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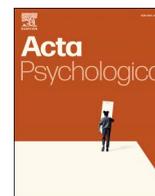
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Identity salience moderates the effect of social dominance orientation on COVID-19 ‘rule bending’

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ABSTRACT

Amidst the economic, political, and social turmoil caused by the COVID-19 pandemic, contrasting responses to government mandated and recommended mitigation strategies have posed many challenges for governments as they seek to persuade individuals to adhere to prevention guidelines. Much research has subsequently examined the tendency of individuals to either follow (or not) such guidelines, and yet a ‘grey area’ also exists wherein many rules are subject to individual interpretation. In a large study of Canadians ($N = 1032$, $M_{\text{age}} = 34.39$, 52% female; collected April 6, 2020), we examine how social dominance orientation (SDO) as an individual difference predicts individual propensity to ‘bend the rules’ (i.e., engaging in behaviors that push the boundaries of adherence), finding that SDO is significantly and positively associated with greater intentions toward rule-bending behaviors. We further find that highlighting a self-oriented or in-group identity enhances the relationship between SDO and rule-bending, whereas making salient a superordinate-level identity (e.g., Canada) attenuates this effect. Implications for theory and practice are discussed.

1. Introduction

The global pandemic caused by the emergence of the SARS-CoV-2 coronavirus disease (COVID-19; [World Health Organization, 2020](#)) led to myriad government response strategies to mitigate viral transmission. Both recommended and government-mandated interventions called on consumers to change their behaviors from previously established behavioral and social norms to often very new ones (e.g., wearing masks in public). In response, individuals demonstrated a wide range of behaviors, ranging from strict adherence to openly flouting those practices. Such discrepancies in adherence to public health measures highlights the need to augment our understanding of how individuals respond to these policies and make behavioral decisions in such an environment (e.g., [Politi et al., 2021](#); [Zitek & Schlund, 2021](#); [Tu et al., 2021](#); [Zajenkowski et al., 2020](#)).

An important question amid this issue is who will adhere to and follow the rules strictly, and who will adhere to them more loosely if at all. We propose that social dominance orientation (SDO; [Pratto et al.,](#)

1994) is a significant predictor of whether public health measures are followed strictly or whether “rule-bending” occurs. We also posit that health message framing can make identities salient and will interact with SDO to predict the likelihood of engaging in rule-bending behaviors. Specifically, we propose that SDO will be associated with increased rule-bending, but that highlighting a superordinate identity (not a self or in-group identity) will attenuate this relationship and result in greater adherence to public health guidelines.

1.1. Social dominance orientation

SDO encompasses individuals’ support for group-based hierarchy and the domination of certain groups by others ([Sidanius & Pratto, 1999, p. 48](#)). Individuals high in SDO tend to see hierarchies as inevitable and legitimate due to their predisposition to believe that the world is a “competitive jungle” ([Duckitt, 2001](#)). SDO is associated with negative attitudes toward entities that are seen as threatening status quo, hierarchy, and power, and results in boundaries to protect the in-group(s)

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from threats (Politi et al., 2021). As such, those high in SDO pursue self-interested goals in resource allocations (Sidanius et al., 1994) and uphold personal and in-group norms (Stanley et al., 2019).

1.2. SDO and COVID-19 behaviors

Difference in opinions about COVID-19 responses observed across the political divide might indicate a misalignment between ideology and regulations (Taber & Lodge, 2006). There is anecdotal evidence in popular media (e.g., Nace, 2020; Santhanam, 2021) and some research (Cakanlar et al., 2020; Gollwitzer et al., 2020; Politi et al., 2021) that suggests that those with high SDO may be less inclined to engage in COVID-19 prevention behaviors. For instance, SDO has been shown to be negatively correlated with support for government COVID-19 restrictions (Clarke et al., 2021), such as mask wearing and physical distancing.

