

## On the Relation Between Religiosity and the Endorsement of Conspiracy Theories: The Role of Political Orientation

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*Religious and conspiracy beliefs share the feature of assuming powerful forces that determine the fate of the world. Correspondingly, they have been theorized to address similar psychological needs and to be based on similar cognitions, but there exist little authoritative answers about their relationship. We delineate two theory-driven possibilities. If conspiracy theories and religions serve as surrogates for each other by fulfilling similar needs, the two beliefs should be negatively correlated. If conspiracy and religious beliefs stem from the same values and cognitions, this would speak for a positive correlation that might be diminished—for example—by controlling for shared political ideologies. We approached the question with a meta-analysis ( $N = 10,242$ ), partial correlations from large Christian-dominated datasets from Germany, Poland, and the United States ( $N = 12,612$ ), and a preregistered U.S. study ( $N = 500$ ). The results indicate that the correlations between religiosity and conspiracy theory endorsement were positive, and political orientation shared large parts of this covariance. Correlations of religiosity with the more need-related conspiracy mentality differed between countries. We conclude that similarities in the explanatory style and ideologies seem to be central for the relation between intrinsic religiosity and endorsing conspiracy theories, but psychological needs only play a minor role.*

**KEY WORDS:** conspiracy theories, conspiracy mentality, intrinsic religiosity, political ideology, political orientation, spirituality

Headlines like “Are conspiracy theories really ‘a new religion’?” (Ayed, 2020) point at a growing public body of discussions about religious elements in conspiracy theories (CTs). Also, the scientific literature ascribes CTs “quasi-religious qualities” (Franks et al., 2013, p. 10) and outlines shared elements of CTs with religions regarding the content and structure; other comparisons shed a light on psychological similarities (Robertson & Dyrendal, 2018; Wood & Douglas, 2018). The joint characteristics allow opposing conclusions about the relationship between religions and CTs, depending on the focus of the argument. To the extent that conspiracy beliefs can satisfy needs that have traditionally been satisfied by religions (e.g., facing uncertainty, Barber, 2011; van Prooijen &

#### Highlights

- Religiosity and the belief in specific conspiracy theories are positively correlated
- This association is largely due to their shared covariance with political orientation
- Only weak evidence for a function of a generalized conspiracy mindset as a substitute for religion

Douglas, 2017), one would expect people to endorse *either* religious beliefs *or* conspiracy beliefs, resulting in a negative correlation. In contrast, if both reflect basal underlying cognitions (e.g., there are hidden powers; there is more in the world than is visible) or other shared ideologies, then the same individuals should be prone to endorse *both* beliefs, resulting in a positive correlation.

The present study empirically addresses the question of how the endorsement of CTs relates to religiosity. Importantly, both the previous literature and our current investigations are largely confined to contexts with a predominance of Christian faith, but there are good reasons to assume similar features (e.g., providing meaning and belongingness; Saroglou, 2011) and similar results also for other denominations (see Muslim majority contexts in Study 1). After delineating competing hypotheses, we will present a meta-analysis of previously published studies as well as reanalyses of large datasets from three countries with different average religiosity and cultural contexts. Throughout our studies, we control for political orientation on the left-right continuum to elucidate whether the association between religiosity and CT endorsement might be due to shared variance with political worldviews. The empirical section concludes with a preregistered study that additionally takes a closer look at different religious orientations (intrinsic, extrinsic, and religious quest) and spiritual beliefs.

### COMPARISON BETWEEN RELIGIOSITY AND CTs

Clearly, religions and CTs are not the same concepts. For example, many religions impart beliefs that the world is a just place (Jost et al., 2013), whereas CTs assume that many important (and especially negative) events are intentionally brought about by hostile groups (Jolley et al., 2018). The social dimensions of religions and CTs also reveal differences as CTs do not share the institutionalized and organized structures of religions that promote a sense of community and social structures to the same degree (Franks et al., 2013). Nevertheless, several similarities have been noted of which some refer to needs fulfilled by both (competing) concepts, whereas others point to overlapping cognitive styles and ideologies suggesting that religiosity and CTs complement each other.

