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The politics of mask-wearing: Political preferences, reactance, and conflict aversion during COVID

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ABSTRACT

The current project examines how psychological reactance and conflict orientation relate to the highly politicized debate over mask-wearing in the U.S. during the COVID-19 pandemic. We explore how psychological reactance and conflict orientation are related to self-reported mask-wearing, and how these same predispositions are correlated with political beliefs. We then assess how favorability towards President Trump in the context of the 2020 Election was uniquely correlated with these traits and how Trump favorability both mediated and moderated the effects of conflict orientation and psychological reactance on individuals' likelihood of wearing masks. Results from a national survey of U.S. adults from Nov–Dec 2020 suggest that Trump favorability was positively associated with trait reactance, negatively associated with conflict aversion, and negatively associated with self-reported mask-wearing. The opposite was true of favorability towards Joe Biden. Moderation analyses indicate that conflict-approaching Biden detractors were especially unlikely to report wearing masks, while mediation analyses show that political preferences significantly mediated the relationships between both psychological traits and self-reported mask-wearing. Implications for the politicization of health messaging and health behavior are discussed.

1. Background: mask wearing and politics during the COVID-19 pandemic

As the COVID-19 pandemic unfolded in the U.S. in 2020, it quickly became clear that this was a politicized health crisis (see Fowler and Gollust, 2015; Gollust et al., 2020; Young and Bleakley, 2020). Early data on perceptions of the severity of COVID indicated that Republicans were less likely to perceive COVID as a serious risk and more likely to perceive COVID as just as dangerous as the flu (Rothwell and Desai, 2020). The political divide extended beyond perceptions to behavior, with Republicans less likely than Democrats to engage in masking, social distancing, and limited travel (Allcott et al., 2020; Gadarian et al., 2021; Grossman et al., 2020). President Trump's own statements regarding COVID-19 often downplayed the severity of the virus and mocked expert recommendations (Cathey, 2020b). The partisan divide in preventative behaviors translated into larger COVID infection rates and fatalities in majority Trump-voting counties (Gollwitzer et al., 2020).

One of the most visible and earliest political debates during COVID was over the use of face masks to prevent the virus' spread (Bromwich,

2020). When President Trump announced new mask-wearing recommendations from the Centers for Disease Control and Prevention in April 2020, he "emphasized that wearing masks in public is voluntary and said he would not be doing so" (Dwyer and Aubrey, 2020). Conservative messaging on mask wearing often framed masking guidelines as a threat to personal freedom, such as Fox News' Tucker Carlson who told his viewers, "Dissent used to be a defining feature of American life, but no more. Now we have mandatory consensus: Masks are good. Anyone who questions the utter goodness of masks is bad" (Carlson, 2020), and as masking recommendations became more stringent in the face of the Delta variant in the summer of 2021, "This is about politics and social control. The Biden administration has decided it owns your body" (Carlson, 2021). YouGov data from October 2020 indicates that among Biden supporters, 72% reported always wearing a mask when outside of their home in the last 7 days, compared to 35% of Trump supporters (Frankovic, 2020). Republicans were less likely to wear masks outside of the home than Democrats, even when local regulations mandated masks in public (Milosh et al., 2020).

As public spaces and businesses began reopening in the Spring and

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Summer of 2020, viral videos emerged of people flouting mask rules and harassing store employees about company masking policies (Bromwich, 2020). Interpersonal altercations over masks resulted in store closings, hospitalizations and even deaths (Rojas, 2020). Wearing masks quickly became a “flashpoint” issue (McFall 2020) with individuals frustrated by the fact that masks made them feel hot, uncomfortable, and anxious, and at the same time perceived mandates as a violation of individual liberties (Shepherd, 2020). In June 2020, White House Press Secretary Kayleigh McEnany confirmed that President Trump viewed masks as a personal choice, even in contexts in which state-wide mask mandates were in effect: “It’s his choice to wear a mask. It’s the personal choice of any individual as to whether to wear a mask or not” (Cathey, 2020a). Based on past findings regarding the partisan divide in mask-wearing, our first goal was to verify this established relationship between political preferences and masking behaviors:

H1. Masking behaviors are negatively correlated with Republican party identification, conservative political ideology, and favorability towards President Trump, and are positively correlated with favorability towards Joe Biden.

Given the partisan divide over masks, the interpersonal and public nature of the debate over mask wearing outside of the home, and the invocation of the concept of “freedom loss” in anti-masking rhetoric, it follows that traits related to perceptions of threat, freedom loss, and conflict style ought to be implicated in individuals’ decisions regarding mask-wearing during the COVID-19 pandemic. Given that mask-wearing appears to be influenced by social norms and conformity to one’s immediate social environment (Woodcock and Schultz, 2021), the extent to which individuals want to avoid conflict on the one hand or get frustrated by perceived social pressures on the other, might shape how they respond to said pressures. Countless studies confirm that Republicans were significantly less likely than Democrats to wear masks during COVID (Frankovic, 2020; Kramer, 2020; Milosh et al., 2020). This project assesses the extent to which masking behaviors were shaped by the relationships between political preferences and psychological traits related to interpersonal threat management, namely: psychological reactance and conflict orientation.

2. Reactance, conflict orientation and health behaviors

Popular in the 1970s in the context of persuasion and interpersonal relationships (Grabitz-Gniech, 1971; Karpf, 1978), the concept *psychological reactance* has regained prominence in health communication where health policy may be experienced as “freedom loss” that triggers anger and counter-argumentation (Burgoon et al., 2002; Reynolds-Tylus, 2019). According to Brehm (1966), psychological reactance refers to one’s resistance to a perceived loss of freedom, and their motivation to restore it (Brehm, 1966; Brehm and Brehm, 1981). Scholars also conceptualize reactance as a psychological trait (Dowd et al., 1991; Hong and Faedda, 1996), with individuals high in “trait reactance” more likely to perceive threats to their freedom and thus more resistant to freedom-threatening persuasive messages (Quick and Stephenson, 2008). Trait reactance poses critical challenges in a variety of public policy debates (Proudfoot and Kay, 2014; Song et al., 2018; Traut-Mattausch et al., 2008), most notably in the context of health (Dillard and Shen, 2005; Gollust and Cappella, 2014) where those highest in reactance may be more prone to risky behaviors in the first place (Miller and Quick, 2010) while also being more resistant to potentially freedom-threatening health messaging and recommendations (Richards et al., 2021).