The self-focused, individualistic nature of SDO highlights the belief that it is a personal and individual responsibility to look after one's health rather than relying on external bodies such as government (Clarke et al., 2021). Thus, recommendations or requirements that could be viewed as attenuating one's own opportunities or livelihoods (e.g., inhibiting business practices, socially distancing from family or friends), or which are perceived to attenuate inequality (e.g., benefitting those in groups over which the individual might otherwise be dominant) may be particularly aversive to those higher in SDO. In line with this, Politi et al. (2021) find a negative effect of SDO on *prosocial* COVID-19 related behaviors (e.g., "I am willing to do grocery shopping for those people in my neighbourhood who are in need") and note that people valuing SDO are likely to be opponents of behavior that prioritizes the welfare of others.

Given the tendency of those high in SDO to ascribe to a sense of personal (vs. government) responsibility (Clarke et al., 2021), pursue self-focused goals (Sidanius et al., 1994) and maintain in-group norms and routines (e.g., one's habitual way of doing things; Stanley et al., 2019), while also finding aversive behaviors which prioritize the welfare of others (Politi et al., 2021), it is likely that they will be inclined to engage in behaviors which reflect these goals and thus engage in greater rule-bending behavior overall. In sum,

H1. SDO will be positively related to engagement in COVID-19 rule-bending behaviors.

1.3. Identity salience

Identity is defined as "any category or label to which an individual self-associates either by choice or endowment" (Reed et al., 2012, p. 312). These identities, or labels, can be stable (e.g., identifying as a daughter) or transitory (e.g., identifying as a girlfriend; Reed et al., 2012), and can also be made more or less salient through contextual cues such as in marketing and communication materials that emphasize a specific identity (Forehand et al., 2002; Oyserman, 2009).

Just as societies have hierarchies, identities can be thought of as hierarchical as well, with more specific and salient identities at lower levels underneath, and increasingly broad social identities as the levels go up (Torelli et al., 2014). For example, at the lowest level of identity (i.e., self-oriented identity), one might think of themselves as an environmentally friendly person; at a mid-level identity (i.e., in-group identity), one might identify as belonging to an environmentally friendly group or committee; at the highest level of identity (i.e., superordinate identity), one might identify as a citizen of a country or as part of a global community working for environmentally friendly practices to be employed worldwide. In the superordinate identity, in-groups and out-groups merge to form one group that the individual (and everyone else) belongs to, sometimes called "a common in-group" or creating "a common in-group identity" (Gaertner et al., 1993, p. 6).

Self-categorization theory (Turner & Reynolds, 2012) proposes that the identity associated with a group determines the appropriate

attitudes and behaviors for that group (Hornsey, 2008). In turn, lower-level identities such as individual level (personal) or in-group-level (social) identities can be activated (i.e., made salient), change how information is processed (Hornsey, 2008), and influence behaviors (e.g., Fielding & Hornsey, 2016; Reed et al., 2012; Torelli et al., 2014; Wang, 2017). For example, in-group-level messages are seen as more persuasive when the in-group itself is made salient (David & Turner, 1996; McGarty et al., 1994).

Despite the fact that lower-level identities are often invoked in messaging, research has found that superordinate identities can also be successfully invoked to influence behaviors (Fielding & Hornsey, 2016; Schultz and Fielding, 2014; Batalha & Reynolds, 2012). Fuochi et al. (2021) note that it is likely that superordinate identity activation will be more or less effective depending on individual differences. Favero and Pedersen (2020) start to address this by suggesting that being a Democrat is among the individual traits that enhances intentions to adhere to COVID-19 guidelines.

