



Understanding left-wing authoritarianism: Relations to the dark personality traits, altruism, and social justice commitment

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Abstract

In two pre-registered studies, we investigated the relationship of left-wing authoritarianism with the ego-focused trait of narcissism. Based on existing research, we expected individuals with higher levels of left-wing authoritarianism to also report higher levels of narcissism. Further, as individuals with leftist political attitudes can be assumed to be striving for social equality, we expected left-wing authoritarianism to also be positively related to prosocial traits, but narcissism to remain a significant predictor of left-wing authoritarianism above and beyond those prosocial dispositions. We investigated our hypotheses in two studies using cross-sectional correlational designs. Two nearly representative US samples (Study 1: $N=391$; Study 2: $N=377$) completed online measures of left-wing authoritarianism, the Dark Triad personality traits, and two variables with a prosocial focus (i.e., altruism and social justice commitment). In addition, we assessed relevant covariates (i.e., age, gender, socially desirable responding, and virtue signaling). The results of multiple regression analyses showed that a strong ideological view, according to which a violent revolution against existing societal structures is legitimate (i.e., anti-hierarchical aggression), was associated with antagonistic narcissism (Study 1) and psychopathy (Study 2). However, neither dispositional altruism nor social justice commitment was related to left-wing anti-hierarchical aggression. Considering these results, we assume that some leftist political activists do not actually strive for social justice and equality but rather use political activism to endorse or exercise violence against others to satisfy their own ego-focused needs. We discuss these results in relation to the dark-ego-vehicle principle.

Keywords Altruism · Dark triad · Left-wing authoritarianism · Social justice commitment

On 6 January 2021, the United States Capitol in Washington DC was attacked by a group of individuals who tried to impede the validation of the presidential election. Due to the violent attack, several people were killed and injured. Many argued that the outgoing president Donald Trump had incited the attack on the Capitol – he had lost the 2020 presidential election to president-elect Joe Biden but refused to concede claiming election fraud. But who were the people following Donald Trump’s (alleged) call? According to the New York Times (Barry et al., 2021, January 9), “they came from around the country with different affiliations – QAnon,

Proud Boys, elected officials, everyday Americans [...]” But even though they stemmed from different traits of life, did some of these individuals share a common personality trait called *authoritarianism*?

In psychological and political research, authoritarianism has been characterized as (1) a submissiveness to authority figures and (2) a dominance towards subordinates (Adorno et al., 1950). In the past, authoritarianism has been dominantly investigated in individuals with right-wing political ideologies which led to the term *right-wing* authoritarianism (RWA; Altemeyer, 1996). Individuals with high levels of RWA have been described as people striving for (1) the strict endorsement of conservative social norms and values (i.e., conventionalism), (2) the compliance with established authorities (i.e., authoritarian submission), and (3) antagonistic behavior toward outgroup members (i.e., authoritarian aggression). In line with this description, current research found individuals with higher levels of RWA to be more close-minded (e.g., Hodson et al., 2009), fundamentalistic

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in their religious orientation, and prejudiced towards minority groups (Altemeyer & Hunsberger, 1992). However, in later theoretical conceptualizations (Altemeyer, 1998), it was postulated that RWA seems to be more reflective of the submissive aspect of authoritarianism while another construct – social dominance orientation (SDO) – was assumed to mirror the dominance aspect of authoritarianism. Individuals with high SDO have been characterized as people opposing social equality in support of group-based hierarchies by striving to dominate weaker out-groups. Supporting this later postulate, empirical studies have shown that SDO is associated with racism, homophobia, and attitudes unsupportive of women's rights whilst negatively correlated with empathy, tolerance, and altruism (Pratto et al., 1994). Further, it was found that SDO is related to narcissism (e.g., Cichocka et al., 2017; Zeigler-Hill et al., 2021) and dark personality traits (e.g., Hodson et al., 2009).

While there is wide agreement that RWA and SDO are valid psychological constructs (for a critical review of the measures on RWA, see Harms et al., 2018), the notion of *left-wing* authoritarianism (LWA) has been met with skepticism by many researchers (e.g., Altemeyer, 1996; Jost et al., 2003; Nilsson & Jost, 2020) even though some empirical studies found evidence for the existence of authoritarianism also on the left side of the political spectrum (e.g., Conway et al., 2018; Crawford & Brandt, 2020). Recently, the discussion around LWA has gotten fresh attention: On 25 May 2020, George Floyd – an unarmed Black man – was killed by Minneapolis police. This event induced massive Black Lives Matter (BLM) protests all over the US and the world. And while most (94%) of the racial justice protests in the US were conducted peacefully, some of these protests (6%) included “violence, clashes with the police, vandalism, looting, or other destructive activity” (ACLED, May 2021, p. 1). Later reports found that much of the violence had been directed at the pro-BLM demonstrators, for example by the police (Chenoweth & Pressman, 2020, Oct 16). But had some left-wing authoritarians also been involved in the aggressive activities? This question was addressed by a very recent empirical study (Costello et al., 2022, study phase 6). Out of a nationally representative US sample of $N=834$ participants, the researchers found 67 individuals who endorsed the violence during the BLM protests. Among those individuals, LWA (but not RWA) was found to predict the expressed support and the extremity of the support. Also, 19 individuals reported to have actually engaged in violence during the BLM protests. However, their aggressive engagement was neither statistically significantly associated with LWA nor RWA. Further, 73 individuals reported to having desired to use violence for a political cause during the last five years (i.e., aside from the pro-BLM protests). Among those participants, the study found that both LWA

and RWA were positively correlated with the desired frequency of violence but only the correlation with RWA to reach statistical significance. In concert, these results indicate that authoritarianism cannot only be found on the right side of the political spectrum but might also be prevalent on the political left (see also Conway et al., 2018). This notion is further supported by findings of the Polarization Research Lab (2022, December) which show that even though most followers of both political sides reject violence, some left-wingers are more likely than right-wingers to endorse harming or even murdering their political opponents.

Based on those previous empirical findings, the goal of the present paper is to further investigate ego-focus correlates of LWA. Throughout this paper, based on the conceptualization by Costello et al. (2022), we assume LWA to be a tripartite construct comprising of three correlated dimensions: (1) anticonventionalism, (2) top-down censorship, and (3) antihierarchical aggression. The *anticonventionalism* dimension of LWA is characterized by the absolute endorsement of progressive moral values. For example, individuals with high levels of anticonventionalism might declare anyone to be homophobic who is opposing gay marriage. The LWA dimension of anticonventionalism seems to contrast the RWA dimension of *conventionalism* which is mirrored by the strict endorsement of conservative social norms and values. However, Costello et al. (2022) found similarities between the nomological nets of LWA and RWA/SDO. For example, after controlling for political ideology, LWA anticonventionalism was also associated with lower openness and higher dogmatism.

LWA anticonventionalism is assumed to not only lead to an intolerance towards conservative values but also to the desire to impose those progressive moral values on others (Costello et al., 2022). This desire goes along with top-down censorship as well as antihierarchical aggression. The *top-down censorship* dimension of LWA is described as the preference for the use of authority (governmental and institutional) to deal with opposition and the strive to suppress any speech that is considered as offensive and intolerant. For example, individuals with high levels of top-down censorship may strive to suppress free speech to regulate the expression of right-wing beliefs in educational institutions. Similarly, individuals high in RWA support the limitation of free speech, however, as a means to endorse right-wing values.

The *antihierarchical aggression* dimension of LWA has been defined as “the motivation to forcefully overthrow the established hierarchy and punish those in power” (Costello et al., 2022, p.162). For example, individuals might express their antihierarchical aggression by the endorsement of political violence to fight for social justice. Individuals with high levels of LWA are thus assumed to be hostile towards

the present social and moral authorities while feeling morally superior and endorsing the use of violence to reach one's own political goals. Thus, aggression is prevalent in individuals high in LWA. However, aggression is not a phenomenon reserved for the political left – aggression directed at members of the opposite political party can also be found in individuals high in SDO as conceptualized by Altemeyer (1998).