#### *Psychological Needs as Similarities*

From a psychological perspective, religions and CTs address similar needs and thus might constitute competing concepts that could reduce the motivation of religious individuals to question official narratives and vice versa. If a need is already satisfied, the status of saturation limits the attraction of another belief with the same promise. One of them is the *social* need to keep a positive image of the self and the ingroup. Religiosity and endorsing CTs can both satisfy the social need for the self (van Prooijen, 2016; Ward & King, 2021) and the ingroup (Cairns et al., 2006; Cichocka et al., 2016) by promoting feelings of morality and belongingness (considered as cross-cultural features, Saroglou, 2011).

The *epistemic* function is another shared feature of both concepts by presenting stories about causal relationships (Wood & Douglas, 2018) as cross-cultural phenomena to reduce uncertainty (Barber, 2011; van Prooijen & Douglas, 2017). Sense-making processes and the detection of patterns and agencies have been linked to (predominantly Christian) religiosity (van Elk et al., 2016; Inzlicht et al., 2011) and the endorsement of CTs (Douglas et al., 2016; Marchlewska et al., 2018;

van Prooijen et al., 2018), partly depending on contexts like experiencing uncertainty or lacking control (Andersen, 2019; Whitson & Galinsky, 2008).

According to the *existential* motive (e.g., need of control), lacking control reinforces compensatory mechanisms that structure the environment and attribute agencies to restore control (Landau et al., 2015), for example, after natural disasters or other societal crises (van Prooijen & Douglas, 2017). Previous studies have demonstrated that conspiracist ideation (Abalakina-Paap et al., 1999) and religiosity (Coursey et al., 2013) are associated with higher external loci of control and that both concepts can be defensive strategies for compensatory control (Federico et al., 2018; Kay et al., 2010; Shepherd et al., 2011), depending on personal responsibilities that the religious persuasion promotes (Wood & Douglas, 2018). Despite these competing need-based similarities, we also identified complementing cognitive ones.

### *Cognitive and Explanatory Similarities*

Religions and CTs are associated with similar cognitions and might speak as complementing concepts to the same individuals. The general structure and appeal of both accounts can be considered as similar by representing “grand explanatory narratives” (Robertson & Dyrendal, 2018, p. 8) that offer explanations for events that are anchored in commonsense contents but also violate these in a few aspects (Boyer & Ramble, 2001; Franks et al., 2013). For example, the CT that 9/11 was an inside job adopts commonly accepted facts about the event and adds the (deviating) idea of a blasting by the U.S. government. The synergy of common sense and alternative elements increases the recall (and probably the appeal) of a narrative (Barrett & Nyhof, 2001). In terms of content, the violation of common sense in (especially monotheistic) religions and CTs often includes invisible forces at play (e.g., God or intelligence services), and the explanatory style suggests further similarities like using anomalies as explanatory starting points and offering explanations that tend to be unfalsifiable (Keeley, 2018).

The cognitive style is assumed to be another similarity between religiosity and conspiracy ideation as both are related to reduced analytic thinking (Gervais & Norenzayan, 2012; Pennycook et al., 2013, 2016; Pytlik et al., 2020; Swami et al., 2014), also cross-culturally (Stagnaro et al., 2019). Importantly, this is due to spontaneous preferences of thinking styles but not due to a general lack of cognitive abilities (Jastrzębski & Chuderski, 2017; Pennycook et al., 2013). In a similar vein, religiosity and conspiracy thinking are associated with a higher reception to pseudo-profoundness (i.e., content-free but profound-appearing sentences, Pennycook et al., 2015). Also, ideological factors are shared by religiosity and CT endorsement that could explain why religious individuals might tend to engage more in CTs.

