System Threat during a Pandemic: How Conspiracy Theories Help to Justify the System

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Abstract

During the COVID-19 pandemic, many people have endorsed conspiracy theories about foreign governments yet shown increased trust and support for their own government. Whether there is a potential correlation between these social phenomena and the psychological mechanisms behind them is still unclear. Integrating insights from the existential threat model of conspiracy theories and system justification theory, two experimental studies were conducted to investigate whether belief in out-group conspiracy theories can play a mediating role in the effects of system threat on people's system justification beliefs against the background of the pandemic. The results show that system threat positively predicts individuals' system-justifying belief, and belief in out-group conspiracy theories mediated this relationship.

As the COVID-19 pandemic unfolded globally, it was accompanied by a large number of conspiracy theories (Biddlestone et al., 2020; Jolley & Paterson, 2020). The conspiracy theory that China made this virus in a laboratory as a biological weapon is prevalent in western countries (Biddlestone et al., 2020; van Bavel et al., 2020). On the other hand, part of the Chinese public believes in a conspiracy theory that western countries—especially the United States—created the virus (Mu, 2020; Myers, 2020; Su et al., 2021). This suggests that people may be particularly inclined to make extrinsic attributions about the cause of the pandemic, and thus more likely to believe in conspiracy theories about out-groups. Besides such out-group conspiracy theories, however, the pandemic has also led many people to support their political system. Taking China as an example, while being the first country to be threatened by the pandemic, the Chinese people showed amazing collective and active cooperation with the Chinese government in various prevention and control management work (such as voluntary home quarantine), which suggests substantial trust and support for their own government. Does the threat of the pandemic affect both individuals' belief in conspiracy theories *and* support of their government? This article attempts to explore these questions.

System justification theory states that there is a human tendency for people to rationalize their political system—that is, people are willing to believe that the social system they live in is just and, at the same time, consciously or unconsciously defend this system even if it conflicts with their own interests or common values of equality (e.g., Jost et al., 2004; Jost & Banaji, 1994; van der Toorn & Jost, 2014). The concept of system justification is regarded

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as a set of individual psychological and behavioral tendencies to believe that the status quo is fair and reasonable (e.g., Jost et al., 2014; Jost & Hunyady, 2005). Kay and Friesen (2011) have described four contexts in which the motivation to justify one's system is likely to become salient: system threat, system dependence, system inescapability, and low personal control. For instance, when people perceive that the system is threatened from the outside, their tendency to justify the system will be activated, prompting system-justifying belief. Here, system threat includes natural and social events that can cause harm to the stability and legitimacy of the system (Kay & Friesen, 2011).

Previous studies have found that after the 9/11 terrorist attacks, the American public was afraid of external threats, which was associated with a significant increase in their support for the president and Congress (Huddy et al., 2002). Later studies have also shown through surveys (Willer, 2004) and experiments (Ullrich & Cohrs, 2007) that terrorist acts are associated with increased system-justifying belief among the American people. Likewise, the pandemic may have instilled feelings of system threat among citizens. As a result, people have been willing to sacrifice their personal interests, such as free travel, and deliberately followed their government's pandemic prevention policy. Therefore, we hypothesize that in the context of a pandemic, system threat will increase participants' system-justifying belief (Hypothesis 1).

When a significant societal crisis breaks out, it is usually accompanied by a large number of conspiracy theories (van Prooijen & Douglas, 2017). For example, following the 2011 earthquake and tsunami in Japan and the resulting nuclear leakage at the Fukushima Daiichi Nuclear Power Plant, Imhoff and Bruder (2014) found that many people tended to attribute the disaster to the authorities and believed in the conspiracy theory that the power company or the Japanese government was behind the accident. Social psychology researchers define conspiracy theories as explanatory beliefs which assume that multiple actors colluded in secret to achieve nefarious goals (Goertzel, 1994; Green & Douglas, 2018; Uscinski & Parent, 2014). Van Prooijen (2020) proposes an existential threat model of conspiracy theories, which can be used to explain under what circumstances existential threat will lead people to believe in conspiracy theories. Existential threat refers to a broad spectrum of everyday anxieties and insecurities that people feel when they, or the people around them, experience harm or expect to suffer loss. This model proposes that existential threat will induce individuals to make mental efforts to reduce epistemic uncertainty, and hence understand the external world (Douglas et al., 2017). Put differently, individuals will seek explanations for crisis events through a psychological process of sense-making. However, when a salient antagonistic out-group emerges in an event, the sense-making process may often stimulate belief in a conspiracy theory that blames the

event on the out-group (van Prooijen, 2020). In summary, feelings of existential threat or system threat during social crisis events are likely to trigger belief in conspiracy theories about out-groups.