Contemporary empirical studies on the ego-focused correlates of LWA are comparatively rare. The existing research, however, points to a relationship between LWA and ego-focused traits such as narcissism (Zeigler-Hill et al., 2021) as well as psychopathy (Costello et al., 2022, phase 4). In the present research, we thus wanted to shed further light on the relations of LWA with narcissism. Going beyond the research of Zeigler-Hill et al. (2021), we investigated the relationship between narcissism and the three subfacets of LWA (i.e., anticonventionalism, top-down censorship, and antihierarchical aggression). However, as left-wing political attitudes also include prosocial concerns (i.e., the striving for social equality), in the present research, we simultaneously controlled for the relationship of LWA and prosocial focused dispositions (i.e., altruism and social justice commitment). This approach allowed us to investigate if narcissism is related to LWA above and beyond the predictive power of those prosocial traits.

To investigate our pre-registered research questions, we conducted two cross-sectional correlational studies using nationally nearly representative US samples. In particular, Study 1 explored the associations of LWA with narcissism beyond and above altruism, while Study 2 investigated the relationships between LWA and narcissism (Paulhus & Williams, 2002) above and beyond social justice commitment. All measures were assessed with self-report instruments. To acknowledge the limitations of self-reports regarding individuals' tendency to answer in a socially desirable way (Stöber et al., 2002), we additionally included established measures to account for such tendencies in both studies. As another covariate, we included participants' age as narcissistic traits are susceptible to change over one's life course (Cramer, 2011). Finally, we included gender as a covariate as gender-specific differences in narcissism have been reported (Grijalva et al., 2015).

Study 1

Study 1 had two goals. Firstly, we wanted to investigate the relationship between LWA (and its respective subfacets) and narcissism. In the following, we use the terms “narcissism” and “narcissist” when referring to subclinical narcissism as a personality trait (i.e., to the continuous distribution

of narcissism in the broader community; Furnham et al., 2013). Further, paralleling the research of Zeigler-Hill et al. (2021), we relied on the three-dimensional conception of narcissism provided by Miller et al. (2016) who characterize individuals high in narcissistic traits as (1) demonstrating manipulative and exploitative behaviors, indulging in self-perceived entitlement, arrogance, reactive anger, distrust, lack of empathy, and thrill-seeking (so called antagonistic narcissism); (2) acclaim seeking, authoritative, indulging in grandiose fantasies, and demonstrating exhibitionism (so called extraverted narcissism); and (3) experiencing shame, low indifference, and a need for admiration (so called neurotic narcissism).

Previous studies regarding the relationship between narcissism and global LWA (Zeigler-Hill et al., 2021) found LWA to be positively correlated with antagonistic narcissism ($r=.61$, $p<.001$), extraverted narcissism ($r=.38$, $p<.001$), and neurotic narcissism ($r=.23$, $p<.001$). The results of those studies also showed that LWA (global) was most strongly predicted by antagonistic narcissism ($b=0.34$, $p<.001$) when neurotic narcissism ($b=0.17$, $p<.001$) and extraverted narcissism ($b=0.00$, $p>.05$) were simultaneously included in the analysis.

Interestingly, the authors found similar patterns for SDO, which was also most strongly predicted by antagonistic narcissism ($b=0.25$, $p<.05$) when neurotic narcissism ($b=0.12$, $p<.05$) and extraverted narcissism ($b=0.10$, $p>.05$) were included in the analysis. From these results, Zeigler-Hill and his colleagues concluded that individuals with high levels of antagonistic narcissism may be ruthlessly motivated to endorse either right- or left-wing ideological attitudes depending on which of these attitudes seems to be more advantageous to them in a specific situation.

Based on these findings on the association between LWA and narcissism (Zeigler-Hill et al., 2021), in Study 1, we expected LWA to be positively related to narcissism (pre-registered *Hypothesis 1*). In particular, for the main analyses, we assumed the global LWA score as well as each of the three subfacets of LWA (i.e., anticonventionalism, top-down censorship, and antihierarchical aggression) to be positively related to the three subfacets of narcissism (i.e., antagonistic, extraverted, and neurotic narcissism). Thus, going beyond existing research, we examined not only narcissism but also LWA differentially by considering its subfacets. In a secondary analysis, we investigated the relationship between global LWA and its subfacets on the one hand and narcissism on the other hand applying an alternative conceptualization of narcissism which differentiates between grandiose and vulnerable narcissism (Sherman et al., 2015). Again, we expected positive relationships between each of the LWA scores and these two subfacets of narcissism.

Secondly, as a novel aspect, we explored the relationship between LWA and narcissism above and beyond dispositional *altruism*. Altruistic individuals are people with prosocial tendencies who support others at the price of personal cost (Dargan & Schermer, 2022). They have been described as sympathetic, soft-hearted, and generous (Lee & Ashton, 2006). Trait altruism is observed in individuals who demonstrate altruistic behaviors across different situations, for example giving money to strangers, helping others to move their household, or volunteering for a social cause (Rushton et al., 1981). Studies show that altruism also predicts participation in politics such as voting, volunteering, and protesting (Fowler & Kam, 2007). Further, altruism has been demonstrated to be positively related to left-wing political attitudes (Zettler & Hilbig, 2010). Hence, we also expected LWA (and its subfactors) to be positively related to altruism (pre-registered *Hypothesis 2*).

Method

Open Science and ethical requirements

Study 1 was pre-registered before the data collection with AsPredicted.org (<https://aspredicted.org/qc4hy.pdf> – identifier #97,770) under the title “Understanding Left-Wing Authoritarianism – Study 1”. The study was approved (identifier #2022-05-00006) by the human research ethics committee of the University of Bern. Informed consent was obtained according to the guidelines of the university. The complete study materials including the raw data are available at <https://researchbox.org/751>.

Power analysis and participants

We calculated the sample size necessary to obtain sufficient power of 80% to detect an existing effect (Cohen, 1988) using G*Power 3.1 (Faul et al., 2009). Assuming an effect of each of the predicted sixteen bivariate Pearson product-moment correlations of $|\rho| = 0.21$ (cf., Schönbrodt & Perugini, 2013) and a respective Bonferroni corrected error probability of $\alpha = 0.003125$ (two-tailed), the results of the power analysis revealed a minimum sample size of $N = 320$. The sample was recruited using the Prolific recruitment platform (<https://www.prolific.co>). Expecting some data loss (e.g., due to failed attention checks), we aimed at recruiting $N = 400$ participants nationally representative of the US via this online-crowdsourcing system (detailed information on representative samples recruited via Prolific is provided by Costello et al., 2022). In particular, we applied Prolific’s option for US nationally representative sampling. Ultimately, 413 individuals started to participate in the survey.

Twenty-two of these participants were excluded from the original sample because they did not complete the survey ($n = 11$), failed the attention check ($n = 8$), or were suspected of being duplicate respondents ($n = 3$). Hence, the final sample consisted of $N = 391$ individuals ($M_{\text{age}} = 46.230$ years, $SD = 16.390$, range = 18–93 years). For the full report of the sample demographics for Study 1, see supplementary Table S1.

