

## RESEARCH ARTICLE

# The role of system identity threat in conspiracy theory endorsement

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## Abstract

Conspiracy theories (CTs) about government officials and the institutions they represent are widespread, and span the ideological spectrum. In this study, we test hypotheses suggesting that *system identity threat*, or a perception that society's fundamental, defining values are under siege due to social change, will predict conspiracy thinking. Across two samples ( $N = 870$ ,  $N = 2,702$ ), we found that system identity threat is a strong predictor of a general tendency toward conspiracy thinking and endorsement of both ideological and non-ideological CTs, even after accounting for numerous covariates. We also found that the relationship between system-identity threat and conspiracy-theory endorsement is mediated by conspiracy thinking. These results suggest that conspiracy-theory endorsement may be a compensatory reaction to perceptions that society's essential character is changing.

Although popular media may characterize conspiracy theorists as a handful of tinfoil-hatted individuals obsessed with alien-landing cover-ups, belief in conspiracy theories (CTs) is relatively common (e.g., Oliver & Wood, 2014; Swami et al., 2011). Moreover, CTs are espoused by those at the highest levels of political power (Barkun, 2017), shared by those on both the political left and right (Goertzel, 1994; Hofstadter, 1965; Olmsted, 2009), and consequential for government policy (Uscinski & Parent, 2014). Much research has examined the correlates of conspiracy endorsement, suggesting that conspiracy beliefs satisfy psychological needs that arise in response to threat (Douglas, Sutton, & Cichocka, 2017). In the present study, we propose that *system identity (SI) threat*, or the sense that society's fundamental, defining values are under siege due to social change, may strengthen conspiracy thinking and conspiracy-theory endorsement. We detail our theoretical rationale below.

## Individual-Difference Correlates of Conspiracy Thinking and Conspiracy Endorsement

Prior research has characterized CTs as being focused on the idea that “an invisible, insidious, uncanny force

[is] plotting various kinds of evil” (Zonis & Joseph, 1994, p. 443). More simply, Sunstein and Vermeule (2009, p. 205), characterize CTs as the result of the perception that certain outcomes are caused by “the machinations of powerful people, who attempt to conceal their role.” In the current study, we focused on two manifestations of conspiracism (Uscinski, Klostad, & Atkinson, 2016; Uscinski & Parent, 2014). The first is *general conspiracy thinking*, which reflects a broad explanatory style for social and political events implying that powerful people and institutions conspire behind the public's back, that the truth of how the powerful operate is often hidden and that key events are controlled and orchestrated by powerful, shadowy forces (apart from endorsement of specific CTs). The second is concrete *conspiracy-theory endorsement*, which refers to acceptance of specific CTs present in a particular social or political context.

Research examining CTs has increased dramatically in recent years, with much of it focusing on individual differences that predict increased endorsement of CTs or the circumstances under which conspiracy thinking is likely to emerge. For example, individuals who believe in CTs tend to have higher levels of paranormal beliefs (Swami et al., 2011), anxiety (Grzesiak-Feldman, 2013), paranoid ideation (Darwin, Neave, & Holmes, 2011), openness to new experiences (Swami, Chamorro-Premuzic, & Furnham, 2010), need for uniqueness (Imhoff & Lamberty, 2017; Lantian, Muller, Nurra, & Douglas, 2017), and narcissism

The datasets and code needed to replicate our results can be found at the following link: <https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/HYURNH>.

(Cichocka, Marchlewska, & Golec de Zavala, 2016), and are lower in self-esteem (Cichocka *et al.*, 2016; Swami *et al.*, 2011) and agreeableness (Swami *et al.*, 2010, 2011), and are more likely to believe in other CTs (Goertzel, 1994; Imhoff & Lamberty, 2017; Swami *et al.*, 2010, 2011), even when these beliefs are contradictory (Wood, Douglas, & Sutton, 2012). With respect to political antecedents, research indicates that CT endorsement is higher among those who are more politically extreme (van Prooijen, Krouwel, & Pollet, 2015) and politically cynical and distrusting of government (Swami *et al.*, 2010).

### Conspiracy Thinking and Conspiracy Endorsement as Compensatory Reactions to Threat

Conspiracy thinking and CT endorsement are higher among individuals for whom threats loom large. For example, individuals who are sensitive to threats to order and structure (Abalakina-Paap, Stephan, Craig, & Gregory, 1999; Swami, 2012) or to uncertainty (van Prooijen & Jostmann, 2013) are more prone to conspiracy thinking. As such, scholars have suggested that CT endorsement may fulfill psychological needs for certainty and security (e.g., Douglas *et al.*, 2017). Consistent with this, Marchlewska, Cichocka, and Kosowska (2018) found that individuals high in the need for cognitive closure were more likely to endorse conspiracy-oriented reasons for events (e.g., a plane crash; but see Leman & Cinnirella, 2013). Similarly, individuals who believe they are faced with a threatening loss of control tend to engage in more conspiracy thinking and endorse CTs more strongly (Kay, Gaucher, Napier, Callan, & Laurin, 2008; Kramer, 1994; Sullivan, Landau, & Rothschild, 2010; van Prooijen & Acker, 2015; Whitson & Galinsky, 2008).

Results such as these broadly suggest that conspiracy thinking and CT endorsement are the province of those who feel that they are faced with the threat of loss, whether it be of certainty, security, or control. Consistent with this perspective, several lines of research indicate that losses in the political realm encourage conspiracy thinking. For example, studies suggest that political disenfranchisement (Crocker, Luhtanen, Broadnax, & Blaine, 1999) and having one's political party lose power (Edelson, Alduncin, Kreswon, Sieja, & Uscinski, 2017; Uscinski & Parent, 2014) are both associated with increased conspiracy thinking and belief. In turn, this has led some commentators to argue that "conspiracy theories are for losers" in the context of politics (Uscinski & Parent, 2014).

