

## Right-Wing Authoritarianism: Protective Factor Against or Risk Factor for Depression?

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*Abstract:* Because the authoritarian personality was introduced to explain the rise of fascism during World War II, research focused on its ability to predict prejudice, leaving its associations with well-being largely unexplored. Studies that did examine these associations yielded inconsistent results, and some authors even argued that authoritarianism buffers against the negative effects of psychological vulnerability factors (i.e. D-type personality) and negative life events on well-being, especially among people in an authoritarian environment. Using a cross-sectional community sample (N = 1010), Study 1 failed to support the idea that authoritarianism relates to depressive symptoms and buffers against the negative effects of D-type personality on depressive symptoms. Using a longitudinal college student sample (N = 499), Study 2 showed that authoritarianism did not moderate the effects of life events either and even predicted over-time increases in depressive symptoms. Using a longitudinal high school sample (N = 590), Study 3 showed that this effect emerged regardless of degree of fit with the social environment (i.e. with family and friends). Taken together, results suggest that authoritarianism constitutes a risk factor for rather than a protective factor against depressive symptoms. Copyright © 2011 John Wiley & Sons, Ltd.

Key words: authoritarianism; depression; well-being; life events; vulnerability

Shortly after World War II, Adorno, Frenkel-Brunswik, Levinson, and Sanford (1950) introduced 'The Authoritarian Personality' to explain the rise of fascism. Because of this focus on explaining fascism, research mainly focused on authoritarianism's ability to predict prejudice towards various social groups (e.g. Asbrock, Sibley, & Duckitt, 2010; Duckitt, 2006; Sibley, Robertson, & Wilson, 2006), leaving its association with personal well-being largely unexplored. Studies that did examine this association yielded inconsistent results, often failing to demonstrate the expected negative relation (e.g. Hodson, Hogg, & MacInnis, 2009; Mehrabian, 1996; Wylie, 1979). Recently, authoritarianism was even argued to have a twofold beneficial effect on well-being (Napier & Jost, 2008; Van Hiel & De Clercq, 2009). First, authoritarianism was argued to have a positive main effect on well-being. In line with this, Napier and Jost (2008) reported a positive relation between conservative ideology and happiness. Second, authoritarianism was argued to buffer against the negative effects of psychological vulnerability factors in general and the effects of Denollet's (1997) D-type personality in particular as well as against the effect of negative life events on mental distress (Van Hiel & De Clercq, 2009).

The present article aims to take a closer look at the relation between authoritarianism and one prominent indicator of psychological ill-being (i.e. depressive symptoms). Study 1 examined the direct association of authoritarianism with depression and its moderating role in the relation between

D-type personality and depression. Because we were not only interested to examine whether authoritarianism might be a good coping mechanism at one point in time but also whether the use of such a coping mechanism is sustainable across time, it was deemed crucial to study these relations from a longitudinal perspective. Therefore, Study 2 examined the direct association of authoritarianism with depression and its moderating role in the relation between life events and depression from a longitudinal perspective. Finally, Study 3 examined whether the direct association of authoritarianism with depression as observed in Study 2 is moderated by the social environment, as has been argued previously (e.g. Peterson & Duncan, 1999; Sagiv & Schwartz, 2000; Van Hiel & Brebels, 2011). In particular, in line with previous research (Peterson & Duncan, 1999), using a high school student sample, Study 3 examined whether the authoritarianism–depression relation is moderated by the level of authoritarianism in the family of origin. In addition, because peer relations become increasingly important throughout adolescence (Brown & Dietz, 2009) and because peers are thought to influence the development of authoritarianism as well (Altemeyer, 1981, 1988, 1998), Study 3 also examined the possible moderating role of the level of authoritarianism in one's peer group (i.e. among one's best friends).

### AUTHORITARIANISM

Relying on Freud's psychoanalytic theory, which emphasizes early childhood experiences as the driving force of

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personality development, Adorno et al. (1950) reasoned that a childhood characterized by strict discipline, excessively harsh and punitive parenting and little parental warmth is likely to produce a pathological personality structure that is characteristic of people who idolize authority figures and admire fascist ideologies. Specifically, Adorno et al. (1950) argued that growing up with parents who sanction any sign of independence or rebellion leads to the development of an overly strong superego and the repression of unconscious desires and drives. Because of this parental repression, the child has no other option than to turn to a process called reaction formation to protect its integrity. The child then starts glorifying his feared parents and internalizes the values of loyalty and obedience. Although, at first sight, this process of submissive compliance with parental demands for obedience might seem a functional way of dealing with a harsh parenting climate, from a psychodynamic perspective, it has been argued that repressed desires, drives and hostility do not just disappear. Instead, they keep boiling and, somehow, must find a way out. A safe way out is to fall back on socially acceptable prejudices that allow projecting the 'forbidden' desires onto safe targets, such as social groups whom the parents and other authority figures dislike (e.g. ethnic, political, religious or sexual minorities) or people who cannot defend themselves (e.g. homeless people or drug addicts). This projection mechanism then provides a justification for unleashing aggression towards such people.

The authoritarian personality was defined by Adorno et al. (1950) in terms of nine personality traits that were believed to cluster together as the result of the abovementioned traumatic childhood experiences. To measure this personality cluster, Adorno et al. (1950) developed the Fascism or F scale. Disregarding the psychodynamic origins that gave rise to the authoritarianism construct and using a purely empirical approach instead, Altemeyer (1981) found that only three of the nine original authoritarian personality facets were sufficiently internally consistent and correlated: conventionalism, authoritarian submission, and authoritarian aggression. To measure this attitude cluster, Altemeyer (1981) developed the Right-Wing Authoritarianism or RWA scale. This scale was found to relate positively to negative attitudes and hostility towards several social groups and is nowadays widely accepted as an important predictor of prejudice towards certain types of social groups (e.g. Asbrock et al., 2010; Duckitt, 2006; Sibley, et al., 2006). On the basis of social learning theory, Altemeyer (1981, 1988, 1998) assumes that RWA is not exclusively rooted in early childhood experiences but is acquired through social interactions (e.g. through teaching or modeling) and open to lifelong development. In spite of this, at the same time, he considers adolescence to be a crucial formative phase, arguing that, as of that point on, authoritarianism is fairly resistant to change later in life.

Altemeyer's (1981) contribution caused a resurgence of interest in authoritarianism in the domain of political psychology from the 1980s onwards. However, in spite of undeniable conceptual and methodological improvements, research has shown that the RWA scale and the F scale are highly positively correlated and are similarly related to a host of other variables including political party preference and

attitudes towards the national in-group, ethnic minorities and feminism (Meloan, Van der Linden, & De Witte, 1996) as well as value orientations, religious attitudes and moral competence (Duriez & Van Hiel, 2002). Moreover, the RWA scale was shown to relate to a range of constructs that can be considered indicators of other traits that Adorno et al. (1950) considered part of the authoritarian personality. In this respect, research demonstrated significantly positive relations of RWA with indicators of 'projectivity' or the disposition to see the world as a dangerous place (e.g. dangerous world beliefs; Duckitt, Wagner, du Plessis, & Birum, 2002; Duckitt & Sibley, 2010), 'concern over sex' (e.g. adherence to conventional sexual mores; Peterson & Zurbriggen, 2010) and 'stereotypy' or the disposition to think in rigid categories (e.g. the need for simple structure; Jugert, Cohrs, & Duckitt, 2009; Van Hiel, Pandelaere, & Duriez, 2004). In addition, research found authoritarianism to relate negatively to 'anti-intracception' indicators such as openness to experience (Duriez & Soenens, 2006; Ekehammar, Akrami, Gylje, & Zakrisson, 2004; Sibley & Duckitt, 2008), identity exploration (Peterson & Lane, 2001) and enjoying entertainment offering introspection (Peterson & Pang, 2006).