### *Ideological Political Overlaps*

As central ideological similarities and possibly overlapping societal groups, religiosity and CT endorsement are rooted in similar political contexts that might contribute to the relation of interest and pull it into a positive direction. Particularly, political orientation appears to play a key role according to previous studies. They yielded significant positive correlations between the endorsement of CTs and conservatism (Douglas et al., 2016; Miller et al., 2016) and right political orientation (Enders et al., 2018; Galliford & Furnham, 2017). Although this relation with political orientation is basically curvilinear in many countries, there is an increase in the political right averaged across all countries and especially in the countries investigated in the present study (i.e., Poland, Germany and the United States; Imhoff et al., 2022; van der Linden et al., 2021).

Religiosity is cross-culturally linked to political attitudes as well (Caprara et al., 2018; Ksiazkiewicz & Friesen, 2021). Similar correlation patterns as for CTs also emerge for religiosity

with conservatism (Malka et al., 2012; Pennycook et al., 2012; Piazza & Sousa, 2014) and right political orientation (Dirilen-Gümüş, 2010; Saribay & Yılmaz, 2018). System justification might be one of the shared mechanisms between political attitudes, religiosity, and CT endorsement (Jolley et al., 2018; Jost et al., 2013; Osborne & Sibley, 2014).

## DIFFERENTIATING MEASURES AND CONTEXT

When examining the correlation between religiosity and CT endorsement as well as the role of political orientation, the measures of religiosity and the (country-specific) religious contexts can lead to different conclusions. Another empirical angle is to compare ideologically enriched, content-laden specific conspiracy beliefs on the one hand, and a more abstract tendency to suspect secret forces at play (conspiracy mentality) on the other hand.

### *Mentality vs. Specific Beliefs*

As the associations with religiosity can vary between the different measures of CT endorsement and thus indirectly might suggest different implications for the underlying processes, we also differentiated between the belief in specific CTs and a generalized conspiracy mentality (see Imhoff & Bruder, 2014). The mentality concept grounds on the empirical finding that the beliefs in different CTs are interrelated (Swami et al., 2011) and describes a content-free general tendency to see the world governed by hidden forces. This might indirectly be more reconcilable with the competing need-based account, whereas specific theories might translate more into complementing ideological directions and political attitudes (Smallpage et al., 2017). It is thus conceivable that the correlation of religiosity and conspiracy mentality is smaller compared to presumably higher correlations with specific conspiracy beliefs. However, generalizing from specific CTs might also be more biased compared to the less content-laden conspiracy mentality as specific CTs are more susceptible to other situational or elite cues, for instance from religious and political leaders.

### *Different Types of Religiosities*

In addition to the focus of both prior work and our current studies on predominantly Christian traditions of religiosity, we also took more fined-grained inner differentiations into three orientations of religiosity: intrinsic, extrinsic, and quest (Batson & Schoenrade, 1991). Whereas the extrinsic and the quest dimensions are compatible with the need-based account (fulfilling social and epistemic needs), intrinsic religiosity is more in accordance with the cognitive and ideological similarities between religiosity and CT endorsement. Accordingly, intrinsic religiosity might be positively correlated with CT endorsements, but extrinsic religiosity and religious quest might be negatively correlated with them.

### *Role of the Cultural Context*

Results might also differ between countries depending on their cultural context and the role religion plays in the public sphere as well as the relation between church and state (Roccas & Schwartz, 1997). The associations of religiosity with right-wing and conservative attitudes are especially substantial in countries where religion is more apparent in the public (Caprara et al., 2018). This might translate into more substantial correlations between religiosity and CT endorsement (and more pronounced roles of political orientation) in countries with higher religiosity and where religion is more politically laden.

## THE PRESENT STUDY

In the present study, we examined how religiosity and the endorsement of CTs are interrelated in Christian-dominated countries and thereby put the theory-driven accounts of need-based versus cognitive-ideological similarities between religiosity and CTs indirectly to a large-scale test.