There is also a link between believing in out-group conspiracy theories and system justification. First, most conspiracy beliefs can be framed in terms of beliefs about how a powerful and evil out-group meets in secret, designing a plot that is harmful to one's in-group (van Prooijen & van Lange, 2014). Social identity theory proposes that individuals identify with the group they belong to through social categorization, generating feelings of in-group favorability and a rejection of out-groups (Tajfel & Turner, 1979). Therefore, when one's in-group or system is in a weak position or threatened, believing in conspiracy theories about out-groups is both an explanation to exclude the out-group and a way of explaining and rationalizing the in-group's weak position, thus defending their social system (Douglas et al., 2018; Uscinski & Parent, 2014; van Prooijen & van Lange, 2014). This is described by Douglas et al. (2017, 2018) as a social motive of conspiracy theories, to actively maintain a positive image of the in-group. These processes are underscored by the relationship of conspiracy beliefs with collective narcissism, which is defined as an exaggerated perception of the greatness of the in-group. Golec de Zavala and Cichocka (2012) found that the collective narcissism of the Polish nation predicted anti-Semitism and, accordingly, Jewish conspiracy theories. Similarly, collective narcissism in the United States predicted support for conspiracy theories involving foreign governments in addition to the U.S. government (Cichocka et al., 2016).

Jolley et al. (2018) directly investigated the relationships between system threat, belief in conspiracy theories, and system-justifying belief (i.e., satisfaction with the status quo) in several studies. Their results reveal that the participants who were exposed to conspiracy theories were more satisfied with the status quo after a system threat. In other words, under the influence of a system threat, conspiracy theories cause people to shift their attribution of social problems from flaws in the system to hostile groups. As a consequence, people paradoxically become more satisfied with the status quo, hence justifying the social system. It should be noted that the process described here is actually very similar to the notion of antagonistic out-groups proposed by van Prooijen (2020) in the existential threat model of conspiracy theories. Once people discover and identify groups within their own society as perpetrators of a conspiracy, they mentally construe them as a subgroup (and out-group) that is separate from, and antithetical to, their valued in-group. Conspiracy theories are associated with what groups people identify as hostile, enabling them to recognize dangerous and untrustworthy groups, and to weaken or eliminate the threat that they may pose (Bost & Prunier, 2013).

Extrapolating these arguments to the COVID-19 pandemic, the system threat posed by the current health crisis will stimulate people to seek explanations for the pandemic, and conspiracy theories about out-groups provide such explanations. At the same time, belief in out-group conspiracy theories helps people to psychologically defend the in-group and the system they belong to, and hence increases system-justifying belief. Therefore, we hypothesize that system threat positively predicts participants' system-justifying belief—an effect that is mediated by participants' belief in out-group conspiracy theories (Hypothesis 2). To be specific, the more strongly people perceive a system threat, the more they believe in out-group conspiracy theories, and therefore the higher their system-justifying belief.

The Current Research

The studies outlined in this article sought to investigate the two hypotheses in the context of the COVID-19 pandemic with Chinese participants. Referring to previous studies on the manipulation of system threat (Jost, 2019; Jost et al., 2005; Kay et al., 2005; Ullrich & Cohrs, 2007), the current research adopted two different experimental manipulation paradigms to manipulate the subjects' perception of system threat—both in order to activate the subjects to the experimental group under system threat. The first was system criticism (Study 1) and the second an expected threat to the system (Study 2). Study 1 was conducted in September 2020 and Study 2 in October 2020. During this period, the COVID-19 epidemic in China had been well controlled, the number of new infections was very small, and social production and living conditions had been restored in an orderly manner. Two empirical studies were carried out to make the research conclusions more reliable and solid. The two studies complement each other through different manipulations of system threat, which enhances the reliability and reproducibility of the results.

Study 1

Method

Participants. Before the experiment, a G*Power analysis was used to calculate the sample size required for this study. The results showed that in an independent samples t test, when the effect size (d) was .5 , a total sample size of about 102 participants was needed to achieve 80% power (Faul et al., 2009). This sample size exceeds the required sample to attain 80% power in bias-corrected bootstrapping mediation analysis, assuming that the a-path and b-path in the model both have a medium effect size (i.e., N = 71; Fritz & MacKinnon, 2007). Through online questionnaire platforms and social networking software, we posted advertisements to recruit subjects, inviting volunteers who

were interested in participating in an experiment on social beliefs to join, and giving a small sum of money as a reward. The interested participants got in touch with us and made an appointment to participate in the experiment, coming to the laboratory to complete the experiment at the appointed time. In Study 1, 130 adult Chinese subjects participated. We assured the participants that the whole experiment and their answers would be confidential, and that they could answer according to their own opinions. We also added questions to the measurement items to test the participants' attention and seriousness in reading the questions. First, 10 participants were excluded because they did not read the priming materials carefully (see the study procedure section below for details). Second, a total of 12 participants was eliminated because their answers showed significant regularity (e.g., all of the results of the scale containing reverse scoring questions were the same value and not the middle value of the scale). Finally, 6 participants were excluded because they failed our polygraph test. The final sample consisted of 102 participants (54 male, 48 female), ranging in age from 18 to 50 (M_{age} = 25.38, SD = 7.05).

