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The Motivational Bases of Right-Wing Authoritarianism and Social Dominance Orientation: Relations to Values and Attitudes in the Aftermath of September 11, 2001

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Research suggests that different motivational dynamics underlie right-wing authoritarianism (RWA) and social dominance orientation (SDO). These differences may be framed in the theory of basic human values. RWA may trace back to conservation versus openness-to-change values, and SDO to self-enhancement versus self-transcendence values. Based on a large-scale German survey, associations of RWA and SDO with personal values and attitudes in the aftermath of September 11, 2001, were analyzed. Results indicated that RWA related more strongly than SDO to conservation values and threat-related attitudes toward Islam as an expression of the motivational goals of social control and security, whereas RWA and SDO related equally to self-enhancement versus self-transcendence values and concern for negative consequences of military action as an expression of the motivational goal of altruistic concern. Thus, the motivational bases of RWA and SDO appear to be only partly different.

Keywords: *right-wing authoritarianism; social dominance orientation; personal values; September 11th; political attitudes*

Examining prejudice from a personality perspective, research has identified two prime determinants: right-wing authoritarianism (RWA)—encompassing authoritarian submission, authoritarian aggression, and conventionalism (Altemeyer, 1981)—and social dominance orientation (SDO)—“a general attitudinal orientation toward intergroup relations, reflecting whether one generally prefers such relations to be equal, vs. hierarchical” (Pratto, Sidanius, Stallworth, & Malle, 1994, p. 742).

Both variables together account for large amounts of variance in hostility toward groups such as homosexuals, Blacks, and women, as well as right-wing political beliefs (e.g., militaristic attitudes, nationalism, harsh social policy attitudes) and party preferences (Altemeyer, 1996; Pratto, 1999; Stellmacher, 2004). For example, RWA and SDO explained about 50% of variance in generalized prejudice (Altemeyer, 1998; McFarland, 2002; McFarland & Adelson, 1996) and a full 66% of variance in conservative beliefs (Van Hiel & Mervielde, 2002).

In North American studies, RWA and SDO are usually unrelated or only weakly related. In Western European studies, the interrelation is typically stronger. The highest correlations reported are .66 in a German study (Zick & Petzel, 1999; however, in this study, an early SDO measure of questionable validity was used) and .68—corrected for unreliability—in an Italian study (Aiello, Leone, & Chirumbolo, 2003). The strong interrelation led Zick and Petzel (1999) to combine RWA and SDO to one construct of authoritarian dominance orien-

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tation. However, despite this substantial overlap in countries outside of North America, RWA and SDO still account for unique variance in various outcome variables (Duriez & Van Hiel, 2002; Van Hiel & Mervielde, 2002).

Because of the strong predictive power of RWA and SDO, it is important to understand what motivational dynamics underlie these variables. In the following, we examine the psychological meanings of RWA and SDO within the framework of the theory of basic human values by Schwartz (1992) and summarize relevant findings on correlates of RWA and SDO. Empirically, we analyze common and unique associations of RWA and SDO with personal values and attitudinal variables that had become relevant in the aftermath of the terrorist attacks on September 11, 2001.

PERSONAL VALUES AND THE MEANINGS OF RWA AND SDO

What are the motivational underpinnings of RWA and SDO? According to Altemeyer (1998), in the tradition of the classic research on the authoritarian personality by Adorno, Frenkel-Brunswik, Levinson, and Sanford (1950), RWA and SDO are simply two different forms of authoritarian personality: a submissive (RWA-based) and a dominating (SDO-based) variant. Elaborating on this idea, Lippa and Arad (1999) consider RWA and SDO expressions of two different kinds of dispositional prejudice: a maladjusted, defensive kind (based on RWA) that "may reflect submission to norms decreed by authorities and defense against intrapsychic threat" and a dominance-oriented kind (based on SDO) that relates to disagreeableness, coldness, and aggressiveness and "may represent a route to superiority and power in a 'dog-eat-dog' world" (p. 488). Similarly, Duriez and Van Hiel (2002) argue that RWA-based prejudice is due to identity concerns (preservation of ingroup norms and traditions) and SDO-based prejudice is due to instrumental concerns (striving for power and superiority).