Procedure

Study 1 was announced as an “Attitudes and Behaviors Study” and lasted about 20 min. The study was conducted online – all instructions and measures were provided via the survey software Qualtrics. After giving written informed consent, participants indicated their age and gender as well as other demographic information (i.e., ethnicity, native language, highest educational level, income, marital status, and sexual orientation). Next, an attention check (Bertrams & Schlegel, 2020) was administered to ensure that participants had carefully read the instructions. In particular, participants were presented with a question (i.e., “Who was the first president of the United States of America?”) and three possible answers (i.e., Abraham Lincoln, George Washington, or Thomas Jefferson). Participants were explicitly instructed *not* to answer this question to demonstrate that they had given attention to this instruction. Next, participants were randomly presented with the items measuring narcissism and altruism (i.e., some participants first answered the items measuring narcissism while other participants first answered the altruism items). Afterwards, participants’ proneness to socially desirable responding (i.e., self-deception and impression management) was assessed with the respective items of both scales presented in a mixed and random order. Further, LWA was measured. In a final step, participants reported on their political orientation as well as their political ideology, and the political party they identify with. After that, participants provided their Prolific ID, were thanked for their participation, and debriefed. After completing the study, participants received a fixed payment of £2.70 (about \$3.50).

Measures

Narcissism

Narcissism was measured with the Five-Factor Narcissism Inventory (FFNI; Sherman et al., 2015). The FFNI is a self-report measure with 60 items and allows for the assessment of narcissism on three subdimensions (Miller et al., 2016): antagonism (32 items; e.g., “I’m pretty good at manipulating people”), agentic extraversion (16 items;

e.g., “Leadership comes easy for me”), and neuroticism (12 items; e.g., “When I realize I have failed at something, I feel humiliated”). Ratings were made using 5-point scales from 1 (*disagree strongly*) to 5 (*agree strongly*). After recoding the respective inverse items, we calculated a total FFNI mean score with high scores indicating a high level of narcissism. The scale showed good internal consistency (McDonald’s $\omega=0.893$). Next, we calculated a mean score for each of the three respective FFNI dimensions with high scores indicating a high level of antagonism, agentic extraversion, or neuroticism. The subscales showed good to excellent internal consistency (antagonism: McDonald’s $\omega=0.910$; agentic extraversion: McDonald’s $\omega=0.875$; neuroticism: McDonald’s $\omega=0.911$). Finally, for analyses with an alternative conception of narcissistic traits (Sherman et al., 2015), we calculated a mean score assessing grandiose narcissism¹ (McDonald’s $\omega=0.910$) and vulnerable narcissism (McDonald’s $\omega=0.859$).

Altruism

Altruism was assessed with the Self-Report Altruism Scale (SRA; Rushton et al., 1981). The SRA measures altruism with twenty items representative of altruistic behaviors (e.g., “I have given money to a charity”). Participants were instructed to rate how often they had engaged in such behaviors in the past using 5-point scales from 1 (*never*) to 5 (*very often*). For the data analyses, we calculated a mean score including all twenty SRA items, with high scores indicating a high level of altruism. The scale showed good internal consistency (McDonald’s $\omega=0.874$).

Socially desirable responding

Proneness to socially desirable responding was assessed with the Balanced Inventory of Desirable Responding (BIDR; Paulhus, 1984; 1988). With its 40 items, the BIDR measures two constructs: self-deceptive enhancement (SDE; 20 items; e.g., “My first impressions of people usually turn out to be right”) and impression management (IM; 20 items; e.g., “I never cover up my mistakes”). Ratings were made using 7-point scales from 1 (*not true*) to 7 (*very true*). First, we recoded the respective inverse items. Second, in line with the findings of Stöber et al. (2002), we used continuous scoring (i.e., all answers on the continuous answer scale are counted). This way, we calculated a mean SDE score with high scores indicating a high level of self-deceptive enhancement. The SDE scale showed good internal consistency (McDonald’s $\omega=0.798$). Further, we

calculated a mean IM score with high scores indicating a high level of impression management. The IM scale also showed good internal consistency (McDonald’s $\omega=0.859$).

Left-wing authoritarianism

LWA was measured with the Left-Wing Authoritarian Index (LWAI; Costello et al., 2022). The LWAI is a self-report measure with 39 items allowing for the assessment of LWA and its three subdimensions: anticonventionalism (13 items; e.g., “Anyone who opposes gay marriage must be homophobic”), top-down censorship (13 items; e.g., “University authorities are right to ban hateful speech from campus”), and antihierarchical aggression (13 items; e.g., “The rich should be stripped of their belongings and status”). Ratings were made using 7-point scales from 1 (*strongly disagree*) to 7 (*strongly agree*). After recoding the respective inverse items, we calculated a total LWA mean score with high scores indicating a high level of LWA. The scale showed excellent internal consistency (McDonald’s $\omega=0.953$). Further, we calculated a mean score for each of the three respective LWA subdimensions with high scores indicating a high level of anticonventionalism, top-down censorship, or antihierarchical aggression. The subscales showed excellent internal consistency (anticonventionalism: McDonald’s $\omega=0.938$; top-down censorship: McDonald’s $\omega=0.898$; antihierarchical aggression: McDonald’s $\omega=0.916$).

Political orientation

In accordance with the approach of Costello et al. (2022), participants’ political orientation was assessed with one item asking participants to place themselves on a 7-point scale with regard to their political views ranging from 1 (*extremely left-wing/far-left*) to 7 (*extremely right-wing/far-right*).

Results

Common method bias test

In the present research, we relied on self-report questionnaires. The adoption of self-report questionnaires can lead to common method variance when the examined variables are assessed at the same point in time (Chang et al., 2010). To examine, if a common method bias occurred, we used Harman’s single-factor test as described by Zhang et al. (2022). For this purpose, we included all measured items in an unrotated principal component analysis to test if only one component emerges from this analysis or if the first component explains the vast majority of the variation (>40%) as both

¹ In calculating the mean score for grandiose narcissism, we did include the items measuring Indifference (items 9, 24, 39, 54) in the original form (i.e., without recoding).

cases would be indicative of the existence of severe common method bias. In the analysis, 35 components emerged explaining 69.67% of the variance in Study 1. Further, the first component explained only 13% of the variation, which is below the critical value. Thus, we assume that common method variance did not severely bias the results of Study 1.

Preregistered main analyses

Descriptive statistics for all variables can be found in supplementary Table S1. Bivariate correlations for all analyzed variables are depicted in Table 1. In line with our predictions, inter-correlations revealed a positive association between LWA and narcissism: Overall, we found a positive correlation between the global LWA score and the FFNI total score ($r = .178, p < .001$). With regard to the three narcissism subscales, we found the total LWA score to be statistically significantly related only to the FFNI neuroticism score ($r = .268, p < .001$). With respect to the LWA subscale scores, we found antihierarchical aggression to be positively related to the FFNI scores for antagonism ($r = .249, p < .001$) and neuroticism ($r = .222, p < .001$). The other LWA subscales were positively related only to the FFNI neuroticism score (LWA anticonventionalism: $r = .255, p < .001$; LWA top-down censorship: $r = .205, p < .001$). Surprisingly, we did not find the expected positive associations between LWA and altruism. On the contrary, altruism was negatively correlated to the total LWA score ($r = -.153, p = .002$) as well as to antihierarchical aggression ($r = -.180, p < .001$).

To further test our assumptions, in a next step we calculated four hierarchical multiple linear regressions predicting LWA (i.e., the total LWA score and each of the three LWA subscales respectively) by altruism and the three FFNI subfacets of narcissism. As general assumptions for the regression analyses (Field, 2018), we first checked the variance inflation factor (VIF) to test for extreme collinearity. VIF values for all variables were lower than the threshold of 10.00 (all VIFs < 2.56). Therefore, extreme collinearity did not occur in the data. Second, the results of the respective Durbin-Watson tests showed that there was no autocorrelation.