Design and Procedure. In Study 1, the perception of system threat (system threat group vs. control group) was manipulated. Belief in out-group conspiracy theories and system-justifying belief were measured as dependent variables.

When the participants arrived at the laboratory, they were randomly assigned to one of the two experimental groups and told they would complete two separate tasks. First, they were asked to take part in a reading-comprehension task (i.e., to read a passage of text and, after reading it, choose a summary that best matched the text's main idea) in order to manipulate the participants' perception of system threat. Then, their perception of system threat was checked with three questions. In the second task, the participants were asked to complete a questionnaire about some of their social beliefs and personal feelings during the COVID-19 pandemic, which included a measure of belief in conspiracy theories and system-justifying belief. We then asked the participants if they knew what the purpose of the experiment was, and none of them could say exactly. Finally, each participant was asked to provide basic demographic information and received a small monetary reward.

Manipulation of System Threat. Consistent with previous studies (e.g., Jolley et al., 2018; Jost et al., 2005; Kay et al., 2005), Study 1 manipulated the participants' perception of system threat by exposing them to system criticism. Specifically, the participants were told that they would take part in a reading-comprehension task. We asked them to read and understand a passage of text as carefully as possible because, after reading it, they would be asked to answer a question about the passage. The

participants in the system threat condition were given the following to read (this material was gleaned from real news reports on the Internet):

> Although China has achieved positive results in response to the COVID-19 pandemic, there have been huge controversies over a series of pandemic prevention and control efforts by the Chinese government (e.g., lockdown management, restricting residents' activities, and strictly controlling imports from abroad). A number of countries have come together to publicly denounce our government's control work, claiming that it severely restricts citizens' right to personal freedom, is suspected to be compulsory enforcement, ignores civil liberties and equal rights, and even violates international law. China's diplomacy has also been under great pressure from international public opinion. This undoubtedly poses a certain threat to China's current and even future pandemic prevention work.

Referencing previous studies in which the subjects of control groups were given a passage of text about physical geography (e.g., Banfield et al., 2011; Cutright et al., 2011), the participants in the control condition in our study read the following:

> The Qaidam Basin is one of the three inland basins in China and is located in the northeast of the Qinghai-Tibet Plateau. Today, the Qaidam Basin is characterized by drought as its main climate feature, with drastic temperature changes, strong winds, and the daily temperature difference often reaching about 30 degrees Celsius. Geologists have recently reconstructed the paleoclimate and ancient altitude of the Qaidam Basin from 30 million years ago. The reconstruction shows that the climate was cool and the humidity moderate. The annual average temperature was about 11.6 degrees Celsius. The winter temperature was close to freezing point and the summer was cool. The seasonal difference between temperatures was far less than at present. The annual precipitation at that time was probably more than 1,000 millimeters, with dry summers and wet winters, and relatively low seasonal differences in precipitation.

After reading the passage, the participants in the system threat group answered a single-choice question—"Can you recall which of the following statements is consistent with the topic of what you have just read?"—with the following three options: A. "There are many malpractices in the pandemic prevention in our country"; B. "International pressure poses a certain threat to China's pandemic prevention work"; and C. "I'm not sure" (only the participants who selected Option B were retained for the analyses). The participants in the control group also answered a single-choice question—"Can you recall which of the following statements is consistent with the topic of what you have just read?"—with three other response options: A. "The study found that the Qaidam Basin 30 million years ago was cool and wet"; B. "The Qaidam Basin has a very dry climate"; and C. "I'm not sure" (we retained data from the participants who chose Option A). A total of 10 participants (six from the system threat group and four from the control group) were eliminated because they answered the single-choice questions incorrectly here, suggesting that they did not read the material carefully.[1]

Then, all of the participants completed the questionnaire on perception of system threat, which comprised three items: "I reckon that massive international pressure is growing on China"; "I realize that many challenging obstacles lie in the way of the prevention and control of the epidemic"; and "I think that social order is under threat." The participants rated how threatened they felt based on what they actually thought on a 7-point scale (1 = *feel no threat* to 7 = *feel seriously threatened*). The reliability of this measurement was good (Cronbach's α = .70), and the results of the measurement were used for the manipulation check.

