



# The intergenerational transmission of authoritarianism: The mediating role of parental goal promotion <sup>☆</sup>

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## Abstract

This study examined the intergenerational transmission of adolescent authoritarian submission (Right-Wing Authoritarianism or RWA) and authoritarian dominance (Social Dominance Orientation or SDO). It was hypothesized that the type of goals that parents promote (i.e., conservation versus openness to change and extrinsic versus intrinsic goal promotion) would mediate any direct association between parents' and adolescents' authoritarian attitudes. This hypothesis was examined in a sample of middle adolescents and their parents. First, a significant parent–child concordance was found for RWA and SDO. Second, whereas parental RWA predicted parental promotion of conservation goals (rather than openness to change goals) as well as the promotion of extrinsic goals (rather than intrinsic goals), parental SDO predicted parental promotion of extrinsic goals only. Third, process analyses showed that, whereas parental conservation goal promotion mediates the relationship between parent and child RWA, parental extrinsic goal promotion mediates the relationship between parent and child SDO.

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## 1. Introduction

Contemporary authoritarianism theory (Altemeyer, 1998) tends to view authoritarianism as a two-sided coin, with authoritarian submission or Right-Wing Authoritarianism (RWA) providing submissive followers and authoritarian dominance or the Social Dominance Orientation (SDO) providing power-seeking leaders. Several studies have investigated the correlates and consequences of RWA and SDO, converging on the conclusion that, albeit positively correlated, RWA and SDO represent independent and additive predictors of various forms of prejudice, including racism, homophobia, and sexism (e.g., Sibley, Robertson, & Wilson, 2006). In spite of this, little attention has been given to how RWA and SDO develop. In line with recent research on the intergenerational transmission of personality characteristics in general (e.g., Serbin & Stack, 1998) and prejudice and intolerance in particular (e.g., O'Bryan, Fishbein, & Ritchey, 2004; Sinclair, Dunn, & Lowery, 2005), we will investigate parent–child concordance in authoritarianism. A second aim is to examine parental goal promotion (i.e., extrinsic versus intrinsic and conservation versus openness to change goal promotion) as a possible explanatory mechanism of this parent–child concordance in authoritarianism.

### 1.1. *The multidimensional nature of authoritarianism*

Shortly after World War II, Adorno, Frenkel-Brunswik, Levinson, and Sanford (1950) introduced “The Authoritarian Personality” to explain the rise of fascism from a psychodynamic perspective. Adorno et al. (1950) assumed that a childhood characterized by strict discipline, harsh punishment, and little parental warmth would produce a specific and pathologic personality structure that is characteristic of people who admire fascist ideologies. To assess this structure, which was thought to consist of nine covarying traits, Adorno et al. (1950) proposed the fascist potential scale (the F-scale). Disregarding the psycho-dynamic basis of the authoritarianism construct and using a purely empirical approach instead, Altemeyer (1981, 1996), found that only three facets of the authoritarian personality were sufficiently internally consistent and intercorrelated: Conventionalism, authoritarian aggression and authoritarian submission. To measure this belief cluster, Altemeyer developed the Right-Wing Authoritarianism or RWA scale, which correlated positively with negative attitudes and hostility toward several outgroups and is nowadays widely accepted as an important predictor of prejudice and discrimination. Based on social learning theory, Altemeyer (1998) assumes that RWA is acquired from other people (through teaching or modelling) and from our own experiences and is open to lifelong development. However, at the same time, he considers adolescence to be the crucial formative phase, arguing that authoritarianism is fairly resistant to change after this life period.

Although the motive for domineering other social groups was part of the authoritarianism construct in Adorno et al.'s theorizing (1950), it was largely overlooked in subsequent decades as research focused on the submissive side of authoritarianism (Altemeyer, 1988). In the 1990s, however, a renewed interest in the motive of authoritarian dominance led to the study of the Social Dominance Orientation (SDO; Pratto, Sidanius, Stallworth, & Malle, 1994). The concept of SDO involves a generalized preference for hierarchy versus equality within social systems, and is part of Social Dominance Theory (Sidanius & Pratto, 1999). According to this theory, most forms of group conflict and

oppression are manifestations of a human predisposition to form group-based hierarchies, and social systems would almost by definition be subject to the influence of both hierarchy enhancing (producing group-based inequality) and attenuating forces (producing group-based equality). RWA and SDO are nowadays often thought of as two sides of the same coin, with RWA providing submissive followers and SDO providing power-seeking leaders (Altemeyer, 1998; Son Hing, Bobocel, Zanna, & McBride, 2007), and studies have shown that, albeit moderately positively correlated, RWA and SDO represent independent and additive predictors of prejudice (Sibley et al., 2006).

### *1.2. The intergenerational transmission of authoritarianism*

Although much knowledge has been gained in recent years on the structure, correlates, and consequences of authoritarianism, comparatively less research addressed the developmental origins of authoritarianism (Duckitt, Wagner, du Plessis, & Birum, 2002). One possible source of influence on adolescents' development of authoritarianism is parents' own authoritarianism. Research outside the realm of authoritarianism has shown that diverse parental features are passed on to the next generation (Serbin & Stack, 1998; Soenens, Duriez, Vansteenkiste, & Goossens, 2007). Particularly relevant to the topic at hand, research demonstrated significant parent–child concordance in prejudice and intolerance (e.g., O'Bryan et al., 2004; Sinclair et al., 2005). Research directly addressing parent–child concordance in authoritarianism is scarce. Altemeyer (1988) reports a correlation of .44 between parent and child RWA in a sample of college students and their parents. In a similar sample, Peterson and Duncan (1999) found a correlation of .48. Finally, in a two-wave study of high school students and their parents, Vollebergh and Raaijmakers (1991) found correlations of .41 and .46 for mother–child dyads and of .44 and .62 for father–child dyads at Time 1 and Time 2, respectively. Together, these results support the idea that parents are, on average, successful in passing down their RWA to their offspring. Surprisingly, to our knowledge, no research to date has examined parent–child concordance with respect to SDO. Therefore, a first aim of this study was to document parent–child concordance in RWA and SDO. We examined this in a sample of middle adolescents and their parents. Middle adolescence is the time in which children face the task of developing a personal view on issues of political, occupational, philosophical, and religious nature (Erikson, 1968) and the time that is thought to represent a particularly sensitive period in the development of authoritarianism (Altemeyer, 1988). Therefore, this age period is highly relevant to examine patterns of intergenerational transmission in authoritarianism.