The COVID-19 pandemic provided an opportunity to witness psychological reactance thwarting health officials’ efforts to promote life-saving behaviors. Resnicow et al. (2021) found that Republicans scored significantly higher in trait reactance than Democrats and were significantly less likely to adopt healthy COVID-preventative behaviors. Individuals higher in trait reactance were less likely to believe that

masks were effective in preventing the spread of COVID (Taylor and Asmundson, 2021), less likely to comply with COVID recommendations (Diaz and Cova, 2021), and were significantly less likely than their less reactive counterparts to adopt protective behaviors like staying home, social distancing, wearing a mask, and avoiding social gatherings (Resnicow et al., 2021). Given these findings, we hypothesize that:

H2. Psychological reactance is a negative predictor of masking-behaviors.

While less explored in the context of public policy compliance than psychological reactance, the trait “*conflict orientation*” (also directionally described as “conflict aversion” or “avoidance”) may also have important implications for individuals’ willingness to comply with highly politicized public health recommendations like wearing masks. Conflict orientation is a psychological predisposition that captures how people engage with and respond to conflict and arguments (see Elliot and Thrash, 2002). Sometimes conceptualized as conflict resolution mechanism (see Leung, 1988), *conflict aversion* has been associated with collectivist (as opposed to individualistic) cultures and efforts to maintain social and community harmony (Trubisky et al., 1991). In the context of a politicized pandemic in which mask-wearing indoors in public places was recommended by the CDC to protect *other* members of one’s community, there is reason to believe that one’s willingness to engage in mask-wearing ought to be associated with individual conflict orientation. Hence.

H3. Conflict aversion is a positive predictor of masking-behaviors.

Given the potential role played by both psychological reactance and conflict orientation in the highly politicized mask-wearing debate, understanding how these traits may correlate with political preferences is paramount. Although the concept of political party has been considered a responsive characteristic that varies based on individual-level judgments about issues, events, and people (Achen, 1992; Fiorina, 1981), it is increasingly viewed as a stable trait that varies little over time (Abramson and Ostrom, 1991; Green and Palmquist, 1990, 1994; Green et al., 2008). Thus, *party* is conceptualized as a social identity (Green et al., 2002) – albeit one that *may* serve as a heuristic to guide issue decisions (Cohen, 2003). Meanwhile, political *ideology* captures one’s governing belief system regarding the role of government in the lives of individuals and society (Converse, 2006).

Political psychological research points to various psychological differences between those with liberal and conservative political ideologies, especially in the context of social and cultural (rather than fiscal) political ideology – that is, political beliefs related to social issues like race, crime, and sexuality (Hetherington and Weiler, 2018; Hibbing et al., 2013; Jost et al., 2003). At the heart of this research are constructs and processes related to threat-monitoring and threat perception in the context of people’s social worlds (see Jost et al., 2003; Matthews et al., 2009), with social conservatives more likely to be monitoring for threats and potential pathogens (Terrizzi et al., 2013) and more likely to exhibiting greater neural activity in response to negative, threatening, and “disgusting” stimuli than their liberal counterparts (Dodd et al., 2012; Pedersen et al., 2018; Smith et al., 2011). Scholars have characterized this as a social conservative “threat bias” (Lilienfeld et al., 2014), or even more specifically as a biased response to “perceived physical threats” (Crawford, 2017).

Despite social conservatives’ bias towards potentially threatening stimuli, existing research does not indicate that conservatives are necessarily seeking to *avoid* physical or interpersonal threats. For example, compared to liberals, conservatives are *more likely than liberals* to engage with oppositional points of view (Bakshy et al., 2015; Heatherly et al., 2017; Knobloch-Westerwick and Kleinman, 2013; Mitchell et al., 2014). Compared to liberals, conservatives exhibit higher resilience (Van Hiel and De Clercq, 2009), are more adept at coping with uncertainty and risk (Choma et al., 2014), exhibit higher rates of self-esteem (Van Hiel and Brebels, 2011), and are higher in “fearless

dominance,” a combination of “physical and social boldness and immunity to anxiety” (Lilienfeld et al., 2014, p. 2). As explained by Van Hiel and De Clercq (2009), although people who score higher on the Right-Wing Authoritarianism scale report seeing the world as a dangerous place, “... there is no evidence whatsoever that these ‘ideological threats’ have implications on mental distress” (p. 34). While prior research has not identified a significant correlation between conflict orientation and political ideology or party identification (see Sydnor, 2019), much of this work was conducted prior to the 2016 election of socially and culturally conservative President Donald J. Trump, and the accompanying shift in the Republican party’s ideological stance (Bartels, 2018). Given the potential link between social and cultural conservatism and both reactance and conflict orientation, we posit that:

H4. Psychological reactance is positively related to a) conservatism, b) Republicanism, and c) Trump favorability and d) negatively related to Biden favorability.

H5. Conflict aversion is negatively related to a) conservatism, b) Republicanism and c) Trump favorability and d) positively related to Biden favorability.

There are two explanatory mechanisms that would account for potential relationships between Trump support, masking behaviors, and psychological traits relating to threat monitoring and threat management. First, Trump’s populist appeal was rooted in concerns about cultural and racial change (Mutz, 2015; Norris and Inglehart, 2019; Sides et al., 2019) and his rhetoric was centered on the concept of racial and cultural “threats” (Mercieca, 2020; Oliver and Rahn, 2016). Support for President Trump was positively associated with racial resentment, sexist attitudes, and anti-immigrant sentiments (see Mason et al., 2021) as well as anti-political correctness attitudes and conspiracy ideation (Enders and Uscinski, 2021). Given the aforementioned literature on the association between social conservatism and threat monitoring (Jost et al., 2003), Trump favorability (and its converse; animus towards his opponent, Joe Biden) may capture a kind of social and cultural conservatism that is closely linked to interpersonal-threat-related predispositions, like trait reactance and conflict orientation. If this were the case, then the relationship between these traits and masking behaviors would be explained in part by one’s favorability towards President Trump and Joe Biden.