#### **AUTHORITARIANISM, PSYCHOPATHY, WELL-BEING AND ADJUSTMENT**

As already mentioned, authoritarianism was originally thought to take root in unconscious conflicts that would give rise to an overly strong superego and the associated repression of unconscious desires (Adorno et al., 1950). Although Altemeyer (1981, 1988, 1998) tried to rid the authoritarianism construct of its psychodynamic origins, Crouse and Stalker (2007) argued that a psychodynamic reasoning can still be applied to right-wing authoritarianism. Crouse and Stalker (2007) trace the right-wing authoritarian origins to unconscious conflicts around self-preservation, mastery, sexuality and aggression. They argue that reminders of death, obstacles to mastery that originate from environmental unpredictability and the fear of losing control over sexual and aggressive impulses are sources of anxiety and depression and that authoritarian beliefs are one way to form a defence against such feelings. Through identification with a powerful leader or nation and through following strict rules, one would gain illusory strength and security, eradicate ambiguity and receive approval for renouncing sexual demands and for turning aggressive impulses to targets that are disapproved of by authority figures. In line with this, Van Hiel and De Clercq (2009) conclude that authoritarianism is beneficial to the self because it enables people to deal with death anxiety, low self-esteem, frustration and negative affect. Hence, authoritarian beliefs would constitute an adequate coping mechanism that buffers against the negative effects of psychological vulnerability factors such as the distressed of D-type personality (Denollet, 1997) and negative life events. However, following Crouse and Stalker (2007), we would like to argue that, although authoritarian beliefs might buffer against the negative effects of psychological vulnerability factors and negative life events on

well-being at a given point in time, over time, the adoption of authoritarian beliefs is likely to shield awareness from one's inner wishes, desires, feelings, emotions and intentions. In turn, this is likely to result in self-deception and self-estrangement, which, according to Crouse and Stalker (2007), is characteristic of many forms of pathology. In line with this reasoning, the main objective of many psychoanalytic, humanistic and existential psychotherapies is to help people change and progress in their lives through the development of self-awareness and insight (e.g. Etchegoyen, 1991; Perls, 1973; Rogers, 1961; van Deurzen, 2002; Wolberg, 1995).

Although studies failed to demonstrate cross-sectional relationships between authoritarianism and well-being and adjustment measures such as social dysfunction (Van Hiel & De Clercq, 2009), neuroticism (Duriez & Soenens, 2006; Ekehammar *et al.*, 2004; Sibley & Duckitt, 2008), self-esteem (Hodson *et al.*, 2009; Wylie, 1979), positive and negative affect, happiness and life satisfaction (Butler, 2000), sleeping problems that might suggest emotional disorders (Van Hiel & Cornelis, 2006), anxiety (e.g. Mehrabian, 1996; Van Hiel & De Clercq, 2009) and depression (Butler, 2000; Mehrabian, 1996), other studies support the idea that authoritarian beliefs form a defence against unconscious impulses. In this respect, research found positive cross-sectional relationships between authoritarianism and anal retentiveness indicators such as compulsivity (Freedman, Webster, & Sanford, 1956), a compulsive-dependent personality (Schlachter & Duckitt, 2002), obsessiveness (Kline & Cooper, 1984) and a reluctance to accept and express inner feelings (Wilson & Brazendale, 1973). In addition, with respect to depression, Van Hiel and De Clercq (2009) reported a significant negative relationship. Moreover, Van Hiel and De Clercq (2009) found that RWA buffered against the negative effects of D-type personality on depression and the effects of negative life events on depression as well as anxiety and insomnia, somatic symptoms and social dysfunction. Taken together, this latter set of findings supports the idea that authoritarianism is beneficial to the self because its anally retentive character enables people to cope with psychological vulnerability factors as well as with negative life events (Van Hiel & De Clercq, 2009). However, what seems crucial in order to answer the question whether authoritarianism is truly good for the self is what happens across time. Do authoritarians manage to maintain their defence, or does the presumed associated self-estrangement backfire across time?

To date, virtually no studies investigated the longitudinal effects of authoritarianism on well-being. The only relevant data that we know of were data presented by Peterson and Duncan. In a sample of 52-year-old women, Peterson and Duncan (2007) showed that, probably because their investment in traditional roles of wife and mother had not paid off as expected, authoritarian women experienced less positive affect, leading them to display increased neuroticism at Time 2 (i.e. 10 years later). In addition, in an earlier study among college students, Peterson and Duncan (1999) showed that the long-term effects of authoritarianism on well-being and adjustment (i.e. over the course of a year) depended on whether students matched or mismatched with their parents on authoritarianism. Specifically, mismatching students (and

especially low-authoritarian offspring with high-authoritarian parents) increased in life satisfaction relative to their matching peers so that the initial differences in life satisfaction at Time 1 were no longer there at Time 2. In line with a match perspective that states that the relation between values and attitudes on the one hand and well-being on the other hand depends on the match between people's values and the values that are emphasized within their social environment (Sagiv & Schwartz, 2000), this study suggests that the effects of authoritarianism might be moderated by the degree to which these beliefs are supported by the social environment. A similar argument was made by Van Hiel and Brebels (2011) in a study on conservative ideology and self-esteem. Although Van Hiel and Brebels (2011) argue that this relation becomes more positive with increasing age, they admit that, on the basis of their cross-sectional data, they cannot rule out the alternative interpretation that their age-related findings reflect cohort effects instead. An interpretation in terms of cohort effects entails that generations reflect the macro-social climate in which they grew up and that authoritarianism is especially adaptive for people who grew up in an authoritarian climate.

## THE PRESENT STUDIES

In three different studies, the present manuscript examined possible direct associations between authoritarianism and ill-being, the possible moderating role of authoritarianism in the relation between psychological vulnerability factors and ill-being and the possibility that the role of authoritarianism depends on the social climate in which persons find themselves. Depression was selected as an indicator of ill-being and psychological distress because of its major societal relevance and importance. In the Disability-Adjusted Life Year index of the World Health Organization (i.e. an index estimating disease burden in terms of number of years lost because of ill-health, disability or early death), clinical depression is currently ranked fourth and expected to become second by 2020. Specifically, we decided to focus on depressive symptoms because such symptoms might allow identifying people that are vulnerable to developing clinical depression (Petersen *et al.*, 1993). Moreover, depressive symptoms can be reliably identified in self-reports, and depressive symptoms have been shown to relate to other problem syndromes including social problems, somatic problems, thought and attention problems, and self-destructive, aggressive and delinquent behaviour (Petersen *et al.*, 1993).

## STUDY 1

Study 1 had a threefold aim. First, Study 1 intended to examine the cross-sectional relation between authoritarianism and depression in a large cross-sectional community sample. This was deemed necessary because the direct association between authoritarianism and depression received hardly any research attention and because studies that did investigate this relation typically relied on small samples and

yielded inconsistent results. To our knowledge, only three published articles have reported correlations between both constructs. Although Van Hiel and De Clercq (2009) reported a negative relation between authoritarianism and a measure of depressive symptoms [i.e.  $r = -.21$  and  $-.19$ ,  $p < .05$ , in Study 1 ( $N = 132$ ) and Study 2 ( $N = 110$ ), respectively], the other studies failed to find any significant association. Specifically, Butler (2000) reported a non-significant correlation of .01 with depressive symptoms ( $N = 58$ ), and Schlachter and Duckitt (2002) reported a non-significant correlation of  $-.02$  with a measure of major clinical depression ( $N = 88$ ). Second, Study 1 intended to examine the possible moderating relation of authoritarianism in the relation between an important psychological vulnerability factor (i.e. D-type personality) and depression. A distressed or D-type personality refers to people who frequently experience negative affect whilst having inhibited self-expression (Denollet, 1997). So far, only one study investigated this relationship (Van Hiel & De Clercq, 2009), and as already mentioned, this study relied on a small sample. Third, Study 1 intended to examine whether the possible moderating role of authoritarianism in the relation between D-type personality and depression is itself moderated by age, as suggested by Van Hiel and Brebels (2011).