A more comprehensive account of the psychological meanings of RWA and SDO has been presented recently by Duckitt (2001; Duckitt, Wagner, du Plessis, & Birum, 2002). In his dual process model of ideology and prejudice, RWA and SDO are two dimensions of ideological attitudes that trace back to a developmental sequence of two dimensions of child-rearing behavior, personality characteristics, and social worldviews. RWA, on one side, results from a punitive and strict (vs. permissive and tolerant) upbringing, the personality dimension of social conformity (vs. individual autonomy), and the belief that the social world essentially is dangerous and threatening (vs. safe and secure). SDO, on the other side, results from a cold, unaffectionate (vs. affectionate) upbringing, the personality dimension of toughmindedness (vs. tendermindedness), and the belief that the world essen-

tially is competitive (vs. cooperative and harmonious). The common thread of these developmental stages is specific motivational goals: RWA and a dangerous worldview develop on the basis of the motivational goals of social control and security (vs. autonomy and individual freedom; see Feldman, 2003a, for a similar account), and SDO and a competitive worldview develop on the basis of the motivational goals of superiority, power, and dominance (vs. egalitarian and altruistic concern). According to Duckitt (2001), importance of these dual motivational goals are the main individual difference factors in prejudice.

The notions on the psychological meanings of RWA and SDO can be integrated into an established, comprehensive theoretical framework: the motivational theory of basic human values by Schwartz (1992, 2005a; see also Feldman, 2003b). Values can be defined as transsituationally consistent, relatively stable, evaluative beliefs pertaining to desirable end-states or modes of conduct. They vary in importance as guiding principles in one's life and influence attitudes and behavior (Rokeach, 1973; Schwartz, 1992). Schwartz (1992) distinguishes 10 motivational types of values: universalism, benevolence, tradition, conformity, security, power, achievement, hedonism, stimulation, and self-determination. Deriving from the inherent compatibilities and conflicts of the motivational goals underlying these value types, they are arranged in the aforementioned order in a two-dimensional quasi-circumplex structure in which adjacent values have similar motivational implications and tend to go together, whereas opposing values have contrasting motivational implications and tend not to go together. From this follows that associations between the 10 value types and external variables decrease monotonically as one goes around the circular structure of values in both directions from the most strongly to the least strongly associated value type, so that a graphical representation of the correlations with the external variable takes the form of a sinusoid curve (Schwartz, 1992). On one dimension, self-enhancement values (power and achievement) contrast with self-transcendence values (universalism and benevolence), and on the other dimension, conservation values (tradition, conformity, and security) contrast with openness-to-change values (stimulation and self-determination); the 10th value, hedonism, shares aspects of both self-enhancement and openness-to-change. The dynamic relations between the value types have been confirmed in a large number of societies all over the world, using various samples and different methods of measurement (Schwartz, 2005a, 2005b; Schwartz & Boehnke, 2004; Schwartz et al., 2001; Schwartz & Sagiv, 1995; Struch, Schwartz, & van der Kloot, 2002).

RWA and SDO can be linked to this two-dimensional value structure (see also Duckitt, 2001). The motivational goals of RWA, security and social control, are reflected in the conservation values security, conformity, and tradition, so RWA should be strongly related to these types of values. The motivational goals of SDO, dominance and superiority, are reflected in the self-enhancement values power and achievement, so SDO should be strongly related to these types of values. Conversely, RWA should relate to low importance of openness-to-change values, and SDO should relate to low importance of self-transcendence values. The theory of basic human values allows for a sophisticated analysis of the motivational meanings of RWA and SDO because it states a specific continuous structure of different types of values. Thus, integrating RWA and SDO into this structural model goes beyond studying simple correlations.

EMPIRICAL FINDINGS ON CORRELATES OF RWA AND SDO

Only few results on value correlates of RWA and SDO have been reported in the literature, and these studies are rather exploratory in nature. All of them support the aforementioned motivational meanings of RWA and SDO. McFarland and Adelson (1996) found that RWA related to high importance of tradition, conformity, and security values and low importance of self-direction values, whereas SDO related to low importance of universalism values. Similar results for RWA have been found by Rohan and Zanna (1996). In the studies by Altemeyer (1998) and Duriez and Van Hiel (2002), RWA related most positively to tradition or conformity values and most negatively to self-direction values, whereas SDO related most positively to power values and most negatively to universalism values. The correlational patterns of RWA and SDO were more similar in the Belgian study by Duriez and Van Hiel (2002) than in the Canadian study by Altemeyer (1998), reflecting the differing magnitude of correlation between RWA and SDO (.37 vs. .22). Specifically, in the Belgian study, RWA correlated less strongly with tradition and more strongly with security values than in the Canadian study.¹