The results revealed that the total LWA score (Model 1a, supplementary Table S2) was only predicted by the FFNI neuroticism score ($b = 0.279, SE\ b = 0.060, \beta = 0.233, p < .001$). However, the FFNI neuroticism score was no longer a significant predictor of LWA when we controlled for age, gender, self-deceptive enhancement, and impression management in a second block (see Model 1b, supplementary Table S2). Similar results were found when we predicted the LWA score for anticonventionalism (see Models 2a & 2b, supplementary Table S3) and top-down censorship (see Models 3a & 3b, supplementary Table S4). The only

exception from this pattern was found when we predicted LWA antihierarchical aggression: The respective LWA score was only statistically significantly predicted by the FFNI score for antagonism ($b = 0.380, SE\ b = 0.121, \beta = 0.181, p = .002$) when we controlled for age, gender, self-deceptive enhancement, and impression management (see Model 4b, Table 2).

Preregistered secondary analyses

In a final step, we repeated the data analyses to examine the relationships between LWA and the alternative narcissism subfacets of grandiose and vulnerable narcissism (Sherman et al., 2015). Again, we calculated four hierarchical multiple linear regressions predicting LWA (i.e., the total LWA score and each of the three LWA subscales respectively), but this time by altruism and these two subfacets of narcissism (i.e., FFNI grandiose narcissism, FFNI vulnerable narcissism). All VIF values were again < 2.56 and results of the respective Durbin-Watson tests showed that there was no autocorrelation.

In all these regression analyses, the respective LWA score was statistically significantly predicted by the FFNI score for vulnerable narcissism (see Models 6a to 9a, supplementary Tables S5 to S8). However, this FFNI score was no longer predictive for any of the respective LWA scores, when we controlled for age, gender, self-deceptive enhancement and impression management (see Models 6b to 9b, supplementary Tables S5 to S8).

Discussion

In Study 1, we investigated the relationship between LWA and the ego-focused trait of narcissism above and beyond the influence of altruism. In a first step, the results of the data analyses showed that LWA (and all its subfacets) were predicted by neurotic narcissism. Interestingly, and contrary to our predictions, we did not find any relationship between LWA (and its subfacets) and altruism. These results seem to imply that individuals high in LWA are also individuals with high levels of neurotic narcissism (i.e., individuals who strongly care about what others might think about them, who experience high levels of shame, and have a strong need for admiration).

However, when we controlled for other relevant variables such as age, gender, and the tendency for socially-desirable responding, the relationship between LWA (and its subfacets) and neurotic narcissism was no longer detectable. Then, a robust relationship between the LWA subfacet of *antihierarchical aggression* and *antagonistic* narcissism was unveiled. Antihierarchical aggression represents the

Table 1 Intercorrelations and (*p* Values) for Study 1 Variables

	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
01 Age	–														
02 Gender (1 = male, 2 = female)	0.011 (0.825)	–													
03 Altruism	0.246 (<0.001)	–0.006 (0.911)	–												
04 FFNI: Total Score	–0.412 (0.003)	–0.153 (0.169)	–0.070 (0.169)	–											
05 FFNI: Antagonism	–0.281 (<0.001)	–0.249 (<0.001)	–0.117 (0.021)	0.841 (<0.001)	–										
06 FFNI: Agentic Extraversion	–0.250 (<0.001)	–0.083 (0.101)	0.169 (<0.001)	0.718 (<0.001)	0.435 (<0.001)	–									
07 FFNI: Neuroticism	–0.342 (<0.001)	0.106 (0.037)	–0.181 (<0.001)	0.442 (<0.001)	0.071 (0.158)	0.052 (0.301)	–								
08 FFNI: Grandi- ose Narcissism	–0.235 (<0.001)	–0.236 (<0.001)	0.080 (0.113)	0.797 (<0.001)	0.821 (<0.001)	0.801 (<0.001)	–0.159 (0.002)	–							
09 FFNI: Vulner- able Narcissism	–0.426 (<0.001)	0.010 (.838)	–0.224 (<0.001)	0.682 (<0.001)	0.532 (<0.001)	0.141 (0.005)	0.766 (<0.001)	0.181 (<0.001)	–						
10 Self-Deceptive Enhancement	0.268 (<0.001)	–0.099 (0.051)	0.125 (0.014)	–0.239 (<0.001)	–0.091 (0.072)	0.131 (0.010)	–0.635 (<0.001)	0.175 (<0.001)	–0.605 (<0.001)	–					
11 Impression Management	0.206 (<0.001)	0.097 (0.057)	0.039 (0.443)	–0.361 (<0.001)	–0.371 (<0.001)	–0.037 (0.461)	–0.301 (<0.001)	–0.180 (<0.001)	–0.437 (<0.001)	0.579 (<0.001)	–				
12 LWA	–0.370 (<0.001)	0.103 (0.042)	–0.153 (0.002)	0.178 (<0.001)	0.109 (0.031)	0.021 (0.674)	0.268 (<0.001)	0.021 (0.685)	0.328 (<0.001)	–0.302 (<0.001)	–0.164 (0.001)	–			
13 LWA: AHA	–0.387 (<0.001)	0.029 (0.565)	–0.180 (<0.001)	0.254 (<0.001)	0.249 (<0.001)	0.034 (0.507)	0.222 (<0.001)	0.118 (0.019)	0.382 (<0.001)	–0.346 (<0.001)	–0.273 (<0.001)	0.863 (<0.001)	–		
14 LWA: AC	–0.337 (<0.001)	0.064 (0.212)	–0.126 (0.013)	0.107 (0.034)	0.047 (0.351)	–0.043 (0.397)	0.255 (<0.001)	–0.038 (0.459)	0.268 (<0.001)	–0.286 (<0.001)	–0.148 (0.003)	0.899 (<0.001)	0.712 (<0.001)	–	
15 LWA: TDC	–0.220 (<0.001)	0.175 (<0.001)	–0.085 (0.093)	0.101 (0.046)	–0.011 (0.825)	0.074 (0.145)	0.205 (<0.001)	–0.020 (0.693)	0.190 (<0.001)	–0.138 (0.007)	0.003 (0.960)	0.793 (<0.001)	0.499 (<0.001)	0.554 (<0.001)	–
16 Political Orientation	0.176 (<0.001)	–0.090 (0.076)	0.061 (0.226)	0.020 (0.699)	0.095 (0.060)	0.085 (0.092)	–0.204 (<0.001)	0.139 (0.006)	–0.126 (0.013)	0.204 (<0.001)	0.080 (0.116)	–0.619 (<0.001)	–0.454 (<0.001)	–0.356 (<0.001)	–

Note. FFNI = Five-Factor Narcissism Inventory (Miller et al., 2016); LWA = Left-wing Authoritarianism; AHA = Antihierarchical Aggression; AC = Anticonventionalism; TDC = Top-Down Censorship. All reported *p* values are two-tailed. For the correlations between the FFNI subscales and LWA (including its subscales) as well as altruism and LWA (including its subscales), we considered Bonferroni adjusted *p* values < 0.003125 (two-tailed) as statistically significant; for all other correlations, we applied the conventional 0.05 significance level.