*H1 (surrogate hypothesis):* A negative correlation might indicate that the personal needs are already satisfied by religiosity or CTs prohibiting the support of the other (for the perspective of CTs as secularized religious superstitions, see Popper, 1945);

*H2 (complement hypothesis):* A positive correlation could be explained by overlaps in cognitive preferences and ideologies.

If both hypotheses play out simultaneously, the direction of correlation might still indicate the dominating part.

To address ideological overlaps and their positizing impact on the correlation, we controlled for political orientations (left-right) in the analyses. The effect is informative for testing the surrogate (no influence of political orientation) versus the complement hypothesis (potentially attributable to shared variance with political orientation). Additionally, we separated specific CT endorsements and conspiracy mentality as measurements with different conceptual backgrounds. Higher correlations for specific CTs than for conspiracy mentality would indicate unspecific support for at least one or both hypotheses. We thus expected the correlation with religiosity to be higher for specific CTs than for conspiracy mentality.

We reanalyzed large datasets of countries with different cultural contexts but with Christianity as the main denomination: Germany (Study 2) as Western-European country with a comparably low religiosity, Poland (Study 3) as Eastern-European country with a rather high religiosity, and the United States (Study 4) as non-European country with rather high religiosity (Joshani & Gebauer, 2020). The preregistered Study 5 comprises a new dataset from the United States to replicate the findings of the previous studies and to explore different religious orientations as well as spiritual and supernatural beliefs. The examination begins with a meta-analysis of previously reported studies on the correlation between religiosity and the endorsement of CTs (Study 1).

## STUDY 1: META-ANALYSIS

### Methods and Sample

The literature review for the meta-analysis included the first 70 results sorted by relevance that were listed on Google Scholar when entering “religiosity and conspiracy.” We selected peer-reviewed studies that reported the correlation index between self-reported religiosity and a measure of specific conspiracy beliefs or a general conspiracy mindset. Of the search results, 18.5% were included in the meta-analysis, 65.7% were excluded because they did not report the relevant variables or correlations, and 15.7% were excluded due to other reasons like mixing up religiosity and spirituality. The meta-analysis was conducted separately for specific conspiracy beliefs and general conspiracy mindset scales by applying the *meta* package in R (Schwarzer, 2021). We used the inverse variance method, the Sidik-Jonkman estimator for  $\tau^2$ , Q-profile method for the confidence interval of  $\tau^2$ , and Fisher’s *z*-transformation of correlations.

The nine studies including specific CTs (see Figure 1;  $N = 5,438$ ) and the nine studies reporting correlations of religiosity with scales measuring a general conspiracy mindset (see Figure 2; total  $N = 4,804$ ) based on samples predominantly from the United States, but also on non-Christian samples from Iran and Turkey (for further sample descriptions, see the online supporting information).

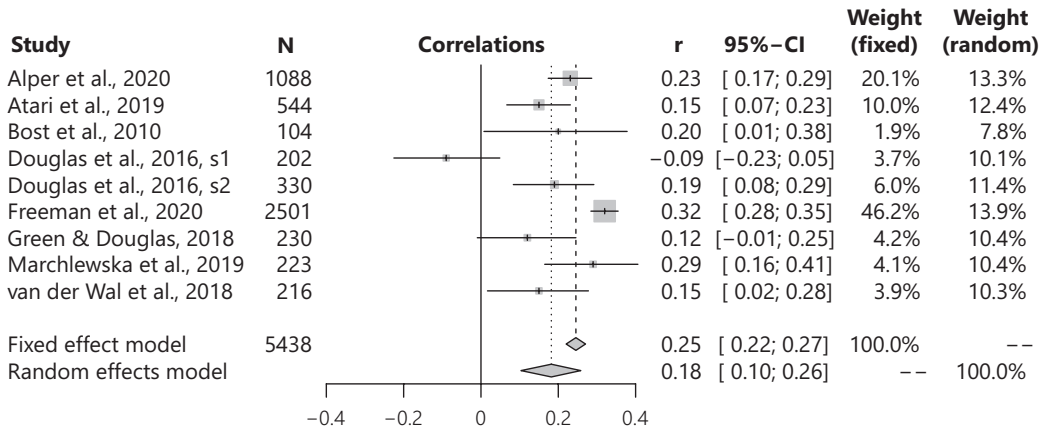


Figure 1. Correlations between religiosity and specific CTs (Study 1).