Several studies examined correlations with variables that may be considered indirect indicators of the motivational goals underlying conservation versus openness-to-change and self-enhancement versus self-transcendence values. Results from these studies are consistent with the suggested psychological meanings of RWA and SDO. RWA, but not SDO, was associated with social conformity and traditionalism, religiosity, need for structure, and a dangerous worldview (Altemeyer, 1998; Duckitt, 2001; Stellmacher, 2004). In contrast, SDO, but not RWA, correlated positively with toughmindedness and a competitive-jungle worldview (encompassing personal

meanness and Machiavellian beliefs) and negatively with empathy, altruism, expressiveness, and agreeableness (Duckitt, 2001; Lippa & Arad, 1999; McFarland & Adelson, 1996; Pratto et al., 1994; Stellmacher, 2004). Saucier (2000) found that RWA and SDO were differentially associated with two broad dimensions of ideological attitudes he had identified through a lexical approach: RWA related strongly to "alphasisms" (attitudes referring to "reverence for traditional and religious sources of authority" and "conserving cultural traditions," p. 377) but not to "betaisms" (attitudes referring to "an overall orientation favoring whatever is immediately beneficial to me and mine, disregarding wider concerns of fairness or morality," p. 378), whereas SDO correlated moderately positively with "betaisms" but not with "alphasisms." Concerning more specific variables, RWA correlated higher than SDO with prejudice against homosexuals, whereas SDO correlated higher than RWA with prejudice against other groups (Altemeyer, 1998; Whitley & Lee, 2000). Altemeyer (1998) reports different correlations between RWA and SDO and prejudice on the item level. For example, although both RWA and SDO correlated in similar magnitude with acceptance of rape myths, people high in RWA scored particularly high in items referring to moral aspects, whereas people high in SDO scored particularly high in items referring to power issues. McFarland (2003, 2005) found that both RWA and SDO led to support for attacking Iraq, but these effects were in part differentially mediated: RWA operated through the belief that Iraq is a threat to the United States and SDO through a lack of care for human suffering produced by war.

THE PRESENT RESEARCH

Summing up, there is some evidence that RWA relates to conservation (vs. openness-to-change) values and orientations expressing the motivational goals of social security and conformity (vs. individual autonomy) and SDO relates positively to self-enhancement (vs. self-transcendence) values and orientations expressing the motivational goals of dominance and superiority (vs. equality and altruistic concern). The present study has two main aims. First, the motivational goals associated with RWA and SDO are tested directly by analyzing relationships of RWA and SDO with personal values. We complement previous studies on value correlates of RWA and SDO by using a different operationalization of values and a large, heterogeneous sample in another country. It will be interesting to see whether in Germany, a country where a very high correlation between RWA and SDO has been found, differential value correlates of RWA and SDO occur. We expect that despite a strong

interrelation, RWA still relates more strongly to conservation values, whereas SDO relates more strongly to self-enhancement values. However, the correlational patterns of RWA and SDO may be more similar than those in other studies.

Second, to test indirectly whether different motivational goals underlie RWA and SDO, we analyze correlations of RWA and SDO with attitudes that have become relevant in the aftermath of the terrorist attacks on September 11, 2001, namely, attitudes toward Islam and toward a military response to September 11. Based on Altemeyer's (1998) observation that RWA and SDO correlate differently with different prejudice items, we hypothesize that RWA and SDO correlate differently with different facets of attitudes toward Islam and toward military action. Derived from the assumption that RWA and SDO are linked to different motivational goals, we first expect that RWA relates more strongly than SDO to a threat-related, fearful facet of attitudes toward Islam (as an expression of social control and security motivation), although RWA and SDO predict in equal measure a more general stereotypical facet. Second, we hypothesize that SDO relates more strongly than RWA to low concern for negative consequences of a military response to September 11 (as an expression of low altruistic concern), although RWA and SDO predict in equal measure general support for a military response.

METHOD

Overview

The results presented below are based on a survey that we began shortly after the terrorist attacks on September 11, 2001. Data collection took place from September 28, 2001, to January 24, 2002. Most of the data were obtained through an Internet questionnaire; a minority of participants filled out paper-and-pencil questionnaires. Because item and factor analyses yielded virtually identical results for the Internet and the paper-and-pencil samples (see Cohrs, Kielmann, Moschner, & Maes, 2002), we combined both samples. Other studies found that data obtained through paper-and-pencil and Internet questionnaires are generally comparable (e.g., Buchanan & Smith, 1999; Gosling, Vazire, Srivastava, & John, 2004).

In the present study, we not only assessed the variables used in this article but, for the analyses presented below, we selected those variables for which clear predictions concerning their relationships with RWA and SDO could be made. Detailed information on the study can be found in the technical report (Cohrs et al., 2002), which is available (in German) on the Internet (<http://www.gerechtigkeitsforschung.de/berichte/beril48.pdf>).

