient, dispositional factors are still the major predictors of prejudice (Heaven & St. Quintin, 2003). Within the latter tradition, two dimensions have been found to predict prejudice. The first—the authoritarian personality—was introduced by Adorno et al. (1950), and was reconceptualized by Altemeyer (1981) to right-wing authoritarianism (RWA). RWA can be defined as the covariation of an adherence to conventional norms and values, an uncritical subjection to authority, and feelings of aggression towards norm violators. The second—the social dominance orientation (SDO)—was introduced by Pratto, Sidanius, Stallworth, and Malle (1994) to delineate the extent to which one desires the ingroup to dominate outgroups. According to Altemeyer (1998), RWA and SDO constitute two different faces of the authoritarian personality with RWA referring to authoritarian submission and SDO to authoritarian dominance. And although, the strength of the RWA–SDO relation varies in function of socio-political context and differences in political socialization, interest and involvement (Duriez, Van Hiel, & Kossowska, 2005a); RWA and SDO independently predict multiple forms of prejudice including homophobia (Altemeyer, 1998; Lippa & Arad, 1999), sexism (Altemeyer, 1998; Thomas & Esses, 2004) and racism (Altemeyer, 1998; Van Hiel, Pandelaere, & Duriez, 2004).

Although there is consensus on the importance of authoritarianism as a predictor of prejudice, its status and genesis has been hotly debated. Originally, Adorno et al. (1950) considered authoritarianism to be a personality characteristic that is formed in early childhood. However, although some researchers still consider authoritarianism as a personality disposition (e.g. Heaven & Bucci, 2001; Heaven & St. Quintin, 2003), empirical support for childhood as its formative phase has not been strong (e.g. Altemeyer, 1981, 1998; Duckitt, 2001), and commentators have argued that the items of authoritarianism scales merely capture social beliefs of a broadly ideological nature that do not develop until (late) adolescence (e.g. Duckitt, 2001; Duckitt et al., 2002; Duriez & Van Hiel, 2002; Duriez et al., 2005a; Guimond, Dambrun, Michinov, & Duarte, 2003;

Van Hiel et al., 2004; Vollebergh & Raaijmakers, 1991), which is the developmental stage in which identity formation becomes crucially important.

Although some people consider any (relatively) stable individual difference to express a personality trait, such a view blurs the conceptual distinction between traits and other relatively stable individual differences, such as values and attitudes. According to Roccas, Sagiv, Schwartz, and Knafo (2002), values and attitudes differ from traits in several ways. First, whereas traits are enduring dispositions, values and attitudes are enduring goals: Whereas traits describe what people are like, values and attitudes describe what people consider important. Second, whereas people consider their values and attitudes as important and desirable, they may view traits as desirable or undesirable. People may refer to either traits or values and attitudes to explain behaviour, but whereas it is values and attitudes that they will refer to when they wish to justify their behaviour, traits will often be used apologetically. In spite of these conceptual differences, traits can be expected to relate to values and attitudes. Because people generally try to behave consistent with their values and attitudes, values and attitudes might influence traits. However, traits are more likely to influence values and attitudes because people who exhibit a certain trait might find it easier to bring their values and attitudes in line with their behaviour than to bring their behaviour in line with their values and attitudes. Therefore, it is interesting to investigate how traits influence the generalized attitudes that constitute the authoritarian belief system.

Authoritarianism and personality

Costa and McCrae (1978, 1992 Five-Factor Model, which is currently the most widely accepted model of personality structure, asserts that five factors (Neuroticism, Extraversion, Openness to Experience, Conscientiousness and Agreeableness) can describe most personality traits. Results of studies that have investigated the relationship between RWA/SDO and these five personality factors suggest that, RWA and SDO relate differently to these personality factors. Whereas SDO is characterized by low Agreeableness (Ekehammar, Akrami, Gylje, & Zakrission, 2004; Heaven & Bucci, 2001; Lippa & Arad, 1999) and low Openness to Experience (Heaven & Bucci, 2001), RWA is characterized by high Conscientiousness and low Openness to Experience (Altemeyer, 1996; Ekehammar et al., 2004; Van Hiel & Mervielde, 2004). In this respect, however, it should be noted that, although Conscientiousness is consistently positively related to RWA, this relation does not always reach significance (Butler, 2000; Heaven & Bucci, 2001; Peterson, Smirles, & Wentworth, 1997; Trapnell, 1994). The present study aims to contribute to this literature (a) by providing further evidence for some of the inconsistent relations and (b) by examining identity styles as a mediator of the personality-authoritarianism relationship.

Identity styles

Inspired by Erikson (1968), who argued that the main developmental task of adolescence is the formation of an integrated personal identity, which includes developing of a personal view on issues of political, philosophical and religious nature, Berzonsky (1990) proposed a model that postulates reliable stylistic differences in how individuals approach identity-relevant tasks and problems. In this model, Berzonsky introduces three identity styles: the informational, the normative and the diffuse/avoidant style. These styles are ways of processing information and coping with problems that arise in identity crises. As such, they should be considered social cognitions or cognitive self-theories through which

adolescents perceive and process reality. According to Berzonsky, adolescents have the cognitive abilities to use all three identity styles. However, individuals may not always be motivated to use a particular style or they may not have access to relevant information. Consequently, depending on the specific situation or problem, adolescent may use an informational, a normative or a diffuse/avoidant identity style. And although Berzonsky argues that adolescents will gradually develop a preference for one specific identity style, in theory, it is possible to obtain high scores on all three styles.

Predominantly information oriented individuals deal with identity issues by seeking out, processing and utilizing self-relevant information. They take an analytic and mentally effortful approach to identity formation. They are rational self-explorers who want to learn things about themselves, and when confronted with information that is dissonant with their self-conceptions, they will revise and accommodate their self-perceptions. Predominantly normative oriented individuals internalize and conform to the values, expectations and goals of significant others and reference groups. They take a relatively automatic, mindless approach to identity formation by becoming who others expect them to be. Although they are self-disciplined, conscientious, committed and goal-oriented, they possess rigidly organized self-views that they try to protect and maintain by shutting themselves off from information that may threaten internalized values and beliefs. Finally, predominantly diffuse/avoidant oriented individuals are reluctant to deal with identity conflicts and personal problems and tend to procrastinate decisions. When they have to act, their behaviour tends to be influenced mainly by immediate situational demands, hedonistic cues and personal feelings. They adopt a situation-specific, impression management approach to identity issues. Who they are or appear to be depends on where they are and who they are with. Their context-specific adjustments tend to be acts of behavioural or verbal compliance rather than actual changes in their identity structure. They are reluctant to assume responsibility for the consequences of their actions and they lack a clear sense of purpose and commitment.