There are several reasons why SDO and the salience of the level of identity (self-oriented, in-group, or superordinate) might interact to predict COVID rule-bending behaviors. For instance, given that those higher in SDO are more affected by external threat than personal threat (Onraet et al., 2013), it is then possible that when self-oriented-frame messages are viewed, COVID-19 may not be perceived as threatening, resulting in more rule-bending behavior. But, when an identity-framed message highlights a threat to the whole nation (e.g., superordinate), individuals high in SDO may be more likely to see COVID-19 as a threat and adhere more strongly to protective behaviors. When high SDO individuals identify with the larger superordinate national group they may also perceive the "in-group" norm to be the government-prescribed guidelines and so follow them more closely. In addition, threat to one's group has been shown to increase group-oriented protective action (Kachanoff et al., 2020); thus, when the national group is threatened, high SDO should be more likely to engage in preventative behavior. Preliminary support for this notion is found in work that highlights that those who identified more strongly with their nation reported greater engagement in public health behaviors and support for public health policies (Van Bavel et al., 2021).

Stemming from this, we argue that the relationship between SDO and COVID-19 rule-bending behaviors can be shaped by the salience of the level of identity (self-oriented, in-group, and superordinate). For example, research suggests when high SDO individuals focus on in-group identities they can remain prejudiced against "others," but when they focus on the similarities within the group those negative perceptions are reduced (Danso et al., 2007). In other words, by focusing on a superordinate country-level identity, the distinction between in-group versus out-group may be diminished and high SDO individuals may be more likely to see the nation as their overarching membership group. Thus, we predict that when a superordinate country-level identity is made salient, people high in SDO will engage in less rule-bending to protect the national in-group, but not when a self or community in-group identity frame is salient.

Herein, we operationalize self-oriented identities with an appeal focused on the self, and in-group identities are operationalized with an appeal focused on the immediate community of the individual (e.g., close family and friends). The superordinate identity was conceptualized as a country-level identity (e.g., Canadians), meaning the participant was intended to perceive their in-group as being every person in the country. We utilize country-level identity here as a superordinate identity, because it requires the individual to think of themselves beyond their immediate in-groups to a larger national community. Work on dissociative out-groups has specifically explored out-group differences in how Canadians perceive their individual provinces (White et al., 2014) and thus superordinate level messaging activates identity in a way that incorporates a variety of out-groups.

In sum, we propose that the theorized main effect of SDO on rule-bending behaviors will be moderated by identity-level. For those high

in SDO, a superordinate identity appeal should activate the salience of a country-level in-group and motivation to protect the in-group against the external threat of COVID-19. Thus, we propose that superordinate identity salience will attenuate the effect of SDO on rule-bending. Put formally:

H2. SDO and identity salience will interact to predict rule-bending behavior. In particular, a superordinate identity appeal will attenuate the relationship between SDO and rule-bending.

2. Method

2.1. Participants

Participants (n = 1200) from Canada were recruited online on April 6, 2020 via Prolific Academic (<http://prolific.ac>) to complete an online survey. Participants were excluded for failing attention checks (n = 17)¹ or if they had themselves or knew someone personally who had tested positive for COVID-19 (n = 149), and 2 participants were removed due to not completing a focal variable (final N = 1032, M_{age} = 34.39, 52% female, 1% of participants chose “other”).

2.2. Procedure

Participants were randomly assigned to one of three identity salience conditions: self [self], community members [in-group], or country members [superordinate group; see Methodological Detail Appendix (MDA)]. They were next asked about their own intended rule-bending behaviors (see MDA) and provided age and gender details. They then completed a measure of social dominance orientation² and indicated whether themselves or someone they know had contracted COVID-19.

2.3. Measures

2.3.1. Social dominance orientation

To assess social dominance orientation (SDO), participants completed items from the Ho et al. (2015) SDO measure [8 items; “Some groups of people are simply inferior to other groups”; “No one group should dominate society”; 1 (Strongly Oppose) to 7 (Strongly Favor); M = 2.50, SD = 1.10, α = 0.852].