Belief in Out-Group Conspiracy Theories. Referring to the Belief in Conspiracy Theories Inventory compiled by Swami et al. (2010, 2011), various conspiracy theories about the out-group (mainly the United States) during the COVID-19 pandemic were collected, and a self-compiled scale was used to measure the belief in out-group conspiracy theories. This scale contained nine items—for example, "COVID-19 was artificially created by America to launch biological warfare against China"; "From August 17 to November 5, 2019, the 'e-cigarette pneumonia' epidemic (rising from 50 cases to 2,051 in three months, with 39 deaths) in the United States is actually COVID-19"; and "COVID-19 was introduced into China by U.S. military athletes during the Military Games in Wuhan, October 2019." The participants rated these items on a Likert scale (1 = *strongly disagree* to 7 = *strongly agree*). This scale had good reliability in our study (Cronbach's α = .92). In addition, we adapted the 12-item Conspiracy Mentality Scale developed by Imhoff and Bruder (2014) by selecting eight items, to which the background of the COVID-19 pandemic was added to measure the participants' general belief in conspiracy theories (the remaining four items that were not selected could not be associated with the COVID-19 pandemic; Cronbach's α = .73); this was used to test the validity of the above self-compiled scale. The items included: "There are a lot of very important things going on in the world (like the COVID-19 pandemic) about which the public doesn't know the truth" and "I think the various conspiracy theories that are circulating in the media about this pandemic are absolute nonsense" (reverse scored). The participants responded on a 7-point Likert scale (1 = *strongly disagree* to 7 = *strongly agree*). The results of the

correlation analysis showed that belief in out-group conspiracy theories was positively correlated with the general belief in conspiracy theories ($r = .60, p < .001$), which indicated that the self-compiled scale used in our study to measure belief in out-group conspiracy theories had good validity.

System-Justifying Belief. System-justifying belief was measured with the eight-item System Justification Scale (Cronbach's $\alpha = .86$) developed by Kay and Jost (2003). These items included: "China's political system operates in a fair and legitimate way" and "Chinese society needs to be completely rebuilt" (reverse scored). The participants responded on a 9-point Likert scale (1 = *strongly disagree* to 9 = *strongly agree*).

Finally, all of the participants were informed of the real purpose of our experiment. In particular, all of the measures were administered in the order presented here.[2]

Results

System Threat Manipulation Check. An independent samples *t* test (bilateral) was used to test the difference in perception of system threat between the two groups of participants. The results showed that the participants in the system threat group reported higher levels of perception of system threat ($N = 51, M = 4.42, SD = 1.19$) than the participants in the control group ($N = 51, M = 3.41, SD = 1.13$), $t(100) = -4.42, p < .001$, Cohen's $d = .87$, which indicates that the experimental manipulation in our study successfully elicited the participants' perception of system threat.

We also conducted a bilateral independent samples *t* test on the participants' belief in out-group conspiracy theories and system-justifying belief. The results showed that the participants had higher levels of belief in out-group conspiracy theories in the system threat group ($N = 51, M = 4.48, SD = 1.16$) than in the control group ($N = 51, M = 3.16, SD = 1.05$), $t(100) = -6.02, p < .001$, Cohen's $d = 1.19$, and higher levels of system-justifying belief in the system threat group ($N = 51, M = 7.87, SD = 1.00$) than in the control group ($N = 51, M = 6.67, SD = 1.36$), $t(100) = -5.06, p < .001$, Cohen's $d = 1.01$. This not only showed that individuals' personal beliefs and social attitudes would indeed change after being exposed to a system threat, but also that our experimental manipulation was successful from the side. Therefore, we marked the system threat of the system threat group as 1 and the system threat of the control group as 0 in the following test.

Descriptive Statistics and Correlations. System threat was positively correlated with belief in out-group conspiracy theories ($M = 3.82, SD = 1.28, r = .52, p < .001$) and system-justifying belief ($M = 7.27, SD = 1.33, r = .45, p < .001$). Belief in out-group conspiracy theories was also positively correlated with system-justifying belief ($r = $ .41, $p < .001$), thus providing the basis for mediation analysis among these variables.