It is important to distinguish identity styles from other relatively stable individual differences such as personality traits and values and attitudes. Whereas traits describe what people are like, and values and attitudes describe what people consider important and identity styles describe how people make identity-relevant decisions. In this respect, Berzonsky (1990) points out that identity styles should be considered developmental outcomes: As they interact within environmental contexts, people develop a preference for a particular identity style. This preference may be further reinforced by the life events and social relationships that are elicited by this identity style. As people enter adulthood, their identity style is thought to become relatively stable; although stressful life events or therapeutic interventions may still affect their identity style.

Elaborating on this, Soenens, Berzonsky, Vansteenkiste, Beyers, and Goossens (2005) have suggested that the distinction between personality factors and identity styles reflects the distinction between core and surface personality traits (Asendorpf & Van Aken, 2005). Core traits (such as the personality factors of the Five-Factor Model) are based on genetic differences and/or early childhood experiences and evidence limited susceptibility to social-contextual influences later in life. In contrast, surface traits such as the identity styles are malleable and open to development. In line with this, contemporary personality and developmental research assumes that personality factors influence how people process information (e.g McCrae & Costa, 1997; Roberts, Caspi, & Moffitt, 2001), which, in turn, may relate to an individuals' functioning and adjustment in daily life. Research therefore starts to explore the mediating role of identity styles in linkages between personality factors

and specific attitudinal, affective and behavioural outcomes. An illustration of such an approach can be found in a study by Duriez, Soenens, and Beyers (2004), who showed that the relations between personality traits and religiosity dimensions were mediated by late adolescents' identity styles. For instance, they found that the relation between Openness to Experience and a symbolic, tolerant and personal approach of religious contents was mediated by the informational identity style. In a similar, it is interesting to investigate whether identity styles also mediate the relations between personality traits and the attitudes of the authoritarian belief system.

Identity styles and personality

According to Berzonsky (1990), Openness to Experience is the most important personality factor to determine differences in identity styles. More specifically, Berzonsky (1990) argued that information oriented individuals are characterized by high Openness to Experience levels, whereas normative oriented people are closed to information that threatens their self-image and value system. It has indeed been shown that the informational identity style relates positively to Openness to Experience (Dollinger, 1995), introspectiveness and need for cognition (Berzonsky & Sullivan, 1992). In contrast, the normative identity style relates negatively to Openness to Experience (Berzonsky & Sullivan, 1992; Dollinger, 1995) and positively to need for closure (Berzonsky & Adams, 1999). Finally, the diffuse/avoidant orientation, which relates negatively to the information orientation (e.g. Berzonsky, 1992; Berzonsky & Sullivan, 1992), tends to relate negatively to Openness to Experience (Berzonsky & Sullivan, 1992).

Recently, Duriez et al. (2004) confirmed these relationships: Openness to Experience was positively related to the informational and negatively to the diffuse/avoidant identity style. These results suggest that high scores on Openness to Experience are associated with a tendency to actively seek out, process and utilize relevant information rather than procrastinate decisions. Openness to Experience was also negatively related to a normative identity style, showing high Openness to Experiences is inversely related to a submissive stance towards the expectations and prescriptions of others. In addition, Duriez et al. (2004) showed that Conscientiousness was positively related to the normative and negatively to the diffuse/avoidant identity style and that Agreeableness was negatively related to the diffuse/avoidant style (cf., Duriez & Soenens, 2006). This suggests that, when choices need to be made, conscientious people tend to rely on the expectations and prescriptions of others and, as a consequence, are less likely to delay their choice until the situation dictates what to do, whereas agreeable people tend to be able to fairly easily make such decisions, or at least, report that they are able to do so.

Identity styles and authoritarianism

Early research that focused on how authoritarianism relates to cognitive functioning has demonstrated that authoritarianism is accompanied by cognitive rigidity (e.g. Rokeach, 1948) and intolerance for ambiguity (e.g. Frenkel-Brunswik, 1949). These findings led to the conclusion that authoritarianism goes hand-in-hand with a need to simplify reality, suggesting that prejudice results from this need for simplification. This relationship was further investigated by the cognitive conservatism approach (e.g. Greenberg, Simon, Pyszczynski, Solomon, & Chatel, 1992; Shah, Kruglanski, & Thompson, 1998; Tetlock, 1983). In this approach, it is assumed that cognitive conservatism is comprised of directional and non-directional psychological motives that instigate belief formation and

maintenance. Directional motives reflect the desire to reach a specific conclusion such as that the self is valuable (e.g. Kunda, 1990). Non-directional motives reflect the desire for any firm belief, and include among other things dogmatism (Rokeach, 1960), intolerance of ambiguity (Frenkel-Brunswick, 1949), need for closure (Kruglanski & Webster, 1996) and low need for cognition (Cacioppo & Petty, 1982). Research revealed that cognitive conservative persons tend to support ideologies that rely on tradition and are aimed at (societal) stability because they lack motivation and ability to incorporate contradicting information into their cognitive structure and, hence, lack insight in how society (and their own psyche) works.

Given the fact that low levels of an informational and high levels of a normative identity style can be considered indicators of cognitive conservatism (Berzonsky & Adams, 1999; Berzonsky & Sullivan, 1992), it is not surprising that the identity styles were shown to relate to authoritarianism. Soenens et al. (2005) recently found the informational style to relate negatively to cognitive conservatism (i.e. need for closure), authoritarianism (i.e. RWA and SDO) and prejudice (i.e. racism and homophobia). The normative identity style was positively related to cognitive conservatism (i.e. need for closure), some authoritarianism measures (i.e. RWA) and prejudice (i.e. racism and homophobia). Finally, the diffuse/avoidant style was positively related to some authoritarianism and prejudice measures (i.e. SDO and racism).