Table 2 Regression Coefficients, Standard Errors (SE), and Confidence Intervals (CI) for Left-Wing Authoritarianism (LWA): Antihierarchical Aggression

	B	SE	95% CI		β	p	R ²	df1, df2	F	p
			LL	UL						
Model 4a							0.119	4, 382	12.888	<0.001
Constant	1.957	0.437	1.099	2.816	–	<0.001				
Altruism	–0.241	0.112	–0.462	–0.021	–0.109	0.032				
FFNI: Antagonism	0.534	0.115	0.308	0.760	0.254	<0.001				
FFNI: Agentic Extraversion	–0.113	0.086	–0.283	0.056	–0.073	0.189				
FFNI: Neuroticism	0.238	0.066	0.110	0.367	0.178	<0.001				
Model 4b							0.239	8, 378	14.847	<0.001
Constant	5.571	0.753	4.091	7.051	–	<0.001				
Age	–0.021	0.004	–0.029	–0.014	–0.282	<0.001				
Gender (1 = male, 2 = female)	0.143	0.115	–0.083	0.370	0.058	0.215				
Self-Deceptive Enhancement	–0.402	0.108	–0.615	–0.189	–0.266	<0.001				
Impression Management	–0.017	0.072	–0.160	0.125	–0.015	0.810				
Altruism	–0.137	0.108	–0.350	0.076	–0.062	0.208				
FFNI: Antagonism	0.380	0.121	0.142	0.617	0.181	0.002				
FFNI: Agentic Extraversion	–0.104	0.086	–0.273	0.066	–0.067	0.230				
FFNI: Neuroticism	–0.105	0.082	–0.265	0.055	–0.079	0.199				

Note. $N = 387$. FFNI = Five-Factor Narcissism Inventory (Miller et al., 2016). All reported p values are two-tailed. For the relations between the FFNI subscales and LWA (including its subscales) as well as altruism and LWA (including its subscales), we considered Bonferroni adjusted p values < 0.003125 (two-tailed) as statistically significant; for all other relations, we applied the conventional 0.05 significance level.

drive to use force to overthrow those in power and who endorse conservative values. The results of Study 1 suggest that this motivation can be more likely found in individuals who exploit others for their own interests, lack empathy, have a sense of entitlement, are arrogant and manipulative, demonstrate reactive anger and distrust others while at the same time seeking thrill.

The results of Study 1 are also in line with previous research (Zeigler-Hill et al., 2021) that found LWA (global) to be most strongly predicted by antagonistic narcissism ($b = 0.34$, $p < .001$) when controlled for neurotic narcissism ($b = 0.17$, $p < .001$) and extraverted narcissism ($b = 0.00$, $p > .05$). In their study, Zeigler-Hill and his colleagues further found the relationship between antagonistic narcissism and global LWA to be mediated by a competitive social worldview. From this, the authors concluded that individuals with high levels of antagonistic narcissism may perceive the world as a highly competitive place which needs to be dominated, for example via the strong endorsement of left-wing ideological attitudes. Interestingly, Zeigler-Hill and his colleagues found a similar pattern for the relationship between antagonistic narcissism and SDO. From these results, the authors concluded that individuals with high levels of antagonistic narcissism may be ruthlessly motivated to endorse either right- or left-wing ideological attitudes depending on which of these attitudes seems to be more advantageous to them in a specific situation. For example, an individual with a high level of antagonistic narcissism may engage in social justice (i.e., left-wing) protesting as long as they are not in a privileged position themselves. As a novel

aspect, the results of Study 1 of the present research suggest that such an individual may particularly be motivated to endorse violent attacks against the established social institutions demonstrating LWA antihierarchical aggression.

Study 2

In Study 2, we further investigated the relationship between narcissism and LWA. However, we now focused on LWA antihierarchical aggression as it was the only LWA subfacet robustly related to narcissism in Study 1. Based on the results of Study 1, we expected the LWA dimension of antihierarchical aggression to be positively related to narcissism (pre-registered *Hypothesis 3*). As a novel aspect, we used another measure for narcissism (i.e., the Short Dark Triad; Jones & Paulhus, 2014) that incorporates antagonism in a narcissism subscale besides two other dark traits (i.e., Machiavellianism and psychopathy).

Secondly – parallel to the design of Study 1 – we explored the relationship between narcissism and LWA antihierarchical aggression above and beyond individuals' prosocial motives. However, for Study 2, we did not include altruism but social justice commitment as an expression of participants' prosocial attitudes. *Social justice* focuses on the positive outcome of “changing or transforming inequality among underprivileged subgroups within society to be more equitable” (Fietzer & Ponterotto, 2015) and tackles issues like the fight against poverty, racism, and discrimination (e.g., due to sexual orientation, ethnicity, religion,

or gender) (Miller et al., 2009). Social justice *commitment* refers to an individual's intention to pursue social justice related (i.e., prosocial) activities in the future. Research shows that social justice commitment is related to political activism (e.g., participating in a pro-BLM demonstration; Hope et al., 2016). Further, social justice was shown to be positively related to political liberalism and negatively associated with SDO (Janoff-Bulman et al., 2008). Hence, we assume the LWA dimension of antihierarchical aggression to be positively associated with social justice commitment (preregistered *Hypothesis 4*).

Given the overlap between narcissism and Machiavellianism as well as psychopathy found in previous research (Jones & Paulhus, 2014), we also considered these two dark personality traits as covariates. Further, LWA anticonventionalism and LWA top-down censorship were treated as covariates. To acknowledge the limitations of self-reports regarding individuals' tendency to answer in a socially desirable way (Stöber et al., 2002), we included virtue signaling as another measure of socially desirable responding in Study 2. According to Ok et al. (2021), *virtue signaling* refers to an individual's (i.e., the sender's) demonstration of symbolic behaviors so that any observing person (i.e., the receiver) makes favorable inferences about the signaler's moral character. Lastly, we again included participants' age and gender as covariates in the analyzes because narcissistic traits are depending on changes over one's life course (Cramer, 2011) and gender-differences (Grijalva et al., 2015).

Method

Open science and ethical requirements

The second survey was also pre-registered before the data collection with AsPredicted.org (<https://aspredicted.org/2sy8f.pdf> – identifier #99,079) under the title “Understanding Left-Wing Authoritarianism – Study 2”. The second survey was also approved (identifier #2022-05-00006) by the human research ethics committee of the University of Bern. Informed consent was obtained the same way as it was obtained for the first survey. The complete materials and the raw data for the second study are available at <https://researchbox.org/752>.

Power analysis and participants

For study 2, we again used G*Power 3.1 (Faul et al., 2009) to calculate the necessary sample size. Assuming a bivariate effect of $|\rho| = 0.21$ (cf., Schönbrodt & Perugini, 2013) for the two relationships of central interest (LWA: antihierarchical aggression and narcissism; LWA: antihierarchical

aggression and social justice commitment) and a respective Bonferroni corrected error probability of $\alpha = 0.025$ (two-tailed), the results of the power analysis revealed a minimum sample size of $N = 212$. The sample was recruited using the Prolific recruitment platform (<https://www.prolific.co>). Again, we aimed at recruiting $N = 400$ participants nationally representative of the US via this online-crowdsourcing. Applying Prolific's respective option, we *a priori* excluded those individuals who had already participated in Study 1. Ultimately, four hundred and twenty-eight individuals started to participate in the survey. Fifty-one of these participants were excluded from the original sample because they did not complete the survey ($n = 19$), failed the attention check ($n = 19$), or were suspected of being duplicate respondents ($n = 13$). Thus, the final sample consisted of $N = 377$ individuals ($M_{\text{age}} = 46.040$ years, $SD = 15.973$, range = 18–79 years). For the full report of the sample demographics for Study 2, see supplementary Table S1.

Procedure

The second survey was announced as an “Attitudes and Behaviors Study” and lasted about 15 min. The survey was conducted online via the survey software Qualtrics. After giving written informed consent, participants reported their demographic information. Next, the same attention check (Bertrams & Schlegel, 2020) as in Study 1 was administered. Then, participants were randomly presented with the items measuring the dark triad and social justice commitment (i.e., some participants first answered the items measuring the dark triad while other participants first answered the items assessing social justice commitment). Afterwards, participants' proneness to conduct virtue signaling was assessed. Finally, LWA was measured. In a final step, participants reported on their political orientation as well as their ideology and which political party they identify with. After that, participants provided their Prolific ID, were thanked for their participation in the survey and debriefed. After completing the survey, participants received a fixed payment of £2.00 (about \$2.46).

