


Political Ideology, Ingroup Favoritism, and Conspiratorial Thinking: Patriotism, Nationalism, and COVID-19 Conspiracy Theories

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Abstract

This article examined the relationship between ideology and conspiratorial thinking and the related mediating effect of ingroup favoritism in a non-Western society. We investigated patriotism and nationalism as two favorable orientations toward national ingroups. We also examined their relationship with the general conspiracy mentality and the specific conspiracy beliefs that have emerged during the COVID-19 pandemic. The results revealed that conservative ideology was associated with conspiratorial beliefs in China regardless of the specific conspiracy theories related to ingroups or outgroups, which indicates such tendencies may exist universally across cultures. Patriotism was not associated with conspiracy theories about the origin of COVID-19, whereas nationalism was negatively associated with the conspiracy theories about China (an ingroup) and positively associated with conspiracy theories about the US (an outgroup). Moreover, nationalism mediated the relationship between ideology and specific conspiracy beliefs during the pandemic. The general conspiracy mentality did not predict conspiracy theories about the origin of COVID-19. The results indicate that believing conspiracy theories is not only the result of a stable conspiracy mentality but is also influenced by ideology and intergroup relations.

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China, conservatism, conspiracy theories, COVID-19, ingroup favoritism, nationalism, patriotism

Introduction

The COVID-19 pandemic has caused a rise in patriotism and nationalism amid an urgent need for international cooperation (Rachman, 2020; Tisdall, 2020). The ongoing pandemic poses a great challenge for each country. Some countries have declared a national emergency and emphasized the pandemic as a massive threat to national security. In crises, fear and uncertainty are prevalent, and individuals will try to reduce anxiety through their connection with their ingroups (Bieber, 2020; Hogg, 2000; Rieger et al., 2017). Export restrictions on medical supplies to other countries, protectionist trade policies, international travel bans, and border shutdowns have further intensified feelings of cohesion in national ingroups. Patriotism and nationalism reflect ingroup favoritism at the national level, even though nationalism is strongly associated with authoritarianism and a sense of superiority of ingroups over outgroups. The situation of COVID-19 amplifies the influence of patriotism and nationalism (Woods et al., 2020). Some political leaders mobilized patriotism and nationalism to strengthen solidarity in their countries. Bias or prejudice against foreign countries during the pandemic has increased as a result of the intergroup dynamics of nations (Zhai et al., 2022).

The spread of misinformation often accompanies crises. Various conspiracy theories have emerged and flourished during the pandemic. These conspiracy theories are fairly diverse, and their original sources are difficult to trace. For example, conspiracy theories such as the SARS-CoV-2 (hereafter, referred to as “virus”) traveled through 5G networks or Bill Gates purposely caused the pandemic. Some conspiracy theories were even backed and amplified by governments and used as an instrument for aggressive diplomacy. Although a broad segment of expert opinions states that the virus came about naturally and most likely spread via an intermediate animal host rather than a laboratory leak (WHO, 2021), the US government officials claimed that the virus came from a virology institute in the Chinese city of Wuhan (Gertz, 2021), while Chinese officials promoted a conspiracy theory that the US military brought the virus to Wuhan (Westcott & Jiang, 2020). The influence of various conspiracy theories should not be underestimated. The Pew Research Center (2020) found that nearly three in ten Americans believed the virus was bioengineered in a lab.

Various psychological factors have driven people to believe in conspiracy theories during the COVID-19 pandemic. In contrast to non-conspiratorial explanations, conspiracy theories can satisfy people’s epistemic, existential, and social motives (Douglas et al., 2017). The social motives, in particular, reflect people’s desire to maintain a positive evaluation of the self and the ingroup. This study examined conspiracy beliefs from the perspective of political ideology and intergroup relations. Some evidence shows that conservatives are prone to believe in conspiracy theories that

claim that global warming does not exist and that Barack Obama was born outside of the US (Enders et al., 2020; McCright & Dunlap, 2011; Pasek et al., 2015). We were interested in exploring to what extent the relationship between conservatism and conspiratorial thinking can be generalized in other cultures. Thus, this study examined the association between political ideology and conspiracy beliefs in a non-Western society. Moreover, specific conspiracy theories are highly dependent on contexts (Enders & Smallpage, 2019; Swami, 2012). Intergroup relations influence individuals' attitudes toward various conspiracy theories. Both patriotism and nationalism indicate favorable orientations to national ingroups, but nationalism is strongly related to authoritarianism and negative attitude toward outgroups. They may influence people's conspiracy beliefs about ingroups and outgroups in various ways. Therefore, the present study examined further the mediating effects of national ingroup favoritism (patriotism and nationalism) on the relationships between conservative ideology and conspiracy beliefs.