Towards an integrated model

In this introduction, we have summarized research that focused on (1) the prejudice dispositions of authoritarianism submission (RWA) and authoritarian dominance (SDO), (2) the relation between personality traits and authoritarianism, (3) the relation between personality traits and identity styles and (4) the relation between identity styles and authoritarianism. The present study attempts to reconcile and elaborate these research traditions by proposing an integrated model of the interplay of personality factors, identity styles, RWA and SDO and racism. In this model, the relations between the personality factors and racism are mediated by RWA and SDO, and the relations between the personality factors and RWA and SDO are mediated by the social-cognitive processes involved in identity development during late adolescence.

Given that previous research (e.g. McFarland, 2001) has shown that RWA and SDO are by far the most important predictors of a variety of forms of prejudice, the relations between the personality factors and racism are expected to be fully mediated by RWA and SDO. In addition, given the assumption that issues of identity development and ways of processing these issues are of major importance during (late) adolescence, the relationships between personality traits and authoritarianism can be expected to be mediated by the identity styles late adolescents use. More specifically, based on the theories and the research reviewed earlier, we expect Openness to Experience to be the crucial determinant of an individual's identity style and his level of authoritarianism (both RWA and SDO). In addition, Conscientiousness and Agreeableness are considered important determinants of an individual's identity style and an individual's level of RWA and SDO, respectively. In the presented model, it is hypothesized that (1) Openness to Experience will predict higher scores on the informational and lower scores on the normative and diffuse/avoidant identity style, and that these styles will mediate the positive relation between Openness to Experience and RWA and SDO, (2) Conscientiousness will predict higher scores on the normative and lower scores on the diffuse/avoidant identity style, and that these styles will

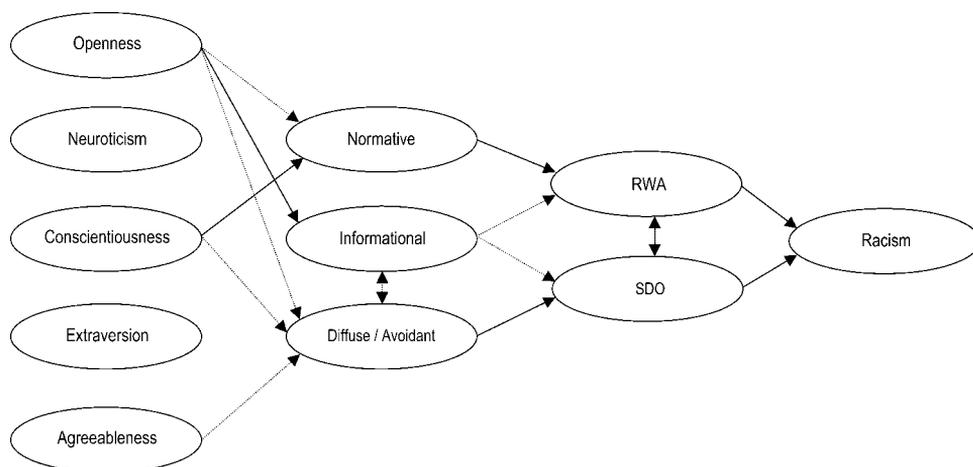


Figure 1. Hypothetical model of the relations between the personality factors, the identity styles, RWA and SDO and racism (Full lines delineate positive and dashed lines delineate negative relationships).

mediate the positive relation between Conscientiousness and RWA and (3) Agreeableness will predict lower scores on the diffuse/avoidant identity style, which will mediate the negative relation between Agreeableness and SDO. Additionally, based on previous findings, we expect RWA and SDO to be positively related and the informational and the diffuse/avoidant style to be negatively related. Finally, the relations between the personality factors and racism will also be examined. The proposed model is summarized in Figure 1.

Finally, this proposed model will be compared to three other models. First, in the light of the debate on the causal order of SDO and prejudice (e.g. Guimond et al., 2003), an alternative model will be tested in which the order of RWA/SDO and racism is reversed. Given the fact that similar alternative models have been shown to provide a worse fit to the data on several other occasions (e.g. Duriez et al., 2005a; Ekehammar et al., 2004; Van Hiel et al., 2004), we expect the presented model to fit the data better than the alternative model. Second, given that Roccas et al. (2002) have noted that, although personality traits are more likely to influence values and attitudes, values and attitudes might also influence personality traits (see above), a model in which the personality factors are situated at the end of the sequence will also be tested. In line with Roccas et al. (2002), this alternative model is expected to provide a worse fit to the data. Third, we decided to compare the fit of the presented model with the fit of an alternative model in which the identity styles predict the personality factors. Previous research has shown that identity and personality develop as part of a transactional system (e.g. Luyckx, Soenens, & Goossens, 2005). In other words, although personality factors were found to influence people’s identity style, the identity styles late adolescents use were also found to initiate personality change.

METHOD

Participants

Participants were 328 Flemish-speaking Belgian, first year psychology students, ranging in age from 18–24 with a mean of 18.45 years (80% female). Participation was mandatory. Participants received course credit. Participants having over six missing values on the

NEO-FFI, over three missing values on the Identity Style Inventory or over two missing values on the RWA, the SDO or the racism scale were excluded from further analyses. In total, 8 participants needed to be removed (making $N = 320$). For subjects that were not removed, missing values were estimated with the EM-algorithm (Schafer & Graham, 2002).

Measures

Personality

Participants completed the Flemish NEO-FFI (Hoekstra, Ormel, & De Fruyt, 1996), which covers the US item pool as much as possible, and whose factor structure and meaning closely resembles the original version. Items were scored on 5-point Likert scales (as was also the case for all other items). Neuroticism covers rumination and feeling ashamed, anxious, depressed, helpless and worthless. Extraversion covers enjoying people's company and being optimistic, gay, energetic and active. Openness to Experience covers being intrigued and thrilled by art, poetry, nature, foreign food, theories and abstract ideas. Conscientiousness covers being reliable, productive, systematic, structured and perfectionist. Agreeableness covers being polite, cooperative, empathic, tender and caring. Estimates of internal consistency (Cronbach alpha) were 0.85, 0.81, 0.69, 0.79 and 0.70 for Neuroticism, Extraversion, Openness to Experience, Conscientiousness and Agreeableness, respectively (12 items each).