Participants

We attempted to obtain a diverse sample regarding demographic and attitudinal variables. For the Internet questionnaire, all employees and students of a German university were asked by e-mail whether they would participate in the study and/or forward the request for participation to possibly interested acquaintances. Similar e-mail requests were distributed in newsgroups and a number of mailing lists and were sent to political, educational, environmental, and societal groups. Several newspapers published announcements of the study and a few Web sites included links to our survey. For the paper-and-pencil questionnaires, all employees and students of another German university were invited to participate. Further requests were sent to friends, relatives, and colleagues, always with the plea to forward it to possibly interested people. Participants were not paid. As incentives for participation, we offered feedback about the general results. Also, a Web page with answers to frequently asked questions was published after data collection.

After deletion of multiple submissions and cases with unusable or largely incomplete data, we obtained a sample of $N = 1,597$. Participants were required to have answered at least 50% of the items for each construct. Remaining missing values were estimated by the expectation-maximization algorithm (see Schafer, 1997), separately for each of the constructs listed below. This procedure resulted in a sample of 1,552 individuals, of whom 82.2% participated on the Internet and 17.8% filled out paper-and-pencil questionnaires. There were more men (53.0%) than women (46.8%; 3 participants did not indicate their gender). Age ranged from 14 to 75 years ($M = 30.50$, $SD = 10.67$). Of the participants, 59.2% were students. Educational level was high; 59.4% of the participants had graduated from (the German equivalent of) high school and an additional 32.1% from university. Political ideology, indicated on a 10-point scale ranging from *extremely left* (1) to *extremely right* (10) extended from 1 to 9 ($M = 4.06$, $SD = 1.49$). The median time needed for filling out the Internet questionnaire was 33.35 min.

Instruments

If not stated otherwise, items were answered on 6-point rating scales ranging from *full rejection* (0) to *full agreement* (5).

Right-wing authoritarianism. RWA was measured by a nine-item scale developed by Petzel, Wagner, Nicolai, and van Dick (1997), following Altemeyer (1988). It has been validated in a number of studies (Petzel et al., 1997). In our study, some items were replaced with, in our view, clearer translations by Schneider (1997), and

TABLE 1: Values Scale Characteristics and Sample Items

Value Type	Sample Items	No. of Items	α	M	SD
Tradition	L thinks it's important not to ask for more than what you have. L believes that people should be satisfied with what they have.	4	.51	1.99	0.77
Conformity	It is important to J always to behave properly. J wants to avoid doing anything people would say is wrong.	4	.71	2.10	0.85
Security	It is very important to D that his or her country be safe. D thinks the state must be on the watch to threats from within and without.	5	.69	2.59	0.80
Power	B always wants to be the one who makes the decisions. B likes to be the leader.	3	.67	1.76	0.90
Achievement	Being very successful is important to W. W likes to impress other people.	4	.85	2.55	0.96
Hedonism	U really wants to enjoy life. Having a good time is very important to U.	3	.84	2.95	1.00
Stimulation	R likes surprises. It is important to R to have an exciting life.	3	.79	2.51	0.93
Self-direction	It is important to L to make his or her own decisions about what he or she does. L likes to be free to plan and to choose his or her activities for himself or herself.	4	.60	3.83	0.64
Universalism	H believes all the world's people should live in harmony. Promoting peace among all groups in the world is important to H.	6	.79	3.64	0.72
Benevolence	It is important to C to respond to the needs of others. C tries to support those he or she knows.	4	.63	3.46	0.65

some items were modified linguistically. This version has been validated in an earlier study by Cohrs and Moschner (2002). A sample item is, "To maintain law and order, tougher action should be taken against outsiders and troublemakers." Cronbach's α was .78 ($M = 1.27$, $SD = .71$).

Social dominance orientation. SDO was measured by a translation of the 16-item scale by Pratto et al. (1994). Most items were taken from Six, Wolfradt, and Zick (2001) but some of their translations were changed to render the items closer to the original meanings. An exemplary item is as follows: "It would be good if all groups were equal" (reverse-coded). Cronbach's α was .89 ($M = 1.66$, $SD = .72$).

Personal values. Values were assessed by a translation of the Portrait Values Questionnaire (PVQ; Schwartz, 2005b; Schwartz et al., 2001), which is easier to administer over the Internet than the more commonly used Schwartz Value Survey (SVS; Schwartz, 1992). Schwartz (2005b) presents evidence of reliability, relative stability, and construct and external validity of the PVQ as well as convergent and discriminant validity of the PVQ and the SVS. Also, multidimensional analyses supported the theoretical quasi-circumplex structure. Each of the 40 items consists of a short person description and refers to one value type. Participants rated on 6-point scales how similar or dissimilar the persons were compared to themselves (0 = *very dissimilar*, 5 = *very similar*). Scale characteristics and sample items are presented in Table 1.