### Societal Change as a Type of Threat

Belief in CTs can provide *intuitively* plausible, internally consistent, and personally meaningful explanations for

the *causes* of complex, threatening events and changes in the world (e.g., Kruglanski & Webster, 1996; Miller, Saunders, & Farhart, 2016; Sunstein, 2014). Accordingly, conspiracy beliefs often function to justify existing social systems and arrangements. As Jolley, Douglas, and Sutton (2017) explain, by impugning the motivations and actions of a select few who are perceived to be solely responsible for precipitating events that threaten the legitimacy of existing systems, conspiracy beliefs provide a justification for the status quo.

However, prior work has not examined the consequences of the perceived threat of social change—a unique kind of threat that may not *only* threaten one's perceptions of the legitimacy of relevant social systems, but may *also* fundamentally challenge (i) one's conception of society and what it means to be a member of that society and (ii) the personal meaning and esteem one ascribes to and derives from these values and identities. We refer to these perceptions as *SI threat* to distinguish between threats to the legitimacy of the social systems and threats to the received values and identities associated with that system. Jolley *et al.* (2017) find that situationally induced threats to the status quo can promote conspiracy thinking, but this work did not address the role of perceptions of threats associated with changes that appear to alter society's identity and defining values. Further, perceived threats to the legitimacy of the system—such as a sense that it is corrupt—do not necessarily involve perceptions of threatening social change in ways that challenge one's identity or values associated with that system. In this article, therefore, we attempt to move beyond the consequences of threats to the perceived legitimacy of existing social systems, to focus specifically on the consequences of threats to the perceived *identity of the system*, which is precipitated by perceptions of undesirable social change, not threats to the legitimacy of social systems.

We also distinguish SI threat from the construct of collective narcissism, an exaggerated belief in in-group greatness that depends on external validation (Golec de Zavala, Cichocka, Eidelson, & Jayawickreme, 2009). Collective narcissism shares common ground with our conceptualization of SI threat in that it implies that some aspect of a group is not respected the way it "should" be. However, unlike collective narcissism, SI threat focuses less on the idea that *others* fail to respect the group and more on the perception that the ideas and values that define the group are themselves eroding from *within*. Moreover, SI threat does not incorporate the exaggerated sense of entitlement to "special," group-based adulation from others.

To the extent that perceptions of social change threaten SI in this fashion, they may heighten epistemic needs for order, certainty, and control (Jost, Federico, & Napier, 2009), which are precursors to conspiracy thinking (e.g., Marchlewska *et al.*, in press). Because CTs function to satisfy these needs by providing meaning to otherwise complex and

threatening phenomena (Miller *et al.*, 2016; Sunstein, 2014), they may serve to reduce the uncertainty and threat that surround the belief that one's society is changing for the worse, and to bolster the perception that the root cause of this change is external to the self (e.g., Eidelman & Biernat, 2003; Marques, Abrams, Paez, & Hogg, 2001).

More generally, several lines of research point to reasons why SI threat may be sufficiently aversive to do this. First, as noted above, individuals are generally motivated to justify existing social arrangements as desirable (e.g., Jost & Banaji, 1994; Jost, Banaji, & Nosek, 2004; Jost, Glaser, Kruglanski, & Sulloway, 2003; Wright, 2010) and defend them when threatened (Jost & Hunyady, 2002; Kay, Jost, & Young, 2005; Ullrich & Cohrs, 2007). Second, in challenging existing arrangements, SI threat may also threaten social identities associated with those arrangements. For example, perceiving oneself as a part of a nation is valued among liberals and conservatives alike (Huddy & Khatib, 2007). Factors that change the meaning of that identity may be distressing (e.g., Stryker & Burke, 2000; Swann & Bosson, 2008), as individuals derive a great deal of esteem and meaning from the groups with which they identify (Tajfel & Turner, 1979; see also Grant & Hogg, 2012; Hogg, 2006; Hogg, Sherman, Dierselhuis, Maitner, & Moffitt, 2007). Consequently, threats to social identity may lead to greater identity defense (Abrams & Hogg, 2010; Hogg, 2009). Insofar as general conspiracy thinking and a belief in specific CTs each provide a defense of existing arrangements *and* social identities linked to those arrangements, we expected SI threat to predict both of the former.

## Overview and Hypotheses

The aim of the current research was to examine the relationship between SI threat and both conspiracy thinking and CT endorsement. We tested several hypotheses. First, controlling for relevant predictors (such as demographics, political information, authoritarianism, and ideology), system-identity threat should predict both general conspiracy thinking (H1a) and endorsement of general, non-ideological CTs (H1b). Second, given that many CTs have a distinctly ideological flavor (Miller *et al.*, 2016), we looked at whether the predictive power of SI threat extended to CTs that appeal more to those on the left or those on the right. In particular, while all CTs implicate the outsized influence of hidden actors perceived to be colluding in wide-ranging activities to influence political events, some appeal more to those with a specific political allegiance by, for example, impugning the motives or goals of one's political or ideological opponents. That is, CTs vary in the extent to which endorsement is motivated by a specific ideological affinity. Since both the right and left are likely to endorse CTs when they believe favorable conditions are slipping away (Uscinski & Parent, 2014; see also Richey, 2017; Uscinski *et al.*, 2016),

we expected that system-identity threat would predict endorsement of both conservative-leaning (H2a) and liberal-leaning (H2b) CTs, controlling for relevant predictors. However, ideology provides a more relevant judgmental cue in the context of ideologically flavored CTs, compared to non-ideological CTs. Thus, while we expected SI threat to predict endorsement of ideological and non-ideological CTs, we also expected that ideological self-placement would more strongly predict endorsement of ideological CTs compared to SI threat. For non-ideological CTs, we expected SI threat to matter more than ideological self-placement. Finally, we expected that part of the effect of SI threat on CT endorsement would be *indirect*. That is, SI threat may facilitate endorsement of specific CTs by eliciting a general propensity to think in conspiracy terms. This follows from H1a and from results suggesting that general conspiracy thinking predicts endorsement of specific CTs (Uscinski *et al.*, 2016). Thus, we expected the relationship between system-identity threat and endorsement of non-ideological and ideological CTs to be mediated by general conspiracy thinking (H3).