Identity styles

Participants completed a Flemish version (Duriez et al., 2004) of the revised Identity Style Inventory (Berzonsky, 1992). Cronbach alpha was 0.68, 0.61 and 0.74 for the informational, the normative and the diffuse/avoidant identity style. The informational identity style relates to the process by which people make choices in life and the degree to which they are out to actively seek out, process and utilize relevant information when making such choices (10 items, e.g. 'I've spent a great deal of time thinking seriously about what I should do with my life', 'I find that personal problems often turn out to be interesting challenges', 'I've spent a lot of time reading and trying to make some sense out of political issues'). The normative identity style relates to the process by which people make choices in life, the degree to which they prefer to rely on family, friends and specialists when making such choices, and the degree to which they hold firm ideas about what they want in life (10 items, e.g., 'I prefer to deal with situations where I can rely on social norms and standards', 'I find it's best for me to rely on the advice of close friends or relatives when I have a problem', 'I've always had purpose in my life; I was brought up to know what to strive for'). The diffuse/avoidant identity styles relates to the degree to which people procrastinate or avoid making choices (10 items, e.g., 'I'm not really thinking about my future now; it's still a long way off', 'I try not to think about or deal with problems as long as I can', 'When I know a situation is going to cause me stress, I try to avoid it').

Authoritarianism

As an authoritarian submission measure, participants completed a Flemish version of the RWA scale, which covers attitudes towards authority, rebellion, decency, traditional family structures, (homo)sexuality, and criminality (Van Hiel et al., 2004; 11 items, e.g. 'Obedience and respect for authority are among the most important virtues children should learn', 'The courts are right in being easy on drug offenders because punishment would not do any good in cases like this (reversely scored)' and 'Laws have to be enforced without mercy, especially

when dealing with agitators and revolutionaries who are stirring things up'). As an authoritarian dominance measure, we administered the Flemish version of the SDO scale, which measures attitudes towards the equality of people, social groups and countries (Van Hiel & Duriez, 2002; 14 item, e.g. 'To get ahead in life, it's sometimes necessary to step on others', 'Some groups of people are simply not the equals of others' and 'It is important that we treat other countries as equals'). Cronbach alpha was 0.69 for RWA and 0.87 for SDO.

Racism

A 9-item racism scale (Billiet & De Witte, 1991), which intended to measure the conceptually different aspects of xenophobia (e.g. 'In general, immigrants are not to be trusted') and racism (e.g. 'We have to keep our race pure and fight mixture with other races') was administered. Contrary to the presumed two-factorial structure, the scree test pointed to one factor only (cf., Duriez et al., 2005a; Van Hiel et al., 2004). Cronbach alpha was 0.89.

RESULTS

Correlation analyses

To test our hypotheses we first conducted correlation analyses on the manifest variables. Correlations are displayed in Table 1. Due to the large sample size, our analyses attained high power. To preclude that small effects were flagged as significant, an alpha-level of 0.01 was used. As expected, results show that, whereas Openness to Experience relates negatively to both RWA and SDO, Conscientiousness relates positively to RWA and Agreeableness relates negatively to SDO. In addition, Openness to Experience and Agreeableness are negatively related to racism. As expected, analyses show that Openness to Experience was positively related to the informational and negatively to the normative and the diffuse/avoidant identity style. In line with the results of Duriez et al. (2004), Conscientiousness related positively to the normative and negatively to the diffuse/avoidant style, and Agreeableness related negatively to the diffuse/avoidant style. Finally, analyses revealed clear relationships between the identity styles and RWA and SDO. More specifically, RWA related negatively to the informational and positively to the normative identity style, and SDO related negatively to the informational and positively to the diffuse/avoidant style. In addition, racism was found to relate negatively to the informational and positively to the normative and the diffuse/avoidant style.

Table 1. Correlations between the manifest variables

	01	02	03	04	05	06	07	08	09	10
1 Neuroticism										
2 Extraversion	-0.34**									
3 Openness	0.00	0.15								
4 Conscientiousness	-0.16*	0.25**	0.02							
5 Agreeableness	-0.15*	0.27**	0.12	0.20**						
6 Informational	0.01	0.00	0.46**	0.08	0.11					
7 Normative	-0.07	0.06	-0.18**	0.33**	0.05	0.01				
8 Diffuse/Avoidant	0.06	-0.10	-0.20**	-0.31**	-0.24**	-0.44**	-0.09			
9 RWA	-0.07	0.00	-0.33**	0.29**	-0.03	-0.16*	0.40**	-0.01		
10 SDO	-0.04	-0.01	-0.24**	0.02	-0.29**	-0.27**	0.12	0.23**	0.43**	
11 Racism	-0.04	0.00	-0.33**	0.11	-0.17*	-0.29**	0.20**	0.16*	0.48**	0.55**

Note: **p* < 0.01; ***p* < 0.001.

Confirmatory factor analysis

To test our hypotheses in more depth and to adjust for measurement error that may result from the relatively low internal consistencies of some scales (i.e. Openness to Experience, the informational and the normative identity style and RWA), structural equation modelling with latent variables (SEM; Bollen, 1989) was performed using Lisrel 8.54 (Jöreskog & Sörbom, 1996a). Instead of using separate items, we created three item parcels for each construct (in a random fashion) and used these as indicators of the latent constructs. According to Marsh, Hau, Balla, and Grayson (1998), parcelling has some advantages with respect to latent factor modeling: It results in a smaller number of indicators per latent factor, and the parcels are (1) likely to have a stronger relation to the latent factor, (2) less likely to be influenced by method effects and (3) more likely to meet normality assumptions. In addition, factor reliability is unaffected by the use of parcels because the same items are used to form the latent factor. In spite of this procedure, data screening using Prelis 2.54 (Jöreskog & Sörbom, 1996b) indicated partial data non-normality, both at the univariate and the multivariate level. Therefore, in the subsequent models, the asymptotic covariance matrix (which can be obtained from the authors on request) was used as input. To evaluate goodness of fit, we inspected the Satorra-Bentler Scaled chi-square (SBS- χ^2 , Satorra & Bentler, 1994) instead of the commonly used chi-square because the former corrects for data non-normality. An SBS- χ^2 to degree of freedom ratio (SBS- χ^2 /df) close to 3.0 indicates good model fit (Kline, 1998). To further evaluate model fit, the comparative fit index (CFI; Bentler, 1990) and the standardized root mean square residual (SRMR; Bentler, 1995) were selected. According to Hu and Bentler (1999), combined cut-off values of 0.95 for CFI and 0.09 for SRMR indicate good fit. Estimation of the measurement model with 11 latent factors (i.e. five personality factors, three identity styles, RWA, SDO and racism) and 33 parcels (three parcels for each latent factor) by means of confirmatory factor analysis indicated good model fit (SBS- $\chi^2(440) = 708.69$; SBS- χ^2 /df = 1.61; CFI = 0.956; SRMR = 0.058), and all parcels had a high standardized factor loading on their corresponding latent factor (mean lambda = 0.72).