Attitudes toward Islam and a military response. We devised 16 items on attitudes toward Islam pertaining to aggressiveness and threat of Islam, the character of Islam concerning human rights, and political preferences (e.g.,

concerning immigration from Islamic countries). Using exploratory factor analyses, threat-related and stereotypical human rights-related items could be differentiated. For both facets, three items with very high factor loadings were retained. One threat-related sample item is as follows: "The large number of Koran schools and mosques in Germany shows how much we are already infiltrated by Islam." Cronbach's α was .85 ($M = 1.18$, $SD = 1.06$). One stereotypical sample item is as follows: "Basically, the fundamental human rights are respected in Islamic societies as much as in others" (reverse-coded). Cronbach's α was .75 ($M = 2.73$, $SD = .93$). Concerning attitudes toward a military response to September 11, concern for negative consequences was measured by four items. A sample item is as follows: "Military action causes enormous suffering for innocent people." Cronbach's α was .86 ($M = 3.40$, $SD = .99$). Support for a military response was assessed by three items (e.g., "There should be military action against those immediately responsible"). Cronbach's α was .86 ($M = 2.49$, $SD = 1.24$).

RESULTS

RWA and SDO were highly interrelated ($r = .56$, $p < .001$) and both related strongly to a right versus left political ideology (RWA: $r = .56$; SDO: $r = .52$, $ps < .001$). Men had slightly higher scores than women in both RWA ($M_s = 1.34, 1.20$; $SD_s = .77, .63$), $t(1547) = 3.90$, $p < .001$, $d = .20$, and SDO ($M_s = 1.76, 1.56$; $SD_s = .74, .68$), $t(1547) = 5.51$, $p < .001$, $d = .28$. In the following, we first present results concerning value correlates and then results concerning associations with attitudes in the aftermath of September 11, 2001.

RWA, SDO, and Values

To analyze their underlying motivational goals, we computed correlations between RWA, SDO, and values. The mean similarity rating across all 40 value items was controlled for because of methodological and theoretical reasons (Schwartz, 1992). Methodologically, this procedure controls response sets (acquiescence), which is a common problem in assessing values because they are, in general, socially desirable and, theoretically, it is relative value priorities rather than the absolute importance of values that is of psychological significance. For RWA, partial correlations were positive for tradition (.21), conformity (.41), security (.44), and power (.18) and negative for hedonism (-.12), stimulation (-.15), self-direction (-.27), universalism (-.49), and benevolence (-.23, $p < .001$). There was no significant correlation with achievement. For SDO, correlations were positive for conformity (.18), security (.32), power (.32), and achievement (.22) and negative for self-direction (-.11), universalism (-.68), and benevolence (-.25, $p < .001$). There were no significant associations with hedonism, stimulation, and tradition. The relationships are presented graphically in Figure 1. For both constructs, almost perfect sinusoid curves emerged. As expected, there were differential peaks of the curves for RWA and SDO. According to significance tests for comparison of correlations (Steiger, 1980), RWA and SDO correlations were significantly different ($z_{diff} > 4.78$, $p < .001$) for all value types except for benevolence ($z_{diff} = .75$, ns). Overall, RWA related more strongly than SDO to conservation versus openness-to-change values and SDO related more strongly than RWA to self-enhancement versus self-transcendence values. However, there also was substantial overlap: Both RWA and SDO related to high importance of security values and both RWA and SDO related to low importance of universalism and benevolence values.

To examine more closely where RWA and SDO are located in the two-dimensional value space, we ran a principal component analysis on RWA, SDO, and the 10 value scales (we used ipsatized scores, i.e., subtracted from the value scales the mean similarity rating across all 40 items; see Schwartz, 1992). The scree plot clearly indicated a two-dimensional solution (with eigenvalues of 3.31, 2.67, 1.23, .97, .81, etc.), which explained 49.9% of the variance. The Varimax-rotated component loadings are presented in Figure 2. In agreement with the theory of basic human values by Schwartz (1992), the two dimensions can clearly be identified as self-enhancement versus self-transcendence (contrasting power and achievement with universalism and benevolence) and conservation versus openness-to-change (contrasting conformity, security, and tradition with stimulation, self-direction, and hedonism).² SDO loaded strongly on the self-enhancement (.68) and weakly on the conservation

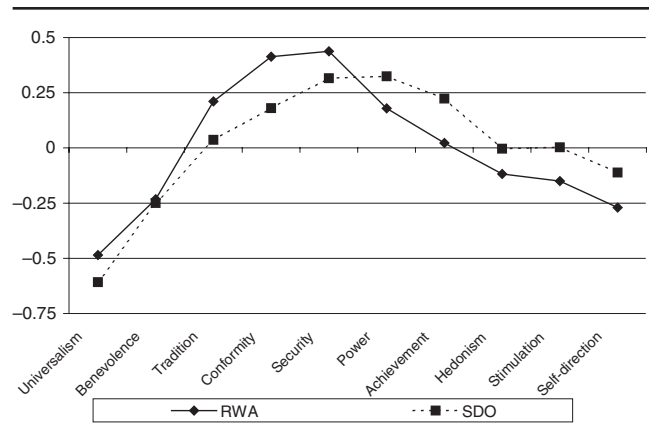


Figure 1 Value correlates of RWA and SDO.
NOTE: RWA = right-wing authoritarianism, SDO = social dominance orientation.