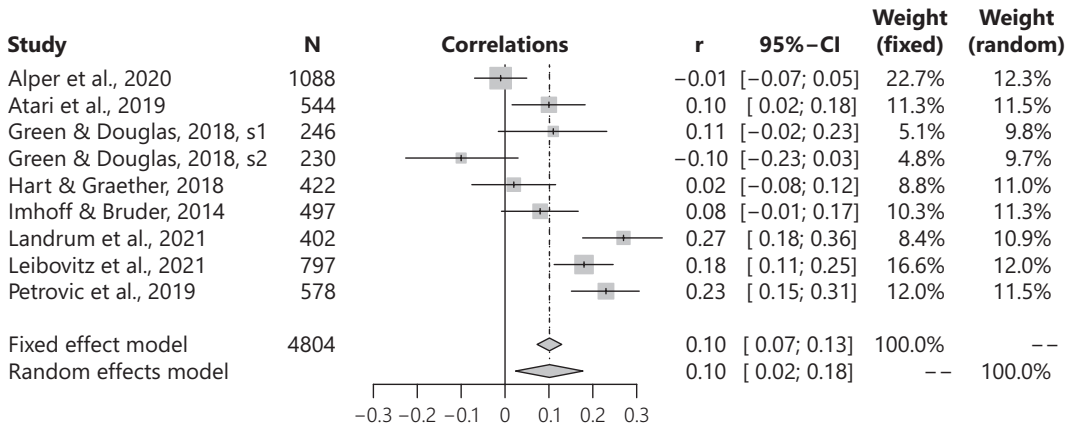


Figure 2. Correlations between religiosity and conspiracy mindset (Study 1).

### Results and Discussion

The meta-analysis yielded a significant positive correlation between religiosity and the endorsement of specific CTs,  $r_{pooled} = .182, p < .001$ , and a small, but significant positive correlation between religiosity and measures of the conspiracy mindset,  $r_{pooled} = .101, p = .010$ . Although the substantial heterogeneity in the analysis of the dataset containing variables about specific CTs,  $I^2 = 84.9\%$ ,  $\tau^2 = 0.012, p < .001$ , and of the dataset containing conspiracy mindset variables,  $I^2 = 85.0\%$ ,  $\tau^2 = 0.012, p < .001$ , supports the use of the random-effects model in both cases, the number of included studies is arguably too small to warrant the estimation of random effects. The estimated values from fixed effect models provide clearer differences with  $r_{pooled} = .246, p < .001$  for specific CTs and  $r_{pooled} = .101, p < .001$ , for conspiracy mindsets.

Previously published studies pointed at significant positive correlations between CT measures and religiosity that are descriptively higher for specific CTs than for conspiracy mindset. For the random effects models, these corresponding confidence intervals partially overlapped, but they do not overlap for the fixed effects models. These analyses thus provide tentative support for a positive

correlation (speaking against the surrogate hypothesis) and faintly for the idea that content does matter. Both findings are more easily reconcilable with the complement hypothesis than the need-based one.

In the following analyses of large-sample datasets from three different countries (Studies 2 to 4), one of the goals was to bolster generalizability by exploring the relation separately for three different countries with markedly different roles of religiosity in public life and political discourse. The other goal was to control statistically for (political) worldviews in line with the assumption of the complement hypothesis that overlaps in worldviews might pull the correlation into a positive direction.