Structural equation modelling

Our structural model proposes that personality factors are predictive of the way identity-relevant information is processed, which, in turn predicts differences in RWA and SDO, which, in turn, predicts whether people will adopt racism. In other words, the proposed model is a (double) mediation model (Baron & Kenny, 1986; Holmbeck, 1997) in which the paths from the personality factors to racism are expected to turn out non-significant when RWA and SDO are inserted and in which the paths from the personality styles to racism RWA and SDO are expected to decrease significantly when the identity styles are inserted. In order to test this model, the mediational role of RWA and SDO in the relationships between the personality factors and racism and the role of the identity styles as a mediator of the relations between the personality factors and RWA and SDO was examined. These analyses resulted in an integrated model which features the personality factors, the identity styles, RWA and SDO and racism. As in series of supplementary analyses, our basic model was compared with the alternative models that were mentioned in the introduction.

Towards an integrated model

To test the mediational role of RWA and SDO in the relations between the personality factors and racism, following the general logic proposed by Baron and Kenny (1986), a three-step

procedure was applied. In the first step, the direct relations from the personality factors to racism were inspected. In line with our correlation analyses, results revealed significant direct effects of Openness to Experience ($\beta = -0.40, p < 0.01$) and Agreeableness ($\beta = -0.22, p < 0.01$) on racism. In a second step, RWA and SDO were inserted under the assumption that they would fully mediate the relations between Openness to Experience and racism and between Agreeableness and racism. In this step, the direct effects of the personality factors on RWA and SDO were inspected. In line with our correlation analyses, results revealed significant direct effects of Openness to Experience ($\beta = -0.51, p < 0.01$) and Conscientiousness ($\beta = 0.42, p < 0.01$) on RWA and of Openness to Experience ($\beta = -0.26, p < 0.01$) and Agreeableness ($\beta = -0.39, p < 0.01$) on SDO. In turn, RWA and SDO positively predicted racism ($\beta = 0.41$ and 0.41 , respectively). The resulting full mediation model yielded an acceptable fit ($\text{SBS-}\chi^2(233) = 217.44, \text{SBS-}\chi^2/\text{df} = 0.93, \text{CFI} = 0.966$ and $\text{SRMR} = 0.055$). In a third step, direct effects of Openness to Experience to racism and of Agreeableness to racism were added to this model in order to check whether these effects would turn out non-significant. This did not improve the fit ($\text{SBS-}\chi^2_{\text{diff}}(2) = 0.48, p > 0.01$) and the initial direct effects of Openness to Experience and Agreeableness turned out non-significant ($\beta = -0.13$ and -0.05 , respectively) after entering RWA and SDO as mediators. The indirect effects of Openness to Experience ($z = -3.95, p < 0.01$) and Agreeableness ($z = 2.90, p < 0.01$) on racism through RWA and SDO were significant. These findings indicate that the effects of Openness to Experience and Agreeableness on racism are fully mediated by RWA and SDO.

To test the role of the identity styles as a mediator of the relations between the personality factors and RWA and SDO, in a first step, the identity styles were added to our model under the assumption that they would fully mediate the relations between Openness to Experience and RWA and SDO, between Conscientiousness and RWA and between Agreeableness and SDO. In this step, the direct effects of the personality factors on the identity styles and of the identity styles on RWA and SDO were inspected. In line with our correlation analyses and with the basic model presented in Figure 1, results revealed significant direct effects of Openness to Experience on the informational identity style ($\beta = 0.74, p < 0.01$), the normative identity style ($\beta = -0.32, p < 0.01$), and the diffuse/avoidant identity style ($\beta = -0.22, p < 0.01$), of Conscientiousness on the normative identity style ($\beta = 0.51, p < 0.01$) and the diffuse/avoidant identity style ($\beta = -0.37, p < 0.01$), of Agreeableness on the diffuse/avoidant identity style ($\beta = -0.28, p < 0.01$), of the informational identity style on RWA ($\beta = -0.44, p < 0.01$) and SDO ($\beta = -0.21, p < 0.01$), of the normative identity style on RWA ($\beta = 0.54, p < 0.01$) and of the diffuse/avoidant identity style on SDO ($\beta = 0.21, p < 0.01$). The resulting full mediation model (see Figure 1) yielded an acceptable fit ($\text{SBS-}\chi^2(471) = 766.55, \text{SBS-}\chi^2/\text{df} = 1.63, \text{CFI} = 0.952$, and $\text{SRMR} = 0.068$). In a second step, direct effects of Openness to Experience on RWA and SDO, of Conscientiousness on RWA and of Agreeableness on SDO were added to check whether these effects would turn out non-significant. This improved the fit of our model ($\text{SBS-}\chi^2_{\text{diff}}(4) = 26.89, p > 0.01$): Although the effects of Openness to Experience on SDO ($\beta = -0.01$) and Conscientiousness on RWA ($\beta = 0.16$) turned out non-significant ($\beta = -0.13$ and -0.05 , respectively), Openness to Experience ($\beta = -0.40, p < 0.01$) continued to directly affect RWA and Agreeableness ($\beta = -0.30, p < 0.01$) continued to directly affect SDO. In line with this, the indirect effects of Openness to Experience on SDO ($z = -4.11, p < 0.01$) and of Conscientiousness on SDO ($z = 4.60, p < 0.01$) through the identity styles were significant, but the indirect effects of Openness to Experience on RWA and of Agreeableness on SDO were not ($z = -2.10$ and