## Method

### Data

We used two large samples of U.S. respondents recruited from Amazon.com's Mechanical Turk. These studies originally reached 1,070 and 3,092 individuals; however, we used data only from respondents who completed their surveys. The final version of *Sample 1* included  $N = 870$  respondents (mean age = 36.81,  $SD = 13.19$ ). There were 499 women and 371 men, and 82% of respondents were White. Data collection for *Sample 1* occurred from 26 June 2014 to 1 July 2014. The final version of *Sample 2* included  $N = 2,702$  respondents (mean age = 34.29,  $SD = 12.31$ ). There were 1,548 women and 1,154 men, and 82% of respondents were White. Data collection for *Sample 2* occurred from November 21, 2013, to December 13, 2013. We describe our measures below. Unless otherwise indicated, all measures were recoded to run from 0 to 1 for easier comparison of coefficients. Additional details on the measures can be found in Appendix S1.

### Independent Variables

**System-identity threat.** This was measured using six items tapping respondents' perceptions that American society's fundamental identity and values are changing for the worse. They were: (i) "Compared to the America I grew up in, sometimes I barely recognize what this country is becoming," (ii) "In this country, there is a 'real America' distinct from those who don't share the same values," (iii) "The values that made America great are eroding more and more with each passing year," (iv) "There are a growing number of people in this country who have no idea what it

means to truly be an American,” (v) “True, red-blooded Americans are fewer and farther between these days,” and (vi) “America’s greatest values are increasingly decaying from within.” The items formed a highly reliable scale; higher scores indicated greater system-identity threat (Sample 1:  $\alpha = .93$ ,  $M = 0.51$ ,  $SD = 0.28$ ; Sample 2:  $\alpha = .93$ ,  $M = 0.53$ ,  $SD = 0.28$ ). Additional information on the properties of this scale can be found in Appendix S1.

**Demographics.** We included several demographics: *Age* (in years), *race* (0 = nonwhite, 1 = white), *gender* (0 = female, 1 = male), *income* (rescaled from 0 to 1), and *education* (five ordered categories, rescaled to run 0–1; the categories were less than high school, high school/GED, some college, two-year college degree, four-year college degree or higher).

**Political information.** Since informed citizens are less likely to endorse CTs (Berinsky, 2012), we included a measure of political information. This was assessed using factual political-knowledge items (10 in Sample 1, 14 in Sample 2; e.g., Delli Carpini & Keeter, 1996). Items were scored on a 0 (incorrect) or 1 (correct) basis and averaged. Higher scores indicated greater information (Sample 1:  $\alpha = .73$ ,  $M = 0.67$ ,  $SD = 0.21$ ; Sample 2:  $\alpha = .74$ ,  $M = 0.63$ ,  $SD = 0.23$ ).

**Authoritarianism.** Since individuals who are sensitive to social-system threat endorse CTs more strongly (Abalakina-Paap *et al.*, 1999; Swami, 2012), we included a variable predicting strong responses to such threats: Authoritarianism. Authoritarianism also serves as a control for general system-justification motives that have been implicated in conspiracy-theory endorsement (Jolley *et al.*, 2017). This was measured using Stenner’s (2005) four-item childrearing values scale. Though the scale is brief, it functions similarly to longer inventories and avoids including explicitly political content. Higher scores indicated greater authoritarianism (Sample 1:  $\alpha = .55$ ,  $M = 0.27$ ,  $SD = 0.28$ ; Sample 2:  $\alpha = .65$ ,  $M = 0.38$ ,  $SD = 0.21$ ).

**Ideology and ideological extremity.** To account for how participants’ ideological identity may predict conspiracy endorsement (Miller *et al.*, 2016), we included a measure of *ideological self-placement*. Insofar as conservatism reflects system support (Jost *et al.*, 2003), this variable also provides another control for general system-justification motives (Jolley *et al.*, 2017). This was measured using a seven-point scale ranging from *very liberal* (1) to *very conservative* (7) in Sample 1 and *extremely liberal* (1) to *extremely conservative* (7) in Sample 2. Higher scores indicated greater conservatism (Sample 1:  $M = 0.37$ ,  $SD = 0.28$ ; Sample 2:  $M = 0.40$ ,  $SD = 0.26$ ). Based on recent research (Miller *et al.*, 2016), we also controlled for *ideological extremity*, which was measured by folding the ideology scale at its midpoint and recoding to range from 0 to 1. Higher scores

indicated greater extremity (Sample 1:  $M = 0.51$ ,  $SD = 0.34$ ; Sample 2:  $M = 0.45$ ,  $SD = 0.33$ ).

## Dependent Variables

Below, we provide basic descriptive information about our dependent variables. Additional measurement information is provided in Appendix S1.

**Conspiracy thinking.** A general propensity to think in terms of conspiracies about social events was assessed using a 17-item scale in both samples. The items included: (i) “Those people in power will use shadowy means to gain profit or an advantage, rather than lose it,” (ii) “I rarely wonder what hidden reasons those in power may have for their actions” (R), (iii) “There are always powerful groups plotting to sway the outcomes of elections,” (iv) “The media is the puppet of those in power,” (v) “Nothing in politics or world affairs happens by accident or coincidence,” (vi) “The actions of the powerful are usually what they seem” (R), (vii) “Many major events have behind them the actions of a small group of influential people,” (viii) “Despite what people may think, much of the power in this country is concentrated in the hands of a select group of individuals working behind the scenes,” (ix) “There are people with power who will do anything to hide the truth from public scrutiny,” (x) “The media usually reports on what is happening ‘behind the scenes’ in the halls of power” (R), (xi) “The public is generally unaware of the identity and actions of the most influential people in this country,” (xii) “Sometimes politics and government seem so suspicious that people can’t really understand the truth of what’s going on,” (xiii) “The media hides the truth to protect the interests of those in power,” (xiv) “People in power rarely lie to prevent the public from knowing what is truly going on” (R), (xv) “Many of the decisions that affect us the most are made in secret by a small group of people,” (xvi) “Our lives are not controlled by the secret actions of the powerful” (R), and (xvii) “There is no ‘secret cabal’ of powerful people pulling the world’s strings” (R). The items used a seven-point response scale ranging from 1 (strongly agree) to 7 (strongly disagree). Items were averaged to form a scale; higher scores indicated greater conspiracy thinking (Sample 1:  $\alpha = .91$ ,  $M = 0.64$ ,  $SD = 0.18$ ; Sample 2:  $\alpha = .90$ ,  $M = 0.66$ ,  $SD = 0.17$ ).