## Method

### Participants

Dutch-speaking Belgian educational science students of a large Belgian university were asked to complete a questionnaire and to distribute five questionnaires to other people, including their parents (or, when impossible, adults of the same age, gender and educational level), a fellow college student of the opposite gender, and male and female high school students. Because participants received course credit, response rates were high ( $>98\%$ ), resulting in a high school student sample ( $N = 338$ ; 50% male ranging in age from 14 to 20 years with a mean of 16 years), a university student sample ( $N = 336$ ; 50% male ranging in age from 18 to 26 years with a mean of 20 years) and an adult sample ( $N = 336$ ; 50% male ranging in age from 30 to 74 years with a mean of 48 years). The highest obtained school degree in the adult sample was either a primary school degree (10%), a high school degree (26%), a non-university higher education degree (41%) or a university degree (23%). For the present purpose, these three samples were pooled, resulting in a sample of  $N = 1010$ .

### Questionnaires

Participants completed a Dutch 11-item RWA scale (e.g. 'Obedience and respect for authority are among the most important virtues children should learn'). Past research showed that this scale related in a theoretically meaningful fashion to relevant external variables such as cultural conservatism and racial prejudice (Duriez, Van Hiel, & Kossowska, 2005; Van Hiel et al., 2004), value orientations (Duriez et al., 2005), the need for simple structure (Van Hiel et al., 2004), and personality traits and identity styles (Duriez & Soenens, 2006). Items were accompanied by 5-point Likert

scales anchored by *Completely disagree* and *Completely agree*. After reversing the negatively worded items, we averaged the item scores ( $M = 2.87$ ;  $SD = 0.67$ ). Cronbach's alpha was .76.

In addition, participants completed a Dutch version (Soenens, Luyckx, Vansteenkiste, Luyten, Duriez, & Goossens, 2008) of Radloff's (1977) Center for Epidemiologic Studies Depression scale, assessing how often participants experienced each of 20 symptoms over the past month. Scores were obtained on a 4-point Likert scale from 0 (*Never*) to 3 (*Often*). After reversing the negatively worded items, we averaged the item scores ( $M = 0.72$ ;  $SD = 0.42$ ). Cronbach's alpha was .87.

Finally, participants completed a Dutch version of the 60-item NEO-FFI (Hoekstra, Ormel, & De Fruyt, 1996), measuring neuroticism, extraversion, agreeableness, conscientiousness and openness to experience (12 items each). Items were accompanied by 5-point Likert scales anchored by *Completely disagree* and *Completely agree*. For the purpose of the present study, we were interested in neuroticism and extraversion only. In a first step, after reversing the negatively worded items, we computed scale scores of neuroticism ( $M = 2.78$ ;  $SD = 0.67$ ) and extraversion ( $M = 3.67$ ;  $SD = 0.59$ ) by averaging the respective items. Cronbach's alphas were .86 for neuroticism and .82 for extraversion. In a second step, based on these scores, a dichotomous D-type variable was constructed. Following Van Hiel and De Clercq (2009), participants were assigned 1 if they scored above the median on neuroticism (indicating a tendency to frequently experience negative affect) and below the median on extraversion (indicating a tendency to have inhibited self-expression) and  $-1$  whenever this was not the case.

## Results and discussion

### Preliminary analyses

At the scale level, 2% of the data were missing because of some people not answering all questions. Participants with and without complete data were compared on the study variables using Little's (1988) Missing Completely At Random (MCAR) test. A non-significant chi-square [ $\chi^2(55) = 62.69$ ,  $ns$ ] suggested that missing values were MCAR, allowing for a reliable estimation of missing values. After missing value estimation using the expectation maximization algorithm (Schafer & Graham, 2002), correlation analyses showed that depression was associated with neuroticism ( $r = .56$ ,  $p < .01$ ) and extraversion ( $r = -.27$ ,  $p < .01$ ) but not significantly so with RWA ( $r = -.01$ ,  $ns$ ). RWA was significantly associated neither with neuroticism nor with extraversion ( $r = .02$  and  $-.03$ ,  $ns$ , respectively). There were age differences in neuroticism, extraversion, RWA and depression ( $r = -.20$ ,  $-.28$ ,  $.12$  and  $-.13$ ,  $ps < .01$ , respectively), indicating that older participants were more likely to obtain higher scores on RWA and lower scores on neuroticism, extraversion and depression. Moreover, there were differences in RWA and depression in terms of level of education ( $r = -.28$  and  $-.12$ ,  $ps < .01$ , respectively), indicating that more highly educated participants were less likely to obtain higher scores on RWA and depression. Finally, univariate ANOVAs revealed gender differences in neuroticism and depression

[ $F(3, 1009) = 20.01$  and  $6.12$ ,  $ps < .01$ ,  $\eta^2 = .06$  and  $.02$ , Cohen's  $d = .49$  and  $.26$ , respectively], with men obtaining lower scores on neuroticism and depression ( $M = 2.61$  and  $0.66$ ,  $SD = 0.66$  and  $0.39$ , respectively) compared with women ( $M = 2.93$  and  $0.77$ ,  $SD = 0.64$  and  $0.44$ , respectively). Given these results, age, educational level and gender were controlled for in our primary analyses.

#### Primary analyses

Primary analyses then examined whether RWA had a main effect on depression, whether RWA moderated the relation between D-type personality and depression and whether age moderated the main and/or interaction effect of RWA. Because interaction effects are typically weak in magnitude and interaction terms are often plagued by low reliabilities of the constituting variables (Orth, Robins, & Meier, 2009), structural equation modeling (SEM) with latent variables for RWA and depression was conducted via Mplus 6.1 (Muthén & Muthén, 1998–2010) to maximize chances of finding significant interactions. SEM with latent variables requires multiple indicators for the latent constructs. For this purpose, instead of using items as indicators, three parcels of items were created for RWA and depression (Marsh, Hau, Balla, & Grayson, 1998). Initial SEM analysis included age, gender (male = 1; female = 2) and educational level as control variables, and D-type personality and RWA as predictors of depression. Age ( $\beta = -.13$ ,  $p < .01$ ), education ( $\beta = -.12$ ,  $p < .01$ ), gender ( $\beta = .13$ ,  $p < .01$ ) and D-type personality ( $\beta = .38$ ,  $p < .01$ ) had significant main effects on depression, but RWA ( $\beta = -.03$ , *ns*) did not. Adding the two-way interactions between RWA and D-type personality and RWA and age, and the three-way interaction between RWA, D-type personality and age showed that none of these interactions was significant ( $b = .05$ ,  $.00$ , and  $.00$ , respectively; all  $ps > .35$ ).

#### Discussion

Study 1 failed to support the idea that there would be a cross-sectional association between authoritarianism and depression and rejected the idea that authoritarianism would buffer against the effects of D-type personality on depression. Specifically, RWA did not moderate the negative effect of D-type personality on depression. Given that Van Hiel and Brebels (2011) have argued that the effects of RWA on depression would increase with age, the present study also checked whether the direct effect of RWA on depression or its moderating role in the relation between D-type personality and depression would increase with age. Results failed to support this hypothesis. Specifically, neither the two-way interaction between RWA and age nor the three-way interaction between RWA, D-type personality and age reached significance, suggesting that authoritarianism does not become more beneficial to the self with age. This justified a restriction of the age range in Studies 2 and 3.