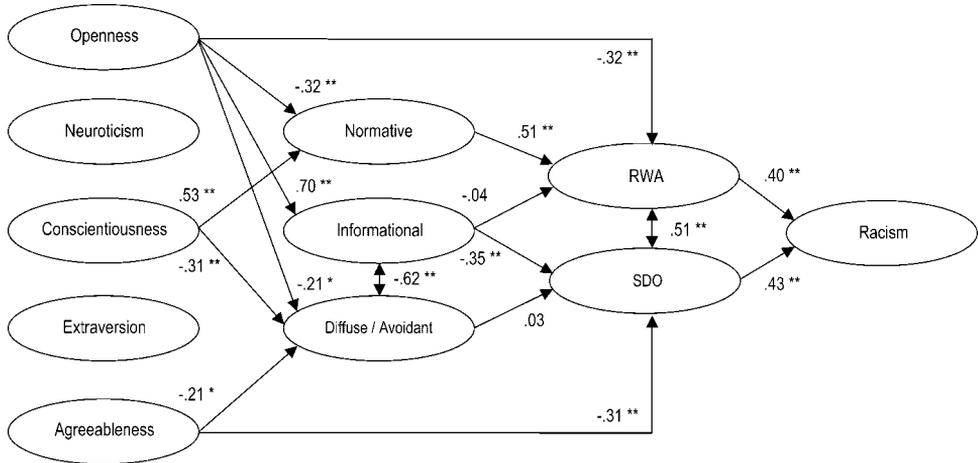


Figure 2. Best fitting model of the relations between the personality factors, the identity styles, RWA and SDO and racism. * $p < 0.01$, ** $p < 0.001$.

0.21, respectively). Hence, the effects of Openness to Experience on SDO and of Conscientiousness on RWA are fully mediated, but the effects of Openness to Experience on RWA and Agreeableness on SDO are not mediated by the identity styles. The final model, which is displayed in Figure 2, provided a good fit to the data ($SBS-\chi^2(469) = 745.84$, $SBS-\chi^2/df = 1.59$, $CFI = 0.955$, and $SRMR = 0.065$).¹

Testing alternative models

In order to compare our model with the alternative models that were proposed at the end of the introduction, we decided (1) to assume full mediation between all the different constructs (cf., Figure 1), (2) to allow error covariance between all of the identity styles as well as between all of the personality factors and (3) to allow paths between all of the variables of one level and all of the variables of the adjacent levels (instead of only allowing the theoretically expected or significant paths). In this way, we could keep the degrees of freedom of all four models as constant as possible, allowing for a more optimal comparison of these models. In order to actually compare our model with the alternative models, we relied on Akaike (1987) information criterion (AIC), which allows for a direct comparison between non-nested models, and which states that models with lower AIC should be preferred to models with higher AIC. The AIC favoured the model in which the personality factors predict the identity styles, who in turn predict RWA and SDO, who in turn predict

¹One of the reviewers pointed out that the high correlations between Openness to Experience and the informational identity style and between the normative identity style and RWA that became apparent in the full mediation model might be due to item overlap. Therefore, we decided to conduct some additional Confirmatory Factor Analyses. More specifically, we decided to compare the fit of our measurement model ($SBS-\chi^2(440) = 708.69$; $SBS-\chi^2/df = 1.61$; $CFI = 0.956$; $SRMR = 0.058$) with a model in which the parcels for Openness to Experience and the informational identity style load on the same factor, and with a model in which the parcels for RWA and for the normative style load on the same factor. Both models fitted the data less well ($SBS-\chi^2(450) = 797.76$ and 783.56 ; $SBS-\chi^2/df = 1.77$ and 1.74 ; $CFI = 0.948$ and 0.948 ; $SRMR = 0.063$ and 0.063 , respectively), showing that it is justified to distinguish these concepts. Second, inspection of the items tapping these constructs revealed no item overlap. In general, the Big-Five items reflect what people are like, the identity style items reflect how people process information relevant to their identity formation, and the RWA and SDO items refer to how people think about human relations and society in general.

racism (SBS- χ^2 (461) = 806.24, SBS- χ^2/df = 1.61, CFI = .954, SRMR = .073, AIC = 945.14) over the three alternative models: (1) a model in which the causal order of RWA/SDO and racism is reversed (SBS- χ^2 (461) = 827.88, SBS- χ^2/df = 1.80, CFI = 0.945, SRMR = .074, AIC = 1006.24), (2) a model in which the personality factors are situated at the end of the sequence (SBS- χ^2 (468) = 896.75, SBS- χ^2/df = 1.92, CFI = 0.934, SRMR = 0.086, AIC = 1082.75), and (3) a model in which the identity styles predict the personality factors (SBS- χ^2 (454) = 736.37, SBS- χ^2/df = 1.62, CFI = 0.954, SRMR = 0.062, AIC = 950.38).

DISCUSSION

This study's aim was to elaborate on previous findings on the relations between personality factors, dimensions of identity development, authoritarianism and racial prejudice. In this respect, we paid attention to the recently made distinction between authoritarian submission and authoritarian dominance (Altemeyer, 1998), and we introduced the identity style concept as a possible mediator of the relations between personality and authoritarianism. We then proposed a theoretical model in which the relations between the personality factors and racial prejudice are mediated by authoritarianism, and in which the relations between the personality factors and authoritarianism are mediated by differences in late adolescents' identity styles. We will now discuss (the different parts of) our model in more detail.

Personality and authoritarianism

Results of studies investigating the personality correlates of authoritarianism suggest that, rather than being two faces of the authoritarian personality, RWA and SDO represent two distinct clusters of attitudes. Whereas the submissive attitude (RWA) is characterized by low Openness to Experience and high Conscientiousness (Altemeyer, 1996; Ekehammar et al., 2004; Heaven & Bucci, 2001; Peterson et al., 1997; Van Hiel & Mervielde, 2004), the dominance attitude (SDO) is characterized by low Openness to Experience (Heaven & Bucci, 2001) and low Agreeableness (Ekehammar et al., 2004; Heaven & Bucci, 2001; Lippa & Arad, 1999). Our study confirms this, suggesting a different genesis of RWA and SDO. This is in line with studies showing that, whereas RWA is rooted in social conformity (Duckitt et al., 2002), a need for cognitive simplification (Van Hiel et al., 2004) and conservation values (Duriez & Van Hiel, 2002; Duriez et al., 2005a), SDO is rooted in tough-mindedness (Duckitt et al., 2002), lack of empathy (Duriez, 2004) and self-enhancement values (Duriez & Van Hiel, 2002; Duriez et al., 2005a).

Identity styles and authoritarianism

As already noted in the introduction, Berzonsky's (1990) identity style paradigm is based on Erikson's (1968) theory and focuses on differences in information-processing styles. However, in the past, empirical research on Erikson's theory has primarily been guided by the identity status paradigm (Marcia, 1966). In this paradigm, identity development is thought to result from the dimensions of exploration and commitment. Exploration was defined as the degree to which someone engages in a search for values, beliefs and goals. The process of exploration implies experimenting with social roles, plans and ideologies.