A second aim of this study was to go beyond a mere examination of parent–child concordance in authoritarianism by providing more insight in the dynamics that may account for this concordance. Although in the past, the importance of socialization in the transmission of authoritarianism has been stressed (e.g., Adorno et al., 1950; Altemeyer, 1988), recent research has pointed out that a share of the parent–child concordance in social attitudes in general (e.g., Olson, Vernon, Harris, & Jang, 2001) and in RWA in particular (e.g., McCourt, Bouchard, Lykken, Tellegen, & Keyes, 1999) can be attributed to genetic factors. At the same time, these studies show that the variance in social–political attitudes is only partly due to genes and that environmental factors account for significant portions of the variance in these attitudes too. Accordingly, it is generally assumed that social developmental processes, and parenting in particular, represent an important source of influence on the development of dimensions of authoritarianism (cf. Altemeyer, 1988).

In this respect, it should be noted that, although both Adorno et al. (1950) and Altemeyer (1988) stress the role of parents, they tend to stress different parenting aspects. Whereas Adorno et al. (1950) assumed that a childhood characterized by strict discipline, harsh punishment, and little parental warmth would lead children to adopt an authoritarian disposition, according to Altemeyer (1998), parents need not be harsh and unresponsive to produce authoritarian offspring, and need not use punishments to ensure that their children conform to their expectations. Merely teaching children to adhere to norms and to obey authority (for RWA) or teaching them that one can only get ahead in life at the expense of others (for SDO) might suffice.

Altemeyer's (1988) focus on the type of goals parents promote fits with a distinction Darling and Steinberg's (1993) made in an overview paper on socialization research. Darling and Steinberg (1993) argued that, to understand parents' influence on child development, parenting style dimensions (i.e., *how* parents socialize their children) should be distinguished from parental goal promotion efforts (i.e., *what* parents socialize in their children). Whereas parenting style dimensions provide indications of the emotional climate within the family (i.e., parental warmth) and of whether parents attempt to provide guidance and structure to the child's goals and behaviors (i.e., parental regulation), parental goal promotion pertains to the kind of goals parents will encourage. In line with this, recent research has drawn attention to the importance of parental goal promotion in explaining adolescent authoritarianism (Duriez, Soenens, & Vansteenkiste, 2007) by showing that dimensions of adolescent authoritarianism are more strongly predicted by dimensions of parental goal promotion than by parenting style dimensions. In line with this, in the present paper, we examined the role of parental goal promotion as a possible explanatory mechanism (i.e., mediator) of this transmission process. In the next section, we will define the types of parental goal promotion that are relevant to the study of authoritarianism and outline how these goals are related to both parents' and children's authoritarianism.

### *1.3. Parental goal promotion and adolescent authoritarianism*

A first type of goals that is relevant to the study of authoritarianism is rooted in Self-Determination Theory (Deci & Ryan, 2000; Kasser & Ryan, 1996). Self-Determination Theory categorizes the goals people pursue as intrinsic or extrinsic in nature. Intrinsic goals (i.e., community contribution, affiliation, and self-development) are considered inherently satisfying to pursue and are said to be consistent with the satisfaction of the basic human needs for autonomy, competence, and relatedness. In contrast, with their focus on attaining external signs of worth and success, extrinsic goals (i.e., social recognition, wealth, and physical attractiveness) are considered unrelated or even negatively related to basic need satisfaction (Kasser, 2002). In line with this, a stronger focus on extrinsic rather than intrinsic goals was found to be negatively related to basic need satisfaction (Vansteenkiste et al., 2007) and various indices of personal well-being (Kasser, 2002). Recently, Duriez, Vansteenkiste, Soenens, and De Witte (2007) examined relations between extrinsic versus intrinsic goal pursuit and SDO. Using cross-lagged longitudinal analyses, they found that an extrinsic versus intrinsic goal pursuit and SDO yielded reciprocal effects on each other over time, indicating that extrinsic versus intrinsic goal pursuit and SDO mutually reinforce each other. The authors interpreted this by suggesting that the adoption of SDO is instrumental for the pursuit and attainment of extrinsic goals,

whereas the pursuit of extrinsic versus intrinsic goals is equally useful in maintaining one's superior position compared to other groups.

Although previous research within the framework of Self-Determination Theory has primarily examined the correlates of *personal* extrinsic versus intrinsic goal pursuits, it has recently been argued that extrinsic and intrinsic goals can not only be pursued to different degrees by individuals, but can also be promoted to a different extent by socializing agents such as teachers and parents (Vansteenkiste, Lens, & Deci, 2006). In line with this, differences in extrinsic versus intrinsic goal promotion were shown to have a negative effect on individual functioning, including learning, performance and persistence (e.g., Vansteenkiste, Simons, Lens, Sheldon, & Deci, 2004). Extending this line of work and essential to the topic of this paper, Duriez, Soenens, et al. (2007) examined the effects of parental extrinsic versus intrinsic goal promotion on SDO and RWA. They argued that parental extrinsic versus intrinsic goal promotion would positively predict adolescent SDO as adolescents belonging to a high status group might learn that adopting a hierarchy-enhancing attitude is helpful in getting the parentally promoted extrinsic versus intrinsic goals met. Furthermore, it was suggested that, because Western society is characterized by the encouragement of extrinsic ideals, parents who promote extrinsic rather than intrinsic goals might actually also teach their children to adopt a conservative and conformist attitudes (such as RWA). Alternatively, RWA might be endorsed by children because the promotion of extrinsic versus intrinsic goals induces stressful interpersonal comparisons (Vansteenkiste et al., 2004). RWA would then be more strongly valued in an attempt to buttress the insecurity that arises from these comparisons. Results indicated that parental extrinsic versus intrinsic goal promotion was concurrently positively related to both RWA and SDO, and that both RWA and SDO were longitudinally predicted by parental extrinsic versus intrinsic goal promotion (Duriez, Soenens, et al., 2007). In line with these results and with the theoretical arguments mentioned above, we expected that parental extrinsic versus intrinsic goal promotion would be positively related to both RWA and SDO.

A second type of goals that is relevant to the study of authoritarianism pertains to conformity. Duckitt (2001) has shown that, whereas conformity is unrelated to SDO, it is highly important for the development of RWA. Conformity was not present in the original distinction between intrinsic and extrinsic goals (Kasser & Ryan, 1996), but has recently been found to cluster together with the original extrinsic goals in a circumplex model that generally held across 15 different cultures (Grouzet et al., 2006). However, the location of conformity in the extrinsic goal pole seems inconsistent with Schwartz' (1992) value model. Schwartz reported that two orthogonal dimensions, namely Self-Enhancement versus Self-Transcendence dimension (encompassing power values that relate to an extrinsic goal content) and Conservation versus Openness to Change (encompassing conformity values), could most accurately summarize the assessed values in his circumplex model.