H6. a) The negative relationship between reactance and self-reported masking, and b) the positive relationship between conflict aversion and masking, are explained in part through Trump and Biden favorability.

A second potential explanatory mechanism that would account for associations between Trump support, conflict orientation, reactance, and mask wearing is one rooted in the power of elite cues (see McGuire, 1969). As outlined at the outset of this manuscript, President Trump and conservative media pundits were vocal critics of expert scientific opinion on COVID and mask-wearing in particular. Partisan elite cues provide an efficient heuristic to guide citizens’ behavior (Arceneaux, 2008; Arceneaux and Kolodny, 2009), especially when the cues are provided by a trusted source (Hartman and Weber, 2009; Rinscheid, Piana and Weber, 2021). For example, in the context of COVID-19, negative shifts in conservative elite rhetoric regarding the trustworthiness of scientific institutions were followed by declines in Republicans’ trust in those institutions (Hamilton and Safford, 2020). Empirical analyses suggest that Americans who lived in Republican-leaning counties were significantly more likely to engage in COVID-preventative behaviors in the time periods following President Trump’s tweets *emphasizing*, rather than *downplaying*, COVID risk (Brisbee and Lee, 2021). It is possible that Trump supporters’ relatively low masking behaviors were guided by the President’s statements downplaying the virus and mocking the efficacy of masks. If so, the relationship between conflict orientation (or psychological reactance) and mask-wearing behaviors

would be stronger among Trump supporters, consistent with the President tapping into his supporters’ threat-related traits, thereby fueling anti-mask sentiments and behaviors.

H7. The relationships between a) reactance and self-reported masking behaviors and b) conflict aversion and self-reported masking behaviors are contingent on political preferences, such that those most favorable towards President Trump and least favorable towards Joe Biden will show a) the strongest negative relationship between reactance and masking, and b) the strongest positive relationship between conflict aversion and masking.

In sum, this project explores how the traits of conflict aversion and psychological reactance contributed to the politics of the preventive health behavior of mask wearing during COVID in the U.S in late fall of 2020. The first goal is to assess how reactance and conflict aversion were related both to masking and to political preferences. The second goal is to explore the interdependent nature of these relationships: On the one hand, consistent with the conceptualization of Trump support as a distillation of psychological traits related to threat management, political preferences may have helped to explain some of the relationships between psychological traits and mask-wearing (H6). On the other hand, if Trump’s cues tapped into these dynamics, then the association between traits and mask-wearing may be moderated by political preferences, such that support for President Trump amplified the existing relationships between conflict aversion/reactance and the likelihood of wearing a mask (H7a and b).

3. Methods

These relationships were examined within a dataset collected from a national survey of U.S. adults 18 and over. Two separate samples were pulled from the population to serve broader project goals, one sample ages 18–49 and one ages 50 and older. Surveys were administered by SSRS, a survey research firm, following a pre-test to ensure questionnaire content and skip patterns were correct. SSRS enrolled participants at least 18 years of age that were recruited from a third-party volunteer web panel. Data were collected at two time points: from Oct 20 – Nov 2, 2020 (time 1) and Nov 26 – Dec 4, 2020 (time 2) for each group. The availability of various items in this analysis on only one of the two time points prevents us from taking advantage of the longitudinal design. Hence, analyses treat the data as cross sectional, and we use the sample from time 2 -ages 18–49 ($N = 475$) and ages 50 and older ($N = 1303$), with their demographics and other stable traits measured at time 1 but not time 2. More detail is provided in the statistical analysis section below. Within each age-based sample, oversamples from Black and Hispanic populations were drawn to facilitate other aspects of the project. For the present study, data are weighted (within each age group) to match general U.S. population demographics (see Appendix A for details). Participants were provided with consent information at the beginning of the survey and could discontinue at any time. Approval was obtained by the Institutional Review Board of the University of Delaware. Data will be publicly available in 2024 from Banner Alzheimer’s Institute. Requestors may email APIData@bannerhealth.com. All scripts and outputs are available as supplemental files.

Weights. For all analyses, data were weighted to be nationally representative on age, education, gender, and region as follows. The parameters used in the post stratification in the 18–49 sample were age (18–34, 35–49), sex, education (High school or less, some college/associate’s degree, bachelor’s degree or higher), and census region (Northeast, Midwest, South, West). The parameters used in the post stratification in the 50+ sample were age (50–64, 65+), sex, education (less than college, bachelor’s degree or higher), and census region. The demographic benchmarks were obtained from the 2018 American Community Survey (ACS). Post-stratification weighting was accomplished using SPSSINC RAKE, an SPSS extension module that balances variable distributions using the GENLOG procedure. For information on

Table 1
Bivariate correlations.

		Conflict Aversion	Psych Reactance	Ideology	Party	Trump Favorability	Biden Favorability	Masking Behaviors
Conflict aversion	18–49	1.0	.09	.06	-.07	-.10*	.05	.24***
	50+	1.0	.05	.00	-.05	-.05	.07*	.07*
Psych reactance	18–49	.09	1.0	.02	.05	.21***	.12*	-.07
	50+	.05	1.0	.13***	.18***	.26***	-.27***	-.08**
Ideology	18–49	.06	.02	1.0	.59***	.37***	-.45***	.02
	50+	.00	.13***	1.0	.75***	.62***	-.66***	-.15***
Party	18–49	-.07	.05	.59***	1.0	.44***	-.44***	-.27***
	50+	-.05	.18***	.75***	1.0	.76***	-.78***	-.14***
Trump fav	18–49	-.10*	.21***	.37***	.44***	1.0	-.43***	-.13**
	50+	-.05	.26***	.62***	.76***	1.0	-.85***	-.25***
Biden fav	18–49	.05	.12*	-.45***	-.44***	-.43***	1.0	.22***
	50+	.07*	-.27***	-.66***	-.78***	-.85***	1.0	.27***
Masking behaviors	18–49	.24***	-.07	.02	-.27***	-.13***	.22***	1.0
	50+	.07*	-.08**	-.15***	-.14***	-.25***	.27***	1.0

Note: *** $p < .001$, ** $p < .01$, * $p < .05$.

the parameters from the ACS, the original sample characteristics, and the weighted sample characteristics, see [Appendix A](#).