Mediation Effect of Belief in Out-Group Conspiracy Theories. We used the PROCESS macro for IBM SPSS (Statistical Package for the Social Sciences) 25.0 (Model 4) developed by Hayes (2013) to evaluate the mediation effect of belief in out-group conspiracy theories between the system threat manipulation and system-justifying belief. The results of the regression analysis showed that the total effect of system threat on system-justifying belief was significant (total effect = .45, $CI_{95\%}$ [.27; .63]). As shown in Figure 1, system threat positively predicted belief in out-group conspiracy theories ($\beta = .52, p < .001, CI_{95\%}$ [.35; .69]); in turn, belief in out-group conspiracy theories positively predicted system-justifying belief ($\beta = .24, p < .05, CI_{95\%}$ [.04; .45]). The residual direct effect was still significant ($\beta = .33, p < .01, CI_{95\%}$ [.12; .53]). Belief in out-group conspiracy theories therefore played a mediating role in the link between system threat and system-justifying belief (indirect effect = .13, $CI_{95\%}$ [.04; .22]), and the proportion of the mediating effect was 27.94%.

Discussion

In general, the results of Study 1 supported our hypotheses: perceived system threat increased belief in out-group conspiracy theories, which in turn mediated increased system-justifying belief. From a practical point of view, Chinese citizens have become more supportive of their own government and social system in the face of the system threat posed by the COVID-19 pandemic, in part because they believe in conspiracy theories about foreign governments (especially the U.S. government). In order to enhance the reliability and reproducibility of the research conclusions, we designed Study 2 to replicate and extend the findings of Study 1. The overall experimental design of Study 2 was the same as that of Study 1, but the experimental manipulation of system threat was different. Instead of using systematic criticism to induce the participants' perception of system threat, Study 2 made reference to external threats to the system in other crisis situations (Ullrich & Cohrs, 2007).

Study 2

Method

Participants. Since the experimental design of Study 2 was the same as that of Study 1, an effect size (d) of .5 in the independent samples *t* test still required a sample size of approximately 102 participants for 80% power of detecting the effect (Faul et al., 2009). Again, this sample exceeded the requirements to attain 80% power in bias-corrected bootstrapping mediation analyses, assuming that the
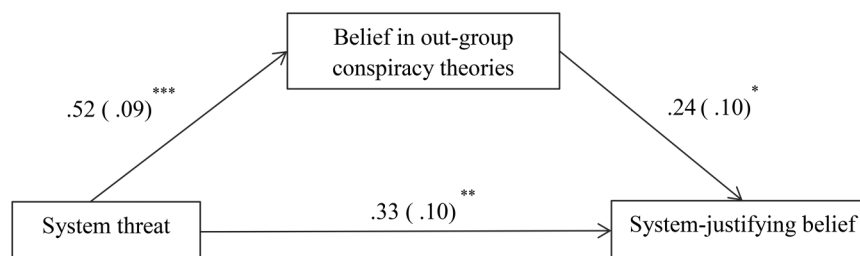
Figure 1. *Mediation Model*
Note. The path values are the path coefficients with standard errors. All of the variables were standardized.
*$p < .05$. **$p < .01$. ***$p < .001$.

a-path and b-path have a medium effect size (Fritz & MacKinnon, 2007). By using the same method of recruitment as in Study 1, we recruited 135 adults via the Internet and told them that their answers would be confidential during the experiment. As in Study 1, 13 participants were firstly excluded because they did not read the priming materials carefully (see the study procedure section below for details). Then, 11 participants were eliminated because of obviously regular answers and, lastly, 9 participants were eliminated because they failed our polygraph test. This resulted in a final sample of 102 (41 male, 61 female), ranging in age from 18 to 58 ($M_{age} = 27.53$, $SD = 10.26$).

Design and Procedure. The overall experimental design and procedure of Study 1 and Study 2 were the same, but the manipulation of system threat and its manipulation check were different.

Manipulation of System Threat. Based on the idea that system threats are events that potentially jeopardize the system's legitimacy in some way, and referring to previous research that manipulated system threats (Ullrich & Cohrs, 2007), the participants read texts about the international pressure that the Chinese government may experience to respond to the COVID-19 outbreak.

The specific procedure to induce the experimental manipulation was consistent with that in Study 1. However, the participants in the system threat condition read the following text (compiled from news reports on the Internet):

> China's current response to COVID-19 pandemic prevention and control has achieved positive results, in large part thanks to the Chinese government's strict control over imports from abroad. However, there is great controversy around the entry control work of the Chinese government internationally, because it has destroyed the hopes of foreign people to gain asylum or medical treatment in China. At present, many countries are coming together to denounce our government's control work publicly, claiming that it violates the spirit of international humanitarian

assistance, does not accord with China's international image as a permanent member of the United Nations Security Council, and even violates international law. China's diplomacy has also been under great pressure from international public opinion. In future, the Chinese government may be forced to relax the control of overseas imports due to these pressures, which will undoubtedly pose a new round of threats for China.

