SHORT REPORT

Disentangling the relationship between Machiavellianism and social dominance orientation

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BACKGROUND
Machiavellianism and social dominance orientation are two constructs associated with socially undesirable behavior and predictors of prejudice; however, their relationship has mainly been investigated through measures that only assess the antagonism dimension of Machiavellianism. Thus, this study aimed to disentangle their relationship using an instrument assessing agency and planfulness.

PARTICIPANTS AND PROCEDURE
Participants were 767 Brazilians aged 18 to 71 (M = 30.10, SD = 10.60), most identified as women (67.7%) and assessed using the Five Factor Machiavellianism Inventory, the Short Dark Triad, and the Social Dominance Orientation Scale. A path model was used, where the Machiavellianism and the Dark Triad dimensions predicted social dominance orientation.

RESULTS
The results suggest that antagonism was indeed the primary and only dimension of Machiavellianism to predict dominance and antiegalitarianism, while agency and planfulness were non-significant.

CONCLUSIONS
The findings suggest that socially dominant traits have their roots in antagonism, showing no interaction with planning and impulse control.

KEY WORDS
antiegalitarianism; Machiavellianism; social dominance theory; social psychology

BACKGROUND

Individual differences in socially undesirable traits are central to the consequences of aversive everyday behavior such as prejudice; however, not measuring (or mismeasuring) traits adequately can influence how we understand the display of unwanted behaviors. Two variables that are currently tangled and could be influencing inaccurate findings are Machiavellianism and social dominance orientation (SDO). Both variables are studied by social psychology as part of a socially aversive set of traits and are mainly associated with adverse outcomes (Pratto et al., 1994; Rauthmann & Will, 2011). On the one hand, Machiavellianism describes a personality trait that characterizes people who behave in a manipulative interpersonal style, exploiting others while lacking concern for ethical principles (Rauthmann & Will, 2011). While Machiavellianism is usually associated with aversive outcomes, it also has some adaptive behaviors, such as impulse control and planning (Collison et al., 2018), core features of conscientiousness.

On the other hand, SDO refers to an ideological belief system that legitimizes group-based hierarchy and social inequality (Pratto et al., 1994). It can be understood as two sets of attitudes: dominance (i.e., SDO-D, an inclination for group dominance, with higher status groups enforcing their dominance over lower status groups) and antiegalitarianism (i.e., SDO-E, an inclination for group inequality, with hierarchical ideologies; Ho et al., 2012, 2015). People with higher levels of SDO tend to endorse beliefs such as the natural superiority of ingroups over outgroups and the need for dominance and power in social relationships (Jarmakowski-Kostrzanowski & Radkiewicz, 2021; Pratto et al., 1994). Machiavellianism and SDO share a callous antagonistic core, and they have been shown to be expressed through similar beliefs (Jones & Figueredo, 2013); for example, both are predictors of prejudice against a myriad of groups (Berry, 2023; Hodson et al., 2009). Given the potential adverse consequences associated with Machiavellianism and SDO, it is essential to understand their complete association.

However, measures of Machiavellianism, such as the Short Dark Triad (i.e., Machiavellianism, narcissism, and psychopathy; Jones & Paulhus, 2014), have been held to be too narrow because they focus mainly on antagonistic traits and have a significant amount of overlap with psychopathy (Kückelhaus et al., 2022; Sharpe et al., 2021), and consequently do not consider other core aspects of the Machiavellian personality, such as impulse control and planning (Rauthmann & Will, 2011). To mitigate such problems, the Five Factor Machiavellianism Inventory (FFMI) was developed (Collison et al., 2018). The FFMI has the five-factor personality model as a base and assesses dimensions that other instruments do not, such as agency (e.g., assertiveness and competence) and planfulness (e.g., order

and deliberation), the fundamental aspects that differentiate Machiavellianism from psychopathy (Sharpe et al., 2021), and it has been shown to be an accurate measure of Machiavellianism (Grabovac & Dinić, 2022). Nevertheless, there is no evidence known regarding agentic and planful Machiavellian traits and SDO.

PRESENT STUDY

In summary, previous studies have only investigated the association between Machiavellianism-antagonistic traits and SDO (Hodson et al., 2009; Jones & Figueredo, 2013), therefore not focusing on adaptive behaviors that are a part of the Machiavellian personality (i.e., impulse control and planning). Thus, this study aimed to disentangle the association between Machiavellianism and SDO. To do so, a measure that assesses broader beliefs associated with Machiavellian people (i.e., not only antagonism) needed to be used. By using the FFMI and the Short Dark Triad (SDT) and applying a predictive path model, it was possible to test the association of agentic and planning traits related to social dominance. It can be hypothesized that antagonism will positively predict SDO (Hodson et al., 2009; Jones & Figueredo, 2013), while agency and planfulness will not predict SDO; this hypothesis is based on previous evidence that indicates a negative small, nonsignificant association between extraversion and conscientiousness and SDO (Berry, 2023; Ho et al., 2015), two traits highly predictive of agency and planfulness.