**General conspiracy-theory endorsement.** In Sample 1, endorsement of general, non-ideological CTs was assessed using Swami *et al.*’s (2010) 15-item Belief In Conspiracy Theories Scale ( $\alpha = .92$ ,  $M = 0.38$ ,  $SD = 0.21$ ). Sample 2 was drawn from a larger survey, in which a shorter, three-item scale developed by Miller *et al.* (2016) was used to limit survey length and reduce participant fatigue ( $\alpha = .61$ ,  $M = 0.43$ ,  $SD = 0.20$ ). The items included: (i) “Some people believe that the U.S. government covered up a UFO



crash at Roswell, New Mexico, in 1947. Others do not believe this. What do you think?", (ii) "Some people believe that Lee Harvey Oswald was part of a larger conspiracy in killing President Kennedy that involved other actors, while others believe Oswald acted alone. What do you think?", and (iii) "Some people believe that the July, 1996 crash of TWA Flight 800 off the coast of New York was not caused by equipment failure, as the National Travel and Safety Board's findings indicate, but was instead caused by an outside force. Others do not believe this. What do you think?" All items were coded so that higher scores indicated greater conspiracy theory endorsement and averaged to form scales.

**Ideological conspiracy-theory endorsement.** Endorsement of ideological CTs disproportionately attractive to either conservatives or liberals was measured using scales developed by Miller *et al.* (2016). There were four *conservative* items ( $\alpha = .62$ ,  $M = 0.28$ ,  $SD = 0.21$ ): (i) "Was Barack Obama definitely born in the United States, probably born in the United States, probably born in another country, or definitely born in another country?", (ii) "Does the health care law passed in 2010 definitely authorize government panels to make end of life decisions for people on Medicare, probably authorize government panels to make end of life decisions for people on Medicare, probably not authorize government panels to make end of life decisions for people on Medicare, or definitely not authorize government panels to make end of life decisions for people on Medicare?", (iii) "Some people believe that global warming is a hoax. Others do not believe this. What do you think?", and (iv) "Some people believe that Saddam Hussein was involved in the 11th September 2001 attacks on America. Others do not believe this. What do you think?" There were three *liberal* items ( $\alpha = .63$ ,  $M = 0.38$ ,  $SD = 0.22$ ): (i) "Did senior federal government officials definitely know about the terrorist attacks on 11 September 2001 before they happened, probably know about the terrorist attacks on 11 September 2001 before they happened, probably not know about the terrorist attacks on 11 September 2001 before they happened, or definitely not know about the terrorist attacks on 11 September 2001 before they happened?", (ii) "Some people say that when Hurricane Katrina hit the Gulf Coast in the summer of 2005, the federal government intentionally breached flood levees in New Orleans so that poor neighborhoods would be flooded and middle class neighborhoods would be spared. Do you think the federal government definitely did this, probably did this, probably did not do this, or definitely did not do this?", (iii) "Some people think the Republicans stole the 2004 presidential election through voter fraud in Ohio. Others do not believe this. What do you think?" Higher scores on both scales indicated greater endorsement.

## Results

### Bivariate Analyses

As a preliminary step, we examined bivariate correlations among key variables (see Table 1). In both samples, SI threat was associated with greater authoritarianism and conservatism ( $ps < .001$ ). It was also correlated with lower levels of political information and ideological extremity in both samples ( $ps < .001$ ), suggesting that SI threat was experienced more strongly by those who are more disengaged from politics. Consistent with Hypotheses 1a and 1b, SI threat was associated in both samples with greater conspiracy thinking and general CT endorsement ( $ps < .001$ ). Consistent with Hypotheses 2a and 2b, SI threat was also associated with endorsement of both conservative and liberal CTs ( $ps < .001$ ) in Sample 2. However, it was more strongly related to the former ( $r = .51$ ) than the latter ( $r = .12$ ), Steiger's  $Z = 16.93$ ,  $p < .001$ . This suggests that SI threat encouraged a more conservative brand of conspiracism, consistent with the aforementioned relationship between SI threat and conservatism. To minimize the possibility that the observed effects were driven by the covariance between SI threat and ideological self-placement, we included the latter in all of the analyses reported below.

With respect to the dependent variables, conspiracy thinking was correlated with general CT endorsement in both samples ( $p < .001$ ), though the correlation was stronger in Sample 1 ( $r = .51$  vs.  $r = .34$ ). In Sample 2, conspiracy thinking correlated with endorsement of both conservative and liberal CTs ( $ps < .001$ ), though it was more strongly related to the latter ( $r = .32$ ) than the former ( $r = .17$ ), Steiger's  $Z = 6.14$ ,  $p < .001$ . Similarly, general CT endorsement correlated with both conservative and liberal CT endorsement ( $ps < .001$ ), but it was more strongly related to the latter ( $r = .49$ ) than the former ( $r = .34$ ), Steiger's  $Z = 6.78$ ,  $p < .001$ .

### Conspiracy Thinking and General CT Endorsement as a Function of System Identity Threat

To examine Hypotheses 1a and 1b, we estimated a series of ordinary least-squares regression models in Samples 1 and 2. In each sample, we regressed conspiracy thinking and general conspiracy theory endorsement on SI threat, the demographics, and the four controls (authoritarianism, political information, ideology, and ideological extremity). To guard against heteroscedasticity, standard errors and confidence intervals were computed using HC3 variance estimates (Long & Ervin, 2000). Given the 0–1 coding of all variables, the unstandardized coefficients represent the proportion change (or percentage change when multiplied by 100) in the dependent variable associated with going from the lowest to the highest level of each predictor. We also present standardized coefficients.