In Study 2, the participants in the control condition read the same text material (an introduction to the Qaidam Basin) as in Study 1, and answered the same single-choice question to examine whether they had read the material carefully. However, the participants in the system threat group in Study 2 answered another single-choice question—"Can you recall which of the following statements is consistent with the topic of what you have just read?"—with the following three options: A. "Our government's strict control of foreign imports is not reasonable"; B. "International pressure could cause a new round of pandemic threats to our country"; and C. "I'm not sure" (only the participants who selected Option B were effectively manipulated). Thirteen participants (eight from the system threat group and five from the control group) were eliminated because they got the single-choice questions wrong here.[3]

Finally, all of the participants in Study 2 completed the same three-item questionnaire as in Study 1 to measure their perception of system threat, which had good reliability (Cronbach's $\alpha = .76$) and was used as a manipulation check.

Belief in Out-Group Conspiracy Theories. The measure of belief in out-group conspiracy theories was the same as that in Study 1 (Cronbach's $\alpha = .91$).

System-Justifying Belief. The measure of system-justifying belief was also the same as in Study 1 (Cronbach's $\alpha = .91$).

Finally, all of the participants were informed of the real purpose of our experiment, and it was made clear that the material they were reading was fiction. All of the measures were administered in the order presented here.

Results

System Threat Manipulation Check. Consistent with Study 1, the results of an independent samples t test (bilateral) showed that the participants in the system threat group reported higher levels of perception of system threat ($N = 51$, $M = 4.69$, $SD = .93$) than those in the control group ($N = 51$, $M = 3.40$, $SD = 1.00$), $t(100) = -6.75$, $p < .001$, Cohen's $d = 1.34$, which indicated that the experimental manipulation in Study 2 successfully elicited the participants' perception of system threat again.

A bilateral independent samples t test was conducted again on the participants' belief in out-group conspiracy theories and system-justifying belief. The results showed that the participants had higher levels of belief in out-group conspiracy theories in the system threat group ($N = 51$, $M = 4.73$, $SD = 1.05$) than in the control group ($N = 51$, $M = 3.34$, $SD = .94$), $t(100) = -7.02$, $p < .001$, Cohen's $d = 1.39$, and higher levels of system-justifying belief in the system threat group ($N = 51$, $M = 8.34$, $SD = .73$) than in the control group ($N = 51$, $M = 6.59$, $SD = 1.25$), $t(100) = -8.66$, $p < .001$, Cohen's $d = 1.71$. The results in Study 2 were consistent with the findings in Study 1. Therefore, we marked the system threat of the system threat group as 1 and the system threat of the control group as 0 in the following test.

Descriptive Statistics and Correlations. System threat was positively correlated with belief in out-group conspiracy theories ($M = 4.03$, $SD = 1.21$, $r = .58$, $p < .001$) and system-justifying belief ($M = 7.47$, $SD = 1.34$, $r = .66$, $p < .001$). Belief in out-group conspiracy theories was also positively correlated with system-justifying belief ($r = .55$, $p < .001$). All of the variables were significantly positively correlated, which provided a basis for a mediation analysis among the variables.

Mediation Effect of Belief in Out-Group Conspiracy Theories. The PROCESS macro for IBM SPSS 25.0 (Model 4) developed by Hayes (2013) was again used to test the mediational role of belief in out-group conspiracy theories between the system-threat manipulation and system-justifying belief. The results showed that the total effect of system threat on system-justifying belief was significant (total effect = .65, $CI_{95\%}$ [.50; .80]). As shown in Figure 2, system threat positively predicted belief in out-group conspiracy theories ($\beta = .57$, $p < .001$, $CI_{95\%}$ [.41; .74]); in turn, belief in out-group conspiracy theories positively predicted system-justifying belief ($\beta = .27$, $p < .01$, $CI_{95\%}$ [.09; .44]). The residual direct effect was still significant ($\beta = .50$, $p < .001$, $CI_{95\%}$ [.33; .68]). Belief in out-group conspiracy theories also played a mediating role in the link between system threat and system-justifying belief (indirect effect = .15, $CI_{95\%}$ [.06; .25]), and the proportion of the mediating effect was 23.29%. The results of Study 2 and Study 1 were consistent and both supported the hypotheses.

General Discussion

This research examined two prominent social phenomena that have emerged during the COVID-19 pandemic by exploring the psychological processes associated with Chinese people's tendencies to (1) justify the system and (2) blame the pandemic on out-groups through conspiracy theories. Studies 1 and 2 induced different manipulations of system threat and found that individuals exposed to system threat were more likely to engage in system justification. Moreover, the studies revealed that belief in out-group conspiracy theories played a mediating role between the system threat manipulation and system-justifying belief.