General Conspiracy Mentality, Political Ideology, and Conspiratorial Thinking

As explanations for complicated and unsettling events, conspiracy theories are popular among populations, and crises further promote their spread. Regarding various social and political issues, some people tend to understand them with reference to secret plots hatched by powerful people or groups (Imhoff & Bruder, 2014). Conspiracy mentality indicates individuals' propensity toward conspiratorial thinking. Social psychologists believe that there are stable individual differences in the conspiracist mindset, and that the general propensity to believe conspiracist explanations for events can be theorized and measured by conspiracy mentality (Brotherton et al., 2013; Imhoff & Bruder, 2014). The general conspiracy mentality acts as the central, overarching belief system that underpins the specific understanding of reality and existence. It consists of mistrust of authorities and beliefs in the existence of deception and secret forces (Dagnall et al., 2015; Wood & Douglas, 2013; M. J. Wood & Douglas, 2013). For example, researchers have found that the general conspiracy mentality had predicted conspiracy beliefs about the 9/11 terrorist attacks and the assassination of John F. Kennedy (Enders et al., 2020). Although the general conspiracy mentality does not involve any specific conspiracy theories, it predisposes people's tendency to endorse them. Moreover, evidence shows that individuals' general tendency toward conspiratorial thinking is a unidimensional construct. People who endorse one conspiracy theory also tend to endorse others (Dagnall et al., 2015; Swami et al., 2013, 2011; Wood et al., 2012). Thus, conspiracism can generalize across specific conspiracy theories. The present study examined whether the general conspiracy mentality (a conspiracist cognitive style) predicts conspiracy theories about the origin of COVID-19.

In addition to the general conspiracy mentality, conspiratorial thinking is associated with political ideology. Political ideologies are classified according to a left-right (liberal-conservative) divide and determined by the motivational differences among citizens (Jost, 2006; Jost, Nosek, & Gosling, 2008; Jost et al., 2008). Conservatives are identified as those with an emphasized desire for epistemic and existential certainty,

stability, and adherence to preexisting social norms (Cuevas & Dawson, 2020; Feldman & Johnston, 2014). Political conservatism is found to be associated with religiosity (DeFranza et al., 2020; Hirsh et al., 2013). In the US, Republicans have more established identities and tend to conform to rigid and highly prescribed beliefs than Democrats (Mason & Wronski, 2018). Furthermore, they are more likely to be fueled by ingroup bias and to display ethnocentrism and racism (Hall et al., 2010; Mason & Wronski, 2018). As partisanship is a process of motivated reasoning that influences attitude formation and expression, it can drive conspiratorial thinking (Bullock et al., 2015; Enders et al., 2020). The role of partisanship in influencing people's tendency to believe in conspiracy theories indicates that political ideology is a force that motivates individuals' conspiracy beliefs. In fact, conservatives demonstrate a stronger endorsement of conspiracy theories (Alper et al., 2020; Enders et al., 2020; Enders & Smallpage, 2019; Pasek et al., 2015). For example, Republicans are prone to accept "birther" beliefs in the US (Enders et al., 2020; Pasek et al., 2015). Political views differ across cultures, which impact the concepts related to political orientation (Zhai, 2017, 2020, 2022). However, whether the association between conservatism and conspiratorial thinking is present in a country with a culture considerably different from that of Western countries has not been established yet. Accordingly, the present study examined the relationship between political ideology and conspiracy beliefs in a non-Western society.

National Ingroup Favoritism and Conspiratorial Thinking

Although most previous research has focused on conspiracy mentality as a stable mindset, intergroup relations may also affect individual tendency to believe in conspiracy theories. Recent studies on conspiracy theories reveal that specific conspiracy theories have different effects on individuals; the content of conspiracy theories matters (Enders & Smallpage, 2019; Oleksy et al., 2021). Endorsement of government-related conspiracy theories caused people to be lax with prevention measures such as social distancing during the pandemic, while the general conspiracy mentality did not have such an effect (Oleksy et al., 2021). The situation-dependent characteristics of conspiracy theories indicate that intergroup relations can be a factor that influences how people respond to different specific conspiracy theories. Realistic group conflict theory, terror management theory, and social identity theory are the primary theoretical approaches to ingroup-outgroup issues (Cuevas & Dawson, 2020). The theoretical perspective of ingroup favoritism adopted by our study is based on the social identity theory. According to social identity theory, in intergroup relations, individuals tend to favor their own groups over outgroups, which is driven by social identities (Tajfel 1974; Tajfel & Turner, 1979; Turner et al., 1987). Social categorization, ingroup-outgroup consciousness, and the motivation to maintain self-esteem drive people to favor their ingroups (Iacoviello et al., 2017; Romano et al., 2017; Tajfel et al., 1971). Examining conspiracy beliefs from the perspective of intergroup relations, we posit that ingroup favoritism may mitigate conspiracy beliefs about ingroups and increase the tendency to believe in conspiracy theories about outgroups.