**Table 1.** Correlations between key variables

Variables	1	2	3	4	5	6	7	8
<b>Sample 1</b>								
1. System identity threat	1.00							
2. Political information	-.14***	1.00						
3. Authoritarianism	.33***	-.28***	1.00					
4. Ideology	.49***	-.04	.31***	1.00				
5. Ideological extremity	-.14***	.16***	-.14***	-.33***	1.00			
6. Conspiracy thinking	.39***	-.02	.01	.11***	.03	1.00		
7. General CT endorsement	.38***	-.26***	.18***	.07*	-.08**	.51***		
<b>Sample 2</b>								
1. System identity threat	1.00							
2. Political information	-.20***	1.00						
3. Authoritarianism	.20***	-.13***	1.00					
4. Ideology	.49***	-.07***	.20***	1.00				
5. Ideological extremity	-.17***	.19***	-.09***	-.33***	1.00			
6. Conspiracy thinking	.34***	-.01	.01	.10***	.03	1.00		
7. General CT endorsement	.31***	-.18***	.09***	.13***	-.11***	.34***	1.00	
8. "Conservative" CT endorsement	.51***	-.30***	.19***	.56***	-.13***	.17***	.34***	1.00
9. "Liberal" CT endorsement	.12***	-.22***	.05*	-.17***	-.04*	.32***	.49***	.11***

Note: Entries are Pearson correlation coefficients. CT, conspiracy theories.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

The results for Sample 1 are summarized in Table 2. The two models indicated that SI threat was significantly related to both conspiracy thinking ( $b = 0.29$ ,  $\beta = .46$ ,  $p < .001$ ), and general CT endorsement ( $b = 0.30$ ,  $\beta = 0.40$ ,  $p < .001$ ). Comparison of both the unstandardized and standardized estimates indicated that SI threat was by far the most powerful predictor of both dependent variables. Going from the lowest to the highest level of SI threat was associated with a 29% increase in conspiracy thinking and a 30% increase in general CT endorsement. These were considerably larger changes than those associated with the next strongest predictor in each model (8% for authoritarianism in the conspiracy-thinking model and 14% for information in the general CT model); the standardized estimates indicated similar differences in comparative effect size. To illustrate these relationships, Figure 1 plots the two dependent variables as a function of SI threat and four other key predictors in Sample 1.

The results for Sample 2 were quite similar; they are summarized in Table 3. As in Sample 1, SI threat was significantly related to both conspiracy thinking ( $b = 0.22$ ,  $\beta = 0.38$ ,  $p < .001$ ) and general CT endorsement ( $b = 0.20$ ,  $\beta = 0.27$ ,  $p < .001$ ). Comparison of both the unstandardized and standardized estimates indicated that SI threat was again the most powerful predictor of each outcome. Going from the minimum to the maximum level of SI threat was associated with a 22% increase in conspiracy thinking and a 20% increase in general CT endorsement. These changes are notably larger than those associated with the next strongest predictors in each model (6% for education and information in the conspiracy-thinking model and 9% for education in the general CT model); the standardized estimates indicate similar comparative effect sizes. For illustrative purposes, Figure 2 plots the two

dependent variables as a function of SI threat and four other key predictors in Sample 2.

Thus, both samples provided clear evidence for Hypotheses 1a and 1b.

### Endorsement of Ideological CTs as a Function of System Identity Threat

To examine Hypotheses 2a and 2b, we regressed the conservative and liberal CT scales on the same predictors as before; except for the different dependent variables, estimation was identical. Only Sample 2 contained the ideological CT measures, so we focused our analyses on that dataset alone. The results of these analyses are summarized in Table 4. As predicted, SI threat was significantly related to both conservative CT endorsement ( $b = 0.19$ ,  $\beta = 0.25$ ,  $p < .001$ ) and liberal CT endorsement ( $b = 0.17$ ,  $\beta = 0.22$ ,  $p < .001$ ). Per expectations, ideology was a stronger predictor of support for both conservative CTs ( $b = 0.36$ ,  $\beta = 0.45$ ,  $p < .001$ ) and liberal CTs ( $b = -0.25$ ,  $\beta = -0.30$ ,  $p < .001$ ). Going from the lowest to the highest level of SI threat was associated with a 19% increase in conservative CT endorsement and a 17% increase in liberal CT endorsement; the standardized coefficients in each model told a similar comparative story. To illustrate these relationships, Figure 3 plots endorsement of both conservative and liberal CTs as a function of SI threat and four other key predictors in Sample 2. As such, our data provided clear evidence for Hypotheses 2a and 2b.

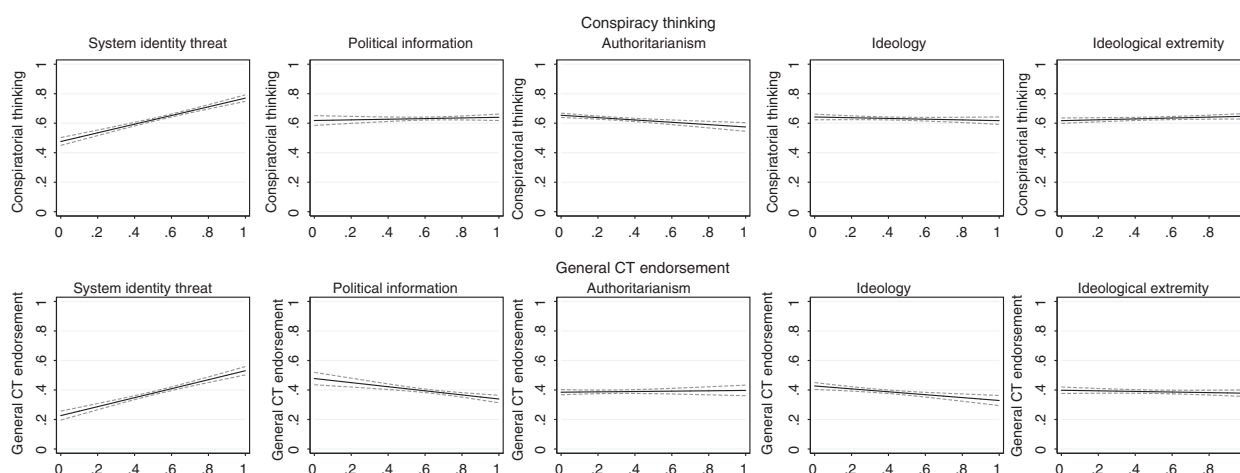
### Indirect Effects of SI Threat on CT Endorsement via Conspiracy Thinking