In line with Schwartz (1992), Duriez, Soenens, et al. (2007) have shown that two factors underlie the structure of their parental goal promotion questionnaire, with scales pertaining to intrinsic versus extrinsic goal promotion loading on one factor and scales pertaining to conservation versus openness to change goal promotion loading on a second factor. In line with Schwartz (1992) and the findings of Duriez and Van Hiel (2002) and Duriez, Van Hiel, and Kossowska (2005) that conservation versus openness to change values relate to RWA but not to SDO, Duriez, Soenens, et al. (2007) found that the parental promotion of conservation rather than openness to change goals predicted RWA but not SDO. In the

present study, we predicted a similar specific effect of parental conservatism versus openness to change goals on RWA.

#### *1.4. Parental authoritarianism and parental goal promotion*

The pattern of relationships between parental SDO and RWA and parental goal promotion was expected to mirror the pattern of findings between parental goal promotion and adolescent RWA and SDO. Specifically, we expected that both parents high on RWA and high on SDO would promote extrinsic rather than intrinsic goals. Parents high on SDO would be more likely to promote these goals because they would consider extrinsic goal attainment and, hence, extrinsic goal encouragement as instrumental in maintaining a superior position. Parents high on RWA would promote these goals because the ability to live up to the extrinsic ideals that are highly valued in western society would signal the capacity to submit to the prevailing societal norms. Thus, because parents high in SDO and RWA would want their adolescents to adopt a similar attitude, they are likely to promote extrinsic rather than intrinsic goals, as the pursuit of these goals is likely to result in hierarchy maintenance and submission to societal norms. Likewise, based on research examining the link between conservatism versus openness to change goals and RWA and SDO (Duriez & Van Hiel, 2002; Duriez et al., 2005), we expect parents high on RWA only to promote conservatism rather than openness to change goals in their child rearing. This effect would occur because parents high on RWA feel a need to refrain from anything that might endanger the social order, and the promotion of conservatism versus openness to change goals in their child rearing might be instrumental in achieving this aim.

## **2. Present study**

The present study examines patterns of intergenerational transmission of authoritarian attitudes as well as the explanatory (i.e., mediating) role of parental goal promotion in these patterns. First, we hypothesized that there would exist intergenerational similarity in RWA and SDO. More specifically, we expected parent RWA to be uniquely and specifically related to adolescent RWA and parent SDO to be uniquely and specifically related to adolescent SDO (Hypothesis 1). Second, we expected parent RWA and SDO to have an effect on the presumed mediating variable of parental extrinsic versus intrinsic goal promotion, whereas parental RWA would have an additional effect on the promotion of conservatism versus openness to change goals (Hypothesis 2). Third, we hypothesized that the direct effect of parent to child RWA would be accounted for by differences in the parental promotion of both conservatism versus openness to change goals and extrinsic versus intrinsic goals, whereas the direct effect of parent to child SDO was expected to be accounted for by differences in the parental promotion of extrinsic versus intrinsic goals only (Hypothesis 3). Each hypothesis was examined for mothers and fathers separately, and in order to deal with the problems of shared method variance and social desirability, the parental goal promotion constructs were estimated through multiple informants.

There is substantial evidence that both parent reports and child reports of parenting have specific limitations (e.g., Schwarz, Barton-Henry, & Pruzinsky, 1985). Both types of report can be biased by the reporter's personal functioning, such that correlations between self-reported parenting and the reporter's functioning are overestimated. In addition, particularly in the case of parent reports of parenting, social desirability may further



add to the bias inherent in self-reported parenting measures. Given that both approaches have their specific limitations, it has been argued that researchers should take the best of both worlds, for instance by aggregating across parent and child reports or, even better, by extracting the “true variance” that both types of reports have in common (e.g., by means of latent factor analysis). In line with this, Schwarz et al. (1985) have shown that the convergence between an aggregate measure of parent and child reports with sibling reports of parenting was substantially larger than the degree of convergence obtained with parent and child reports separately. Given these results, Schwarz et al. (1985) has cautioned against the use of parent or child reports of parenting only: Apparently, the validity of parenting assessments increases by aggregating across parent and child reports. However, when aggregating across parent and child reports, correlations with outcome variables might still be driven by only one of the included measures. This can be avoided by extracting a latent factor on the basis of the variance that parent and child reports have in common. Given that this is the basic principle behind latent factor analysis, many prominent scholars in the parenting domain have advocated the use of latent factors to capture the shared variance between multiple informants of parenting behavior (e.g., Conger, Ge, Elder, Lorenz, & Simons, 1994; Simons, Whitbeck, Conger, & Chyi-In, 1991). In sum, given that it has been argued on various occasions that multiple informants based latent factors of parenting dimensions are more valid and yield more consistent and theoretically predictable patterns of results, the parental goal promotion constructs were estimated through multiple informants.

### 3. Method

#### 3.1. Participants

Participants were 905 high-school students who were recruited in six different secondary schools in the Flemish speaking part of Belgium (Mean age = 14.94; 51.22% male) and took part during regular school hours. All participants had the Belgian nationality. Of these participants, 747 came from intact families, 128 had parents that were divorced, 26 had a deceased parent, and one was an orphan. All students received additional questionnaires for their parents, and were asked to return these in a closed envelop ultimately 14 days later. In each school, one person was responsible for collecting these questionnaires. In total, 564 mothers (62%) and 497 fathers (55%) filled out the questionnaires. After listwise deletion of missing values, 536 mother–child and 472 father–child dyads were retained. Independent samples *t*-tests showed no significant differences between children of parents who participated and children whose parents did not participate on any parenting variable (all *ps* > .05). Moreover, a comparison of the correlation matrix of each group by means of a chi-square test indicated no differences in the pattern of associations (*p* > .05). These analyses suggest that the final sample does not represent a non-selective subgroup of the initial sample.

#### 3.2. Measures

##### 3.2.1. Authoritarianism

Adolescent and parent participants rated the items of a 14-item RWA scale (Altemeyer, 1981, translated by Melen, Van der Linden, & De Witte, 1996; e.g., ‘Obedience and

respect for authority are among the most important virtues children should learn') and a 14-item SDO scale (Pratto et al., 1994, translated by Van Hiel & Duriez, 2002; e.g., 'It's sometimes necessary to step on others to get ahead in life') on a five-point likert scale anchored by *Completely disagree* and *Completely agree*. After reversing the negatively worded items, scores were computed by averaging the items for RWA (Cronbach alpha = .68, .73, and .78 for adolescents, mothers, and fathers), and SDO (Cronbach alpha = .85, .85, and .86 for adolescents, mothers, and fathers).