## STUDY 2

Study 2 had a twofold aim. First, Study 2 intended to examine the possible moderating relation of authoritarianism in

the relation between life events and depression. So far, only one study investigated this relationship (Van Hiel & De Clercq, 2009). Whereas Van Hiel and De Clercq (2009) only looked at negative life events, the present study also takes positive life events into account. The main reason for this is that authoritarianism might not only diminish the impact of negative but also of positive life events. In this respect, previous research has suggested that shielding oneself off from negative emotions often has the side effect that positive emotions are blocked as well (e.g. Gross & John, 2003). Second, Study 2 intended to examine longitudinal associations between authoritarianism and depression to find out whether authoritarianism provides a sustainable coping mechanism or whether, instead, it is likely to backfire over time. For this aim, we were inspired by Orth, Robins, and Meier (2009), who modeled longitudinal associations between self-esteem, life events and depression. Freshman college students were assessed because upon entering university, individuals face the important challenges of building an extra-familial social network and of adjusting themselves to their new environment (Peterson & Duncan, 1999), challenges that might make them vulnerable to develop depressive symptoms. A three-month time interval was selected because we figured that this would be a reasonable amount of time for people to experience changes in well-being. In line with this, previous studies among college students have shown that levels of self-esteem fluctuate meaningfully over a similar period (Duriez, & Klimstra, 2011; Luyckx, Duriez, *et al.*, 2011), and other studies have shown that low self-esteem is a proxy and even a predictor of depressive symptoms (see e.g. Orth *et al.*, 2009).

## Method

### Participants

Dutch-speaking Belgian psychology students of a large Belgian university were assessed at two different measurement points, separated by a three-month interval. Students were assigned a unique code number to protect their confidentiality. At Time 1, 458 students took part in our research. At Time 2, 410 of them participated again, along with 41 students who did not participate at Time 1. Individuals were included in our study if they participated in at least one measurement occasion, resulting in a final sample of 499 participants. The mean age at Time 1 was 18.60 years ( $SD = 2.47$ ; range 17 to 29), with 83% of the participants being women.

### Questionnaires

At Times 1 and 2, participants completed a Dutch 14-item RWA scale that is very similar to the 11-item scale that was used in Study 1. Past research showed that this scale related in a theoretically meaningful fashion to relevant external variables such as racial prejudice (Duriez, 2011; Duriez & Soenens, 2009; Meeus, Duriez, Vanbeselaere, Phalet & Kuppens, 2009), goals and values (Duriez, 2011), parental RWA (Duriez & Soenens, 2009; Duriez, Soenens, & Vansteenkiste, 2008) and parental goals and styles (Duriez, Soenens, & Vansteenkiste, 2007). Items were scored on a 5-point Likert scale anchored by *Completely disagree* and *Completely agree*. After reversing the negatively worded

items, we averaged the item scores. Cronbach's alphas were .72 at Time 1 and .74 at Time 2.

In addition, participants filled out a Dutch version (Soenens, Luyckx, Vansteenkiste, Duriez, & Goossens, 2008) of the shortened Center for Epidemiologic Studies Depression scale (Roberts & Sobhan, 1992), assessing how often participants experienced each of 12 symptoms over the past week on a 4-point Likert scale ranging from 0 (*Never*) to 3 (*Often*). After reversing the negatively worded items, item scores were averaged. Cronbach's alphas were .85 at Time 1 and .87 at Time 2.

Finally, at Time 2, participants completed a Dutch version of the Brief Adolescent Life Event Scale (Shahar, Henrich, Reiner, & Little, 2003), assessing how often participants experienced each of 18 positive events (e.g. 'I made up with a family member', 'I did something I felt proud of' and 'I got a good grade in school') and 18 negative events (e.g. 'I argued with a family member', 'I did something I felt embarrassed by' and 'I got a bad grade in school') over the past month on a 4-point Likert scale ranging from 0 (*Never*) to 3 (*Often*). According to Shahar et al. (2003), both positive and negative life event items can be divided in six 3-item subscales, each of which tap a different domain (i.e. family events, friendship events, peer-related and extra-curricular activities events, school events, work events and health and physical appearance events). A higher-order factor analyses on all subscales would then yield a two-factor solution, with all positive life events subscales loading positively on one factor and all negative life events subscales loading positively on the other factor. In line with this, the scree plot of an exploratory factor analyses on the 12 subscales favoured a two-factor solution (explaining 40% of the variance). All positive life events subscales loaded over .40 on the first factor, and all negative life events subscales loaded over .40 on the second factor, without there being any cross-loadings. Further analyses on the constituting items revealed acceptable internal consistency estimates both for the 18 positive life event items and the 18 negative life event items (Cronbach's alphas = .76 and .72, respectively).

**Results and discussion**

*Preliminary analyses*

At the scale level, 9% of the data were missing because of drop-out or drop-in, or because of some people not answering all questions. Participants with and without complete data were compared using Little's (1988) MCAR test. A non-significant chi-square [ $\chi^2(16) = 22.99, ns$ ] confirmed the MCAR assumption, allowing for a reliable estimation of missing values. Means, standard deviations and correlations are shown in Table 1. Prior to computing these means, standard deviations and correlations, missing values were replaced using the expectation maximization algorithm. RWA and depression were not significantly related to each other either at Time 1 or at Time 2. Moreover, RWA was not significantly related to either positive or negative life events. In contrast, depression related negatively to positive life events and positively to negative life events, with positive and negative life events being positively related. Between-time

Table 1. Means, standard deviations (SD) and correlations between the variables in Study 2

	Mean	SD	01.	02.	03.	04.	05.
01. T1 RWA	2.88	0.43					
02. T2 RWA	2.82	0.43	.75**				
03. T1 Depression	0.92	0.51	.00	.04			
04. T2 Depression	0.92	0.54	.10*	.07	.59**		
05. T2 Positive events	1.28	0.41	-.04	-.01	-.23**	-.28**	
06. T2 Negative events	0.51	0.28	.02	.01	.33**	.46**	.14**

RWA, right-wing authoritarianism.

\* $p < .05$ ; \*\* $p < .01$ .

correlations showed substantial rank-order stability in RWA and depression. There were no age differences in any of the variables, but there were small gender differences in RWA at Time 1 and Time 2 [ $F(1, 497) = 15.53$  and  $14.12, ps < .01, \eta^2 = .03$  and  $.03$ , Cohen's  $d = .41$  and  $.44$ , respectively], with boys scoring lower ( $M = 2.71$  and  $2.66; SD = 0.49$  and  $0.45$ ) than girls ( $M = 2.91$  and  $2.85; SD = 0.49$  and  $0.42$ ), and in depression at Time 2 [ $F(1, 497) = 4.20, p < .05, \eta^2 = .01$ , Cohen's  $d = .27$ ], with boys scoring lower ( $M = 0.81; SD = 0.40$ ) than girls ( $M = 0.94; SD = 0.56$ ). Therefore, gender was a control variable in subsequent analyses.

*Primary analyses*

Latent change modeling (LCM; Hertzog & Nesselroade, 2003; McArdle & Nesselroade, 1994) was used to examine the main hypotheses. LCM was chosen over more common methods such as cross-lagged modeling because LCM allows assessing absolute change (i.e. intra-individual change) rather than relative change (i.e. inter-individual or rank-order change) and hence allows investigating whether individuals actually increase (or decrease) over time in a given construct. Specifically, in LCM, change is assessed as a latent factor, implying that it has a mean (i.e. indicating mean change in the total sample) and a variance (i.e. indicating individual differences in change). In line with this, LCM follows a two-step procedure. A first step consists of confirmatory factor analysis, requiring multiple indicators for the latent constructs (e.g. RWA at Time 1). Therefore, for each latent construct, three item parcels were created. The corresponding factor loadings of the parcels are set equal across time, and residuals of corresponding parcels are allowed to covary across time to assure measurement invariance. In a second step, LCM restructures the wave specific factors to latent level and change factors. Specifically, by fixing regression coefficients to 1, latent levels (e.g. level of RWA) are implicitly defined as equal to the scores at Time 1 (e.g. Time 1 RWA), and the latent change variable (e.g. change in RWA) is implicitly defined as the difference between scores at Times 2 and 1 (e.g. RWA at Time 2 - RWA at Time 1). In this way, LCM allows estimating the variance of the latent change factor. When the means of the parcels are also included in the analysis, as was done in the present study, one can estimate absolute change. These latent level and change factors can then be used in cross-lagged analyses to examine over-time associations between the different constructs.