Finally, we examined Hypothesis 3 by conducting mediation analyses in which SI threat served as the independent variable and conspiracy thinking served

**Table 2.** Conspiracy thinking and general conspiracy theory endorsement as a function of system identity threat (Sample 1)

Predictor	Conspiracy thinking				General conspiracy theories endorsement			
	<i>b</i>	95% CI	$\beta$	<i>p</i>	<i>b</i>	95% CI	$\beta$	<i>p</i>
System identity threat	0.29	(0.25, 0.34)	0.46	<.001	0.30	(0.25, 0.36)	0.40	<.001
Age	−0.0003	(−0.001, 0.001)	−0.02	>.250	−0.0001	(−0.001, 0.001)	−0.005	>.250
Race (1 = white)	−0.01	(−0.03, 0.02)	−0.02	>.250	−0.08	(−0.11, −0.04)	−0.14	<.001
Gender (1 = male)	−0.01	(−0.04, 0.01)	−0.04	.167	0.01	(−0.01, 0.03)	0.02	>.250
Income	−0.04	(−0.07, −0.001)	−0.06	.045	−0.07	(−0.11, −0.03)	−0.10	.001
Education	0.004	(−0.04, 0.04)	0.01	>.250	−0.06	(−0.11, −0.02)	−0.08	.009
Political information	0.02	(−0.03, 0.07)	0.03	>.250	−0.14	(−0.20, −0.08)	−0.14	<.001
Authoritarianism	−0.08	(−0.12, −0.04)	−0.12	<.001	0.01	(−0.04, 0.06)	0.02	>.250
Ideology	−0.02	(−0.06, 0.01)	−0.04	.220	−0.10	(−0.15, −0.05)	−0.13	<.001
Ideological extremity	0.03	(−0.002, 0.06)	0.06	.062	−0.02	(−0.06, 0.02)	−0.03	>.250
Intercept	0.51	(0.46, 0.57)		<.001	0.50	(0.44, 0.57)		<.001
<i>F</i> ( <i>df</i> )		22.22 (10, 1,011), <i>p</i> < .001				36.81 (10, 1,011), <i>p</i> < .001		
Adjusted <i>R</i> <sup>2</sup>		.173				.242		
<i>N</i>	1,022				1,022			

Note: Entries are ordinary least squares regression coefficients. Variances estimates based on the HC3 method.

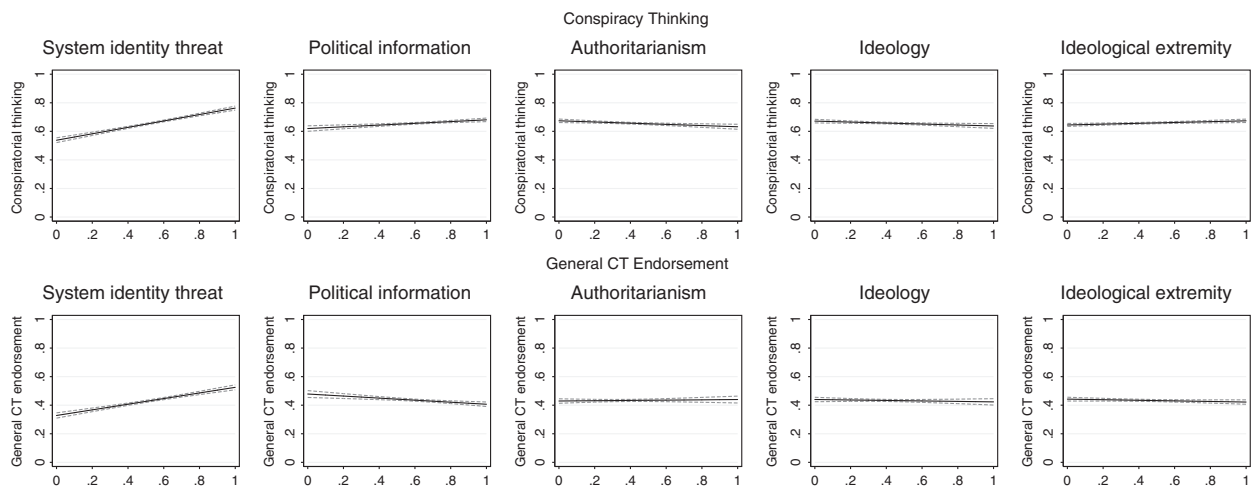
**Fig. 1:** Conspiracy thinking (top panels) and general conspiracy theory endorsement (bottom panels) as a function of selected predictors, Sample 1. Dotted lines indicate 95% confidence regions**Table 3.** Conspiracy thinking and general conspiracy theory endorsement as a function of system identity threat (Sample 2)

Predictor	Conspiracy thinking				General conspiracy theories endorsement			
	<i>b</i>	95% CI	$\beta$	<i>p</i>	<i>b</i>	95% CI	$\beta$	<i>p</i>
System identity threat	0.22	(0.20, 0.25)	0.38	<.001	0.20	(0.16, 0.23)	0.27	<.001
Age	0.001	(0.000, 0.001)	0.04	.051	0.001	(0.0004, 0.002)	0.06	.002
Race (1 = white)	−0.01	(−0.03, 0.001)	−0.03	.074	−0.06	(−0.07, −0.04)	−0.10	<.001
Gender (1 = male)	−0.02	(−0.03, −0.01)	−0.06	.001	−0.004	(−0.02, 0.01)	−0.01	>.250
Income	−0.02	(−0.04, 0.004)	−0.03	.108	−0.04	(−0.06, −0.01)	−0.06	.003
Education	−0.06	(−0.09, −0.03)	−0.08	<.001	−0.09	(−0.13, −0.06)	−0.10	<.001
Political information	0.06	(0.03, 0.09)	0.08	<.001	−0.07	(−0.11, −0.03)	−0.08	<.001
Authoritarianism	−0.04	(−0.07, −0.01)	−0.05	.003	0.01	(−0.03, 0.05)	0.01	>.250
Ideology	−0.03	(−0.06, −0.01)	−0.05	.012	−0.02	(−0.05, 0.02)	−0.02	>.250
Ideological extremity	0.03	(0.01, 0.05)	0.06	.003	−0.02	(−0.05, 0.005)	−0.03	.109
Intercept	0.56	(0.53, 0.60)		<.001	0.47	(0.43, 0.51)		<.001
<i>F</i> ( <i>df</i> )		37.35 (10, 2,691), <i>p</i> < .001				42.43 (10, 2,691), <i>p</i> < .001		
Adjusted <i>R</i> <sup>2</sup>		.137				.135		
<i>N</i>	2,702				2,702			