### 3.2.2. Parental goal promotion

Adolescent participants rated a 20-item parental goal promotion scale (Duriez, Soenens, et al., 2007) assessing to which extent they perceive their parents to promote 12 different extrinsic and intrinsic goals and 8 different conservation versus openness to change goals by encircling a number between 1 (*Not important at all*) and 5 (*Very Important*). The extrinsic goals of financial success (e.g., 'My father finds it important that I'm financially successful in my life'), social recognition (e.g., 'My father finds it important that I'm admired by several people'), and physical attractiveness (e.g., 'My father finds it important that I'm physically attractive and appealing for others'), and the intrinsic goals of self-development (e.g., 'My father finds it important that I develop my talents'), community contribution (e.g., 'My father place high importance on helping other people in need'), and affiliation (e.g., 'My father finds it important that I develop close relationships with a few friends') were assessed. In addition, the conservation goals of conformity (e.g., 'My mother finds it important that I behave properly and avoid doing anything people would say is wrong') and tradition (e.g., 'My father finds it important that I try to follow the customs of my family and society as a whole), and the openness to change goals of self-direction (e.g., 'My father finds it important that I can make my own decisions, be free, and not dependent on others'), and stimulation (e.g., 'My father finds it important that I can have an exciting and adventurous life') were administered. Each goal was assessed with two items. Parent participants were asked to what extent they promote these goals in their child rearing. For this purpose, the items that were administered to the adolescents were slightly revised to make them amenable to parent self-report (e.g., the item "My mother finds it important that I help other people in need" was changed to "I find it important that my son/daughter helps other people in need").

As in Duriez, Soenens, et al. (2007), in order to control for response sets, an individual's mean score was subtracted from the individual scores, after which exploratory factor analysis was conducted. The screen plot pointed to two-factor solutions, explaining between 51% and 49% of the variance for (perceived) maternal and paternal goal promotion. Intrinsic scales always had a minimal positive loading  $> .50$  and extrinsic scales had a minimal negative loading  $< -.50$  on the first factor. The openness to change scales always had a minimal positive loading  $> .50$  and the conservation scales had a minimal negative loading  $< -.50$  on the second factor. Subsequently, (perceived) maternal and paternal extrinsic versus intrinsic goal promotion scores (EXT) were computed by subtracting the averaged intrinsic from the averaged extrinsic scales (Cronbach alpha between .74 and .78), and (perceived) conservation versus openness to change goal promotion scores were computed by subtracting the averaged openness to change from the averaged conservation scales (Cronbach alpha between = .61 and .70). Positive EXT scores indicate the promotion of extrinsic rather than intrinsic goals. Positive CON scores indicate the promotion of conservation rather than openness to change goals.



## 4. Results

### 4.1. Preliminary analyses

Before turning to the analyses that directly address our research questions, preliminary analyses were conducted. First, in order to get an indication of how the study variables are related and in order to check whether it would make sense to use adolescent and parent reports of the parental goal promotion dimensions as multiple indicators of the same underlying constructs, the raw correlations between the different constructs were investigated. Second, in order to decide whether it is necessary to control for certain background variables (i.e., adolescent gender and parental educational level) in our primary analyses, the influence of these background variables on the study variables was inspected. Due to the large sample size, all of our analyses attained high power. To preclude small effects from being flagged significant, an alpha-level of .01 was used for these and all subsequent analyses.

The Pearson product moment correlations among the variables along with the means and standard deviations of the study variables are presented in Table 1. Across family members, RWA scores were significantly positively related, and so were SDO scores. In addition, RWA tended to correlate positively with SDO across family members. Adolescent RWA was mainly unrelated to child and father reports of EXT, but was positively related to mother reports of EXT. In contrast, mother and father RWA were positively correlated with child and parent reports of EXT. Next, across family members, RWA was significantly positively related to child and parent reports of CON. Child, mother, and father scores of SDO tended to relate significantly positively to child and parent EXT, but were unrelated to child and parent CON. Finally, child and mother reports of maternal extrinsic versus intrinsic goal promotion and child and father reports of paternal extrinsic versus intrinsic goal promotion were significantly positively correlated. Similarly, child and mother reports of maternal conservation versus openness to change goal promotion and child and father reports of paternal conservation versus openness to change goal conservation were also positively correlated. The magnitude of these relationships ( $r$  between .20 and .30) is similar to those observed in other research using parent and child reports of parental socialization (e.g., Schwarz et al., 1985). Therefore, in all subsequent analyses, parent and child reports were used as separate indicators of parental goal promotion (for a similar procedure, see Simons et al., 1991; Soenens et al., 2007).

Because boys have been found to score higher on SDO than girls (Lippa & Arad, 1999) and parental educational level was found to relate to adolescent RWA and (perceived) parental EXT (Duriez, Soenens, et al., 2007), we checked whether these variables affected the study variables. Univariate ANOVA-analyses indicated that boys obtained higher SDO scores than girls ( $F(1, 894) = 42.41, p < .01, \eta^2 = .045$ ). No other significant differences were found. Father's educational level related negatively to father RWA ( $r(477) = -.26, p < .01$ ), father reported EXT ( $r(479) = -.14, p < .01$ ), child reported paternal EXT ( $r(489) = -.13, p < .01$ ), and child RWA ( $r(491) = -.12, p < .01$ ). Mother's educational level related negatively to mother RWA ( $r(548) = -.30, p < .01$ ), mother reported EXT ( $r(548) = -.17, p < .01$ ), mother reported CON ( $r(548) = -.21, p < .01$ ), and child RWA ( $r(553) = -.13, p < .01$ ). Therefore, in all further analyses, we decided to control for adolescent gender and parental educational level. In order to do so, we

Table 1  
Means, standard deviations, and correlations

Measure	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12	13
01. RWA, Adolescent	2.84	0.50	–												
02. RWA, Mother	3.11	0.56	.29**	–											
03. RWA, Father	3.06	0.57	.30**	.44**	–										
04. SDO, Adolescent	2.46	0.68	.13**	.15**	.09	–									
05. SDO, Mother	2.23	0.64	.07	.25**	.18**	.17**	–								
06. SDO, Father	2.31	0.65	.08	.17**	.26**	.15**	.34**	–							
07. EXT, Mother Adolescent	–1.01	0.87	.05	.23**	.18**	.31**	.13*	.08	–						
08. EXT, Father Adolescent	–1.04	0.87	.06	.20**	.23**	.32**	.13*	.15*	.63**	–					
09. EXT, Mother	–1.54	0.73	.12*	.26**	.18**	.03	.32**	.21**	.24**	.21**	–				
10. EXT, Father	–1.38	0.77	.09	.15**	.38**	.10	.17**	.39**	.17**	.25**	.36**	–			
11. CON, Mother Adolescent	–0.11	0.96	.26**	.23**	.20**	.06	.02	.08	.08	.06	.05	.11	–		
12. CON, Father Adolescent	–0.06	0.96	.17**	.21**	.21**	.00	.01	.06	.05	.14**	.06	.15*	.46**	–	
13. CON, Mother	–0.13	0.74	.20**	.46**	.22**	.09	.14*	.09	.08	.07	.14*	.03	.25**	.17*	–
14. CON, Father	–0.16	0.73	.19**	.27**	.46**	.10	.09	.08	.19**	.18**	.13*	.19**	.17**	.21**	.30**

Note: \* $p < .01$ ; \*\* $p < .001$ .

included paths from adolescent gender and parental education to all variables in our models.