## STUDY 2: DATASET FROM GERMANY

### Sample and Methods

The dataset from Germany was collected as part of the *Mitte-Studie* in 2012 among a large national sample  $N = 2,348$  (54.6% women, 45.4% men,  $M_{\text{age}} = 48.84$ ,  $SD_{\text{age}} = 18.18$ ).

The conspiracy mentality scale consisted of five items (short version from Imhoff & Bruder, 2014,  $\alpha = .80$ , e.g., “There are secret organizations that have great influence on political decisions.”; response options from 1 = *Do not agree at all* to 7 = *Completely agree*). Religiosity (“Do you consider yourself as rather religious or unreligious?” from 1 = *Not religious at all* to 10 = *Deeply religious*) and left-right self-classification (from 1 = *Left* to 10 = *Right*) were recorded as single items. The analyses of all studies have been conducted in SPSS (IBM Corp., 2015).

### Results and Discussion

The partial correlation between religiosity and conspiracy mentality with political orientation as a control variable yielded a significant negative, but very small partial correlation,  $r_{\text{part.}} = -.048$ ,  $p = .020$ . The impact of the control variables was not substantial (bivariate correlation without control variables  $r = -.042$ , Table 1) but significant according to the unstandardized indirect mediation effect (*IE*) and bootstrapped confidence interval,  $IE = 0.003$ , 95% CI [0.005, 0.052]. Indirect mediation effects are only reported to test the indirect paths for significance, but we refrain from interpreting them causally.

In Germany, a country with comparably low religiosity (Joshani & Gebauer, 2020), all interrelations between religiosity, conspiracy mentality, and political orientation were very small, and religiosity almost uncorrelated to conspiracy mentality. The observed (extremely weak) negative correlation and the fact that this was practically unaffected by controlling for political ideologies are more in line with the need-based (surrogate) than the cognitive-explanatory account. This is at odds with previous findings reported in the meta-analysis (Study 1). Therefore, we conducted similar analyses on datasets with participants from more religious countries (Poland and the United States, Joshani & Gebauer, 2020).

**Table 1.** Correlations and Descriptive Values in the German Dataset

Measures	$M$ ( $SD$ )	(1)	(2)	(3)
(1) Religiosity	4.08 (2.69)	–		
(2) Conspiracy mentality	3.96 (1.31)	-.042*	–	
(3) Political orientation	5.21 (1.71)	.056**	.097**	–

\* $p < .05$

\*\* $p < .01$ .

## STUDY 3: DATASETS FROM POLAND

### Sample and Methods

The datasets from Poland were collected in 2013 ( $N = 965$ , 54.3% women, 45.7% men,  $M_{\text{age}} = 46.05$ ,  $SD_{\text{age}} = 17.52$ ; complete datasets 640) and 2017 ( $N = 1,019$ ; 52.2% women, 47.8% men,  $M_{\text{age}} = 46.72$ ,  $SD_{\text{age}} = 17.03$ ; complete datasets 600). The study was part of the two waves of the *Polish Prejudice Survey*, a nation-wide survey of intergroup attitudes.

Concerning the 2013 dataset, religiosity (“Regardless of your participation in religious events, do you consider yourself religious?”; response options from 1 = *Absolutely unbelieving* to 7 = *Strict believer*) and political orientation (“Which of these points most closely aligns with your political beliefs?”; response format 1 = *Far left* to 7 = *Far right*) were single-item facets. Two scales measured the endorsement of specific CTs, that is, Antisemitic CTs (6 items,  $\alpha = .95$ , e.g., “Jews try to rule the world”; response format 1 = *Completely disagree* to 5 = *Strongly agree*) and the agreement to Smolensk CTs (4 items,  $\alpha = .73$ , e.g., “Polish and Russian authorities together hide the truth about the Smolensk disaster.”; responses from 1 = *Completely disagree* to 5 = *Definitively agree*). Smolensk refers to the crash of a Polish military plane near the Russian city of Smolensk in 2010 with many Polish officials and politicians among the victims.