2.3.2. Identity salience manipulation

Participants were randomly assigned to view one of three appeals. The appeals all presented information on physical distancing but were differentiated by who physical distancing would keep safe. The manipulation read: “Physical distancing is strongly encouraged to prevent the spread of COVID-19 and keep yourself safe and healthy [self-oriented identity salience]/keep your community safe and healthy [in-group identity salience]/keep Canada safe and healthy [superordinate identity salience]/ Please read the below information about how you can keep yourself safe and healthy [keep your community safe and healthy/keep Canada safe and healthy].” They were then presented with an ad describing recommended behaviors; all conditions are presented in the MDA.

2.3.3. Rule-bending behavioral intentions

Participants were asked to complete a taxonomy of 19 behaviors (see MDA) that were brainstormed on the extent to which there were

perceived to be more open for interpretation as government guidance lacked clarity. In particular, respondents indicated how often they intended to engage in a variety of behaviors in the upcoming week (e.g., “Hanging out with other people who have been physically distancing”; “Grocery shopping more than once per week”) on a scale of 1 (Never) to 6 (Very Frequently; 19 items, M = 1.37, SD = 0.46, α = 0.866).³ Answers were averaged with lower scores indicating greater intentions to adhere to the guidelines and higher numbers indicating greater intentions to engage in rule-bending behaviors.

2.4. Statistical analysis

Analysis was done in SPSS using Hayes PROCESS macro version 3.5.2, model 1 with bootstrapping analysis (5000 replications; Hayes, 2018). Bootstrapping inference does not require a normality assumption (Wood, 2005), is a superior alternative to parametric estimation of moderation (Russell & Dean, 2000), and has been shown to perform better than normal regression methods (Taylor et al., 2008).⁴ Effect coding was used to compare self with in-group and self with superordinate identity conditions. As recommended by Hayes (2018), we probed interactions using 16th and 84th percentiles. SDO was mean-centered for analysis.

3. Results

Descriptive statistics and zero order correlations are presented in Table 1.

3.1. Rule-bending behavioral intentions

Hayes PROCESS Macro model 1 was used to test the moderating effect of identity on the relationship between SDO (X) and rule-bending intentions (Y; see Table 2). First, the overall model was significant [R² = 0.06, F(5,1026) = 12.20, p < .01]. SDO was significantly (p < .001) and positively related to rule-bending intentions, which supports H1. There was no significant effect of self-identity compared to in-group identity on rule-bending [b = -.003, p = .88; CI: -.0413 to .0356]. However, the superordinate identity yielded significantly less rule-bending, compared with self-identity [b = -.06, p = .01, CI: -.0948 to -.0169].

The test of the highest order unconditional interaction between SDO and identity salience was also significant [R²_{change} = 0.0057, F(2,1026) = 3.08, p = .05], indicating that identity salience had a significant moderating impact on the relationship between SDO and rule-bending intentions (see Fig. 1). Importantly, there are different effects of SDO on rule-bending intentions at each level of the moderator, providing preliminary support for H2. No interaction was observed between self-

Table 1
Bivariate correlations, descriptive statistics, and Cronbach’s alphas.

	Mean	SD	Alpha	Skewness	Kurtosis	SDO
SDO	2.50	1.10	0.85	0.57	-0.13	r
						p
Intent	1.37	0.46	0.87	3.46	19.15	r
						p
						<.001*

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

¹ A captcha was presented at the beginning of the survey, and respondents were asked to provide a fixed answer (i.e., “Please select 4 for this question”) as an attention check (Meade & Craig, 2012; Ward & Pond, 2015).

² The identity salience manipulation did not significantly influence self-reported social dominance orientation (F(2,1029) = 0.567, p = .567). Self-identity (M = 2.55; SD = 1.09), in-group identity (M = 2.49, SD = 1.07), and superordinate identity (M = 2.46; SD = 1.14) did not differ significantly (all contrasts p > .87).

³ A principal components analysis including all 19 behaviors showed that the first factor accounted for 35.18% of the variance, with an eigenvalue of 6.68. The scree plot also indicated that a one-factor solution was adequate. Details are provided in the MDA.

⁴ Additional analyses using a transformed dependent variable are presented in the MDA.

Table 2
Regression results for moderation analysis.