#### 4.2. Primary analyses

To adjust for measurement error in general and the modest reliabilities of some of our scales (i.e., for both parent and child reports of parental conservation versus openness to change goal promotion and for adolescent RWA), Structural Equation Modeling (SEM) with latent variables was performed using Lisrel 8.54. Parent and adolescent reports were used as indicators of the parental goal promotion variables. For instance, maternal EXT was represented by mothers' own report of their extrinsic versus intrinsic goal promotion and adolescents' report of their mothers' extrinsic versus intrinsic goal promotion. For both parent and child RWA and SDO, three parcels were created by randomly splitting the relevant scales in three parts. Parceling has several advantages: It results in a smaller number of indicators per latent factor, parcels are likely to have a stronger relationship to the latent variable, are less likely to suffer from method effects, and are more likely to meet assumptions of normality (Marsh, Hau, Balla, & Grayson, 1998). This procedure resulted in 16 indicator variables.

Data screening with Prelis 2.54 revealed partial data non-normality at the univariate and multivariate level. Therefore, in all subsequent models, the asymptotic covariance matrix was used as input in addition to the covariance matrix, and the Satorra-Bentler Scaled chi-square (SBS- $\chi^2$ , Satorra & Bentler, 1994) instead of the common chi-square was inspected. In each SEM, the unstandardized loading of the indicator with the strongest loading was set to 1 (Byrne, 2001). Solutions were generated on the basis of maximum-likelihood estimation (Bollen, 1989). To evaluate model fit, several indices were used: The SBS- $\chi^2$  to degree of freedom ratio (SBS- $\chi^2/df$ ), with values  $\leq 3.0$  indicating adequate fit (Kline, 1998), the Root Mean Square Error of Approximation (RMSEA; Steiger & Lind, 1980), with values  $\leq .08$  indicating adequate fit (Byrne, 2001), and the Comparative Fit Index (CFI; Bentler, 1990), with values  $\geq .90$  indicating adequate fit (Bentler, 1990).

Estimation of the maternal measurement model with 18 observed variables (i.e., 16 parcels, adolescent gender, and the mother's educational level) and 6 latent factors (i.e., mother RWA, mother SDO, maternal conservation versus openness to change goal promotion, maternal extrinsic versus intrinsic goal promotion, child RWA, and child SDO) by means of Confirmatory Factor Analysis yielded adequate fit, SBS- $\chi^2(110) = 335.00$ , SBS- $\chi^2/df = 3.05$ , RMSEA = .062, CFI = .92, and all parcels had a strong loading on their corresponding latent factor (mean lambda = .67). The paternal model also yielded adequate fit, SBS- $\chi^2(110) = 314.29$ , SBS- $\chi^2/df = 2.86$ , RMSEA = .063, CFI = .93. Again, all parcels had strong factor loadings (mean lambda = .68).

Our hypotheses are addressed in three steps. First, we examined the direct effect of parental RWA and SDO on child RWA and SDO (i.e., the intergenerational transmission). Second, we examined the effect of parental RWA and SDO on parental EXT and CON (i.e., the presumed mediating variables). Third, we examined whether the hypothesized direct effect of parental RWA and SDO on child RWA and SDO could be accounted for by the parental goal promotion variables. Each hypothesis was examined for mothers and fathers separately.

4.2.1. Intergenerational transmission of authoritarianism

To examine the direct effect of maternal to child authoritarianism, we allowed paths from mother SDO to child SDO and from mother RWA to child RWA. In addition, this model also incorporated paths from mother SDO to child RWA and from mother SDO to child SDO to examine the specificity in the intergenerational transmission of authoritarianism. Finally, mother RWA and SDO as well as child RWA and SDO were allowed to correlate. This initial model provided an acceptable fit to the data,  $SBS-\chi^2(67) = 214.92$ ,  $SBS-\chi^2/df = 3.21$ ,  $RMSEA = .064$ ,  $CFI = .93$ . Because the paths from mother RWA to child SDO, from mother SDO to child RWA, and from level of education to child RWA were non-significant, the model was re-estimated. The fit of this simplified and specific model was adequate,  $SBS-\chi^2(70) = 217.79$ ,  $SBS-\chi^2/df = 3.11$ ,  $RMSEA = .063$ ,  $CFI = .93$ . The paths from mother to child RWA and from mother to child SDO were significant ( $\beta = .40, .19; p < .01$ ). The initial model testing the influence of paternal RWA and SDO on child RWA and SDO, which also incorporated paths from father SDO to child RWA and from father SDO to child SDO and allowed child RWA and SDO and father RWA and SDO to correlate, provided an acceptable fit,  $SBS-\chi^2(67) = 208.61$ ,  $SBS-\chi^2/df = 3.11$ ,  $RMSEA = .067$ ,  $CFI = .93$ . In line with the maternal model, the paths from father RWA to child SDO, from father SDO to child RWA and from level of education to child RWA were non-significant. The fit of the simplified model was adequate,  $SBS-\chi^2(70) = 212.82$ ,  $SBS-\chi^2/df = 3.04$ ,  $RMSEA = .066$ ,  $CFI = .92$ . The path from father to child RWA was significant ( $\beta = .41, p < .01$ ). However, the path from father to child SDO reached significance at the .05 level only ( $\beta = .12, p < .05$ ). Both the final maternal model and the final paternal model are displayed in Fig. 1.