Measures

Dark triad

The dark triad was measured with the Short Dark Triad (SD3; Jones & Paulhus, 2014). With its 27 items, the SD3 assesses the three socially aversive traits of Machiavellianism (e.g., “Most people can be manipulated”), narcissism (e.g., “I insist on getting the respect I deserve”), and psychopathy (e.g., “I'll say anything to get what I want”). Ratings were made using 5-point scales from 1 (*disagree*

strongly) to 5 (*agree strongly*). After recoding the respective inverse items, we calculated a dark triad score using the mean score of all 27 items. The SD3 items showed good internal consistency (McDonald's $\omega = 0.878$). Next, we calculated a mean score for each of the three respective SD3 dimensions with high scores indicating a high level of the respective socially aversive trait. Together, the nine items assessing narcissism (McDonald's $\omega = 0.794$) showed good internal consistency. The same was true for the nine items assessing Machiavellianism (McDonald's $\omega = 0.831$) and the nine items measuring psychopathy (McDonald's $\omega = 0.775$).

Social justice commitment

Social justice commitment was assessed with the Social Issues Questionnaire (SIQ; Miller et al., 2009). The SIQ is a 52-item scale measuring interest in social justice with six separate scales. For the present study, we only used those four items of the SIQ that measure social justice commitment (e.g., "In the future, I intent to engage in social justice activities."). Participants rated their agreement with the four items using 10-point scales from 0 (*strongly disagree*) to 9 (*strongly agree*). For the data analyses, we calculated a mean score including all four SIQ items measuring social justice commitment with high scores indicating a high level of self-reported social justice commitment. The scale showed excellent internal consistency (McDonald's $\omega = 0.965$).

Virtue-signaling

Virtue-signaling was assessed with the Moral Identity Scale (MIS; Aquino & Reed, 2002) in four steps. With its ten items, the MIS measures two subdimensions of moral identity: internalization (i.e., the extent to which nine morality-related traits are central to one's own self-concept) and symbolization (i.e., the tendency to publicly express one's own moral identity). In a first step, participants were presented with a list of nine different positive and morality-related traits (i.e., caring, compassionate, fair, friendly, generous, hardworking, helpful, honest, and kind) and asked to visualize how individuals having these traits would think, feel, and act. In a second step, participants' internalization of the nine morality-related traits was measured with the five items of the internalization dimension (e.g., "I strongly desire to have these traits"). Agreement with these five items was rated using 5-point scales from 1 (*strongly disagree*) to 5 (*strongly agree*). After recoding two inverse items, we calculated a mean internalization score with high scores indicating a high level of internalization of moral identity. The internalization subscale showed good internal consistency (McDonald's $\omega = 0.801$). In a third step, we assessed participants' tendency to use symbolic actions

to publicly express their moral identity with the five items of the symbolization dimension (e.g., "I am actively involved in activities that communicate to others that I have these characteristics"). Again, ratings of these five items were made using 5-point scales from 1 (*strongly disagree*) to 5 (*strongly agree*). Next, we calculated a mean symbolization score with high scores indicating a high level of symbolization of moral identity. The symbolization subscale also showed good internal consistency (McDonald's $\omega = 0.858$). In a fourth and final step, in line with the recommendations of Ok et al. (2021), we used a linear regression analysis to control for participants' baseline virtue levels by predicting their mean symbolization scores by their respective mean internalization scores and saving the unstandardized residuals as participants' virtue signaling scores.² Thus, the virtue signaling score represents the degree of how strongly someone tends to publicly demonstrate morality independent of their internalized moral values.

Left-wing authoritarianism

LWA was again measured with the LWAI (Costello et al., 2022). In Study 2, the LWAI showed excellent internal consistency regarding the items included in the total mean LWA score (McDonald's $\omega = 0.954$), assessing antihierarchical aggression (McDonald's $\omega = 0.916$), anticonventionalism (McDonald's $\omega = 0.938$), and top-down censorship (McDonald's $\omega = 0.903$).

Political orientation

As in Study 1, political orientation was again assessed with one item asking participants to place themselves on a 7-point scale with regard to their political views ranging from 1 (*extremely left-wing/far-left*) to 7 (*extremely right-wing/far-right*).

Results

Common method bias test

For Study 2, we again tested for severe common method variance using Harman's single-factor test as described by Zhang et al. (2022). In the principal components analysis, 15 components emerged explaining 65.18% of the variance

² R for the regression model was statistically significantly different from zero, $F(1, 375) = 28.335$, $p < .001$. Altogether, 7.0% (6.8% adjusted) of the variability of participants' mean symbolization scores was explained by participants' mean internalization scores. Results showed that participants' mean symbolization scores were statistically significantly predicted by their mean internalization scores, $b = 0.439$ ($SE = 0.082$), $p < .001$.

in Study 2. The first component explained only 21.01% of the variation, which is again below the critical value of 40%. Thus, we assume that common method variance did also not severely bias the results of Study 2.

Preregistered analyses

Descriptive statistics for all variables can be found in supplementary Table S1. Bivariate correlations for all analyzed variables are depicted in Table 3. The results revealed a positive relationship between narcissism and LWA antihierarchical aggression. However, contrary to our prediction, this correlation did not reach statistical significance ($r=.097$, $p=.059$). Surprisingly, we found a significant association between Machiavellianism and antihierarchical aggression ($r=.217$, $p<.001$) and an even stronger relationship between psychopathy and antihierarchical aggression ($r=.335$, $p<.001$). With regard to social justice commitment, in line with our expectation, we found a significant positive relationship with LWA antihierarchical aggression ($r=.357$, $p<.001$).

To further test our expectations, we calculated a hierarchical multiple linear regression predicting LWA anti-hierarchical aggression. All VIF values were < 1.94 and the results of the two respective Durbin-Watson tests showed that there was no autocorrelation. In a first block, we included only narcissism and social justice commitment as predictors. The results of these analyses can be found in Table 4 (Model 5a). We had expected narcissism to predict LWA antihierarchical aggression above and beyond social justice commitment. However, in this first regression model, LWA anti-hierarchical aggression was only predicted by social justice commitment ($b=0.150$, $SE\ b=0.021$, $\beta=0.350$, $p<.001$). However, when we controlled for the other dark triad traits (i.e., Machiavellianism and psychopathy), the other LWA subfacets (i.e., anticonventionalism and top-down censorship) as well as for age, gender, and virtue signaling (see Model 5b, Table 4), a different pattern emerged: In this analysis, only psychopathy ($b=0.470$, $SE\ b=0.094$, $\beta=0.655$, $p<.001$) was predictive for LWA antihierarchical aggression but neither were narcissism ($b=-0.039$, $SE\ b=0.078$, $\beta=-0.022$, $p=.613$) nor social justice commitment ($b=0.025$, $SE\ b=0.019$, $\beta=0.058$, $p=.170$).

Discussion

In Study 2, we further investigated the relationship between narcissism and the LWA subfacet of antihierarchical aggression. Based on the results of Study 1, we had antihierarchical aggression expected to be positively related to narcissism above and beyond individuals' prosocial attitudes (i.e., their

social justice commitment). In a first step, the results of the data analyses revealed that antihierarchical aggression was only predicted by social justice commitment but not by narcissism. These results seem to imply that individuals high in antihierarchical aggression (i.e., individuals who endorse the use of violence to reach their own political goals) are also more likely to strive for social justice (i.e., for more equality for the underprivileged subgroups within society). However, when we controlled for the other traits of the dark triad (i.e., Machiavellianism and psychopathy), the other LWA subfacets (i.e., anticonventionalism and top-down censorship) as well as for age, gender, and virtue signaling, a different pattern emerged: In this analysis, the association between antihierarchical aggression and social justice commitment vanished and a relationship between antihierarchical aggression and psychopathy was unveiled.