Patriotism and nationalism indicate people's attachment to and identification with nation-states as their ingroup and may be associated with conspiratorial thinking. Crises disrupt the existing state of stability, and uncertainty motivates ingroup identification. Therefore, crises are conducive to a rise in patriotism and nationalism (Hutchinson, 2017). Even though they share many similarities with respect to favorable feelings for one's own country, patriotism is distinct from nationalism (Druckman, 1994; Kosterman & Feshbach, 1989; Nincic & Ramos, 2012). Patriotism is understood as affection toward the national ingroup that implies a sense of belonging, responsibility, and pride in one's country (Mummendey et al., 2001). Moreover, patriotism occurs in non-competitive situations (Druckman, 1994); it is healthy and is associated with a peaceful approach to the world. Patriotism does not necessarily include hostility toward foreign countries. In contrast, nationalism values membership in a nation and stresses the importance of national identity in social interactions (Fox & Miller-Idriss, 2008). Hence, nationalism involves a feeling of superiority about one's nation over others and the need to pursue dominance over foreign countries, as well as expressions of resentment toward foreign nations (Kleinpenning & Hagendoorn, 1993; Kosterman & Feshbach, 1989; Woods et al., 2020). Nationalism is also associated with authoritarianism and the desire to obey traditional societal norms even if they are outdated or detrimental. As patriotism and nationalism are distinct, their effects on conspiracy beliefs should be differentiated.

The COVID-19 pandemic is a natural experiment by which we can survey people's attitudes toward different conspiracy theories about ingroups and outgroups. We used China and the US as the two target countries. Individuals' attitudes toward conspiracy theories about the two countries represent conspiracy beliefs about ingroups and outgroups. Regarding the origin of COVID-19, conspiracy theories assert that the virus was bioengineered in a Chinese or American laboratory. These two conspiracy theories are identical except for the target country that represents ingroup-outgroup relations. This present study examined how ingroup favoritism has been linked with general conspiracy mentality and specific conspiracy beliefs during the COVID-19 pandemic. As stated previously, patriotism and nationalism are examples of national ingroup favoritism, but they are two distinct political orientations. Particularly, we hypothesized that (1) the relationship between patriotism and general conspiracy mentality is different from that between nationalism and general conspiracy mentality, (2) patriotism and nationalism influence individuals' attitudes toward conspiracy theories about ingroups and outgroups differently, and (3) patriotism and nationalism mediate the relationship between political ideology and conspiracy beliefs.

Method

Participants

One hundred and twenty students were recruited from a Chinese university for this study (47% males, 53% females). The age of participants ranges from 17 to 25 ($M = 19.32$, $SD = 1.37$). Participation was voluntary, and participants were offered monetary

compensation after completing the survey. They were assured that all data were anonymous and used only for research purposes. We had obtained their informed consent before the survey, and they could stop answering the questionnaire any time during the survey.

Measures

Patriotism. [Kosterman and Feshbach's \(1989\)](#) patriotism scale was adapted and used to measure patriotism. The sample items were "I love my country," "I am proud to be a Chinese," "It is not that important for me to serve my country," and "When I see the Chinese flag flying, I feel great." Responses were coded on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). A greater score indicates a high level of patriotic feelings ($M = 4.57$, $SD = 0.66$). Based on the sample of the present study, Cronbach's alpha was 0.85.

Nationalism. [Kosterman and Feshbach's \(1989\)](#) nationalism scale was adapted and used to measure patriotism. The sample items were "The important thing for the Chinese foreign aid program is to ensure that China gains a political advantage," "Other countries should try to make their government as much like ours as possible," and "The Chinese nation has the greatest history and culture in the world." Responses were coded on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). A greater score indicates a high level of nationalism ($M = 3.89$, $SD = 0.77$). Based on the sample of the present study, Cronbach's alpha was 0.67.