Unweighted sample characteristics: Age Under 50 $M = 38.32$, $SD = 7.33$; 50+ $M = 64.78$, $SD = 7.63$. Gender Under 50: 34.5% male, 50+: 46% male. Race Under 50: 29.1% Non-Hispanic White, 30.9% Non-Hispanic Black, 29.9% Hispanic/Latinx, 10.1% other; 50+: 36.3% Non-Hispanic White, 28.9% Non-Hispanic Black, 30% Hispanic/Latinx, 4.8% other. Education Under 50: 56.6% hold college degree; 50+: 54.4% hold college degree. Income Under 50, 55.7% make over \$60k; 50+: 58.6% make over \$60k.

4. Measures

Masking Behaviors. Respondents were asked 2 questions regarding their mask behaviors: “How often in the past 7 days did you wear a cloth face covering in public settings around people who don’t live in your household?” and “How often in the past 7 days did you wear a cloth face covering in public settings when you were not able to stay 6 feet away from others?” with the response options: Never, rarely, sometimes, often, all the time (coded 1 to 5). The two items were averaged to create a self-reported masking behavior score. Under 50 Weighted ($N = 474$, Pearson’s $r = 0.80$, $M = 4.41$, $SD = 0.89$). 50+ Weighted: ($N = 1303$, Pearson’s $r = 0.69$, $M = 4.68$, $SD = 0.75$).

Psychological Reactance. To operationalize psychological reactance, we focused on the dimension of trait reactance that represents “a person’s desire to make independent and free choices without reliance or intrusion by others” operationalized with four items from [Hong and Faedda \(1996, p. 178\)](#). Respondents were asked how much they agreed or disagreed with the following items on a scale of 1 (*strongly disagree*) to 7 (*strongly agree*): I become angry when my freedom of choice is restricted. The thought of being dependent on others aggravates me. Advice and recommendations usually induce me to do just the opposite. It irritates me when someone points out things which are obvious to me. Under 50 Weighted ($N = 472$, $\alpha = 0.67$, $M = 3.10$, $SD = 0.85$). 50+ Weighted ($N = 2384$, $\alpha = 0.60$, $M = 3.04$, $SD = 0.72$).

Conflict Aversion. Conflict aversion items were derived from the Conflict Approach/Avoidance Subscale from [Goldstein \(1999\)](#). Respondents were asked how much they agreed or disagreed with the following items on a scale of 1 (*strongly disagree*) to 5 (*strongly agree*): I hate arguments. Arguments don’t bother me (reverse coded). Conflicts make relationships interesting (reverse coded). I feel upset after an argument. Under 50 Weighted ($N = 468$, $\alpha = 0.62$, $M = 3.34$, $SD = 0.83$). 50+ Weighted ($N = 1293$, $\alpha = 0.78$, $M = 3.74$, $SD = 0.79$).

Political ideology. Respondents were asked, “How would you describe your political ideology?” with response options ranging from “very liberal” (coded 1) to “very conservative” (coded 7). Under 50 Weighted ($N = 475$, $M = 3.57$, $SD = 1.74$). 50+ Weighted ($N = 1298$, $M = 4.21$, SD

= 1.69).

Party identification. Respondents were asked, “Generally speaking, do you think of yourself as a ... ?” with response options, “Democrat, Republican, Independent, Other, or Not sure.” Those reporting Democratic and Republican party affiliation were then asked if they would describe themselves as a strong or not very strong [Democrat/Republican]. Those responding “Independent, Other, or Not sure” were asked if they “would say they are closer to the Republican or Democratic Party.” The resulting scale ranged from strong Democrat (coded 1) to strong Republican (coded 7). Under 50 Weighted ($N = 474$, $M = 3.51$, $SD = 2.16$) 50+ Weighted ($N = 1300$, $M = 3.81$, $SD = 2.32$).

Trump and Biden favorability. Respondents were asked to rate public officials on a 0–10 scale. Donald Trump: Under 50 Weighted ($N = 473$, $M = 3.42$, $SD = 3.60$) 50 plus Weighted ($N = 1292$, $M = 3.57$, $SD = 4.09$). Joseph Biden: Under 50 Weighted ($N = 473$, $M = 5.33$, $SD = 3.46$). 50+ Weighted ($N = 1282$, $M = 5.39$, $SD = 4.03$).

Statewide Mask Mandate. Statewide Mask Mandates were obtained from [Raifman et al.’s \(2020\)](#) COVID-19 U.S. state policy database. Respondents were coded 1 if they lived in a state with a statewide mask mandate when the mask-wearing behaviors were self-reported at time 2 (Nov 26 – Dec 4, 2020) and were coded 0 in states with no mask mandate at that time. Out of 51 states, including Washington D.C., 18 had statewide mask-wearing mandates in December 2020. Under 50 Weighted ($N = 475$, $M = 0.75$, $SD = 0.43$). 50+ Weighted ($N = 1303$, $M = 0.72$, $SD = 0.45$).

5. Statistical analyses

As noted, these analyses are based on the time 2 sample with some data from their time 1 assessments, thus the data are treated as cross sectional. Political ideology, party identification, reactance, and the demographics were measured at time 1, and mask wearing, Trump and Biden favorability, and conflict aversion at time 2. The fact that conflict orientation and reactance are considered stable personality traits ([Brehm and Brehm, 1981](#); [Sydnor, 2019](#)) gives us confidence in our ability to draw these measures from surveys administered to the same respondents one month apart. Bivariate correlations and OLS regression were conducted. Models that included the state mask mandate variable were calculated using robust standard errors clustered by state. Due to the high correlations with the 50+ sample between Trump favorability and party ($r = 0.74$), and between Trump favorability and Biden favorability ($r = -0.85$), to reduce problems of multicollinearity, regression models that included Trump favorability as a predictor excluded party and Biden favorability as predictors (see [Table 2](#)). To test for mediation

Table 2
Predicting self-reported masking behaviors.