Covariance matrices were analyzed in Mplus 6.1 (Muthén & Muthén, 1998–2010), and solutions were generated on the basis of robust maximum likelihood estimation. Given that preliminary analyses showed that missing values were missing completely at random, missing values were dealt with using the full information maximum likelihood algorithm. To evaluate model fit, the chi-square ( $\chi^2$ ), the Comparative Fit Index (CFI) and the Standardized Root Mean Square Residual (SRMR) were inspected. Good model fit is indicated by a  $\chi^2$  to degrees of freedom ratio smaller than 3 (Kline, 1998) and by combined cut-off values of over .95 for CFI and below .08 for SRMR (Hu & Bentler, 1999).

Prior to conducting cross-lagged analyses, we conducted univariate LCM for RWA and depression separately. The latent change models fitted the data very well [ $\chi^2(7)=7.35$  and  $7.27$  (*ns*), CFI=1.00 and 1.00 and SRMR = .02 and .02 for RWA and depression, respectively]. Variance estimates for both RWA and depression pointed to substantial inter-individual differences, both with respect to initial levels of RWA and depression and rates of change in these variables ( $p < .01$ ). Regarding change, individual estimates of true change for all variables ranged from negative scores (i.e. decreases) to positive scores (i.e. increases). Initial cross-lagged analyses then tested a model including level and change estimates for RWA and depression. This model fitted the data well [ $\chi^2(56)=116.46$  ( $p < .01$ ), CFI = .98 and SRMR = .04]. In this model, gender was significantly related to levels of RWA ( $r = .20$ ,  $p < .01$ ) but neither to levels of depression ( $r = .06$ , *ns*) nor to changes in RWA ( $\beta = .03$ , *ns*) or depression ( $\beta = -.05$ , *ns*). At the initial level, RWA and depression were not significantly related ( $r = .01$ , *ns*). Modest negative relationships were found between level and change estimates of RWA ( $\beta = -.20$ ,  $p < .05$ ) and between level and change estimates of depression ( $\beta = -.36$ ,  $p < .01$ ), indicating that relatively high levels of these variables predicted a steeper decline over the three-month period of this study, or vice versa. In addition, although levels of depression did not significantly predict changes in RWA ( $\beta = .07$ , *ns*), high levels of RWA predicted significant increases in depression over time ( $\beta = .12$ ,  $p < .05$ ). Finally, changes in RWA and depression were unrelated ( $r = -.10$ , *ns*).

In a next step, this model was extended with the life event measures. Rather than using the 12 life event subscales as indicators of the latent life event factors, we created three parcels of positive life event items and three parcels of negative life event items. Each parcel was composed of one item for each of the six life event domains. We chose to work with domain representative parcels rather than with domain-specific indicators because it has recently been argued that such a strategy leads to better stability and model fit (Little, Cunningham, Shahar, & Widaman, 2002).

Inspired by the procedure of Orth et al. (2009), prior to testing the full model including the interaction effects between RWA and both positive and negative life events (see Figure 1), in Step 1, a model without interaction terms was tested. This no-interaction model, including within-time correlations between RWA and depression, a within-time correlation between positive and negative life events and all possible cross-lagged effects (i.e. from RWA to depression

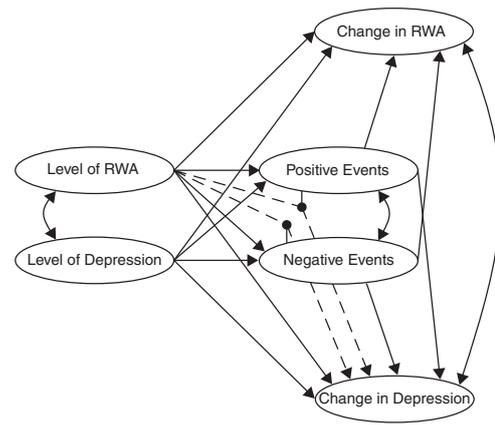


Figure 1. Theoretical model of relations between right-wing authoritarianism (RWA), depression and life events in Study 2 (full lines = main effects; dashed lines = interaction effects).

and both positive and negative life events and from depression to RWA and both positive and negative life events), fitted the data well [ $\chi^2(136)=334.46$  ( $p < .01$ ), CFI = .95 and SRMR = .05]. Correlations between life events on the one hand and either initial levels of RWA and depression or changes in RWA and depression on the other hand were not included because our model specified direct effects between these constructs. In Step 2, the interaction terms between RWA and both positive and negative life events were added to this model. Neither of these interactions had a significant effect on changes in depression, and adding them left the main effects that were observed in Step 1 virtually identical. As a consequence, as indicated by the Bayesian information criterion (BIC) of which lower values point to better model fit, the no-interaction model fitted the data better than the model including interactions (BIC = 9518.17 and 9527.35, respectively). Taken together, this suggests that RWA did not interact with either positive or negative life events in the prediction of depression and hence did not buffer against the effects of either positive or negative life events. Figure 2 displays the standardized estimates in the no-interaction model. In this model, gender was significantly

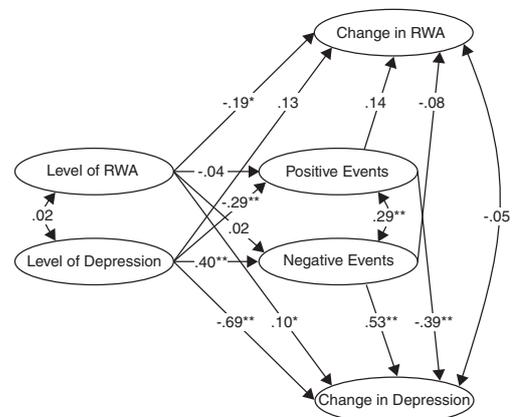


Figure 2. Best fitting structural model of relations between right-wing authoritarianism (RWA), depression and life events in Study 2. Coefficients are standardized estimates. For clarity reasons, relations with the control variables (i.e. gender) are not displayed. \* $p < .05$ ; \*\* $p < .01$ .

related to level of RWA ( $r = .20, p < .01$ ), depression ( $r = .31, p < .01$ ), positive life events ( $\beta = .25, p < .01$ ), negative life events ( $\beta = -.25, p < .01$ ) and changes in depression ( $\beta = .21, p < .01$ ) but not to changes in RWA ( $\beta = .01, ns$ ). In addition, there were significant reciprocal effects between depression and both positive and negative life events, with initial depression levels positively predicting negative life events and negatively predicting positive life events and with negative life events predicting increases and positive life events predicting decreases in depression. More importantly, however, whereas initial depression levels did not predict significant changes in RWA, high initial RWA levels predicted increases in depression over the three-month interval.