Commitment refers to the determined adherence to a set of convictions, goals and values. Based on these dimensions, Marcia defined four identity statuses: Achievement (high commitment, high exploration), Foreclosure (high commitment, low exploration), Moratorium (low commitment, high exploration) and Diffusion (low commitment, low exploration). In this research, we made use of the identity style paradigm because the identity status paradigm has been criticized for focusing on the outcomes of the identity formation process rather than on the process itself (Côté & Levine, 1988; van Hoof, 1999). In spite of this conceptual difference, research has shown that individuals in the achievement and moratorium statuses use a predominantly information oriented identity style, that individuals in the foreclosure status tend to apply the normative identity style, and that individuals in the diffusion status tend to adopt a diffuse/avoidant identity style (Berman, Schwartz, Kurtines, & Berman, 2001; Berzonsky & Kuk, 2000; Berzonsky & Niemeyer, 1994; Streitmatter, 1993; Schwartz, Mullis, Waterman, & Dunham, 2000).

Studies on the relations between authoritarianism and identity statuses have pointed out that foreclosures are the most endorsing of authoritarian values (Marcia, 1967, 1980; Podd, 1972). Based on the convergence between the foreclosure status and the normative identity style, and based on the fact that both the informational identity style (after inversion) and the normative identity style can be considered measures of cognitive conservatism (Berzonsky & Adams, 1999; Berzonsky & Sullivan, 1992), RWA and SDO were expected to relate negatively to the informational and positively to the normative identity style. In line with these expectations, the informational style was negatively related to both RWA and SDO, but the normative identity style was positively related to RWA only. This finding exemplifies that the normative identity style is characterized by a submissive orientation towards important authority and identification figures, and is consistent with a description of normative oriented individuals as reliant on authorities and significant referent groups and as determined by social forces rather than self-determined (Berzonsky, 1990, 1992; Berzonsky & Sullivan, 1992). In addition, the diffuse/avoidant identity style was positively related to SDO, which is not surprising, given the fairly strong negative correlation between the informational identity style and the diffuse/avoidant identity style. However, it should be noted that, in spite of the strong negative correlation, the informational identity style was related to RWA but the diffuse/avoidant identity style was not.²

Previous studies have shown that, whereas RWA takes root in cognitive conservatism, cognitive conservatism can partly explain SDO (e.g. Van Hiel et al., 2004). Results once again testify to this difference. In this respect, Van Hiel et al., 2004 have suggested that, whereas RWA might relate to *quantitative* differences in information processing (with cognitive misers being prone to RWA), SDO might relate to *qualitative* differences in information processing, and that individuals high in SDO might focus on pro-attitudinal information and ignore, discredit or re-interpret counter-attitudinal information (e.g. Davies, 1998) or might lack the motivation to correct for discordant information (e.g. Skitka, Mullen, Griffin, Hutchinson, & Chamberlin, 2002). The negative correlation with the informational style, the absence of a significant correlation with the normative style and

²Although this differential relation supports Berzonsky's (1990) claim that the identity styles are relatively independent, research consistently reveals a strong negative relationship between the informational and the diffuse/avoidant identity style. One of the reviewers of this article has rightfully noted that the magnitude of this correlation might even be underestimated due to the fact that both scales are unbalanced. In other words, the common variance caused by acquiescence might suppress the actual correlation, and, the informational and the diffuse/avoidant identity style might actually constitute two poles of the same underlying continuum. Therefore, we would like to urge future research on identity styles to use balanced scales in order to check whether there are actually three different identity styles or only two.

the presence of a positive correlation with the diffuse/avoidant style all seem to be in line with this interpretation. Social dominators do not seem particularly eager to seek out and process new information and adjust their self-conceptions. Not because they prefer to conform to and rely on the values and expectations of significant others and reference groups or because new information might threaten their hardcore beliefs, as is the case with RWAs, but because they prefer to let their behaviour be dictated by immediate situational demands and hedonistic cues. They prefer to adopt a situation-specific, impression management approach to identity issues: Who they are or appear to be depends on where they are and who they are with. This is in line with an interpretation of social dominators as pragmatic, Machiavellian individualists (e.g. Duriez et al., 2005a; Duriez, Vansteenkiste, Soenens, & De Witte, 2005b; Vansteenkiste, Duriez, Soenens, & De Witte, 2005). Most likely they consider it a waste of time to reflect on who they are and how their psyche functions because spending time thinking about such issues equals losing time to manipulate others and pursue their materialist goals.

An integrated model

Contemporary personality and developmental research assumes that core personality traits such as the ones presented in the Five-Factor Model are not merely descriptions of static, enduring individual differences. Rather they should be considered dynamic constructs that influence how people organize their behaviour, process information and adapt to the social environment (McCrae & Costa, 1997; Roberts et al., 2001). Hence, given the assumption that identity development issues and ways of processing these issues are of major importance during adolescence, we hypothesized that the relations of the personality factors with authoritarianism would be significantly mediated by the identity styles late adolescents use. This theory-driven model fitted the data only partly. The associations between Conscientiousness and RWA and between Openness to Experience and SDO turned out non-significant when the identity styles were included as mediating variables, but the relations between Openness to Experience and RWA and between Agreeableness and SDO were not mediated by the identity styles. This suggests that the influence of personality factors on RWA and SDO can partly but not entirely be explained by the differences in information processing that are associated with differences in personality traits. More specifically, SDO also appears rooted to some extent in disagreeableness (cf., Duckitt et al., 2002; Duriez, 2004), and RWA also appears rooted to some extent in a more general lack of Openness to Experience (cf., Ekehammar et al., 2004). Future research should try to identify mediators of the link between Agreeableness and SDO and Openness to Experience and RWA. In this respect, empathy (Davis, 1983) seems a likely candidate to further explain the former relationship and more general cognitive style variables like the need for closure (Van Hiel et al., 2004) seem likely candidates to further explain the latter relationship. Additionally, the degree to which people attach importance to certain values (e.g. the values proposed by Schwartz, 1992) and goal pursuits (e.g. the goal pursuits proposed by Self-Determination Theory; Ryan & Deci, 2000) are also candidates likely to explain the relationships between both Openness to Experience and RWA and Agreeableness and SDO. Research has shown that differences in personality traits translate into value differences (e.g. Roccas et al., 2002) and recent data show that differences in both value orientations and goal pursuits predict RWA and SDO (Duriez et al., 2005a; Duriez et al., 2005b).