	Ages 18 - 49			Ages 50+		
	b(SE)	b(SE)	b(SE)	b(SE)	b(SE)	b(SE)
Constant	3.46 (.61) ***	3.92 (.48) ***	3.46 (.61) ***	3.58 (.65) ***	4.04 (.50) ***	3.75 (.68) ***
Male	-.17 (.17)	-.24 (.16)	-.15 (.17)	-.13 (.09)	-.17 (.09)#	-.14 (.09)
Education	.02 (.03)	.02 (.03)	.02 (.03)	.04 (.02)*	.02 (.02)	.03 (.02)
Age	.01 (.01)	.01 (.01)	.01 (.01)	.01 (.00)	.01 (.01)	.01 (.01)
Income	.00 (.00)	.00 (.00)	.00 (.00)	.00 (.00)	.00 (.00)	.00 (.00)
Black	.03 (.12)	.07 (.13)	.01 (.11)	.13 (.08)	-.04 (.07)	-.02 (.08)
Hispanic	.07 (.15)	-.01 (.16)	.05 (.16)	.15 (.08)#	.10 (.07)	.11 (.08)
State Mandate Ideology	-.05 (.22) -	.01 (.18) 03(.04)	-.03 (.22) .03	-.01 (.10) -	-.02 (.07) .01	-.02 (.07) .00
Trump Fav	-	-.03 (.02)	.02 (.02)	-	-.05 (.01)	-.04 (.01)
Conflict Aversion	.23 (.10)**	-	.22 (.10)*	.08 (.06)	-	.05 (.06)
Psych Reactance	-.13 (.06)*	-	-.11 (.05)*	-.08 (.05)	-	-.02 (.04)
R ²	.08	.05	.10	.04	.08	.09
N	461	466	459	1253	1247	1237

Note: ****p* < .001, ***p* < .01, **p* < .05.

effects, structural equation modeling was conducted in Stata to test the indirect effects of psychological traits on masking *through* political preferences.¹ Because these are fully saturated models, no model fit statistics are included. To test for moderation effects Hayes PROCESS macro (2017) was used in SPSS. Separate models were run predicting self-reported mask wearing behaviors as a function of conflict aversion and psychological reactance. Interactions of Trump and Biden favorability with each of these two psychological traits were added to the models along with political and socio-demographic controls.

6. Results

Consistent with H1, bivariate correlations (see Table 1) indicate that mask-wearing was negatively associated with Republican party membership, conservatism (in the 50+ sample), Trump favorability, and positively associated with Biden favorability. Additionally, as hypothesized, mask wearing was negatively correlated with psychological reactance (H2) in the older sample; and positively associated with conflict aversion (H3), most notably in the younger sample (*r* = .24, *p* < .001). OLS regressions were estimated to assess the robustness of these relationships in the face of controls. Models shown in Table 2 predict self-reported mask-wearing as a function of political preferences and psychological traits, controlling for gender, education, age, income, race, ethnicity, and whether the individual lived in a state with a mask mandate in Nov–Dec 2020. As illustrated in Table 2, in the 50+ dataset, Trump favorability was a significant negative correlate of mask wearing (*p* < .001) (H1) in the face of extensive controls. Reactance was a significant negative predictor of mask-wearing, but only in the 18–49 sample (*p* < .01) (H2). Conflict aversion was significantly and positively

¹ Because there were no significant relationships between the statewide mask mandate and masking behaviors, and to keep the data on the same level, mediation and moderation models exclude the state mask mandate variable from the analyses.

Table 3
OLS Regressions predicting T2 Favorability of Trump and Biden.

	Ages 18 - 49		Ages 50+	
	Trump Favorability	Biden Favorability	Trump Favorability	Biden Favorability
	B(SE)	B(SE)	B(SE)	B(SE)
	95% CI	95% CI	[95% CI]	95% CI
Constant	2.89(2.70) [-2.32 – 8.20]	2.98 (2.86) [-2.63 – 8.59]	-.22(1.86) [-3.86 – 3.42]	10.83(1.62) *** [7.67 – 14.01]
Male	.66(.53) [-.38 – 1.72]	.39(.47) [-.54 – 1.32]	-.38(.27) [-.91–.15]	-.08(.23) [-.53–.38]
Education	-.13(.13) [-.40 – .13]	.10(.10) [-.11 – .31]	-.10(.07) [-.24–.04]	.03(.07) [-.10–.17]
Age	-.08(.03)* [-.14 – -.01]	.03(.03) [-.03 – .08]	-.02(.02) [-.05–.01]	.03(.01)# [.00 – .05]
Income	.01(.01) [-.01 – .02]	.01(.01) [.00 – .02]	.00(.00) [.00 – .01]	.00(.00) [-.01–.00]
Black	-1.32(.54)* [-2.39 – -.25]	1.11(.57) [.00 – 2.22]	-.30(.26) [-.80–.21]	.46(.23)* [.01 – .92]
Hispanic	-1.29(.55)* [-2.37 – -.20]	.53(.57) [-.60 – 1.65]	-.40(.26) [-.91–.10]	.42(.22) [-.02–.85]
Party	.45(.16)** [.14 – .76]	-.43(.15)** [-.72 – -.14]	1.12(.07)*** [.98 – 1.27]	-1.07(.08) *** [-1.23 – -.90]
Ideology	.37(.18)* [.02 – .72]	-.58(.17)*** [-.91 – -.26]	.30(.09)** [.11 – .49]	-.42(.10)*** [-.62–.22]
Conflict Aversion	-.23(.39) [-.99 – .53]	.27(.48) [-.68 – 1.22]	-.24(.17) [-.57–.10]	.23(.14) [-.04–.51]
Psychological Reactance	.85(.27)** [.32 – 1.38]	.49(.28) [-.05 – 1.04]	.62(.16)*** [.31 – .93]	-.75(.15)*** [-1.05 – -.44]
R ²	.31	.31	.61	.65
N	460	461	1222	1231

Note: ****p* < .001, ***p* < .01, **p* < .05.

related to mask wearing, also limited to the 18–49 sample only (*p* < .01) (H3).

The bivariate correlations reported in Table 1 suggest that psychological reactance was positively associated with conservatism (H4a) and Republican party identification (H4b) in the older sample only. Reactance was positively correlated with Trump favorability (H4c) in both age groups and negatively correlated with Biden favorability (H4d) in the 50+ age group. Note that in the younger sample, contrary to H4, reactance was positively associated with Biden favorability (*r* = 0.12). Results also point to a significant negative relationship between conflict aversion and Trump favorability (H5c) in the younger sample and a significant positive relationship between conflict aversion and Biden

Table 4

Effects of conflict aversion and psychological reactance on masking behaviors mediated through Trump and Biden Favorability (controlling for ideology, male, age, income, education, black, and Hispanic).