### Discussion

Study 2 shows that RWA failed to moderate the effects of negative and positive life events on depression. In fact, in opposition to the claim of Van Hiel and De Clercq (2009) that RWA should be considered a protective factor against distress, results suggest that, over time, RWA constitutes a risk factor for depression. Specifically, although the prospective relations between RWA and depression were rather weak, in line with the idea that self-estrangement is an obstacle for future well-being, authoritarianism significantly predicted over-time increases in depression. In other words, one way to get trapped into a vicious circle of negative affect and life events is through the adoption of authoritarian beliefs. In addition, results of Study 2 support and extend the findings of Orth et al. (2009) by showing that depression is not only reciprocally related to negative but also to positive life events. This suggests that both the presence of negative life events and the absence of positive life events constitute a risk factor for depression but also that depressed individuals are both more likely to experience negative life events and less likely to experience positive life events.

### STUDY 3

The aim of Study 3 was twofold. First, Study 3 intended to examine whether the longitudinal relation that was found in Study 2 between authoritarianism and depression could be replicated in a slightly younger and more heterogeneous sample of high school students (i.e. a period that is thought to be crucial in the formation of RWA) and whether this relation would also show up when using a longer time interval (i.e. one year compared with three months). Second, Study 3 intended to examine whether the longitudinal relation between authoritarianism and depression is moderated by the nature of the social environment. In particular, first, in line with previous research (Peterson & Duncan, 1999), we examined whether the authoritarianism–depression relation depends on (i.e. is moderated by) the authoritarianism level in the family of origin. For this purpose, the participants' parents also received questionnaires to assess their authoritarianism level. Second, because peer relations are thought to become increasingly important throughout adolescence (Brown & Dietz, 2009), we examined whether the authoritarianism–depression relation also depends on the

authoritarianism level among one's (relevant) peers. For this purpose, participants nominated their three best friends from a list of fellow students, allowing us to estimate the mean authoritarianism level of the participants' best friends.

### Method

#### Participants

Participants were 905 Dutch-speaking Belgian high school students following an academic track preparing them for a higher education. Data were collected during school hours in eight different secondary schools in the Dutch-speaking part of Belgium. Of these participants, 750 came from intact families, 128 had parents that were divorced, 26 had one deceased parent and 1 adolescent was an orphan. All participants received additional questionnaires for their parents and were asked to return these in a closed envelop ultimately 14 days later. In total, 565 mothers (62%) and 498 fathers (55%) filled out the questionnaires. Individuals were included in our study if at least one of their parents participated as well. This resulted in a final sample of 590 adolescent participants (mean age = 14.90; range = 14 to 17; 48% male). One year later, 85% of these adolescent participants participated in a follow-up data collection. At Time 1, before answering the questionnaires listed in the next section, participants needed to nominate their three best friends from a list of all the students in their grade.

#### Questionnaires

Both at Times 1 and 2, adolescent participants completed the same 14-item RWA scale that was used in Study 2. Cronbach's alphas were .73 at Time 1 and .75 at Time 2. At Time 1, parent participants also completed this scale. Cronbach's alphas were .73 for mothers and .78 for fathers. Finally, both at Times 1 and 2, adolescent participants completed the same 12-item depression scale as in Study 2. Cronbach's alphas were .84 at Time 1 and .85 at Time 2.

### Results and discussion

#### Preliminary analyses

In the adolescent sample, 9% of the data at the scale level were missing because of drop-out, because of some people not answering all questions or because the friends that were nominated did not participate in our study. In addition, data of 25 mothers and 92 fathers were missing. Participants with and without complete data were compared using Little's (1988) MCAR test. A non-significant chi-square [ $\chi^2(644) = 680.23, ns$ ] confirmed MCAR, allowing for a reliable estimation of missing data of the adolescent participants as well as of their friends, mothers and fathers. Because we were interested in the match between the RWA of adolescents with the RWA of their family of origin, in the parent sample, mother and father reports were combined to form a parental RWA score. Combining these scores seemed justified because (i) mean scores of mothers and fathers were virtually identical (the mean difference was 0.05 on a 5-point scale, see Table 2), (ii) correlations between mother and father reports were high ( $r = .48, p < .01$ , see Table 2)

Table 2. Means, standard deviations (*SD*), and correlations between the variables in Study 3

	Mean	<i>SD</i>	01.	02.	03.	04.	05.	06.	07.
01. T1 RWA mother	3.10	0.51							
02. T1 RWA father	3.05	0.50	.48**						
03. T1 RWA family	0.00	0.86	.86**	.86**					
04. T1 RWA friends	2.83	0.28	.13**	.08*	.13**				
05. T1 RWA	2.86	0.45	.30**	.33**	.37**	.22**			
06. T2 RWA	2.85	0.42	.30**	.27**	.33**	.19**	.65**		
07. T1 Depression	0.80	0.52	-.05	.01	-.02	-.07	-.17**	-.17**	
08. T2 Depression	0.78	0.50	.04	.04	.04	-.01	-.01	-.08	-.54**

RWA, right-wing authoritarianism.

\* $p < .05$ ; \*\* $p < .01$ .

and (iii) mother and father ratings yielded almost identical correlation patterns (see Table 2).

Means, standard deviations and correlations are shown in Table 2. Prior to computing means, standard deviations and correlations, we replaced missing values using the expectation maximization algorithm. Family and friend RWA was significantly positively related to adolescent RWA but not to depression, and adolescent RWA was significantly negatively related to depression at Time 1 but not at Time 2. Between-time correlations showed substantial rank-order stability in RWA and depression. Among adolescents, there were no age differences in any of the variables, but there were small gender differences in RWA at Times 1 and 2 [ $F(1, 589) = 4.12$  and  $8.34$ ,  $ps < .05$ ,  $\eta^2 = .01$  and  $.01$ , Cohen's  $d = .18$  and  $.24$ , respectively], with boys scoring higher ( $M = 2.90$  and  $2.90$ ;  $SD = 0.45$  and  $0.43$ ) than girls ( $M = 2.82$  and  $2.80$ ;  $SD = 0.45$  and  $0.40$ ). In addition, maternal and paternal age was significantly related to family RWA ( $r = -.12$  and  $-.10$ ,  $ps < .05$ , respectively). Finally, maternal and paternal levels of education were significantly related to family RWA ( $r = -.36$  and  $-.27$ ,  $ps < .01$ , respectively) as well as to adolescent RWA at Times 1 and 2 ( $r = -.15$  and  $-.12$  for mothers and  $-.10$  and  $-.13$  for fathers,  $ps < .05$ ).

#### Primary analyses

As in Study 2, LCM was used to examine our main hypotheses, analyzing covariance matrices in Mplus 6.1 using robust maximum likelihood estimation. Given that preliminary analyses confirmed MCAR, missing values were dealt with using the full information maximum likelihood algorithm. Again, to evaluate model fit, we used the chi-square ( $\chi^2$ ), the CFI and the SRMR. Given the differences in terms of adolescent gender, and parental age and level of education that were found in the preliminary analyses, these variables were included as control variables in the models that were tested.