Conspiracy beliefs about China. During the pandemic, conspiracy theories state that the virus was human-made and leaked from Chinese laboratories. We measured conspiracy beliefs about China by asking respondents' attitude toward the statement that "the virus was made in Chinese laboratories." Responses were coded on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree).

Conspiracy beliefs about the US. In China, conspiracy theories about the US circulated among the public, contending that the US was the origin of this infectious disease. We measured conspiracy beliefs about the US using two independent items. "The virus was human-made and leaked from American laboratories" and "The US military brought the virus to the city of Wuhan." Responses were coded on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). These two items were analyzed separately in the following studies.

General conspiracy mentality. General conspiracy mentality was measured by the scale of [Imhoff and Bruder \(2014\)](#). Sample items were "There are several very important things happening in the world about which the public is not informed," "There are secret organizations that have a great influence on political decisions," and "Secret organizations can manipulate people psychologically so that they do not notice how their life is being controlled by others." Responses were coded on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). A greater score indicates a high level of conspiracy mentality ($M = 3.28$, $SD = 0.74$). Based on the sample of the present study, Cronbach's alpha of this scale was 0.88.

Liberal-conservative ideology. The ideological divide was measured by adaptation of items used in Pan and Xu (2018) with seven items that shape the emergence of social and political cleavages: “Western multiparty systems are unsuitable for China,” “If people have too many different ways of thinking, society will be chaotic,” “Divorce is immoral,” “Stability and order of the country should be prioritized over individual freedom and liberties,” “It is risky to change the current state of society,” “Law should not allow same-sex marriage,” and “Harmony of the community will be disrupted if people organize lots of groups.” Responses were coded on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). A greater score indicates a high level of conservative orientations ($M = 2.68$, $SD = 0.65$). Based on the sample of the present study, Cronbach’s alpha was 0.69.

Results

Correlations among variables are presented in Table 1. Regarding specific conspiracy theories about China and the US, the beliefs that the virus was made in Chinese laboratories was positively correlated with beliefs that the virus was made in American laboratories ($r = 0.33$, $p < .001$) but was not significantly correlated with the belief that the US military brought the virus to Wuhan ($r = 0.11$, $p > .1$). Moreover, conservative ideology was positively correlated with patriotism ($r = 0.31$, $p < .05$) and nationalism ($r = 0.41$, $p < .05$). Patriotism was negatively correlated with general conspiracy mentality ($r = -0.26$, $p < .05$). Conservative ideology was positively correlated with the beliefs that the virus was made in Chinese laboratories ($r = 0.20$, $p < .05$) and the beliefs that the virus was made in American laboratories ($r = 0.41$, $p < .001$) and that the US military brought the virus to Wuhan ($r = 0.42$, $p < .001$).

Next, we investigated whether political ideology is related to conspiratorial thinking in a non-Western society. Ingroup favoritism may mediate the relationship between ideology and beliefs in specific conspiracy theories. Figure 1 presents the results regarding the mediating effect of patriotism and nationalism on the relationship between ideology and the conspiracy beliefs that the coronavirus was created in a Chinese laboratory. Conservative ideology was positively associated with patriotism ($\beta = 0.31$, $SE = 0.09$, $p < .001$) and nationalism ($\beta = 0.49$, $SE = 0.10$, $p < .001$). Patriotism was negatively associated with general conspiracy mentality ($\beta = -0.43$, $SE = 0.10$, $p < .001$), whereas in contrast, nationalism was positively associated with general conspiracy mentality ($\beta = 0.18$, $SE = 0.09$, $p < .05$). Concerning this specific conspiracy theory about China, general conspiracy mentality was not significantly associated with the conspiracy belief that the virus was created in a Chinese laboratory ($\beta = 0.03$, $SE = 0.07$, $p > .1$), whereas conservative ideology positively predicted this belief ($\beta = 0.24$, $SE = 0.09$, $p < .01$). The results showed that conservative ideology was associated with the tendency toward conspiratorial thinking. In addition, nationalism was negatively associated with the conspiracy belief that coronavirus was created in a Chinese laboratory ($\beta = -0.16$, $SE = 0.07$, $p < .05$), whereas patriotism was not significantly

Table 1. Means, standard deviations, and zero-order correlations between the variables.