Note: Entries are ordinary least squares regression coefficients. Variances estimates based on the HC3 method.

as the mediator. A separate analysis was performed for each CT endorsement dependent variable (general CT endorsement in Sample 1; one model each for general,

conservative, and liberal CT endorsement in Sample 2). Indirect effects via conspiracy thinking were estimated using the bootstrap-based method

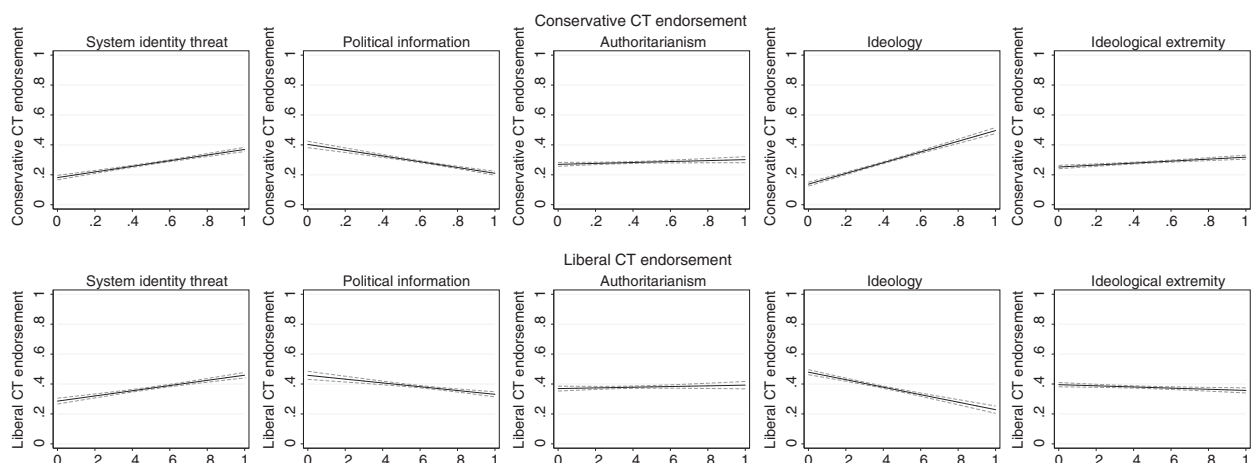


**Fig. 2:** Conspiracy thinking (top panels) and general conspiracy theory endorsement (bottom panels) as a function of selected predictors, Sample 2. Dotted lines indicate 95% confidence regions

**Table 4.** Endorsement of “conservative” and “liberal” CTs as a function of system identity threat (Sample 2)

Predictor	“Conservative” CT endorsement				“Liberal” CT endorsement			
	<i>b</i>	95% CI	$\beta$	<i>p</i>	<i>b</i>	95% CI	$\beta$	<i>p</i>
System identity threat	0.19	(0.16, 0.21)	0.25	<.001	0.17	(0.14, 0.21)	0.22	<.001
Age	−0.0003	(−0.001, 0.0002)	−0.02	>.250	0.00001	(−0.001, 0.001)	0.001	>.250
Race (1 = white)	0.004	(−0.01, 0.02)	0.01	>.250	−0.10	(−0.12, −0.08)	−0.18	<.001
Gender (1 = male)	−0.03	(−0.03, −0.01)	−0.06	<.001	−0.01	(−0.03, 0.004)	−0.03	.147
Income	0.01	(−0.01, 0.03)	0.01	>.250	−0.09	(−0.11, −0.06)	−0.12	<.001
Education	−0.06	(−0.08, −0.03)	−0.06	<.001	−0.05	(−0.09, −0.02)	−0.06	.004
Political information	−0.19	(−0.23, −0.16)	−0.21	<.001	−0.13	(−0.17, −0.09)	−0.13	<.001
Authoritarianism	0.03	(0.001, 0.06)	0.03	.046	0.02	(−0.02, 0.06)	0.02	.236
Ideology	0.36	(0.33, 0.39)	0.45	<.001	−0.25	(−0.29, −0.21)	−0.30	<.001
Ideological extremity	0.07	(0.04, 0.09)	0.10	<.001	−0.04	(−0.07, −0.021)	−0.06	.006
Intercept	0.16	(0.13, 0.20)		<.001	0.64	(0.60, 0.69)		<.001
<i>F</i> ( <i>df</i> )		219.92 (10, 2,691), <i>p</i> < .001				56.84 (10, 2,691), <i>p</i> < .001		
Adjusted <i>R</i> <sup>2</sup>		.444				.175		
<i>N</i>	2,702				2,702			

Note: Entries are ordinary least squares regression coefficients. Variances estimates based on the HC3 method. CT, conspiracy theories.



**Fig. 3:** Endorsement of “conservative” (top panels) and “liberal” (bottom panels) conspiracy theories as a function of selected predictors, Sample 2. Dotted lines indicate 95% confidence regions

recommended by Preacher and Hayes (2004), with 10,000 bootstrap replications. The covariates from the regressions reported above were included in all modeling steps.

The indirect effects (along with direct effects for comparison) are summarized in Table 5. Looking first at the general CT models, we can see support for Hypothesis 3. SI threat had a significant indirect



relationship with general CT endorsement in both Sample 1 (0.15,  $p < .001$ ) and Sample 2 (0.07,  $p < .001$ ), though the proportion of the statistical effect of SI threat that was mediated differed slightly between the samples (i.e., 0.504 vs. 0.377).