Prior to conducting cross-lagged analyses, we conducted univariate LCM for RWA and depression separately. The latent change models fitted the data very well [ $\chi^2(7) = 14.59$  ( $p < .05$ ) and  $28.42$  ( $p < .01$ ), CFI = .99 and .99, and SRMR = .03 and .03 for RWA and depression, respectively]. Again, variance estimates for both RWA and depression pointed to substantial inter-individual differences, both with respect to

initial levels of RWA and depression and rates of change in these variables ( $ps < .01$ ). Regarding change, individual estimates of true change for all variables ranged from negative scores (i.e. decreases) to positive scores (i.e. increases). Initial cross-lagged analyses then tested a model including level and change estimates for RWA and depression. This model fitted the data well [ $\chi^2(88) = 238.65$ , CFI = .95 and SRMR = .04]. In this model, as for the control variables, gender was significantly related to level of RWA ( $r = -.11$ ,  $p < .05$ ) but neither to level of depression ( $r = .05$ , *ns*) nor to changes in RWA ( $\beta = -.11$ , *ns*) or depression ( $\beta = -.02$ , *ns*). In addition, maternal and paternal age was unrelated to both level of RWA ( $r = -.06$  and  $-.03$ , *ns*) and depression ( $r = .02$  and  $.01$ , *ns*), and changes in RWA ( $\beta = -.04$  and  $.12$ , *ns*) and depression ( $\beta = .09$  and  $-.02$ , *ns*). Finally, maternal and paternal levels of education were significantly related to level of RWA ( $r = -.19$  and  $-.12$ ,  $ps < .05$ ) but not to level of depression ( $r = -.02$  and  $.02$ , *ns*) and changes in depression ( $\beta = .01$  and  $-.07$ , *ns*). Further, paternal level of education was related to changes in RWA ( $\beta = -.21$ ,  $p < .01$ ), whereas maternal level of education was not ( $\beta = .01$ , *ns*). At the initial level, RWA and depression were significantly related ( $r = -.20$ ,  $p < .01$ ). Negative relations were found between level and change estimates of RWA ( $\beta = -.37$ ,  $p < .01$ ) and level and change estimates of depression ( $\beta = -.47$ ,  $p < .01$ ), indicating that relatively high levels of these variables predicted a steeper decline over the one-year period of this study. In addition, although levels of depression did not significantly predict changes in RWA ( $\beta = -.02$ , *ns*), high levels of RWA predicted significant increases in depression ( $\beta = .13$ ,  $p < .05$ ). Finally, changes in RWA and depression were not significantly related ( $r = -.11$ , *ns*).

In a next step, this model was extended with the measures of RWA of family and friends. To construct a latent family RWA factor, for both mothers and fathers, we created three item parcels. All six parcels were then used as indicators of the latent family RWA factor. As indicators of the latent friend RWA factor, we used the RWA scores of each of the three nominated friends. Prior to testing a full model including cross-lagged effects between levels and changes of RWA and depression, cross-lagged effects of the RWA of family and friends on changes in RWA and depression and the interaction effects between adolescent and family RWA and

between adolescent and friend RWA as a predictor of change in depression (see Figure 3), we tested a model without an interaction term in Step 1. This no-interaction model fitted the data adequately [ $\chi^2(250)=662.30$  ( $p < .01$ ), CFI = .91 and SRMR = .04]. In Step 2, we added the interaction terms between adolescent and family RWA and between adolescent and friend RWA as predictors of change in depression. The interaction terms did not have a significant effect on changes in depression, and adding these interactions left the main effects that were observed in Step 1 virtually identical. Consequently, the no-interaction model fitted the data better than the model including interactions, as indicated by lower BIC values (BIC = 27533.83 and 29398.67, respectively). Taken together, this suggests that adolescent RWA interacted with neither family nor friend RWA in the prediction of depression and hence that the effects of adolescent RWA on depression are not moderated by the level of RWA of one's family or friends. Figure 4 displays the standardized estimates in the no-interaction model. In this model, neither family nor friend RWA significantly predicted changes in adolescent RWA and depression. More importantly, however, whereas initial depression levels did not predict significant changes in RWA, initial RWA levels predicted significant increases in depression. Finally, changes in RWA and depression were not significantly related.

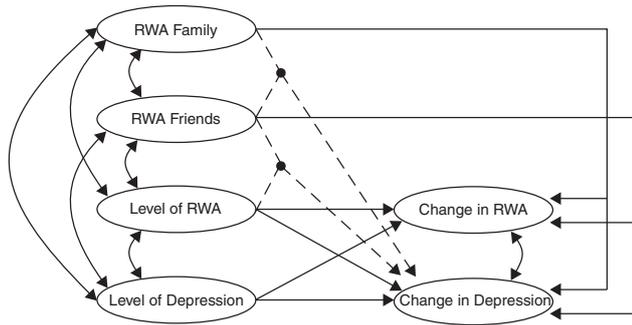


Figure 3. Theoretical model of relations between family, friend, and adolescent right-wing authoritarianism (RWA) and depression in Study 3 (full lines = main effects; dashed lines = interaction effects).

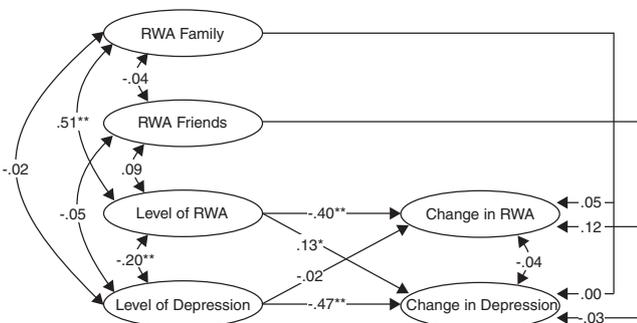


Figure 4. Best fitting structural model of relations between family, friend, and adolescent right-wing authoritarianism (RWA) and depression in Study 3. Coefficients are standardized estimates. For clarity reasons, relations with the control variables (i.e. adolescent gender, maternal and paternal age and maternal and paternal level of education) are not displayed. \* $p < .05$ ; \*\* $p < .01$ .

Discussion

Results of Study 3 replicated the finding of Study 2 that RWA positively predicts over-time increases in depression and should be considered a risk factor for rather than a protective factor against depression. Additionally, results suggest that this main effect of RWA is not moderated by the level of RWA that is present either in the family of origin or among one's best friends. In other words, the effects of RWA on depression do not seem to depend on the degree of (mis)match in RWA between the adolescent and either his parents or his best friends.

GENERAL DISCUSSION

Results of the present studies suggest that authoritarian beliefs are not exactly 'good for you', as recently advocated by Van Hiel and De Clercq (2009). In fact, although the observed relationships between authoritarianism and depression were rather weak, results of the present studies converge on the conclusion that authoritarian beliefs constitute a risk factor for rather than a protective factor against psychological ill-being. First, contrary to Van Hiel and De Clercq (2009), with the exception of Study 3 (Time 1), the present studies failed to demonstrate significantly negative cross-sectional associations between authoritarianism and depression. In fact, in line with other studies that have looked at this cross-sectional relationship (Butler, 2000; Schlachter & Duckitt, 2002), the present study generally failed to find any significant cross-sectional association. In addition, the present studies failed to replicate previous findings that authoritarianism would buffer against the negative effects of psychological vulnerability factors (i.e. D-type personality) and negative life events on depression (Van Hiel & De Clercq, 2009). Authoritarianism moderated the effects of neither D-type personality nor negative (and positive) life events on depression. Instead, in line with psychodynamic theories, Studies 2 and 3 converged on the conclusion that, across time, authoritarianism tends to be 'bad for you'.

Specifically, whereas Studies 2 and 3 showed that depression did not predict over-time changes in authoritarianism, irrespective of the time interval (i.e. three months in Study 2 versus one year in Study 3), authoritarianism predicted over-time increases in depression. In addition, Study 3 showed that the effect of authoritarianism on depression is independent of the immediate social environment. The effect of authoritarianism depended neither on the authoritarianism level in the family of origin nor on the authoritarianism level among one's best friends. In this respect, Study 3 further supports the findings of Study 1 in which it was shown that age (i.e. another proxy for differences in the social environment) did not moderate the authoritarianism–depression relation. Together, findings suggest that, apparently, authoritarianism is not more adaptive among people who grew up in a specific family, among a particular type of friends or in a specific socio-political climate. On the one hand, these results are in line with the findings of previous research which reported that, in general, some of the value orientations that were found to be highly positively related to authoritarianism

(i.e. Tradition, Conformity and Security; see Duriez & Van Hiel, 2002) are weakly but significantly negatively related to mental health and/or positive affect, whereas some of the value orientations that were found to be highly negatively related to authoritarianism (i.e. Self-Direction and Stimulation; see Duriez & Van Hiel, 2002) are weakly but significantly positively related to mental health and/or positive affect (Sagiv & Schwartz, 2000). On the other hand, these results contradict the match perspective put forward by Sagiv and Schwartz (2000), which states that the associations between values and well-being depend on the match between people's values and the values that are emphasized within one's social environment.