	Predicting Masking Behaviors			
	Through Trump Favorability		Through Biden Favorability	
	Ages 18-49	Ages 50+	Ages 18-49	Ages 50+
	b (se)	b (se)	b (se)	b (se)
Conflict Aversion	.04(.02)* CI [.02, .08] N = 462 partial mediation	.02(.01)* CI [.01, .03] N = 1243 full mediation	.02(.02) CI [-.01, .05] N = 463	.02(.01)* CI [.01, .03] N = 1241 full mediation
Psychological Reactance	-.04(.02)* CI [-.07, -.01] N = 463 full mediation	-.03(.01)* CI [-.05, -.02] N = 1240 full mediation	.01(.02) CI [-.02, .04] N = 464	-.03(.01)* CI [-.05, -.02] N = 1238 full mediation

Note: ****p* < .001, ***p* < .01, **p* < .05.

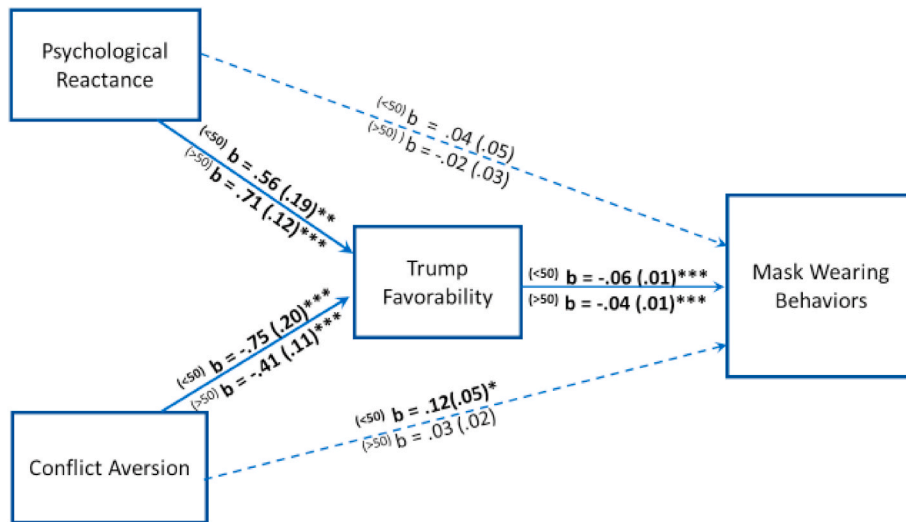


Fig. 1. Trump favorability mediates the relationships between reactance and mask wearing and between conflict aversion and mask wearing in both age groups (controlling for ideology, male, age, income, education, black, and Hispanic). (18–49 weighted $N = 463$, > 50 weighted $N = 1240$). *** $p < .001$, ** $p < .01$, * $p < .05$.

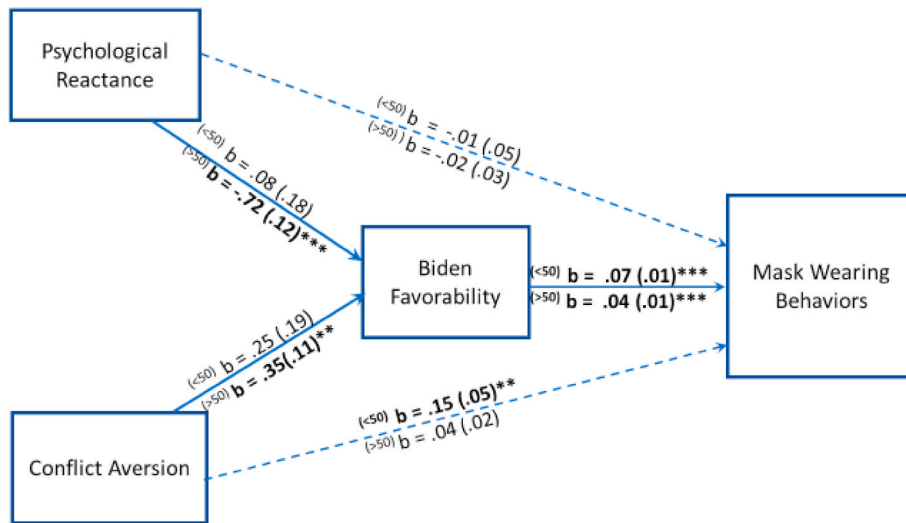


Fig. 2. Biden favorability fully mediates the relationships between reactance and mask-wearing and between conflict aversion and mask wearing among respondents 50 years old and over (controlling for ideology, male, age, income, education, black, and Hispanic) (18–49 weighted $N = 463$, > 50 weighted $N = 1240$). *** $p < .001$, ** $p < .01$, * $p < .05$.

favorability in the older sample (H5d), however no significant associations were found between conflict orientation and party or ideology (H4a and b). The most pronounced associations between both threat-related traits (reactance and conflict orientation) and political preferences emerged in the context of candidate favorability, compared to party or ideology.

Table 3 presents the results of OLS regressions of Trump and Biden favorability in the two age groups with psychological reactance and conflict aversion as predictors, controlling for gender, education, age, income, race, ethnicity, party, and ideology. Results indicate that psychological reactance was significantly positively associated with Trump favorability in both age groups (supporting H4c), even in the face of controls. However, psychological reactance was only significantly negatively related to Biden favorability in the older sample (offering some support for H4d). Meanwhile, conflict aversion was not a significant predictor of Trump or Biden favorability in any of the four models (H5).

Table 4 reports the indirect effects of reactance and conflict aversion on self-reported masking behaviors through Trump and Biden

favorability, controlling for socio-demographic variables and political ideology. Results in the 50+ sample are consistent with H6a and b, as they support Trump and Biden favorability fully mediating the relationships between these psychological traits and masking behavior. In both cases, the psychological traits (both reactance and conflict aversion) were significantly associated with candidate favorability, and these political preferences were associated with masking behaviors. In both cases, the direct relationships between the traits and masking become insignificant when candidate favorability is added as a mediator (see Figs. 1 and 2). Results of the models are illustrated in Fig. 1 (through Trump favorability) and Fig. 2 (through Biden favorability). In both age groups, respondents who were higher in psychological reactance (H6a) and lower in conflict aversion (H6b) (those who were more “conflict approaching”) were more favorable towards Donald Trump, and this favorability was negatively associated with masking behaviors (see Fig. 1). In the case of Biden favorability (Fig. 2), in the older sample only, those who were less psychologically reactant and more conflict averse were significantly more favorable towards Biden, which was positively associated with masking behaviors.