On the one hand, this result fits the theoretical argument that psychopathy is a strong predictor for extremists' violence (Gill & Corner, 2017). It is further in line with previous empirical research that found a correlation between LWA and psychopathy (Costello et al., 2022). On the other hand, this result seems to somewhat contradict our pre-registered hypothesis that narcissism would be predictive for antihierarchical aggression. However, it is worth noting that psychopathy is – besides narcissism and Machiavellianism – also one of the three personality traits of the dark triad (Jones & Paulhus, 2014). Individuals with dark triad traits share several attributes – they are self-promoting, emotionally callous, and have a tendency to manipulate others to take advantage of them (Paulhus & Williams, 2002). Hence, all three dark triad traits are overlapping personality traits (Furnham et al., 2013). Nevertheless, each of these traits also has unique aspects: For psychopaths, the callousness is accompanied by a general disregard for social norms and the element of impulsivity (Jones & Paulhus, 2014). In contrast, Machiavellians are rather obsessed with gaining power, while narcissists display self-grandiosity and self-enhancement (Ok et al., 2021; Paulhus & Williams, 2002). Accordingly, the results of Study 2 showed not only significant correlations between the dark triad traits, but also revealed that each of these traits have unique aspects as only psychopathy was significantly predicting antihierarchical aggression.

It is further worth remembering that in Study 1, we used a different measure for narcissism – the Five-Factor Narcissism Inventory (FFNI; Sherman et al., 2015). The FFNI measures narcissism on three subdimensions (Miller et al., 2016): antagonism, agentic extraversion, and neuroticism. The results of Study 1 revealed that the LWA subfacet of *antihierarchical aggression* was significantly predicted only by *antagonistic* narcissism. Antagonistic narcissists are individuals exploiting others for their own interests,

Table 3 Intercorrelations and (*p* Values) for Study 2 Variables

	01	02	03	04	05	06	07	08	09	10	11	12
01 Age	–											
02 Gender (1 = male, 2 = female)	0.043 (0.406)	–										
03 Social Justice Commitment	–0.083 (0.108)	0.112 (0.030)	–									
04 Dark Triad	–0.359 (<0.001)	–0.210 (<0.001)	0.019 (0.712)	–								
05 Machiavellianism	–0.369 (<0.001)	–0.145 (0.005)	–0.076 (0.141)	0.817 (<0.001)	–							
06 Narcissism	–0.147 (0.004)	–0.125 (0.016)	0.119 (0.020)	0.757 (<0.001)	0.373 (<0.001)	–						
07 Psychopathy	–0.348 (<0.001)	–0.241 (<0.001)	0.002 (0.971)	0.824 (<0.001)	0.575 (<0.001)	0.428 (<0.001)	–					
08 Virtue-Signaling	–0.082 (0.112)	0.079 (0.128)	0.299 (<0.001)	0.255 (<0.001)	0.168 (0.001)	0.340 (<0.001)	0.093 (0.071)	–				
09 LWA	–0.393 (<0.001)	0.157 (0.002)	0.477 (<0.001)	0.135 (0.009)	0.129 (0.012)	0.018 (0.734)	0.182 (<0.001)	0.148 (0.004)	–			
10 LWA: AHA	–0.413 (<0.001)	0.058 (0.259)	0.357 (<0.001)	0.267 (<0.001)	0.217 (<0.001)	0.097 (0.059)	0.335 (<0.001)	0.138 (0.007)	0.843 (<0.001)	–		
11 LWA: AC	–0.316 (<0.001)	0.119 (0.021)	0.462 (<0.001)	0.061 (0.239)	0.069 (0.179)	–0.050 (0.331)	0.133 (0.010)	0.031 (0.543)	0.889 (<0.001)	0.655 (<0.001)	–	
12 LWA: TDC	–0.280 (<0.001)	0.223 (<0.001)	0.390 (<0.001)	0.029 (0.570)	0.053 (0.305)	0.009 (0.860)	0.007 (0.897)	0.221 (<0.001)	0.819 (<0.001)	0.517 (<0.001)	0.583 (<0.001)	–
13 Political Orientation	0.138 (0.007)	–0.045 (0.309)	–0.456 (<0.001)	0.101 (0.051)	0.086 (0.094)	0.114 (0.027)	0.038 (0.465)	0.053 (0.305)	–0.565 (<0.001)	–0.374 (<0.001)	–0.728 (<0.001)	–0.308 (<0.001)

Note. LWA = Left-wing Authoritarianism; AHA = Antihierarchical Aggression; AC = Anticonventionalism; TDC = Top-Down Censorship. All reported *p* values are two-tailed. For the correlations between narcissism and the LWA dimension of antihierarchical aggression as well as social justice commitment and the LWA dimension of antihierarchical aggression, we considered Bonferroni adjusted *p* values < 0.025 (two-tailed) as statistically significant; for all other correlations, we applied the conventional 0.05 significance level.

Table 4 Regression Coefficients, Standard Errors (SE), and Confidence Intervals (CI) for Left-Wing Authoritarianism (LWA): Antihierarchical Aggression

	B	SE	95% CI		β	p	R ²	df1, df2	F	p
			LL	UL						
Model 5a							0.130	4, 370	27.812	<0.001
Constant	1.986	0.234	1.526	2.466	–	<0.001				
Social Justice Commitment	0.150	0.021	0.109	0.192	0.350	<0.001				
Narcissism	0.100	0.089	–0.074	0.274	0.055	0.261				
Model 5b							0.545	8, 366	48.625	<0.001
Constant	0.293	0.407	–0.507	1.093	–	0.472				
Age	–0.011	0.003	–0.017	–0.004	–0.137	<0.001				
Gender (1 = male, 2 = female)	0.036	0.092	–0.145	0.216	0.015	0.696				
Virtue-Signaling	0.056	0.056	–0.054	0.167	0.041	0.317				
Social Justice Commitment	0.025	0.019	–0.012	0.062	0.058	0.170				
Narcissism	–0.039	0.078	–0.192	0.113	–0.022	0.613				
Machiavellianism	–0.007	0.083	–0.170	0.155	–0.004	0.929				
Psychopathy	0.470	0.094	0.286	0.655	0.237	<0.001				
LWA: Anticonventionalism	0.378	0.042	0.296	0.461	0.441	<0.001				
LWA: Top-Down Censorship	0.179	0.045	0.001	0.091	0.267	<0.001				

Note. $N=375$. All reported p values are two-tailed. For the relations between narcissism and LWA antihierarchical aggression as well as social justice commitment and LWA antihierarchical aggression, we considered Bonferroni adjusted p values < 0.025 (two-tailed) as statistically significant; for all other relations, we applied the conventional 0.05 significance level.

lacking empathy, and having a sense of entitlement. Also, they are arrogant and manipulative, demonstrating reactive anger and distrust in others while seeking conflict and thrill. In contrast, the FFNI dimension of *agentic extraversion* is more representative of narcissistic behaviors like acclaim seeking, authoritativeness, grandiose fantasies, and exhibitionism. Thus, antagonistic narcissism (as measured with the FFNI) seems to represent a blend of narcissistic and psychopathic attributes, while agentic extraversion (measured with the FFNI) seems to be rather representative of the narcissism trait measured with the Short Dark Triad (SD3; Jones & Paulhus, 2014). Taking all this into account, the results of Study 2 replicate the results of Study 1, showing that individuals who strongly endorse antihierarchical aggression to overthrow those in power are narcissistic individuals with psychopathic attributes and thus driven by ego-focused motives.