In general, results of the present study are compatible with the idea that authoritarian beliefs take root in unconscious conflicts and serve to shield awareness from these unconscious conflicts through the development of an overly strong superego that represses unconscious desires (Adorno *et al.*, 1950; Crouse & Stalker, 2007). Results are also compatible with the psychodynamic tenet that, although unconscious conflicts and desires can be repressed, repression will not make these conflicts go away, and that leaving these conflicts unattended constitutes a serious risk factor for psychological ill-being. This psychodynamic idea about the counterproductive effects of repressive coping also received support from research on emotion regulation in general and the suppression of negative emotions in particular. From different strands of research, there is increasing evidence that, although suppressing negative emotions might be temporarily functional (or at least not strongly dysfunctional), suppression tends to backfire and, as such, tends to have a well-being cost in the long run (e.g. Gross & John, 2003; Gross & Levenson, 1993, 1997; Petrie, Booth, & Pennebaker, 1998; Ryan, Deci, Grolnick, & La Guardia, 2006; Schwartz, 1990). An important aim for future research is to explicitly examine these dynamics in relation to authoritarianism, for instance, by investigating whether authoritarianism predicts suppression of emotions that, in turn, predicts over-time increases in ill-being.

### Limitations and future directions

Although the present manuscript has a number of strengths, including the longitudinal designs of Studies 2 and 3, the attention for both negative and positive life events in Study 2 and the inclusion of parent and peer reports in Study 3, it also has important limitations. First, the crucial measures (i.e. RWA and depression) were obtained from adolescent self-reports only, increasing the likelihood of shared method variance distorting the results. Although self-reports may be the most valid means to assess adolescents' authoritarianism and depression, future research might want to use other indices as well. Specifically, future research could include parent, teacher or even peer reports to get a more detailed view on adolescents' authoritarian beliefs and psychological functioning. A more detailed view on adolescent beliefs, psychological functioning and their relation might also be obtained by using alternative methods such as interviews. Additionally, to study the possible moderational role of

authoritarianism in the relation between psychological vulnerability factors and/or life events and well-being in more detail, apart from considering other vulnerability factors such as sociotropy and autonomy (Bieling, Beck, & Brown, 2000), experimental studies might be useful. Such studies could, for instance, investigate whether high versus low authoritarians react differently to stress inductions such as negative feedback (e.g. Fodor & Wick, 2009), cues of social exclusion (e.g. Denissen & Penke, 2008) or other related manipulations and whether the emotions aroused by such manipulations might alter over time when participants are repeatedly exposed to such manipulations. Finally, future research might benefit from applying a longitudinal and/or an experimental design to a wider range of well-being and adjustment measures, and not just look at depression as an outcome variable.

Second, consistent with the way we framed the current studies in the introduction, the extent to which authoritarianism impacts upon depression might depend on cultural conditions. Specifically, consistent with the idea that the adaptivity of authoritarianism might depend upon the extent to which authoritarian beliefs are valued within a given society, it is important to more thoroughly investigate whether the extent to which authoritarianism impacts upon depression is moderated by the degree of authoritarianism in the society at large (i.e. at the macro-social level). Although the present studies do not support the idea that authoritarianism impacts differently upon depression in function of the social environment, cross-cultural research seems needed to shed more light on this issue. Although the effects of level of authoritarianism within the family and among one's best friends straightforwardly assess the level of authoritarianism at the micro-social level, at best, it only provides an indirect reflection of the level of authoritarianism at the macro-social level. In addition, although it can be argued that there has been a decline in authoritarianism over time, starting in the 1960s, and that, therefore, age reflects the level of authoritarianism that was present in the society in which one grew up, age-related findings can also reflect true age effects rather than cohort effects. Hence, longitudinal cross-cultural research over a long time span seems needed to investigate this issue more thoroughly.

Third, although the present studies suggest that authoritarianism should be considered a risk factor for rather than a protective factor against psychological ill-being, the present studies offer little insight in the psychological processes underlying the authoritarianism–depression relation. Future research might want to identify mediating mechanisms that can explain the observed relationship. One fruitful avenue might be to investigate whether this relation is mediated by individual differences in anti-intracception and need for closure that were found to relate to individual differences in authoritarianism. In this respect, past studies have demonstrated a clear link between authoritarianism and the need for closure (e.g. Jugert *et al.*, 2009; Van Hiel *et al.*, 2004) as well as between the need for closure and ill-being (e.g. Roets & Soetens, 2010). Moreover, several studies have demonstrated negative links between authoritarianism and intracception indicators such as openness to experience (e.g.

Duriez & Soenens, 2006; Sibley & Duckitt, 2008), identity exploration (Peterson & Lane, 2001) and a preference for entertainment offering introspection (Peterson & Pang, 2006). Another fruitful avenue might be to investigate the mediating role of coping strategies. Authoritarians can be expected to be less problem-solving oriented and more likely to deny and avoid solving problems, which would, in turn, affect changes in depression. Finally, future research might want to investigate the possible mediating role of differences in social functioning. Because of their closed-mindedness, authoritarians might be less likely to support friends and/or significant others whenever these turn out to hold different opinions or whenever these turn out to prefer different paths in life. This might have a negative effect on the quality of their social relations, which, in turn, might increase feelings of loneliness and depression.

Fourth, future research might want to identify external variables that might determine the extent to which people both adopt authoritarian beliefs and develop depressive symptoms. Given that, in line with previous studies on inter-generational similarity in RWA (e.g. Duriez, & Soenens, 2009; Duriez, Soenens, & Vansteenkiste, 2008), Study 3 showed a strong positive correlation between the authoritarianism of adolescents and their parents; one possible direction in which to look for such variables might be the family context. In this respect, studies have shown that an authoritarian parenting style is likely to have a more detrimental effect on adolescent's development of internalizing problems compared with authoritative parenting (e.g. Luyckx, Tildesley, et al., 2011). In addition, research has stressed the importance of the style that parents use in interacting with children and especially of the goals they promote within this interaction for the development of authoritarianism (Duriez et al., 2007, 2008). Apart from parents having an effect on adolescents' authoritarianism and well-being, authoritarianism and well-being might be co-determined by the larger social surrounding (e.g. Petersen et al., 1993; Poteat & Spanierman, 2010) or cultural conditions at large. Cultural factors might not only determine the extent to which authoritarianism impacts upon well-being but might also determine the social desirability of authoritarian beliefs. Cross-cultural studies should examine the influence of such cultural factors on individual authoritarianism and well-being in more depth. In addition, given that biological and genetic factors might predispose people to adopt authoritarian beliefs (e.g. McCourt, Bouchard, Lykken, Tellegen, & Keyes, 1999) or develop depression (Petersen et al., 1993), future research might want to examine the role of such factors in more depth as well.

## Conclusion

Although previous studies already investigated the link between authoritarianism and measures of psychopathology, adjustment and well-being from a cross-sectional perspective, the present article is among the first to address this issue from a longitudinal perspective. Specifically, the present study addressed the question whether the potential benefits of authoritarianism in terms of psychological well-being in general and depressive symptoms in particular are

sustainable over time. Consistent with the tenet that shielding oneself from one's own emotions is likely to result in self-deception and self-estrangement, which is likely to undermine one's well-being (e.g. Etchegoyen, 1991; Perls, 1973; Rogers, 1961; van Deurzen, 2002; Wolberg, 1995), the present studies converge on the conclusion that, over time, authoritarianism tends to have a detrimental effect on well-being.

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