System justification theory states that people have an automatic tendency to recognize, believe in, and protect the legitimacy of the system to which they belong (e.g., Jost & Banaji, 1994; Jost et al., 2004; van der Toorn & Jost, 2014). Meanwhile, cognitive dissonance theory proposes that when the system has been threatened, people will spontaneously emphasize the legitimacy and fairness of their social system (Jost & Banaji, 1994). Kay and Friesen (2011) directly proposed that system threat would motivate individuals to justify their own system. Also, other studies have found that system threat can enhance individuals' system-justifying belief (Huddy et al., 2002; Ullrich & Cohrs, 2007). These findings were mainly based on samples of western subjects, however. The present findings expand these insights by focusing on Chinese participants and the context of the COVID-19 pandemic, yielding results that are consistent with the findings of these previous western studies.

The present studies implemented different manipulations of system threat in order to avoid the limitation that the conclusions may be restricted to the idiosyncrasies of one specific experimental manipulation. Jost (2019) reviewed the operationalization of system threat in 38 experimental studies published from 2005 to 2017. Although most of these studies manipulated system threat through system criticism (see Study 1 above), some studies manipulated system threat by asking participants to read or recall a real or fabricated social crisis event (e.g., Friedman & Sutton, 2013; Ullrich & Cohrs, 2007; van der Toorn et al., 2011). The present contribution adopted two different manipulation paradigms of system threat in the context of the pandemic, thus striving to increase the robustness and generalizability of the results.

Consistent with the existential threat model of conspiracy theories (van Prooijen, 2020) and previous research findings (Biddlestone et al., 2020; Imhoff & Bruder, 2014; Jolley & Paterson, 2020), the current studies show that system threat can increase people's belief in conspiracy
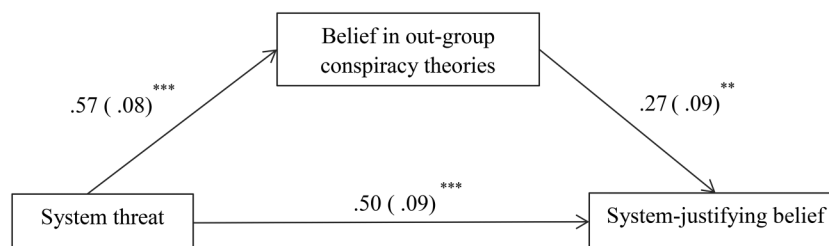
Figure 2. *Mediation Model*
Note. The path values are the path coefficients with standard errors. All of the variables were standardized.
*p < .05. **p < .01. ***p < .001.

theories. If a hostile out-group is salient, threatening societal circumstances increase the likelihood of subscribing to conspiracy theories about the out-group (van Prooijen, 2020). The views of social identity theory (Tajfel & Turner, 1979; Twenge et al., 2001) and previous research findings (Cichocka et al., 2016; Golec de Zavala & Cichocka, 2012) also imply that there is a positive correlation between belief in out-group conspiracy theories and system-justifying belief. Jolley et al. (2018) examined the relationship between conspiracy theories and system-justifying belief more directly, and found evidence for a psychological mechanism of system threat → conspiracy theories → attributions to individuals and small groups (vs. systemic causes) → satisfaction with the status quo. Inspired by all of these previous insights and findings, the present studies investigated, and found evidence for, the mediating role of belief in out-group conspiracy theories between system threat and system-justifying belief.

The present contribution expands previous theorizing by connecting the existential threat model of conspiracy theories with system justification theory in a real-world context. Since the COVID-19 pandemic has suddenly and seriously threatened the fabric of the entire social system, people are likely to have experienced anxiety, loss of control, and uncertainty. Conspiracy theories assuming that foreign governments created the virus have not only provided an explanation for this crisis event, thus satisfying the public's epistemic motive to reduce cognitive uncertainty and understand the external context in time (Douglas et al., 2017), but also helped to avoid cognitive dissonance by ascribing responsibility for the crisis to an evil out-group (Tajfel & Turner, 1979; Twenge et al., 2001). By attributing blame to an out-group, people can psychologically justify and defend their own social system, maintain and strengthen their in-group identity, and support government policies that restrict their freedoms.