Table 5

Effects of conflict aversion and psychological reactance on masking behaviors as moderated by Trump and Biden Favorability (controlling for ideology, male, age, income, education, black, and Hispanic).

	Moderation Effects on Masking Behaviors			
	Trump Favorability		Biden Favorability	
	Ages 18-49	Ages 50+	Ages 18-49	Ages 50+
	<i>b</i> (<i>se</i>)	<i>b</i> (<i>se</i>)	<i>b</i> (<i>se</i>)	<i>b</i> (<i>se</i>)
Conflict Aversion X Favorability	.02(.01) <i>CI</i> [-.01, .05]	.01(.01) <i>CI</i> [.00, .02]	-.04(.01) <i>CI</i> [-.06, -.01]	-.01(.01)* <i>CI</i> [-.02, .00]
Psychological Reactance X Favorability	.02(.01) <i>CI</i> [.00, .05]	-.02(.01) <i>**</i> <i>CI</i> [-.03, -.01]	.00(.01) <i>CI</i> [-.03, .02]	.01(.01) <i>CI</i> [.00, .02]
<i>N</i>	462	1243	464	1238

Note: ****p* < .001, ***p* < .01, **p* < .05.

Moderation results (H7) are shown in Table 5. Results indicate a significant interaction between Trump favorability and reactance predicting masking in the 50+ sample (H7a) and significant interactions of conflict aversion and Biden favorability (in both age groups) when predicting mask wearing (H7b). To interpret these significant interactions, graphs were created using model coefficients to calculate predicted values of masking at various combinations of conflict aversion and Biden favorability, and reactance and Trump favorability (see Fig. 3). Consistent with H7a, among those 50 and older, the negative relationship between reactance and masking was strongest among those most favorable towards Trump (Fig. 3a). The interactions of Biden favorability and conflict aversion predicting masking are illustrated in Fig. 3b (18–49) and 3c (50+). Consistent with H7b, the positive relationship between conflict aversion and masking was strongest among those least favorable towards Biden, especially in the younger sample. Here, the lowest masking behaviors were thus reported among those least favorable towards Biden who were least conflict avoidant – or most conflict “approaching.”

7. Discussion

This project investigated how self-reported masking behaviors during the COVID-19 pandemic in late Fall 2020, related to political preferences and psychological traits of U.S. adults. We show that this important preventative health behavior was negatively related to political conservatism, Republicanism, and favorability towards President Trump. The paper also examines how psychological reactance and conflict aversion - two psychological traits related to management of potentially threatening interpersonal and social contexts - relate to masking, with self-reported masking behaviors highest among the least reactant and most conflict averse (among younger Americans).

Our findings confirm that affinity for Trump and Biden were significantly associated with reactance—with Trump supporters more reactant (in both samples) and Biden supporters less so (among respondents ages 50 and over). Bivariate relationships also show mixed support for the positive link between conflict aversion and Biden support (and negative link between conflict aversion and Trump support). Mediation analyses are consistent with political affinities helping to account for some of the relationships between these threat-related traits and masking – but in two very different directions; conflict approaching, reactant Trump supporters were less likely to engage in masking in public, while the less reactant, more conflict averse Biden supporters were more likely. Not only were those reactant respondents who tended to like conflict more likely to also like Trump (and less likely to like Biden), but these affinities interacted. Among older Americans, a combination of high Trump favorability plus reactance was associated with especially low masking