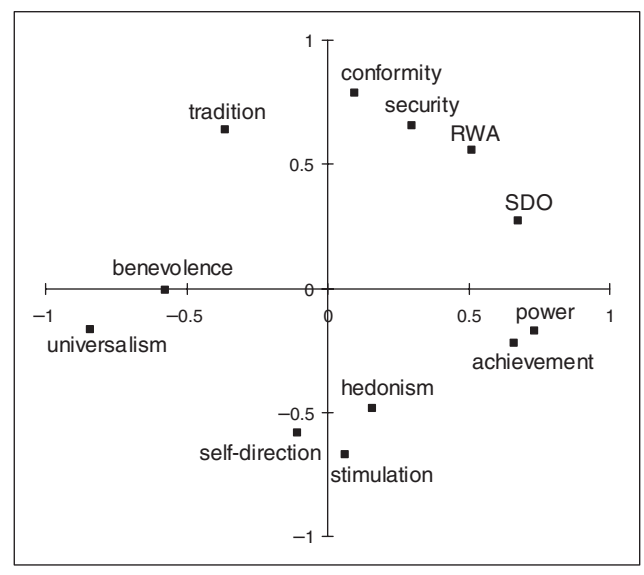


Figure 2 Component loadings of RWA, SDO, and values in a two-dimensional space.
NOTE: RWA = right-wing authoritarianism, SDO = social dominance orientation.

dimension (.27), whereas RWA loaded strongly on both dimensions (self-enhancement: .51; conservation: .56).

RWA, SDO, and Attitudes Toward Islam and a Military Response

Table 2 presents correlations between RWA and SDO and the attitudinal variables pertaining to the situation after September 11, 2001. In general, correlations were very similar for RWA and SDO, which is not surprising because of the high interrelation of both variables. For three variables, results were consistent with our predictions. Z_{diff} values of tests for comparison of correlations showed that RWA related more positively than SDO to threat-related attitude toward Islam. Also, there were no

TABLE 2: Correlations of RWA and SDO With Attitudes in the Aftermath of September 11

	<i>RWA</i>	<i>SDO</i>	<i>z_{diff}</i>
Threat-related negative attitude toward Islam	.61**	.50**	5.46**
Stereotypical negative attitude toward Islam	.26**	.29**	1.57
Concern for negative consequences of military response	-.42**	-.45**	1.34
Support for military response	.44**	.45**	0.40

NOTE: RWA = right-wing authoritarianism; SDO = social dominance orientation.

* $p < .01$. ** $p < .001$ (two-tailed).

significant differences concerning the correlations with stereotypical negative attitudes toward Islam and support for a military response. However, unexpectedly, no differences emerged for concern for negative consequences of a military response.

DISCUSSION

We shall briefly summarize the main findings. First, RWA and SDO were highly interrelated, albeit less so than in the studies by Zick and Petzel (1999) and Aiello et al. (2003). This is in line with results from previous studies in Western Europe (Duriez & Van Hiel, 2002; Van Hiel & Mervielde, 2002). To investigate where motivational differences between RWA and SDO are located, value correlates were analyzed. A graphical representation of the value correlations showed sinusoid curves with different peaks for RWA and SDO. RWA correlated most strongly with security and conformity values, and SDO correlated most strongly with power and security values. The most negative correlation was with universalism values for both RWA and SDO. Thus, albeit distinct, the curves were close. The location of RWA and SDO in the two-dimensional value space stated by the Schwartz model was examined through principal component analysis. Results showed that SDO was clearly related to the self-enhancement versus self-transcendence dimension. RWA, however, had substantial loadings on both dimensions and thus tapped conservation as well as self-enhancement aspects. Second, we analyzed associations of RWA and SDO with attitudes that may express different motivational goals. We argued that threat-related negative attitudes toward Islam may be an expression of the motivational goals of social control and security, which is supposed to be the basis of RWA, but not SDO. The correlation was in fact significantly more positive for RWA than for SDO. Concern for negative consequences of a military response to September 11 was hypothesized to relate more strongly to SDO than to RWA because it was considered an expression of the motivational goal of altruistic concern, which is supposed to be opposite to SDO but not to RWA. However, there were no correlational

differences. Finally, two variables were expected to relate equally strongly to RWA and SDO because they could be influenced by different processes: stereotypical, prejudiced attitudes toward Islam and support for a military response to September 11. These predictions were supported.