4.2.2. Parental authoritarianism and parental goal promotion

Then, we examined whether parent authoritarianism would predict parental goal promotion. The model testing the effect of maternal RWA and SDO on maternal goal promotion, thereby allowing EXT and CON to be correlated, provided adequate fit to the data,  $SBS-\chi^2(36) = 128.28$ ,  $SBS-\chi^2/df = 3.56$ ,  $RMSEA = .069$ ,  $CFI = .93$ . Because the path from maternal SDO to CON and the correlation between EXT and CON were non-significant, the model was re-estimated without these parameters. In addition, because maternal level of education did not affect the goal promotion variables beyond RWA and SDO, we no longer controlled for educational level. The fit of the simplified model was adequate,  $SBS-\chi^2(40) = 134.13$ ,  $SBS-\chi^2/df = 3.35$ ,  $RMSEA = .066$ ,  $CFI = .94$ . The paths from

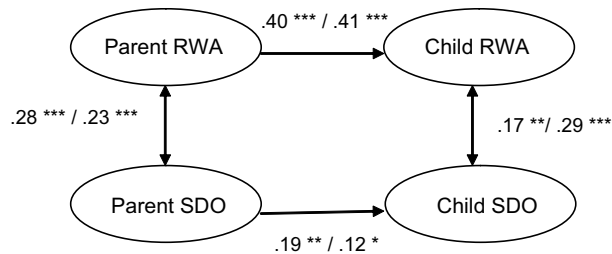


Fig. 1. Structural model of relationships between parental RWA and SDO, and child RWA and SDO. Coefficients in the figure are standardized estimates. The first coefficients refer to the maternal and the second to the paternal model. \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

maternal RWA to CON and EXT were significant,  $\beta = .75, .39, ps < .01$ , and so was the path from maternal SDO to EXT,  $.41, p < .01$ . The initial model testing the effects of paternal RWA and SDO on paternal goal promotion provided adequate fit as well,  $SBS-\chi^2(36) = 112.43$ ,  $SBS-\chi^2/df = 3.12$ ,  $RMSEA = .067$ ,  $CFI = .95$ . In line with the maternal model, the path from paternal SDO to CON, the correlation between EXT and CON, and the paths from level of education to EXT and CON were not significant, and the model was re-estimated without these parameters. The fit of the simplified model was adequate,  $SBS-\chi^2(38) = 108.66$ ,  $SBS-\chi^2/df = 2.86$ ,  $RMSEA = .063$ ,  $CFI = .95$ . The paths from paternal RWA to CON and EXT were significant,  $\beta = .88, .56, ps < .01$ , and so was the path from paternal SDO to EXT,  $.46, p < .01$ . The final model resulting from our analyses is displayed in Fig. 2.

#### 4.2.3. Parental goal promotion as an intervening variable

The final set of models tested parental goal promotion as an intervening variable in the relation between parent and child RWA and SDO. For this purpose, we examined whether the direct relationship between parent and child RWA and SDO was mediated by EXT and CON. Specifically, a full mediation model (in which no direct relationship between parent and child RWA and SDO was allowed) was compared with two partial mediation models: One in which a direct relationship between parent and child RWA was allowed, and one in which a direct relation between parent and child SDO was allowed. The full mediation model incorporated the paths that were retained in the preceding analyses (i.e., from parent RWA to both EXT and CON and from parent SDO to EXT) along with the paths that received support in previous research (from CON to child RWA and from EXT to both child RWA and SDO; see Duriez, Soenens, et al., 2007).

Both the initial maternal,  $SBS-\chi^2(124) = 357.85$ ,  $SBS-\chi^2/df = 2.89$ ,  $RMSEA = .059$ ,  $CFI = .91$ , and paternal model,  $SBS-\chi^2(124) = 332.88$ ,  $SBS-\chi^2/df = 2.68$ ,  $RMSEA = .060$ ,  $CFI = .92$ , provided adequate fit to the data. All paths in these models were significant, except for the path from EXT to child RWA. Therefore, the models were re-estimated without these non-significant paths. The simplified maternal,  $SBS-\chi^2(125) = 357.52$ ,  $SBS-\chi^2/df = 2.86$ ,  $RMSEA = .059$ ,  $CFI = .91$ , and paternal full mediation model,  $SBS-\chi^2(125) = 334.53$ ,  $SBS-\chi^2/df = 2.68$ ,  $RMSEA = .060$ ,  $CFI = .92$ , provided an adequate fit. Adding a path from mother to child RWA or from father to child RWA did not improve model fit ( $SBS-\chi^2_{diff}(1) = 0.67, p = .41$ , and  $SBS-\chi^2_{diff}(1) = 0.20, p = .65$ , respectively). Moreover, the direct paths from mother RWA to child RWA ( $\beta = .24, ns$ ) and

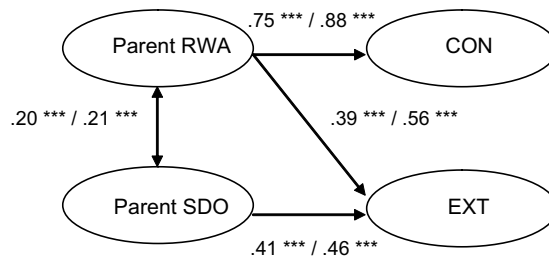


Fig. 2. Structural model of relationships between parental RWA and SDO, and parental conservation versus openness to change (CON) and extrinsic versus intrinsic (EXT) goal promotion. The first coefficients refer to the maternal model and the second refer to the paternal model. \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

from father RWA to child RWA ( $\beta = -.19, ns$ ) were no longer significant. Finally, adding a path from mother to child SDO or from father to child SDO did not improve model fit (SBS- $\chi^2_{diff}(1) = 0.01, p = .93$ , and SBS- $\chi^2_{diff}(1) = 0.99, p = .32$ , respectively). The size of the direct effect was .05 (*ns*) for the mother model and  $-.06$  (*ns*) for the father model. Based on these results, as a further test of mediation,  $z'$  tests examined the significance of the relations between mother/father and adolescent RWA via CON (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002). The  $z'$  scores were significant ( $z' = 5.54$  and  $5.02, p < .01$ ). Because parent RWA positively predicted parent EXT as well and parent EXT was related to child SDO, we also examined whether the indirect effect of parent RWA to child SDO via parent EXT was significant. In both the mother and father model, the indirect effect was found significant ( $z' = 3.97$  and  $4.06, p < .01$ ). Finally,  $z'$  tests examining the significance of the relations between mother/father and adolescent SDO via EXT also yielded significance ( $z' = 3.87$  and  $3.69, p < .01$ ). The final model resulting from our analyses is displayed in Fig. 3.

4.2.4. Additional analyses

To examine whether the structural relations in the maternal and paternal models are invariant across adolescent gender, we performed an additional set of multi-group analyses with gender as a possible moderating variable. The multi-group analyses involved a comparison of constrained models, that is, models in which the structural coefficients are set equal across adolescent gender, to unconstrained models, that is, models in which these coefficients are allowed to vary across adolescent gender. Models were compared in terms of the chi-square difference corresponding to the number of degrees of freedom. Whereas a significant difference implies that the model differs significantly across adolescent gender, a non-significant difference implies that the model is invariant across adolescent gender. Multi-group analyses were performed on the final maternal and paternal mediation models and on the maternal and paternal models assessing intergenerational similarity in RWA and SDO. No significant differences were found between the constrained and unconstrained models in either the maternal ( $\Delta SBS-\chi^2(5) = 5.09, ns$ , and  $\Delta SBS-\chi^2(2) = 0.63; ns$ , for the mediation model and the intergenerational similarity model, respectively) or the paternal models ( $\Delta SBS-\chi^2(5) = 6.11$  and  $\Delta SBS-\chi^2(2) = 2.61, ns$ , for the mediation model and the similarity model, respectively). Hence, adolescent gender did not moderate the structural paths in any of these models.