Results for the ideological CT models in Sample 2 were also supportive, though less consistently so. Although SI threat had a significant indirect relationship with conservative CT endorsement (0.01,  $p < .05$ ) and liberal CT endorsement (0.09,  $p < .001$ ), the indirect effect was considerably stronger for liberal CT endorsement (i.e., 0.525 vs. a smaller 0.051 for conservative CT endorsement). In other words, the vast majority of the statistical effect of SI threat on endorsement of conservative CTs was direct and not a function of the greater propensity toward conspiracy thinking about those high in SI threat, whereas a little over half of the relationship between SI threat and endorsement of liberal CTs was accounted for by the link between SI threat and conspiracy thinking. This asymmetry was due largely to the fact that conspiracy thinking was more strongly related to liberal CTs ( $r = .32$ ;  $b = 0.40$ ,  $p < .001$ , in the last-stage mediation regression) than conservative CTs ( $r = .17$ ;  $b = 0.04$ ,  $p < .05$ , in the last-stage mediation regression). In sum, our results (with one exception) were largely supportive of Hypothesis 3, though mediation was partial rather than complete. Thus, SI threat had both indirect and direct statistical effects on CT endorsement.

## Discussion

Building on existing perspectives characterizing conspiracy belief as a motivated response to perceived threat (e.g., Jolley *et al.*, 2017), the current study explored the role of a thus-far unexamined psychological variable: *SI threat*, or the sense that society's fundamental, defining values are under siege due to social change. Prior research indicates that perceptions of threat—whether to one's sense of control, certainty, or security—can increase conspiracy thinking (e.g.,

Crocker *et al.*, 1999; Kay *et al.*, 2008; Kramer, 1994; Sullivan *et al.*, 2010; Whitson & Galinsky, 2008), since conspiracy thinking and conspiracy-theory endorsement can imbue meaning to complex, threatening phenomena (Douglas *et al.*, 2017; Graeupner & Coman, 2017; Miller *et al.*, 2016; Sunstein & Vermeule, 2009; Uscinski & Parent, 2014). Consistent with this, we reasoned that perceived threat to one's conception of society and what it means to be a member of society would be associated with conspiracy thinking style, which would, in turn, bolster endorsement of both ideological and non-ideological CTs.

Across two large samples, we found strong support for these hypotheses. Controlling for a broad range of factors (including indicators of general system-justification motives, like authoritarianism and ideology), SI threat emerged as a strong predictor of both general conspiracy thinking and CT endorsement. Moreover, mediation analyses indicated that SI threat was indirectly related to CT endorsement via its association with conspiracy thinking in general. This pattern of results adds to a body of work suggesting that perceptions of threat are associated with conspiracy thinking, and extends extant perspectives (e.g., Jolley *et al.*, 2017) by focusing on a novel form of threat. While existing work suggests that threats to the legitimacy of the system can increase conspiracy beliefs, we demonstrate that perceptions of threatening social change are also an important individual difference antecedent for conspiracy beliefs. When individuals perceive that societal change is undermining fundamental values and challenging the meaning of what it means to be a part of their society, they may adopt a more conspiracy-oriented mindset and become more willing to endorse CTs.

Despite the strength of this evidence, there are several limitations of this study that should be addressed by future research. First, our correlational data cannot provide decisive evidence that SI threat is causally prior to conspiracy thinking and conspiracy endorsement (as we assume). Second, we relied upon samples recruited from Amazon's Mechanical Turk. Although MTurk is considerably more diverse than other

**Table 5.** Mediation analyses: Indirect and direct effects of SI threat on conspiracy theory endorsement

Dependent variable	Indirect effect of SI threat via conspiracy thinking		Direct effect of SI threat		Indirect proportion of SI threat effect
	Effect	95% CI	Effect	95% CI	
Sample 1					
General CTs	0.15	(0.12, 0.18)	0.15	(0.10, 0.20)	0.504
Sample 2					
General CTs	0.07	(0.06, 0.09)	0.12	(0.09, 0.16)	0.377
Conservative CTs	0.01	(0.001, 0.02)	0.18	(0.15, 0.21)	0.051
Liberal CTs	0.09	(0.07, 0.11)	0.08	(0.05, 0.12)	0.525

*Note:* Entries are estimates for the indirect and direct effects of SI threat on the indicated dependent variable. Conspiracy thinking serves as the sole mediator in all analyses. Confidence intervals are percentile 95% CIs, based on 10,000 bootstrap samples. All estimated effects are significant at the  $p < .001$  level, except for the indirect effect of SI threat on conservative conspiracy-theory endorsement in Sample 2 ( $p < .05$ ). CT, conspiracy theories; SI, system identity.

convenience samples and has sufficient variability on constructs of interest (see Paolacci & Chandler, 2014, on the usefulness of MTurk for psychological research), it is not nationally representative. This raises the possibility that the relationships we observed here may be somewhat different in magnitude in samples that are less educated (on average) or more racially diverse. Thus, future research should replicate and extend these findings using experimental manipulations of SI threat and data from nationally representative samples.

Additionally, the current research did not consider individual-difference variables that could moderate the impact of SI threat—such as inflated confidence in one's causal understanding of political phenomena (e.g., Vitriol & Marsh, this issue), which has a demonstrated relationship with CT endorsement. Nor did it examine other dependent variables that may be similarly predicted by SI threat, including institutional trust (e.g., Shockley, Neal, Pytlik Zillig, & Bornstein, 2016), pseudoscientific (e.g., Pennycook, Cheyne, Barr, Koehler, & Fugelsang, 2015) or superstitious beliefs (e.g., Matute, Yarritu, & Vadillo, 2011), and intergroup attitudes (e.g., Norton & Sommers, 2011). Investigations of additional downstream consequences of SI threat, as well as moderators of these effects, represent fruitful avenues for extending our investigation. Doing so would further elucidate the underlying psychology of conspiracy thinking as well as the consequences of threatening social change for perceptions of the self, the social and political world, and those who occupy it.

### Conflict of Interest

The authors confirm they have no conflict of interest to declare. Authors also confirm that this article adheres to ethical guidelines specified in the APA Code of Conduct as well as the authors' national ethics guidelines.

### Supporting Information

Additional supporting information may be found in the online version of this article at the publisher's web-site.

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