General discussion

In two pre-registered studies, we investigated the relationship of LWA with the ego-focused trait of narcissism. Based on existing research (Zeigler-Hill et al., 2021), we expected individuals with higher levels of LWA to report higher levels of narcissism. The results of both studies are in line with this prediction: In particular, the results of Study 1 showed that the LWA subfacet of anti-hierarchical aggression was significantly predicted by antagonistic narcissism above and beyond individuals' prosocial dispositions (i.e., altruism). While antihierarchical aggression represents the drive to use force to overthrow those in power and who endorse

conservative values, antagonistic narcissism is characterized by exploitation of others, lack of empathy, a sense of entitlement, arrogance and manipulative behavior. Accordingly, the results of Study 1 show that a strong ideological view, according to which a violent revolution against existing societal structures is legitimate is rather endorsed by individuals with ego-focused motives. This interpretation is further supported by the results of Study 2 which showed that LWA antihierarchical aggression was predicted by psychopathy again above and beyond individuals' prosocial dispositions (i.e., social justice commitment). Unexpectedly, neither dispositional altruism (Study 1) nor social justice commitment (Study 2) was found to be related to antihierarchical aggression. Considering these results, we assume that some political activists on the left side of the political spectrum do not actually strive for social justice and the support of underprivileged groups or persons, but rather endorse or express violence for the satisfaction of their own ego-focused, sometimes even antisocial, needs.

As a new contribution to the literature on dark personality traits, we interpret the results of both studies as expressions of a phenomenon we term the *dark-ego-vehicle principle*. According to this principle, individuals with dark personalities – such as high narcissistic and psychopathic traits – are attracted to certain ideologies and forms of political activism. We assume that such individuals use ideologies and political activism as a vehicle to satisfy their own ego-focused needs instead of actually aiming at social justice and equality. For example, a highly narcissistic/psychopathic person may participate in a pro-BLM protest pretending to fight against racism while actually using such

protesting activities to meet their own aggressive motives and thrills (e.g., via violent escalations during pro-BLM protests). Further, such individuals might be attracted to pro-BLM activism, because this form of activism can provide them with opportunities for positive self-presentation (e.g., virtue signaling).

Three ancillary points are worth mentioning. Firstly, the dark-ego-vehicle principle does not mean that activism *per se* was narcissistic/psychopathic. It rather says that some forms of political activism can be attractive for narcissist/psychopaths; however, people also get involved in political activism due to their altruistic motives (Fowler & Kam, 2007). Secondly, the dark-ego-vehicle principle means that involvement in (violent) political activism is *not* solely attributable to political orientation but rather to personality traits manifesting in individuals on the (radical) left and right of the political spectrum. In particular, we argue that the dark personality correlates of authoritarianism *per se* might be the driving forces behind the aggression and violence expressed during protests like the attack on the United States Capitol in Washington DC and the pro-BLM protests mentioned in the introduction of this paper. This argument is in line with previous research (Zeigler-Hill et al., 2021) which showed that antagonistic narcissism is not only a strong predictor of LWA but simultaneously predicts SDO – a trait that is clearly related to RWA (Altemeyer, 1998). These results also show that some individuals with high levels of antagonistic narcissism may be motivated to endorse either right- or left-wing ideological attitudes depending on which of these attitudes seems to be more opportune to them given a specific situation. Thus, it is necessary to argue very carefully in each case for what reason a specific dark personality should be attracted to particular ideologies/political activism.

Finally, the present research is not based on an elaborated explanatory theory (cf., Sandberg & Alvesson, 2021) as there is a lack of such a theory. Thus, we refer to a *principle* and not to a theory. However, we consider the present research as a first step within the complex process of Theory Construction Methodology *sensu* Borsboom et al. (2021) as our research aimed at the identification of an empirical phenomenon to develop a prototheory.

Limitations and future research

The presents research has some limitations which need to be addressed. First, while the samples of both present studies are much more diverse (see supplementary Table S1) than typical psychological research samples (Sears, 1986), it was not perfectly representative. We applied Prolific's option to recruit a US national representative sample. However, some

participants had to be excluded from the analyses (e.g., for failing the attention checks). By this, representativeness might have been slightly reduced.

Second, there may potential issues resulting from the fact that we collected our data using an online panel (e.g., Smith et al., 2016; Wood et al., 2017). In particular, our samples may also include “professional survey takers” who were primarily interested in completing our surveys to receive the monetary incentive. Thus, our samples may include some specific demographic groups (e.g., unemployed or underemployed individuals with higher than average education levels). Further, some of the participating individuals may have not given the required attention to the survey questions because they were speeding through the survey. To deal with the second issue of careless responding, we included respective attention checks in both surveys and excluded individuals who failed those checks from the data analyses. However, in future studies, further removals of participants' data based on participants' response speed and consistency should be considered as suggested by Wood et al. (2017).

Third, the present findings are based on self-report measures. The usefulness of self-report measures has been criticized in the past (Baumeister et al., 2007). However, very recent empirical findings (Saunders et al., 2022) indicate self-report data can be very useful. Still, we acknowledge that self-reports are distal measures of actual behaviors and might be biased by participants' tendencies to answer in a socially desirable way (Stöber et al., 2002). To tackle the later restriction, in the present research we included well-established measures of socially desirable responding (Study 1) and virtue signaling (Study 2).

Fourth, the self-reports used in the present research may also be problematic as correlations could be artificially inflated due to common method variance which may arise particularly when the examined variables are assessed cross-sectionally (Chang et al., 2010) and/or due to semantic similarities of the items (Wood et al., 2022). However, the results of Harman single-factor tests as described in Zhang et al. (2022) suggested that common method bias did neither seriously affect the results of Study 1 or Study 2.

Fifth, future research should seek more empirical evidence for the dark-ego-vehicle principle. One particular area of interest, we plan to tackle in the near future is the relationship between the dark triad traits and political activism (e.g., in the context of contemporary prevalent feminist activism). Also, we argue that the dark-ego-vehicle principle holds independently of any political orientation. To test this assumption, future research should investigate the validity of the principle including individuals on both sides of political spectrum and involving social topics to which both sides have strong opinions (for example abortion rights or gun control laws). If the

dark-ego-vehicle principle is valid, such research should find evidence for narcissistic individuals making of such topics to satisfy their own ego-focused needs independently of their (alleged) political views (i.e., some liberal narcissistic individuals should be found to be fighting *for* abortion rights or gun control laws while some conservative narcissistic individuals should be found to be fighting *against* abortion rights or gun control laws).

Lastly, future empirical research on the nomological network of dark triad personalities with regard to their “vehicles” (i.e., ideologies and activism) is needed. Further, we think that a number of moderating variables are likely to play a crucial role as well, for example the overall prestige of the ideology/activism in a society, the distribution of supporters and opponents of this ideology/activism in the culture under study, and the likelihood of individually sufficient rewards for advocating pro and contra for this ideology/activism.

Conclusion

The results of our research significantly contribute to the research on LWA as empirical evidence regarding the correlates of LWA are still rare and controversial. With the present two studies, we provide empirical evidence for the relationship between LWA and dark personality traits as well as prosocial variables (i.e., altruism and social justice commitment). Also, with the dark-ego-vehicle principle, our research provides a possible explanation for the psychological mechanisms driving some individuals to participate in political activism independently of their political orientation.

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Data Availability Prior to the data collection, the hypothesis and analysis plan for the current studies were pre-registered at <https://aspredicted.org> (Study 1: <https://aspredicted.org/qc4hy.pdf>; Study 2: <https://aspredicted.org/2sy8f.pdf>).

Materials availability The materials of the current studies and the full datasets generated for the current studies are available at <https://researchbox.org/751> (Study 1) and <https://researchbox.org/752> (Study

2).

Declarations

Conflict of Interest The authors declare that they have no financial conflict of interest. AB declares that during the conducting and the publication process of the current studies, he was a member of the party FDP.The Liberals (FDP.Die Liberalen) Switzerland and the Network for Academic Freedom (Netzwerk Wissenschaftsfreiheit). No funds, grants, or other support was received.

Ethics Approval The current studies were approved by the local ethics commission of the University of Bern (no. 2022-05-00006). All participants provided informed consent prior to participating.

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