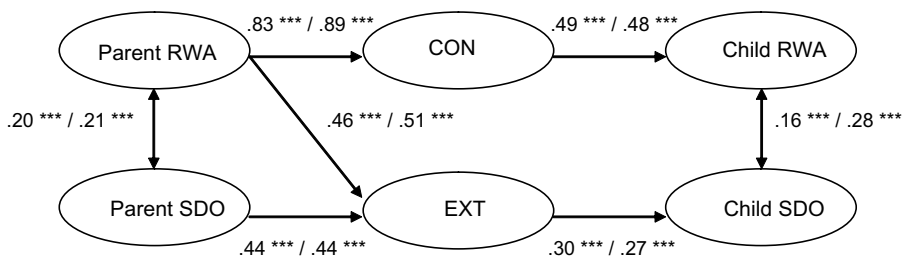


Fig. 3. Structural model of relationships between parental RWA and SDO, parental conservation versus openness to change goal promotion (CON), and extrinsic versus intrinsic (EXT) goal promotion, and child RWA and SDO. The coefficients in the figure are standardized estimates. The first coefficients refer to the maternal model and the second refer to the paternal model. \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .



Another additional set of analyses examined whether analyses in which parent and child reports of parental goal promotion are untangled would yield the same results as the analyses reported above in which parent and child reports of goal promotion are used as indicators of a single latent variable. For this purpose, we analyzed our data anew with the untangled parent and child reports of parental goal promotion. Parcels for parent reports and child reports of EXT and CON were created by subtracting a negatively keyed subscale from a positively keyed subscale. For instance, one of the parcels for EXT was obtained by subtracting the scores on affiliation from the scores on financial success. This procedure resulted in three parcels for EXT and two parcels for CON for both parent and child reports of parental goal promotion. Although the subsequent structural equation analyses support the fact that father–child concordance in SDO can be explained by paternal EXT, this evidence is somewhat weaker than when using a multiple informant based latent factor. Moreover, the mediation for SDO was not supported by the maternal data. This was due to the fact that the path from mother SDO to EXT was no longer significant when exclusively relying on child reported maternal goal promotion and to the fact that the path from EXT to child SDO was no longer significant when exclusively relying on mother reported goal promotion. As for the parent–child concordance in RWA, analyses show partial instead of full mediation when using child reports only and no mediation when using parent reports only. Again, this was due to the fact that the path from parent RWA to CON was substantially weaker when exclusively relying on child reported parental goal promotion and to the fact that the path from CON to child RWA was no longer significant when exclusively relying on parent reported goal promotion. In sum, apparently, our results only surface to the full extent when using latent factor analyses to arrive at a more valid parental goal promotion measure. Given that this is in line with the findings of prominent parenting researchers who have argued that multiple informants based latent factors of parenting dimensions are more valid and yield more consistent and theoretically predictable results (e.g., Conger et al., 1994; Simons et al., 1991), we decided not to report these analyses in further detail. A written report of these additional analyses can however be obtained from the main author on request.

## 5. Discussion

This study aimed to examine (a) patterns of intergenerational transmission of dimensions of authoritarianism (i.e., RWA and SDO), and (b) the contribution of dimensions of parental goal promotion (i.e., extrinsic versus intrinsic and conservation versus openness to change goal promotion) in this transmission process. Findings favor a fairly specific intergenerational transmission model. Specifically, it was found (1) that there exists similarity in both parent and child RWA and parent and child SDO, (2) that, whereas SDO is uniquely related to parental extrinsic versus intrinsic goal promotion, parental RWA predicts both parental conservation versus openness to change and parental extrinsic versus intrinsic goal promotion, (3) that, whereas parental extrinsic versus intrinsic goal promotion uniquely predicts SDO, parental conservation versus openness to change goal promotion uniquely predicts adolescent RWA, and (4) that, whereas parental conservation versus openness to change goal promotion mediates the parent–child concordance in RWA, parental extrinsic versus intrinsic goal promotion mediates the parent–child concordance in SDO.

First, in line with previous studies (e.g., Peterson & Duncan, 1999; Vollebergh & Raaijmakers, 1991), this study shows a substantial degree of parent–child concordance in

RWA. In addition, the present study also shows a certain degree of concordance in SDO, although this is somewhat less pronounced than the concordance in RWA. This is a novel finding, as this issue did not receive prior attention. In spite of the fact that, in Belgium, RWA and SDO are moderately to strongly related to one another (see Duriez et al., 2005), results show that the parent–child authoritarianism concordance is quite specific: Parent RWA was found to be uniquely and specifically related to adolescent RWA and parent SDO was found to be specifically and uniquely related to adolescent SDO.

Second, through structural equation modeling, the present study shows that parental extrinsic rather than intrinsic goal promotion (as indexed by adolescent and parent reports) related positively to adolescent SDO (but not to RWA). In addition, the present study shows that parental conservation versus openness to change goal promotion related positively to adolescent RWA (but not to SDO). These specific effects of different types of goal promotion on different authoritarianism components are not fully consistent with the work of Duriez, Soenens, et al. (2007), who reported a significant concurrent effect of parental extrinsic versus intrinsic goal promotion on adolescent RWA as well as a small but significant effect of parental extrinsic versus intrinsic goal promotion on over-time changes in adolescent RWA. Apparently, when a more valid measure of parental extrinsic versus intrinsic goal promotion is used (i.e., multi-informant instead of adolescent-report), evidence is found for a set of specific effects. As shown in Fig. 1, parental extrinsic rather than intrinsic goal promotion yields an effect that is specific for adolescent SDO, whereas parental conservation versus openness to change goal promotion seems to specifically affect adolescent RWA. These findings of the current study support the dual process theory of prejudice (Duckitt, 2001; Duckitt et al., 2002), which states that adolescent RWA and SDO have a different origin and should be considered independent cognitive-motivational systems. However, given the inconsistency with previous investigations, future research should examine the issue whether the effects of type of goal promotion are specific to either RWA or SDO in more depth.