Regression coefficients (standard errors) analyses (N = 1032)						
	Coefficient	SE	t	p	LLCI	ULCI
Dependent variable model (DV = Mean 'Rule Bending' Intention)						
Constant	1.36	0.01	98.19	<.01	1.3366	1.3912
SDO	0.08	0.01	6.53	<.01	0.0579	0.1075
Self vs. In-group	-0.00	0.02	-0.14	.89	-0.0413	0.0356
Self vs. Super.	-0.06	0.02	-2.82	.01	-0.0948	-0.0169
SDO * SelfInG	0.02	0.02	1.07	.29	-0.0163	0.0550
SDO * SelfSup	-0.04	0.02	-2.47	.01	-0.0788	-0.0090

Model summary: $R^2 = 0.06$, $F(5,1026) = 12.20$, $p < .01$.

Test of highest order unconditional interaction: $R^2_{change} = 0.0057$, $F(2,1026) = 3.08$, $p = .047$.

"Self vs. In-group = Self vs. In-group effect coding: self-identity [-1], in-group identity [1], superordinate [0].

"Self vs. Super." = Self vs. Superordinate effect coding: self-identity [-1], in-group identity [0], superordinate [1].

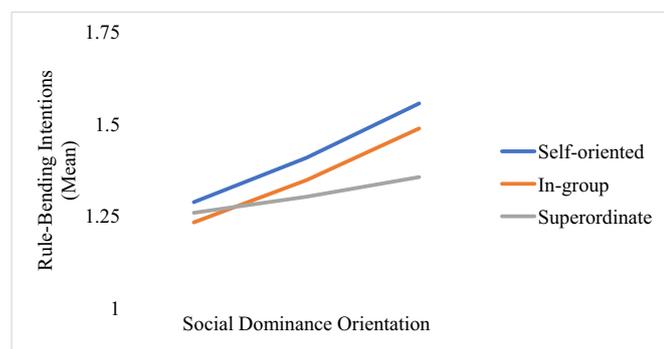


Fig. 1. Rule-bending intentions across levels of SDO.

versus-in-group-identity and SDO on rule-bending [$b = 0.02$, $p = .29$; CI: -0.0163 to 0.0550]. However, the interaction between the self-versus-superordinate-identity contrast and SDO on rule-bending was significant [$b = -0.04$, $p = .01$; CI: -0.0788 to -0.0090].

Turning next to the conditional effects, SDO was a significant predictor of rule-bending behavior in both the self-identity [$b = 0.11$, $t = 4.96$, $p < .01$; CI: 0.0648 to 0.1497] and in-group identity [$b = 0.10$, $t = 4.53$, $p < .01$; CI: 0.0578 to 0.1463] conditions, but not in the superordinate identity condition [$b = 0.04$, $t = 1.80$, $p = .07$; CI: -0.0036 to 0.0812]. Thus, in line with H2, a superordinate identity appeal attenuated the effect of SDO on rule-bending intentions.

4. General discussion

This research examined how SDO and identity salience interact to predict COVID-19 rule-bending behavioral intentions. We found that SDO is positively associated with rule-bending, but this relationship can be attenuated when a superordinate (i.e., country-level) identity appeal is employed. This builds on previous literature that suggests that when individuals high in SDO face a threat (such as COVID-19), they tend to display greater protection of their in-group (Choi & Bowles, 2007; Pratto & Shih, 2000). In particular, we show that when a national identity is made salient, high SDO individuals are more likely to engage in behavior to protect their nation from threat (e.g., through less rule-bending). We also find convergent evidence with Politi et al. (2021) in that when prompted to help others (via a superordinate identity), SDO was no longer significantly associated with intentions to bend the rules, contributing a more nuanced analysis by identifying the novel boundary condition of identity salience.