When our model was extended to incorporate racism, RWA and SDO turned out its sole predictors. The relations between both the personality factors and the identity styles and racism turned out non-significant when RWA and SDO were included as mediating variables. This is in line with a vast research tradition that has shown that RWA and SDO are by far the best, or even the sole, predictors of a variety of forms of prejudice (e.g. Altemeyer, 1998; Ekehammar et al., 2004; McFarland, 2001). Neither personality factors nor differences in information processing contributed to the prediction of racism beyond these two major prejudice dispositions.

Theoretical and practical implications

The proposed model has important implications for future work on racism, both at a theoretical and a practical level. First, the finding that the relations between personality factors and racism are fully mediated by authoritarianism substantiates the claim that RWA and SDO are by far the most important prejudice dispositions. Second, the finding that the relations between dimensions of personality and authoritarianism are partly mediated by the identity styles gives some insight in the nature of these relations. Findings suggest that an individual's personality organizes and structures how information concerning identity-relevant issues is processed. This processing style, in turn, partly predicts RWA and SDO. In particular, differences in the normative identity style predict differences in RWA, and differences in the informational identity style predict differences in both SDO and RWA.³

The differential impact of the identity styles is in line with the reasoning that an important difference between RWA and SDO can be found in the underlying motives (e.g. Duckitt et al., 2002): Although both RWA and SDO relate to a lack of interest in seeking out and processing new information, SDO is characterized by pragmatic individualism and the desire to dominate others and to accomplish materialist goals, whereas RWA is characterized by obedience and respect for authorities and the establishment. The finding that the normative identity style relates to RWA only further exemplifies that this identity style is characterized by a passive, submissive, obedient orientation towards important authority and identification figures rather than by an active, assertive, domineering way of relating to others, and the finding that the diffuse/avoidant style relates to SDO further exemplifies the fact that social dominators most likely prefer to adapt themselves to situational demands in order to be able to more effectively manipulate people. These findings are consistent with Berzonsky's description of normative oriented individuals as reliant on authorities and significant referent groups, as reactive rather than active and as determined by social forces rather than self-determined and of diffuse/avoidant oriented individuals as people who adopt a situation-specific, impression management approach to identity issues (Berzonsky, 1990, 1992; Berzonsky & Sullivan, 1992).

It should be stressed that, even though identity styles turned out to partly mediate the relationship between the personality factors and RWA and SDO, this does not imply that identity styles are exclusive mediators of these relationships. Research suggests that there are other variables that would probably also significantly mediate these relationships. In this respect, several other variables that were shown to relate to RWA and/or SDO and that can be characterized as surface rather than core personality traits (Asendorpf & Van Aken,

³Note that, even though the informational identity style did not mediate the relation between Openness to Experience and RWA, correlation analyses did reveal a negative relationship between the informational identity style and RWA.

2003), such as value orientations (e.g. Duriez et al., 2005a) and the related personal goal pursuits (e.g. Duriez, Vansteenkiste, Soenens, & De Witte, 2005b). In addition, the finding that the effects of Agreeableness on SDO and Openness to Experience on RWA were not mediated by the identity styles suggests that different variables are needed to fully understand this relationship. In this respect, as already mentioned, empathy (Davis, 1983) seems a likely candidate to further explain the former relationship and general cognitive style variables like the need for closure (Van Hiel et al., 2004) seem likely candidates to further explain the latter relationship.

In spite of this, by pointing out the importance of differences in identity development, the proposed model has clear practical implications. There is growing evidence that it is possible to direct the identity formation process by means of intervention programmes (Archer, 1994; Ferrer-Wreder et al., 2002; Josselson, 1994). Consequently, it could be hypothesized that, by promoting an informational identity style and trying to prevent people from adopting a normative or a diffuse/avoidant identity style, adolescents can not only be taught to, for example deal with stress in a more adequate way (e.g. Berzonsky, 1992) but also to deal with societal issues in a more open and tolerant way. Given the positive relations between authoritarianism and various forms of prejudice, intervening in the identity formation process may provide society with the possibility to deal with the problems associated with authoritarian submission and authoritarian dominance. However, one should take into account that such a strategy will never be fully effective unless it is acknowledged that both RWA and SDO are only partly rooted in these processes. And although such identity style intervention programme might work fairly well for RWA, in order to optimize educational programmes targeted at reducing SDO, more insight in the genesis of both RWA and SDO is required.

Limitations and suggestions

We should be careful when drawing conclusions from our integrated model. Although there are clear theoretical predictions underlying our model, the more detailed construction might have been partly data-driven (Jöreskog, 1993). Before basing strong claims on our integrated model, this model should be tested again (strictly confirmatory) in a new sample of late adolescents. Furthermore, testing this model among younger adolescents would allow to test whether the underlying theory encompasses the whole of adolescence. Moreover, Erikson (1968) has stressed that identity development is a life-long process that extends well beyond adolescence into adulthood. Recently, Whitbourne, Sneed, and Skultety (2002) have proposed three ways of adapting one's self-concepts and identity in the context of changing social environments during adulthood and old age: Identity balance, identity accommodation and identity assimilation. These adulthood identity styles are conceptually similar to, respectively, the informational, the diffuse/avoidant and the normative identity style of late adolescence. Because of this striking similarity between adolescent and adult identity styles, we expect our model to apply to later phases in life as well. Future research should test the proposed model in groups of adults to determine whether this is actually the case. In this way, the theory underlying this model might be expanded to encompass later stages in life. In addition, future research should take into account that, whereas (generalized) attitudes are considered better predictors of goal-directed behaviours that are under cognitive control, traits are considered better predictors of spontaneous and intuitive behaviours over which one has little cognitive control (Roccas et al., 2002). Hence, future research should examine whether the relations between the

personality factors and more covert forms of (racial) prejudice (Maas, Castelli, & Arcuri, 2000) are also partly mediated by the identity styles and by RWA and SDO, or whether, in this case, personality factors solely have a direct effect. A final recommendation for future research is to examine the direction of effects. In this respect, even though the proposed model was found to provide a better fit to the data than each of the three plausible alternative models that were tested, the cross-sectional nature of our study is an important limitation. Cross-lagged longitudinal research is therefore needed to affirm the nature of causality implied in our model.

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