Variable	M	SD	1	2	3	4	5	6	7	8	9
1. Age (years)	19.32	1.37	1.00								
2. Gender (female = 1)	0.53	0.50	0.19	1.00							
3. Patriotism	4.57	0.66	0.09	-0.11	1.00						
4. Nationalism	3.89	0.77	0.13	-0.004	0.66	1.00					
5. Ideology (Conservatives = 1)	2.68	0.65	0.07	0.26	0.31	0.41	1.00				
6. General conspiracy mentality	3.28	0.74	-0.10	0.004	-0.26	-0.07	0.13	1.00			
7. The virus made in China	1.21	0.56	-0.12	0.02	-0.04	-0.08	0.20	0.08	1.00		
8. The virus made in the US	1.90	1.10	0.22	0.11	0.16	0.27	0.41	0.05	0.33	1.00	
9. The US brought the virus to the city of Wuhan	1.81	1.07	0.28	0.18	0.15	0.28	0.42	0.05	0.11	0.79	1.00

Note. Bold font indicates the correlation coefficients are statistically significant at the 5% level (two-tailed test).

associated with this belief ($\beta = 0.03$, $SE = 0.09$, $p > .1$). Hence, nationalism mediated the relationship between conservative ideology and this belief.

Figure 2 presents the results of the mediating effect of patriotism and nationalism on the relationship between ideology and the conspiracy belief that the coronavirus was created in American laboratories. Conservative ideology had a direct effect on this belief ($\beta = 0.61$, $SE = 0.16$, $p < .001$). However, the general conspiracy mentality, nationalism, and patriotism were not significantly associated with this belief ($\beta = 0.01$, $SE = 0.13$, $p > .1$; $\beta = 0.21$, $SE = 0.13$, $p > .1$; $\beta = -0.07$, $SE = 0.16$, $p > .1$). Patriotism and nationalism mediated the effect of conservative ideology on general conspiracy mentality, but the mediating effect was not found in the relationship between ideology and the abovementioned conspiracy theory about American laboratories.

Figure 3 presents the results of the mediating effect of patriotism and nationalism on the relationship between ideology and the conspiracy belief that the US brought the coronavirus to the city of Wuhan. Conservative ideology positively predicted this belief ($\beta = 0.62$, $SE = 0.16$, $p < .001$). Nationalism was also positively associated with it ($\beta = 0.25$, $SE = 0.13$, $p < .05$). Thus, nationalism mediated the relationship between ideology and the conspiracy belief that the US brought the coronavirus to Wuhan. However, general conspiracy mentality and patriotism were not significantly associated with this belief ($\beta = -0.02$, $SE = 0.13$, $p > .1$; $\beta = -0.15$, $SE = 0.15$, $p > .1$).

Discussion

Existing literature on conspiracy beliefs focuses on the relationship between personality traits and conspiracy beliefs, demonstrating that conspiracy beliefs are related to paranoia and low levels of interpersonal trust, self-esteem, and agreeableness (Abalakina-Paap et al., 1999; Darwin et al., 2011; Goertzel, 1994; Swami et al., 2011). Bringing a perspective of ideology and ingroup favoritism to conspiracy belief studies,

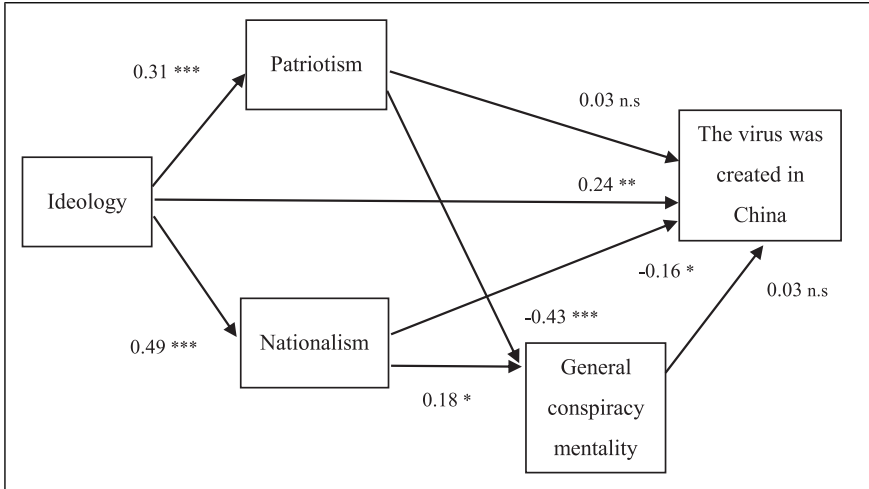


Figure 1. Path model of the effects of ideology on the conspiracy theory that the virus was created in a Chinese lab. Note. * $p < .05$, ** $p < .01$, *** $p < .001$, two-tailed test.

we examined how political ideology, patriotism, and nationalism influence conspiracy beliefs.