PARTICIPANTS AND PROCEDURE

PARTICIPANTS

Participants were 767 Brazilians aged 18 to 71 (M = 30.10, SD = 10.60), from a community sample; 67.7% identified themselves as women. Most people were single (68.7%) or married (24.1%), lived in the Southeast (59.2%) or South (17.3%) of Brazil; 31.2% of participants' highest education level was high school, 24.5% graduate level, and 44.9% received one to three times the minimum wage monthly salary. Data were collected through an online platform, in which participants were first informed about the study objective and indicated their agreement as volunteers. No type of compensation was offered, and the study followed the principles outlined in the Declaration of Helsinki for the ethical conduct of research involving human participants.

MEASURES

Machiavellianism. To assess Machiavellianism, participants answered the Five Factor Machiavellianism

Table 1

Pearson's correlation between Machiavellianism, the Short Dark Triad, and social dominance orientation

	Antagonism	Agency	Planfulness	Machiavellianism	Narcissism	Psychopathy	Dominance	Antiegalitarianism	SDO
Antagonism	α = .833								
Agency	.220*	α = .852							
Planfulness	.067	.252*	α = .803						
Machiavellianism	.723*	.195*	.019	α = .872					
Narcissism	.401*	.562*	.049	.460*	α = .737				
Psychopathy	.650*	.184*	-.177*	.674*	.433*	α = .761			
Dominance	.502*	.166*	.047	.534*	.310*	.436*	α = .881		
Antiegalitarianism	.387*	.176*	.086**	.317*	.221*	.303*	.603*	α = .884	
SDO	.502*	.190*	.072	.487*	.301*	.420*	.917*	.872*	α = .914

Note. * $p < .001$, ** $p < .01$, SDO – social dominance orientation. Cronbach's alpha is shown in the diagonal.

Inventory (Collison et al., 2018) in Brazilian-Portuguese (manuscript under development) on a 5-point Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*). The FFMI has 13 facets and three factors (i.e., antagonism, agency, and planfulness).

The Dark Triad. To assess the Dark Triad, participants answered the Short Dark Triad (Jones & Paulhus, 2014) in Brazilian-Portuguese (Monteiro, 2017) on a 5-point Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*). The SDT has three factors (i.e., Machiavellianism, narcissism, and psychopathy).

Social dominance. To assess social dominance, the Social Dominance Orientation Scale (SDO$_6$; Pratto et al., 1994) in Portuguese (Giger et al., 2015) was answered on a 7-point Likert-type scale from 1 (*very negative*) to 7 (*very positive*) by participants. The SDO$_6$ can be scored in two ways, as unidimensional and as two factors (i.e., dominance [SDO-D] and antiegalitarianism [SDO-E]) as proposed by Ho et al., 2012).

RESULTS

First, Pearson's *r* correlation was performed. The correlations between all variables are shown in Table 1. The results indicate that antagonistic attitudes (i.e., considered here as the facet from FFMI and the SDT) were more associated with dominance and antiegalitarianism, while planfulness showed a small association only with antiegalitarianism. Also, agency had small correlations with both social dominance dimensions. More details on correlations (i.e., between Machiavellianism's facets, the Dark Triad, and SDO factors) can be found in the supplementary material (available in the OSF repository: https://osf.io/wj2u9/?view_only=bce3c893866e49b191d586937d7f23b5).
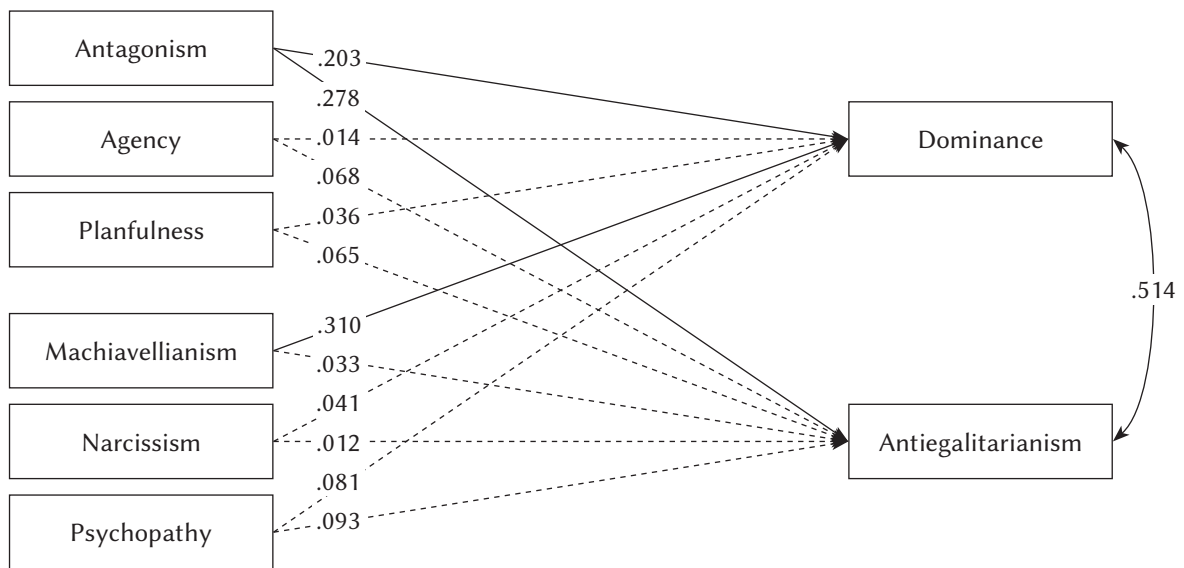
Second, a path analysis model, using the maximum likelihood robust (MLR) estimator, was applied to investigate the predictive power of the Machiavellianism and the Dark Triad dimensions over the SDO ones. All analyses were performed using the MPlus 8 software. When using the structural model, as shown in Figure 1, it was possible to identify that antagonism and Machiavellianism measured by the SDT were the main predictors of both dominance and antiegalitarianism. Agency, planfulness, narcissism, and psychopathy did not predict any dimensions of SDO.