What do these findings suggest concerning the psychological meanings of RWA and SDO? On one hand, there was a strong interrelation, there was large overlap of the sinusoid curves, and the prediction for concern for negative consequences of a military response to September 11 that we considered an expression of self-transcendence motivational goals was not supported. On the other hand, the interrelation was not perfect, the sinusoid curves were distinct, and the hypothesis concerning threat-related negative attitude toward Islam, which we considered an expression of the motivational goals underlying conservation values, were supported. The graphical representation of the component loadings suggests the differences and commonalities. Although SDO was clearly located on the positive pole of the self-enhancement versus self-transcendence dimension, RWA not only had conservation aspects but self-enhancement aspects as well. This was most clearly reflected in the substantially negative relationship with universalism values, which has not been found as large in previous studies in other countries. In consequence, the results can only be seen as partial support for the theoretical assumptions by Duckitt (2001) and Feldman (2003a) that RWA (but not SDO) basically refers to a social conformity (conservation) versus personal autonomy (openness-to-change) dimension. On the other hand, they indicate that also in Germany it is advisable to distinguish between RWA and SDO and not to combine both constructs to an authoritarian dominance orientation (cf. Zick & Petzel, 1999). That RWA is not only related to the conservation versus openness-to-change dimension but also to the self-enhancement versus self-transcendence dimension—or, more specifically, the association of RWA with low importance of universalism values—may account for the fact that we did not find differential associations of RWA and SDO with concern for negative consequences of a military response to September 11.³ In sum, we suggest that RWA, but not SDO, is based on conservation motivational goals (social control and security) but both RWA and SDO share a negative relation to self-transcendence motivational goals (altruistic concern).

A critical methodical consideration is in order here. Regarding RWA and SDO as predictors of outcome variables, we implicitly interpret them as stable individual differences variables. Although RWA and SDO have been shown to be malleable, at least for a short term, by situational factors (e.g., Altemeyer, 1988; Duckitt &

Fisher, 2003; Schmitt, Branscombe, & Kappen, 2003), this fits well with a good number of previous studies and is supported by longitudinal results demonstrating high relative stability of RWA (Altemeyer, 1988; Stellmacher, 2004) and SDO (Pratto et al., 1994; Sidanius & Pratto, 1999). Also, SDO scores obtained prior to and after an experimental manipulation correlated very strongly ($r = .92$) in a study by Pratto, Orton, Cathey, and Stallworth (1997, cited in Pratto, 1999). What also supports a causal interpretation of influences of RWA and SDO on reactions to September 11 is that attitudes toward a military response have only become meaningful after the terrorist attacks. These newly developed beliefs could not have influenced RWA and SDO before. Also, attitudes toward Islam may have been actualized by the political developments and the public discourse after September 11, so a similar argument can be made here. However, we have no assessment of RWA and SDO prior to the terrorist attacks. It cannot be ruled out that the attacks and/or the subsequent military intervention in Afghanistan affected RWA and SDO scores. This would not be particularly problematic, but if the events reduced the relative stability of RWA and SDO, that is, if they had interindividually different effects, our study would overestimate effects of RWA and SDO on specific attitudes.

IMPLICATIONS

Whereas other authors made a clear distinction between the motivational sources of RWA and SDO and found supportive evidence (e.g., Duckitt, 2001; Duckitt et al., 2002), implications of our results are not clear. One idea to account for the ambiguity is that RWA may not be a consistent psychological construct. In the original conceptualization of Adorno et al. (1950), the authoritarian personality was encompassing nine traits. Later, Altemeyer (1981) identified three core elements of RWA. In his studies, he always checked whether correlations with external variables are restricted to certain items, and this was generally not the case (Altemeyer, 1981, 1996). Thus, he considered RWA as a consistent variable. However, Funke (2003, 2005) recently presented evidence that the three-dimensional structure on the theoretical level can be translated to the empirical level and distinguishing between the three facets of submissiveness, aggression, and conventionalism yields important insights. Using structural equation modeling, he showed that the three facets can be separated and relate differentially to outcome variables. Although all three dimensions were equally related to a right versus left political ideology, it was only, or predominantly, authoritarian aggression that predicted hostility to foreigners, political intolerance, punitiveness, and positive attitudes toward military intervention. Thus, it may be

authoritarian aggression that is particularly different from authoritarian submissiveness and conventionalism in terms of their motivational bases. A similar argument has been made by Duckitt and Fisher (2003), who distinguish between authoritarian social control (i.e., authoritarian aggression) and conventional conservatism (i.e., authoritarian submissiveness and conventionalism). In their study, authoritarian social control was marginally more strongly associated with SDO and markedly more strongly associated with dangerous world beliefs than conventional conservatism. In line with these findings, Altemeyer (1998) and Van Hiel and Mervielde (2002) showed that people high in SDO did not tend to score high in RWA items referring to authoritarian submission and conventionalism but tended to endorse RWA items referring to authoritarian aggression.