Our study showed that the general conspiracy mentality does not adequately predict conspiracy beliefs regarding the origin of COVID-19 (whether it originated in the US or China). Enders et al. (2020) contend that the general tendency toward conspiratorial thinking is not a sufficient condition for some specific conspiracy theories. Although previous studies regarded conspiracy mentality as a stable psychological propensity toward conspiracist thinking (Brotherton et al., 2013; Imhoff & Bruder, 2014), the forces that drive beliefs in specific conspiracy theories may vary in different contexts (Enders & Smallpage, 2019; Swami, 2012). Our study was conducted in China; therefore, the Chinese context should be considered when interpreting the results. According to the report of WHO (2021), the virus was not created by people or leaked from a laboratory. As the virus was first reported in Wuhan, there have been various conspiracy theories about China such as that Chinese scientists created the virus or that Chinese scientists investigated the coronavirus in labs by capturing an infected bat and it accidentally spread to the general population. Under international pressure, the Chinese government has denied any conspiracy theories related to Chinese labs and propagated its position by claiming that the coronavirus was developed in the wild and was not a result of the lab leak to both domestic and international audiences. Chinese people have been influenced by the official propaganda that negates the theory of the human-made virus. Therefore, the general conspiracy mentality did not effectively predict specific conspiracy beliefs about the origin of COVID-19.

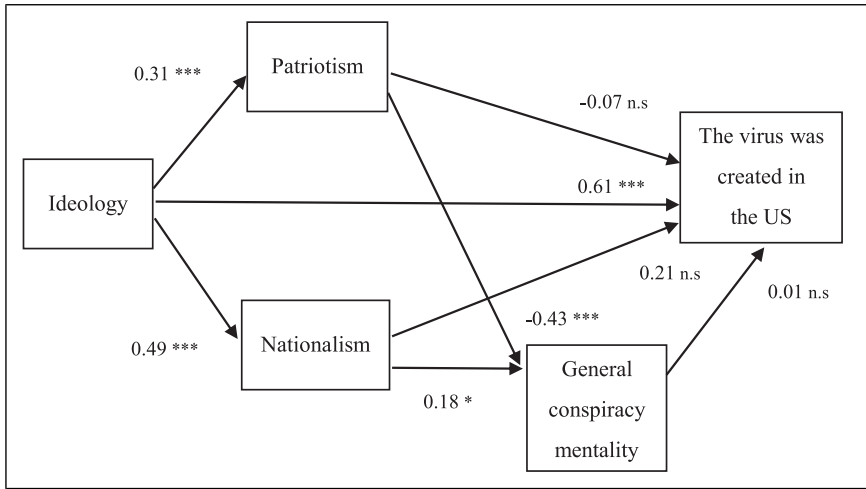


Figure 2. Path model of the effects of ideology on the conspiracy theory that the virus was created in an American lab. Note. * $p < .05$, *** $p < .001$, two-tailed test.

In contrast to the general conspiracy mentality, political ideology is an important factor in predicting people's tendency to endorse conspiracy theories about the origin of coronavirus disease. Previous studies have found that conservatives have more conspiracy beliefs (Alper et al., 2020; Enders et al., 2020; Pasek et al., 2015). Our study confirmed a positive association between conservative ideology and conspiracy beliefs in a non-Western society. Moreover, group-based qualities of conspiracy theories indicate that the role of intergroup relations cannot be neglected in the studies conducted on conspiracy beliefs (van Prooijen & Douglas, 2018). The results further revealed that conservative ideology has a greater positive association with the conspiracy theory about the US than that about China. Enders et al. (2020) maintain that ideologically motivated reasoning is activated much more easily when the conspiracies implicate an outgroup. Therefore, conservative ideology was related to the conspiracy theory about an outgroup more strongly. The above results reveal that group dynamics play an important role in studies on the relationship between political ideology and conspiracy beliefs.

The relationships between nationalism and the two conspiracy theories about the US were not consistent. Nationalism was positively associated with the conspiracy theory that the US military brought the virus to Wuhan, but there was no significant relationship between nationalism and the conspiracy theory that claimed the virus was created in an American laboratory. The former conspiracy theory was the most widely spread in China in 2020 when the present study was conducted. At that time, even the Chinese government spokesman spread such theories (Crossley, 2020). The latter conspiracy theory was not prevalent in 2020 but has spread in 2021. The salience of a conspiracy theory also influences people's attitudes toward it.