In the dataset from 2017, the scales measuring religiosity, political orientation, and Antisemitic CTs were the same as in the study from 2013. Participants were also invited to answer questions about their conspiracy mentality (5 items,  $\alpha = .92$ , e.g., “There are many important things in the world that happen unreported.”; responses were recorded on a scale from 1 = *Completely disagree* to 100 = *Fully agree*; cf. Imhoff & Bruder, 2014).

### Results and Discussion

The specific CTs about Antisemitism and the Smolensk disaster were both positively correlated with religiosity in the 2013 dataset (Table 2) but statistically unrelated after controlling for political orientation,  $r_{\text{part.}} = .070$ ,  $p = .073$  (Smolensk),  $r_{\text{part.}} = .067$ ,  $p = .085$  (Antisemitic). The indirect effects were significant (Smolensk:  $IE = 0.023$ , 95% CI [0.012, 0.036]; Antisemitic:  $IE = 0.011$ , 95% CI [0.003, 0.020]).

In the 2017 dataset, the endorsement of Antisemitic CTs was also positively associated with religiosity (Table 3) but statistically uncorrelated when controlling for political orientation,  $r_{\text{part.}} = -.004$ ,  $p = .927$ , with a statistically significant indirect effect ( $IE = 0.122$ , 95% CI [0.079, 0.172]). The negative correlation between conspiracy mentality and religiosity (Table 3) became more negative when including political orientation in the analysis,  $r_{\text{part.}} = -.135$ ,  $p = .001$ . The indirect effect of political orientation was significant,  $IE = 0.002$ , 95% CI [0.001, 0.004].

In a nutshell, intercorrelations between variables were more pronounced in Poland than in Germany suggesting that religiosity is comparably more rooted in right-oriented sections of the Polish society. Specific CTs were positively correlated with religiosity but unrelated after controlling

**Table 2.** Correlations and Descriptive Values in the 2013 Polish Dataset

Measures	$M (SD)$	(1)	(2)	(3)	(4)
(1) Religiosity	2.96 (0.51)	–			
(2) Smolensk conspiracy	2.51 (1.10)	.129**	–		
(3) Antisemitic conspiracy	3.61 (1.13)	.089*	.173**	–	
(4) Political orientation	4.32 (1.53)	.204**	.313**	.119**	–

\* $p < .05$

\*\* $p < .01$ .



**Table 3.** Correlations and Descriptive Values in the 2017 Polish Dataset

Measures	<i>M</i> ( <i>SD</i> )	(1)	(2)	(3)	(4)
(1) Religiosity	4.87 (1.62)	–			
(2) Conspiracy mentality	51.41 (25.10)	–.094*	–		
(3) Antisemitic conspiracy	3.59 (1.07)	.084*	.379**	–	
(4) Political orientation	4.48 (1.62)	.265**	.130**	.329**	–

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

for political attitudes. On the contrary, conspiracy mentality negatively correlated with religiosity, especially when considering the control variables. It thus seems that specific CTs follow a pattern predicted by the complement hypothesis: positive correlations that are substantially attenuated when controlling for political orientation. The results for conspiracy mentality, however, are more in line with predictions derived from the surrogate hypothesis: a negative correlation that is not diminished in size (but rather boosted) by controlling for political orientation. We examine in the next section if this pattern of results also holds in the United States context as U.S. citizens seem to be more religious in many aspects than most other (Western) democracies (Gin, 2012; Joshanloo & Gebauer, 2020).