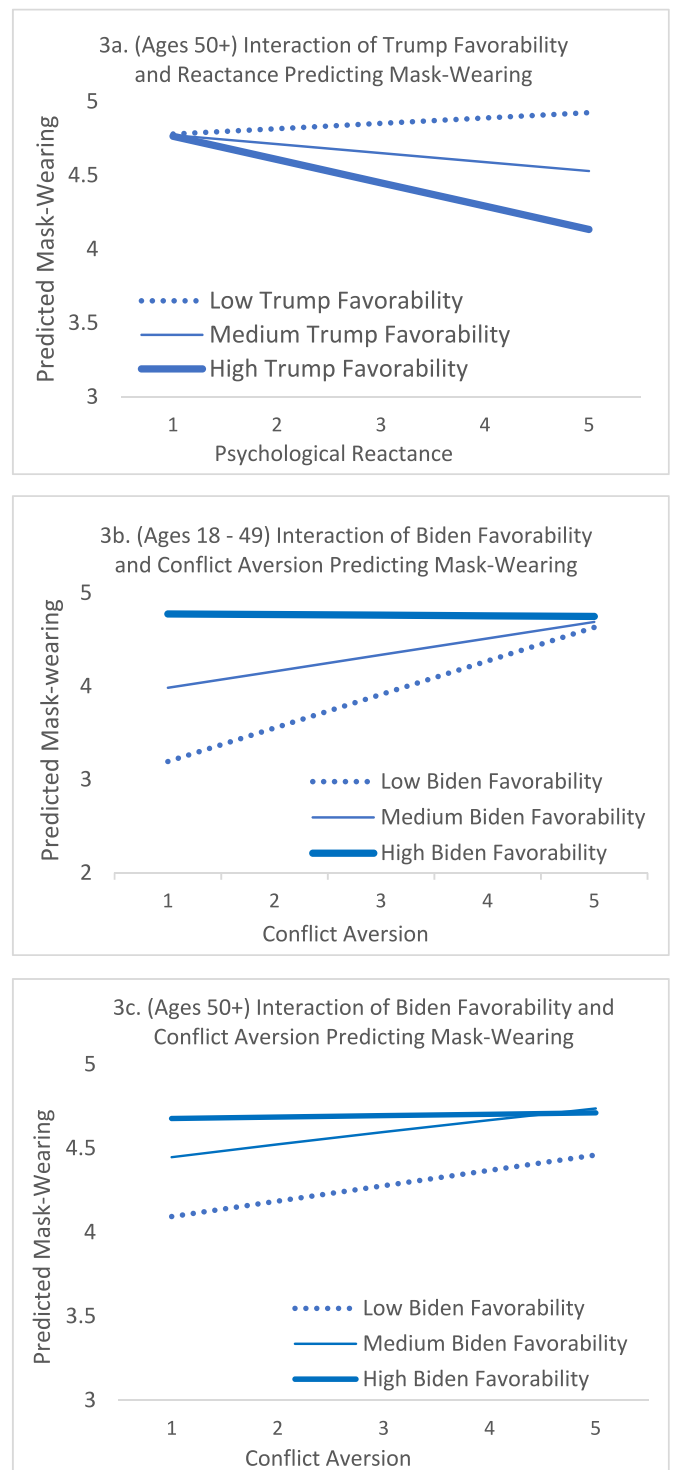


Fig. 3. Interpreting significant interactions of conflict aversion X Biden favorability and reactance X Trump favorability predicting mask wearing behaviors.

behaviors. And low masking behaviors were also found among those least favorable towards Biden who were lowest in conflict aversion (more conflict approaching) in both age groups.

It is perhaps unsurprising that people who are psychologically reactant and conflict-approaching would appreciate a socially conservative populist leader such as Trump (Mercieca, 2020; Norris and Inglehart, 2019; Oliver and Rahn, 2016; Sides et al., 2019). Trump consistently reminded supporters of various infringements on their liberties, and eschewed civility and diplomacy in favor of aggression and

blunt insult. Appealing to reactance and a conflict-approaching style – two predispositions that may already pose a challenge for public health and public policy implementation - may have helped undermine public compliance with health regulations and further erode trust in experts. These data are consistent with both explanatory mechanisms posited at the outset: 1) that these threat-related traits might be inherently tied to social conservatism (captured by Trump support) and thus shaped masking behaviors through those political preferences and 2) that elite cues (from President Trump) - downplaying COVID and mocking masks - appealed to and encouraged reactance and conflict-approaching styles among his supporters, thus reducing their masking behaviors. Future studies might incorporate experimental methods to tease out which mechanism is driving these relationships.

The data presented here cannot isolate whether reactance and conflict aversion are precursors to – or affected by – political preferences. Were the psychologically reactant and conflict-approaching drawn to President Trump, and perhaps having been influenced by his trusted instruction, less likely to wear masks? Similarly, were the less reactant, conflict averse attracted to Biden’s more moderate, civil style, and then followed his recommendations for mask-wearing? Or did the candidates reinforce – or even prime –psychological predispositions through their rhetoric, thereby affecting mask wearing that way? Recent work indicates that these causal arrows can – and do – operate in both directions, with psychological predispositions influencing political beliefs, and political beliefs subsequently informing those psychological traits (Bakker et al., 2021).

The link between conflict style, political preferences, and masking has crucial implications for the implementation of health messaging and health policy. If individuals who enjoy conflict and arguments are the same people whose political preferences encourage opposition to public health mandates and recommendations, then public health practitioners will need to find creative ways to engage conservative citizens and public officials. Such strategies might include inviting community engagement from the start (see Graffigna et al., 2020), or using proven

communication strategies like dramatic narratives (Quick et al., 2013) and even humor to reduce psychological reactance and backlash to health messaging (Moyer-Gusé et al., 2018).

In the United States, COVID-19 has exposed the depths of America’s political divides and the devastating consequences of hyper-partisanship for public health. But by using COVID as a context to explore the interaction of psychology, politics, and health, health communication scholars and practitioners will benefit from a nuanced understanding of the synergistic political and psychological factors that interact to shape public health behaviors. Here, we document how conflict style and psychological reactance, traits that shape individual willingness to engage in health behaviors, are themselves correlated with political preferences. The potential for these traits to be exploited for political purposes in ways that undermine public health is indeed real. However, our hope is that understanding them as interdependent and contingent will empower health professionals and public health officials to disrupt these divisive dynamics and motivate all Americans to protect themselves.

Credit author statement

Dannagal G. Young: Conceptualization, Writing – original draft, Formal analysis, Reviewing and Editing, Huma Rasheed: Formal analysis, Writing – original draft. Amy Bleakley: Funding acquisition, Conceptualization, Supervision, Methodology. Jessica Langbaum: Funding acquisition, Methodology, Investigation

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Appendix B. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.socscimed.2022.114836>.

Appendix A

Population Parameters and Sample Characteristics.

		Ages 18–49		
		Parameter	Unweighted	Weighted
Gender	Male	49.8%	34.5%	49.9%
	Female	50.2%	64.6%	48.3%
Age	18–34	53.8%	27.6%	50.5%
	35–49	46.2%	72.4%	49.5%
Educ	HS or less	36.0%	15.6%	33.9%
	Some Coll	32.1%	37.6%	32.2%
	Coll+	32.0%	56.6%	33.7%
Region	NE	16.7%	14.7%	17.6%
	Midwest	20.3%	19.2%	19.7%
	South	38.1%	43.4%	35.5%
	West	24.9%	20.8%	26.1%
Race/Eth	White	56.0%	29.1%	55.9%
	Black	12.9%	30.9%	12.9%
	Hispanic	20.9%	29.9%	20.9%
	Other	10.2%	10.1%	10.2%
			Ages 50 + Parameter	Unweighted
Gender	Male	46.6%	46.0%	46.7
	Female	53.4%	54.0%	53.2%

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(continued)

		Ages 18–49		
		Parameter	Unweighted	Weighted
Age	18–34	55.0%	46.8%	54.8%
	35–49	45.0%	53.2%	45.2%
Educ	No College	70.5%	45.1%	69.6%
	Coll+	29.5%	54.4%	30.2%
Region	NE	18.3%	15.2%	17.9%
	Midwest	21.4%	17.2%	20.1%
	South	37.8%	42.7%	36.6%
	West	22.6%	23.3%	23.1%
	White	71.9%	36.3%	71.9%
Race/Eth	Black	10.4%	28.9%	10.4%
	Hispanic	10.9%	30.0%	10.9%
	Other	6.8%	4.8%	6.7%

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