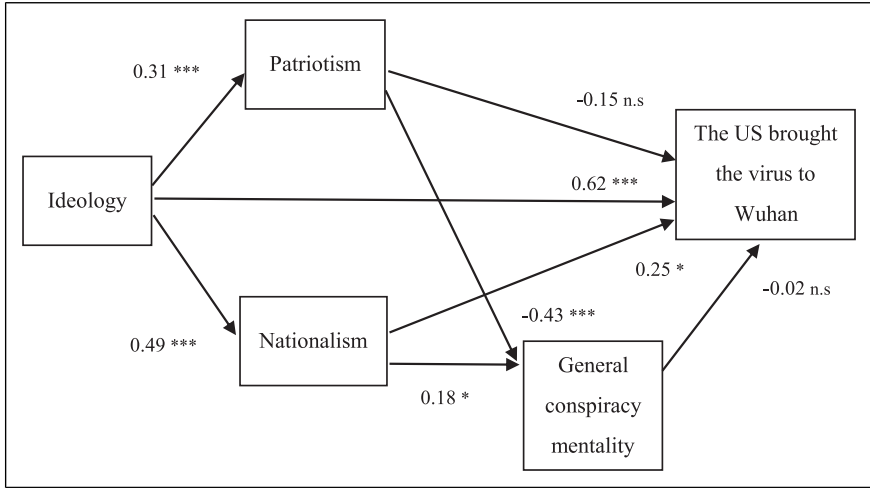


Figure 3. Path model of the effects of ideology on the conspiracy theory that the US military brought the virus to the city of Wuhan. *Note.* * $p < .05$, *** $p < .001$, two-tailed test.

The effects of patriotism and nationalism on conspiracy beliefs are different. The distinction between patriotism and nationalism is not only meaningful in theories (Druckman, 1994; Kosterman & Feshbach, 1989; Nincic & Ramos, 2012); the present study confirmed that they represent different ingroup favoritism orientations. There was no association between patriotism and specific conspiracy beliefs; however, in contrast, a significant association was found between nationalism and conspiracy beliefs. The distinction between patriotism and nationalism can be explained by a relational-autonomous continuum of social orientations (Hinkle & Brown, 1990). Patriotism is an autonomous orientation that corresponds to affection toward national ingroups and is independent of the simultaneous derogation of foreign outgroups. In contrast, nationalism is a relational orientation that requires a comparison with outgroups and a derogation of other nations (Mummendey et al., 2001). The characteristics of nationalism can explain its positive association with conspiracy beliefs about the US.

The results confirmed that patriotism and nationalism are different constructs with variety of sets of circumstances and could be valuable for future research. Previous studies show that patriotism had no impact on the perception of the US threat; however, there were strong links between nationalism and threat perception as well as between nationalism and foreign policy preferences (Gries et al., 2011; Sinkkonen, 2013). Nationalism is more related to authoritarianism and resentment against other foreign nations (Kleinpenning & Hagendoorn, 1993; Kosterman & Feshbach, 1989; Woods et al., 2020). Unlike nationalism, patriotism, as a type of ingroup favoritism orientation, does not produce outgroup hostility. The results also demonstrated that it is not patriotism but nationalism that is related to conspiracy theories about the origin of COVID-19. Nationalists are oriented toward authoritarianism and express hostility

toward outgroups. Although nationalists claim that they are patriots, their actions are often against the healthy development of a country. Politicians even intentionally confuse patriotism with unwavering loyalty to themselves. Supporters of then President Donald Trump, who rioted in the US Capitol in January 2021, claimed that their act was patriotic and adhered to pro-Trump conspiracy theories. Thus, it is critical to note the destructive acts of nationalists in the name of patriotism.

Moreover, our study revealed that people who thought coronavirus was created in a laboratory in China were also more likely to think that it was created in a laboratory in the US (see [Table 1](#)). This result seems contradictory and illogical. The virus could plausibly have been “made” in one place or another but not in both places. Importantly, the results indicate that conspiratorial thinkers hold contradictory beliefs. They tend to believe that the virus was created in labs regardless of its origin, whether Chinese or American, but do not notice that these theses are mutually exclusive. [Wood et al. \(2012\)](#) also found that conspiratorial thinkers endorsed contradictory conspiracy theories. For example, they believed Princess Diana was murdered; meanwhile, this belief was positively related to the belief that she faked her death. Some studies have found that delusion-prone individuals are susceptible to believing fake news ([Bronstein et al., 2019](#)). They are more likely to endorse implausible ideas that are disseminated through misinformation, including conspiracy theories ([Dagnall et al., 2015](#)). Even after false information is debunked, some people are not able to recognize their bias or are indifferent toward it ([Pennycook et al., 2017](#)). In particular, when a person has a relatively lower cognitive ability, they have difficulty noticing and adjusting the judgment ([Brydges et al., 2018](#); [De Keersmaeker & Roets, 2017](#); [Pennycook & Rand, 2020](#)). Researchers have found that the common characteristic of those who espouse delusion-like beliefs is their less engagement in analytic thinking ([Bronstein et al., 2019](#)). This form of cognitive style requires more effort and is characterized by a deliberate thought process. Less engagement in analytic thinking may explain the result that conspiratorial thinkers hold contradictory beliefs. They mainly adhere to conspiratorial thinking but do not pay sufficient attention to the incongruence of their sub-beliefs.