A tentative test of these considerations could be made with the present data. Of the nine RWA items, four clearly tap authoritarian aggression, whereas the other five focus on authoritarian submissiveness and conventionalism. The corresponding subscales ($\alpha = .76, .59$) were positively interrelated ($r = .53, p < .001$) and correlations with SDO were significantly different (aggression: $r = .51$; submissiveness and conventionalism: $r = .45, ps < .001$; $z_{\text{diff}} = 2.91, p < .01$). However, in the two-dimensional representation of component loadings, authoritarian aggression and authoritarian submissiveness/conventionalism were located very close to one another. Loadings on the conservation and self-enhancement dimensions, respectively, were .50 and .54 for aggression and .56 and .41 for submissiveness and conventionalism. Thus, our main conclusion that RWA not only relates to conservation but also to the self-enhancement motivational goals remains.⁴

A possibly more powerful explanation is that RWA may have another meaning in Western Europe, and Germany in particular, than elsewhere. There may be reasonable post hoc arguments for this, related to historical aspects such as the former existence of powerful socialist labor movements in Western Europe (Duckitt, 2001). This may have led to a high degree of ideologization, with political attitudes being organized around a strong left-right dimension. A more specific, even stronger, case could be made for Germany. Here, conformity and tradition values may be intrinsically associated with motivational goals of superiority and antiegalitarianism because these values and motivations have been closely connected in National Socialist ideology. Although National Socialism is still an important theme in German public discourse, people may tend to reject both conformity and tradition as well as dominance and antiegalitarianism when they reject National Socialist ideology. Controlled cross-national studies with strictly

comparable samples and measures are required to test such explanations.

In sum, our findings raise doubt that RWA and SDO trace back to dual dimensions, as suggested by Duckitt (2001). Although RWA, but not SDO, related to conservation values and threat-related attitude toward Islam as an expression of the motivational goals of social control and security, both constructs shared value correlates referring to the self-enhancement versus self-transcendence value dimension and did not differ in their relation to concern for negative consequences of a military response to September 11 as an expression of the motivational goals of egalitarian and altruistic concern. Examining where this overlap stems from is a promising avenue for future, cross-national research.

NOTES

1. Two other studies examined value correlates of right-wing authoritarianism (RWA) and social dominance orientation (SDO) based on the security-harmony social values model by Braithwaite (1997). Heaven and Connors (2001) found that RWA related positively to national strength and order, propriety in dress and manners, and religiosity and negatively to secure and satisfying relationships; SDO related positively to getting ahead and negatively to honesty and international harmony and equality. Sidanius and Pratto (1999) report negative correlations of SDO with international harmony and equality and personal growth and inner harmony as well as positive correlations with social standing and national strength and order.

2. Although hedonism has originally been theorized to relate to both self-enhancement and openness-to-change values by Schwartz (1992), its stronger relation to openness-to-change than to self-enhancement values is consistent with recent results (e.g., Schwartz & Boehnke, 2004).

3. One reviewer questioned whether there are compelling reasons that concern for negative consequences should be more negatively related to SDO than to RWA. Apart from related evidence by McFarland (2005), in support of our assumption, concern for negative consequences correlated more strongly with the component score for self-enhancement versus self-transcendence ($-.45$) than with the component score for conservation versus openness-to-change ($-.21$, $ps < .001$; $z_{diff} = 7.38$, $p < .001$).

4. Although SDO is usually considered unidimensional, some authors suggested that SDO also has two subcomponents, namely, group-based dominance and opposition to equality (Jost & Thompson, 2000; Six, Wolfardt, & Zick, 2001). In our data, these subscales ($\alpha_s = .79$, $.86$) were substantially correlated ($r = .63$, $p < .001$), and correlations with RWA were significantly different (group-based dominance: $r = .54$; opposition to equality: $r = .47$, $ps < .001$; $z_{diff} = 3.67$, $p < .001$). However, loadings on the self-enhancement and conservation dimensions (group-based dominance: $.70$, $.22$; opposition to equality: $.70$, $.20$) were virtually identical.

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