The present research based its hypotheses on system justification theory, as this is currently the dominant theoretical perspective for explaining responses to system threat (e.g., Kay & Friesen, 2011), and has been adopted previously as a theoretical framework for explaining conspiracy beliefs (Jolley et al., 2018). It is noteworthy, however, that the social identity model of system attitudes (SIMSA) has

challenged some of the basic premises of system justification theory (Owuamalam et al., 2018; for a rebuttal, see Jost et al., 2018). Specifically, SIMSA challenges the existence of a unique system justification motive and proposes that people's efforts to defend their social or political system may emerge from basic social identity processes (e.g., in-group bias or hope for in-group advancement). It is important to note that both system justification theory and SIMSA acknowledge that system justification occurs, yet differ in their underlying explanation of why it occurs (Owuamalam et al., 2019). The results of our studies therefore might also be explained from the perspective of SIMSA. Specifically, when individuals are faced with a threat to their system (their superordinate identity), they may be more inclined to maintain their positive social identity (especially identification with their own system as a superordinate level) due to a social identity motive. This might lead them to view competing out-groups as conspiratorial, prompting relatively high levels of system justification. However, whether the influence of system threat on belief in out-group conspiracy theories and system-justifying belief is attributable to a unique system justification motive, or more general social identity motives, needs to be tested in future research. For example, future research could set up a hypothetical scenario in which participants are asked to imagine that they live in a virtual country (for they will not identify with this system) and are told that the virtual country encounters a system threat, then test the effect of the system threat. This could control the involvement of a social identity motive to some extent.

While the present studies were designed to test the role of conspiracy theories, it should be noted that it is likely that there are other, complementary psychological mechanisms to explain the link between system threat and system-justifying belief. That is to say, it is likely that other factors also influence the psychological process of system threat affecting individuals' system justification, such as system dependence, system inescapability, and low personal control (Kay & Friesen, 2011), which needs to be further explored in future studies. However, the notion that out-group conspiracy theories are part of the psychological mechanism of system threat triggering system justification

is a relatively innovative interpretation of the classical viewpoint of system justification theory (Jost & Banaji, 1994; Kay & Friesen, 2011). As such, this study extends the scope of interpretation of system justification theory in the context of the current COVID-19 pandemic.

The findings of this research also have practical significance. Previous studies have generally regarded conspiracy theories as harmful and often having negative effects on individuals and society (Imhoff & Bruder, 2014; Silva et al., 2017; van Prooijen & Douglas, 2018). The present findings suggest that embracing out-group conspiracy theories can contribute to people's tendency to support the in-group system. In other words, they share a common motivational basis. This tendency to support the in-group by disparaging the out-group is likely to be harmful, by fueling intergroup conflict in a crisis situation that requires international cooperation.

The two studies also have a number of limitations. First, the effects observed here were investigated against the background of the COVID-19 pandemic. Future studies could examine a broader range of crisis situations to further investigate the conclusions of this research. Second, the studies reported here make assumptions only about the underlying sense-making processes, which can be defined as cognitive attempts to establish straightforward, meaningful, and causal relationships between stimuli (van Prooijen, 2020). In this process, there are several more specific psychological mechanisms involved, including agency detection (Barrett, 2004, 2007; Douglas et al., 2016; Johnson & Barrett, 2003) and pattern perception (van Prooijen et al., 2018; Whitson & Galinsky, 2008; Zhao et al., 2014). Finally, there are some cultural and political factors that have not been fully considered in this article. China is a collectivist cultural country with high power-distance values, and recent findings have suggested that these cultural dimensions yield higher levels of out-group conspiracy beliefs in China than in the United States (van Prooijen & Song, 2021). It is hence possible that some of the empirical relationships observed here are moderated by culture, suggesting a need to examine these relationships in multination studies.

These limitations notwithstanding, the present studies add to the emerging body of knowledge by clarifying that system threat in the context of the COVID-19 pandemic can increase a tendency to justify the internal system through out-group conspiracy theories. It seems that being suspicious of different groups helps perceivers to legitimize the system of their own group.

Declaration of conflicting interests

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Supplementary material

Supplementary material for this article is available online.

Notes

1. If the data of the subjects in the system threat group in Study 1 who chose Option A on the single-choice question (a total of six participants) is added to the valid sample data for statistical analysis, the results are consistent with the results obtained in this study (the results include all current results—the results of the manipulation effectiveness check, t test, correlation analysis, and mediation analysis). For more specific results, see Appendix 1 in the online supplementary material.

2. In addition to variable measurements, the participants were presented with the following three questions: (1) "Have you been infected with COVID-19?"; (2) "Has your family been infected with COVID-19?"; and (3) "Have you had close contact with an infected person?" All of the participants answered "no" to all three questions. The same measurement was made in Study 2, where all of the participants also reported "no" to all three questions.

3. If the data of the subjects in the system threat group in Study 2 who chose Option A on the single-choice question (a total of eight participants) is added to the valid sample data for statistical analysis, the results are consistent with the results obtained in this study (the results include all current results—the results of the manipulation effectiveness check, t test, correlation analysis, and mediation analysis). For more specific results, see Appendix 2 in the online supplementary material.

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