Limitations and Future Directions

There are some limitations in this study that should be acknowledged. First, some measures of the variables were unsatisfactory. Cronbach’s alpha was 0.67 for nationalism and 0.69 for ideology, respectively. A relatively low Cronbach’s alpha indicates problems in the internal consistency of the instrument. As Western-developed measures may not best suit the circumstances of local society, the intercultural application of scales is a limitation the present study. Due to the ruling party’s control, measuring ideology in China has difficulties, and a more effective instrument needs to be developed. Second, conspiracy theories related to the COVID-19 pandemic were dependent on contexts. Our study was conducted during the pandemic; ingroup favoritism orientations are often intensified in crises. The government actively manipulated public opinion on COVID-19 conspiracy theories regarding China, and among

Chinese citizens, there was limited variation in the conspiracy belief that the virus was made in a Chinese laboratory. Future research may test the effect of ingroup favoritism on alternative conspiracy theories about ingroups rather than highly sensitive COVID-19 conspiracy theories. Third, the findings of the present study were confined to one country with the absence of cross-country tests. Our study investigated the conspiracy theories that are related to China and the US, but the data collection did not include a US sample. As stated previously, under the influence of ingroup favoritism and the government's control of information by both propaganda and censorship, most Chinese respondents believe in conspiracy theories about the US but reject those about China. The homogeneous nature of the Chinese sample could limit the generalizability. Future research should examine the relationships among ideology, ingroup favoritism, and general conspiracy mentality/specific conspiracy beliefs through a multi-nation comparison.

Conclusion

This study was conducted in a non-Western society and the results indicated that the association of conservatism and nationalism with conspiratorial thinking may be more universal than previously thought. In the US, most recent studies have found that conservatism is positively associated with conspiratorial thinking. With the Chinese sample, our study demonstrated that conservatism mirrors the same outcome as that expected in Western societies. This implies that such tendencies may be a universal human characteristic rather than an outcome of the peculiarities of a nation's culture. The relationships between these variables are generalized across the human experience.

This study is an important step to understand how intergroup relations affect conspiracy beliefs. The findings demonstrated that the belief in various specific conspiracy theories is not only a result of a stable conspiracy mentality but also affected by intergroup relations. The effect of intergroup relations is manifested in the following three aspects. First, ingroup favoritism affects individuals' varying attitudes toward conspiracy theories about ingroups and outgroups. We examined two favorable national ingroup orientations—patriotism and nationalism. Patriotism did not significantly affect individuals' attitudes toward different conspiracy theories about ingroups or outgroups. In contrast, nationalism was negatively associated with the conspiracy theory about China (an ingroup), but positively associated with that about the US (an outgroup). The results also confirmed that patriotism and nationalism are two different constructs, with patriotism being a more positive trait and nationalism being more ominous.

Second, intergroup relations provide a lens to understand when political ideology is more successful in predicting people's propensity to endorse conspiracy theories. Compared with the general conspiracy mentality, political ideology has greater power in predicting conspiracy theories about outgroups. This argument was previously tested in the relationships between political parties. Our results indicated that even if intergroup relations are on the national level, the same conclusion is still relevant. The

results indicated that the positive association between conservatism and conspiracy beliefs about the US is higher than that between conservatism and conspiracy beliefs about China.

Third, the relationship between political ideology and conspiracy beliefs is mediated by ingroup favoritism. Although conservative ideology positively predicts conspiracy beliefs, this positive relationship varies per intergroup relations. Specifically, nationalism mitigates the positive association between conservatism and conspiracy beliefs about China (an ingroup), whereas nationalism intensifies the positive association between conservatism and conspiracy beliefs about the US (an outgroup). This asymmetric effect needs further studies that combine perspectives of political ideology with intergroup relations in investigating psychological factors behind conspiracy theories.

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Ethical Approval

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

Data Availability Statement

All data and materials are openly available at <https://osf.io/67tep/>

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