Our results highlight that superordinate identity salience (Dovidio

et al., 2020), can be effective in shaping COVID-19 related behaviors, but that individual differences such as SDO can interfere with (and perhaps also promote; Fuochi et al., 2021) the effectiveness of identity appeals. Governments and NGOs may thus consider activating a superordinate identity when implementing COVID-19 interventions, particularly when targeted toward individuals high in SDO.

4.1. Limitations

While online samples present concerns, such as bot respondents, self-selection, and generalizability (Aguinis et al., 2021; Smith et al., 2016), we used both bot and attention checks (Meade & Craig, 2012; Ward & Pond, 2015) to mitigate the potential for such effects. Further, some evidence suggests that Prolific Academic may yield higher quality data than others (e.g., MTurk; Peer et al., 2017).

Our data were collected in April 2020, before COVID-19 responses and behaviors became highly politicized. It is important to note that attitudes toward COVID-19 restrictions and adherence to them changed over time (Doogan et al., 2020), and these data represent a snapshot in time. As the pandemic persisted and governments tried various measures and exerted control over citizens, relationships between SDO and COVID-19 measures could have shifted. Consequently, this may have influenced how COVID-19 restrictions and guidance were perceived (e.g., as politically "left" or "right") and adhered to (e.g., "I support my party's position on this and will adhere"). Collecting data early in the pandemic may have, in a sense, controlled for the effect political beliefs and politicized actions may have had in influencing rule-bending behaviors, allowing other stable characteristics to emerge. Further, given that the literature has largely focused on the United States, this research contributes to how personal characteristics influence COVID-19 behaviors in a different, distinct (Canadian), socio-political context.

4.2. Future research directions

As this research contributes to the limited evidence regarding the role of SDO in predicting various COVID-19 behaviors, it is clear that both the literature and public health would benefit from a greater understanding of these relationships and the mechanisms that underlie them. For example, we propose a heightened sense of personal responsibility (Clarke et al., 2021), self-focused goals (Sidanius et al., 1994), in-group norms (Stanley et al., 2019), and framing behaviors as a way to prioritize the self or groups inclusive of the self (vs. as a way to help others; Politi et al., 2021) may all play a role in observed rule-bending. Future research should directly assess these possible mechanisms.

Our findings may extend to, and should be tested in, other contexts where applying a superordinate identity might encourage those high in SDO to engage in actions such as prosocial behaviors, support for welfare policies, or environmental conservation. While not tested in this research, the extent to which an individual identifies with the identity may also play a role (Schultz and Fielding, 2014). Further, our manipulation focused solely on highlighting group identity, but did not explain any benefits that these various identities could achieve by adhering to requested behavior. It is possible that highlighting benefits may illuminate other moderating factors for high SDO rule-bending.

Our work demonstrated that message framing utilizing a superordinate identity led to more protective behaviors among those high in SDO. While this is a positive outcome, future research could explore whether this type of framing could have maladaptive consequences as well. Past work on SDO suggests that those higher in SDO are more likely to demonstrate discrimination toward other groups – often to maintain social dominance (Kteily et al., 2011). Could it be that making a superordinate identity salient for high SDO may also, inadvertently, lead to greater discrimination and prejudice against superordinate outgroups (e.g., immigrants, other countries, etc.)? Additionally, while we varied identity salience by identity type (self, in-group,

superordinate), we did not test an out-group or dissociative group identity. Given the focus of those high in SDO on asserting their dominance over out-groups, we presume that an out-group identity is likely to be even less effective; however, future research may wish to examine these possibilities empirically.

5. Conclusion

Social dominance orientation and identity salience are examined in this research as variables that may provide utility in understanding how individuals respond to the COVID-19 threat. We find evidence that SDO is a significant and positive predictor of rule-bending intentions when a self or in-group identity were salient, but that this effect was attenuated when a superordinate (country-level) identity was activated. Future research should extend these findings by analyzing additional aspects of identity salience when predicting COVID-19-related behaviors.

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Declaration of competing interest

The authors declare no conflicts of interest.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.actpsy.2021.103460>.

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