Third, given that parental goal promotion efforts appear to impact on adolescent authoritarianism, an important question to be raised is why some parents are more likely than others to promote certain goals. Results confirmed the expectation that parents' own authoritarianism level may be an important predictor of the goals they promote in their children: Whereas parents' own RWA level predicts the degree to which they promote extrinsic versus intrinsic and conservation versus openness to change goals in their adolescent children, parents' own SDO level predicts the degree to which they promote extrinsic versus intrinsic goals. These results suggest that the pattern of relationships between parent authoritarianism and parental goal promotion might not completely mirror the pattern of relationships between parental goal promotion and child authoritarianism. Specifically, whereas parental extrinsic versus intrinsic goal promotion was uniquely predictive of adolescent SDO, it was predicted by both parental SDO and RWA. Thus, the specificity of the model seems limited to the link between parental goal promotion and adolescent authoritarianism, but does not seem to apply to the link between parent authoritarianism and parental goal promotion, as both parent SDO and parent RWA had an equally strong effect on parental extrinsic versus intrinsic goal promotion. It remains unclear why this asymmetrical pattern of relationships emerged. Apparently, parents who endorse RWA are likely to foster extrinsic rather than intrinsic goals in their children, presumably because parents might consider the promotion of these goals as useful in living up to the current standards in western societies, which are characterized by the pro-

motion of materialist goals (Kasser, 2002). However, when parents promote extrinsic rather than intrinsic goals, their children might not be more likely to conform to the prevailing cultural norms and customs. Given the fact that previous research did show that parental extrinsic versus extrinsic goal promotion efforts are associated with both adolescent RWA and over-time changes in adolescent RWA, this finding should be treated with caution. Future research might want to examine its stability and replicability, prior to speculating on the reasons for its occurrence.

In sum, the data discussed so far suggest that authoritarian parents tend to promote goals that foster authoritarian attitudes in their adolescent children. But can we conclude from this that parents actually pass their attitudes on to their children through their goal promotion? We believe we can. The present research shows that extrinsic versus intrinsic goal promotion can account for the parent–child concordance in SDO and that conservation versus openness to change goal promotion mediates the parent–child concordance in RWA. Hence, results suggest that a specific constellation of promoted parental goals can explain the parent–child concordance in both components of authoritarianism. Apparently, high RWA parents are more likely to have high RWA children because they tend to emphasize the importance of sticking to societal values rather than being open to change. Similarly, parents who tend to subscribe to and support hierarchically structured social systems have a greater chance of having adolescents who adopt a similar attitude, presumably because the parental promotion of materialistic and extrinsic over intrinsic goals leads them to adopt such an attitude.

Although parental RWA did not directly relate to child SDO, there was a significant indirect association between both constructs through parental extrinsic versus intrinsic goal promotion. That is, parents who endorse RWA seem to promote SDO among their children because they encourage the pursuit of extrinsic over intrinsic goals in their child rearing. Parents high on RWA are likely to be quite surprised by this outcome, as they would primarily want their children to submissively stick to societal norms rather than to embrace the more social aggressive attitude that characterizes SDO. Indeed, the personality profile and functioning of people high in SDO and people high in RWA is quite different. For instance, relative to people high on SDO, people high on RWA more strongly value tradition, are more often religious, and are more conscientious and agreeable (e.g., Duriez & Soenens, 2006; Duriez & Van Hiel, 2002). Moreover, whereas high RWAs are often described as people who are not aware of their unusual high prejudice and are willing to change this when they find out that they are, high SDOs are described as people who are well aware of their prejudice but do not care about it (e.g., Altemeyer, 1998). In short, many of the characteristics of high SDO people might not be desired by parents high on RWA. Given that it is the first time that dimensions of parental goal promotion efforts are studied as potential mediators of the parent–child concordance in authoritarianism, future research should examine whether the finding that parental RWA affects child SDO is stable and replicable.

### *5.1. Limitations and future directions*

Although the present study has a number of strengths, some limitations are worth noting. First, although parental goal promotion was estimated through multiple informants, authoritarianism was assessed through self-reports only. Future research might

want to include reports of external informants (e.g., parent, peer and teacher reports of adolescent attitudes, and adolescent and teacher reports of parental attitudes) to ensure that shared method variance or social desirability do not account for the observed relations. A second limitation of the present study is the rather modest reliability of some of our measures (i.e., for both parent and child reports of parental conservation versus openness to change goal promotion and for adolescent RWA). Although we tried to tackle this limitation by using Structural Equation Modeling with latent variables, it would be advisable for future research to try to measure these concepts in a more reliable way right from the start. Given that low reliabilities lower the chance of finding significant results, especially the path from parental conformity goal promotion to adolescent RWA might be underestimated. A third limitation is the cross-sectional design of our study. As such, our findings do not allow inferring causality. Longitudinal research would help to answer the question whether parent SDO predicts increase in child SDO over time or whether child and parent yield a mutually reinforcing impact on one another over time. Furthermore, as mediation is by its very nature a longitudinal phenomenon, such longitudinal studies could more accurately test the role of parental goal promotion efforts in the intergenerational transmission of authoritarianism.

Apart from the effect of parent authoritarianism on the formation of adolescent authoritarianism, there are a host of other factors that might influence the goals parents promote in their child-rearing. Both the socialization model of Belsky (e.g., Belsky & Fearon, 2004) and Self-Determination Theory (e.g., Grolnick, 2003) distinguish three types of antecedents of parenting: (1) social-contextual factors such as the financial situation of a family and the safety of the neighborhood in which a family lives (e.g., Conger et al., 1994), (b) parent characteristic such as level of authoritarianism and education and factors that relate to the personal functioning of parents and their own developmental history (e.g., Belsky, Jaffee, Slogo, Woodward, & Silva, 2005), and (3) adolescent characteristics such as adolescent behavior and general development (e.g., Magnusson, 1988). In line with this, researchers may want to thoroughly investigate the influence of these other factors as well.

## 6. Conclusion

The present study attests to an importance sequence of events leading adolescents to adopt authoritarian attitudes. If parents hold authoritarian submissive attitudes, they are more likely to promote conservation rather than openness to change goals. In turn, being raised in a climate in which parents stress conservation goals at the expense of openness to change goals seems to lead adolescents to form authoritarian submissive attitudes themselves too. If parents hold authoritarian dominant attitudes, they are more likely to promote extrinsic rather than intrinsic goals. In turn, being raised in a climate in which parents stress extrinsic goals at the expense of intrinsic goals seems to lead adolescents to form authoritarian dominant attitudes themselves too. Given that it has often been demonstrated that both authoritarian submissive and authoritarian dominant attitudes lead to prejudice and discrimination, a more thorough exploration of the antecedents of adolescent authoritarianism in general and the parental promotion of conservation rather

than openness to change and extrinsic rather than intrinsic goals in particular should represent an important avenue for future research.

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