DISCUSSION

This study sought to disentangle the relationship between Machiavellianism and social dominance orientation by examining the prediction of agentic and planful traits beyond antagonism (i.e., mea-

Figure 1

Path model, whereas the three dimensions of Machiavellianism and the Dark Triad predict the two dimensions of social dominance orientation

Note. R^2 = .320 (p < .001) for dominance and R^2 = .167 (p < .001) for antiegalitarianism.

sured by the FFMI and the SDT). Two main results were obtained. First, it was further confirmed that antagonism and the Machiavellianism facet from the SDT predicted social dominant beliefs, in accordance with hypothesis one. Second, the non-association between agentic and planful traits and SDO was in agreement with hypothesis two.

The relationship between antagonism and social dominant behavior has been previously and extensively shown (Berry, 2023; Hodson et al., 2009; Jones & Figueredo, 2013), and the results found here re-affirm that SDO has its roots in antagonism. It suggests that individuals seek their ingroup success at the expense of others' well-being, behaving in aversive manners to ensure and maintain dominance and hierarchical structures (Hodson et al., 2009; Jones & Figueredo, 2013). Furthermore, by using the SDT (a well-known measure previously pointed out by Collison et al., 2018 to mainly focus on the antagonistic aspects of Machiavellianism), it was possible to show that, indeed, Machiavellianism kept its positive prediction of SDO (Hodson et al., 2009; Jones & Figueredo, 2013), because it is substantially focused on antagonistic traits, specifically its exploitation aspects (Anderson & Cheers, 2020).

The main finding of this article suggests a lack of association between agency and planful attitudes (i.e., both adaptative traits of Machiavellianism) and dominance/antiegalitarianism. This further expands our understanding of social dominance, suggesting that socially dominant people have no direct influence on impulse control and planning while using agen-

tic strategies to ensure hierarchical structures to keep in power, possibly justifying such behaviors through their achievements (Grabovac & Dinić, 2022).

This study has three main limitations. First, using the SDO₆ to assess SDO-D and SDO-E could have affected the results because SDO-D items are positively worded, and SDO-E items are negatively worded (Ho et al., 2012, 2015). Furthermore, meta-analytic evidence suggests that SDO-D and SDO-E are not distinguishable (Berry, 2023). Nonetheless, the study's aim was to disentangle the relationship between Machiavellianism and SDO, which was achieved. Future studies should investigate whether the same results are found between the FFMI and the SDO₇ and investigate the cognitive aspects associated with Machiavellianism, further assessing how socially dominant people control (or not) their impulses when faced with situations that defy the current hierarchy. Second, the gender imbalance could have skewed the results. However, this was an exploratory study. Thus, it can be assumed that our distribution of participants is adequate to test such differences. And finally, the third limitation is the use of self-report measures, which can be highly influenced by social desirability. Future studies should try to compare direct behavioral measures of SDO and Machiavellianism to test whether the results found here are compatible.

Overall, this study highlights that the primary Machiavellian trait associated with SDO is antagonism, hence re-stating antagonism as the central core of many socially undesirable variables (Jones & Figueredo, 2013), and behaviors such as assertive-

ness, competence, and deliberation are not predictive of socially dominant people, suggesting that people with higher levels of SDO tend to have no influence of impulse control and planning. Furthermore, by using a unidimensional measure of Machiavellianism, it was possible to disentangle the relationship between Machiavellianism and socially dominant views.

Disclosures

This research received no external funding.
The study was approved by the Bioethics Committee of the University of Western Ontario (Approval No. 13457119.0.0000.5514).
The author declares no conflict of interest.

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