## STUDY 4: DATASET FROM THE UNITED STATES

### Sample and Methods

The data from a U.S. national sample  $N = 8,280$  (53.7% women, 46.3 men,  $M_{\text{age}} = 48.98$ ,  $SD_{\text{age}} = 20.81$ ) was collected in 2020 by ANES (American National Election Studies, 2021). Two items measured conspiracy mentality by asking how well general conspiracy sentences described their view (“Much of what people hear in schools and the media are lies designed to keep people from learning the real truth about those in power.” and “Most business and politics in this country are secretly controlled by the same few powerful people.”; from 1 = *Not at all* to 5 = *Extremely well*,  $\alpha = .65$ ). Participants were also invited to choose between binary competing narratives of which one contained a specific conspiracy or conspiracy-related belief contradicting the official narrative (4 items,  $\alpha = .72$ , e.g., “The novel Coronavirus (COVID-19) was [not] developed intentionally in a lab.”; coded 1 = *official narrative*, 2 = *nonofficial narrative/conspiracy*; other topics: COVID-treatment, vaccination side effects, climate change). The score was weighted by the confidence of the rating (from 1 = *Not at all* to 5 = *Extremely*). Participants additionally rated the importance of religion in their life (from 1 = *Not important at all* to 5 = *Extremely important*) and their political orientation (from 0 = *Left* to 10 = *Right*).

### Results and Discussion

Religiosity was positively correlated with conspiracy mentality and conspiracy-related beliefs with small-to-medium effect sizes (Table 4). The partial correlations decreased markedly for the mentality,  $r_{\text{part.}} = .051$ ,  $p < .001$ , and for specific beliefs,  $r_{\text{part.}} = .125$ ,  $p < .001$ , after controlling for political orientation. The indirect effect was significant for the mentality ( $IE = 0.148$ , 95% CI [0.133, 0.162]) and for specific beliefs ( $IE = 0.921$ , 95% CI [0.840, 1.003]).

In sum, all intercorrelations are more pronounced in the U.S. sample than in the European samples. The substantial correlations between religiosity and both conspiracy measures are largely due to shared variance with political orientation. The central overlap between religions and CTs in the U.S.

**Table 4.** Correlations and Descriptive Values in the U.S. Dataset (Study 4)

Measures	<i>M</i> ( <i>SD</i> )	(1)	(2)	(3)	(4)
(1) Religiosity	3.13 (1.50)	–			
(2) Conspiracy mentality	2.91 (1.04)	.152**	–		
(3) Conspiracy beliefs	1.22 (0.25)	.289**	.426**	–	
(4) Political orientation	5.54 (2.76)	.382**	.280**	.490**	–

\*\*  $p < .01$ .

sample thus speaks for the complement hypothesis (for both the general mindset and specific CTs). To further add to the robustness of this result, we collected new data in a U.S. sample and explored the roles of religious orientation and spirituality.

### STUDY 5: NEW DATASET FROM THE UNITED STATES

The data collection, analysis procedure, and hypotheses of Study 5 have been preregistered (<https://aspredicted.org/jj68q.pdf>). The main hypotheses of this novel study in the U.S. context were that (1) there is a positive correlation between religiosity and the two measurements of the endorsement of CTs, that is, conspiracy mentality and specific conspiracy beliefs, and (2) that political orientation is a confounding variable that is at least partly overlapping with the correlation expected in Hypothesis 1. We also implemented a tripartite religious-orientation scale in line with the typology of Batson and Schoenrade (1991) consisting of the dimensions of religious quest as well as extrinsic and intrinsic religiosity to explore which religious facet is most important for the relation with CT endorsement. Additionally, we included measures of spirituality as a related but conceptually different construct to examine its' correlation with CT measures and political attitudes.

#### Sample and Methods

A total of 500 *MTurkers* (53.1% men, 46.3 women, 0.6% nonbinary;  $M_{\text{age}} = 40.28$ ,  $SD_{\text{age}} = 12.03$ ) completed the online questionnaire on the platform *SoSciSurvey* for an expense allowance of \$1.40. The relative majority of 46.3% was Christian, and 41.3% were unaffiliated. All participants passed the control question, but one participant failed the attention check (see preregistration) and had to be excluded. The study was conducted in 2021 during a Democratic presidency that might have strengthened conspiracy attitudes in the political right (see Imhoff et al., 2022).

Participants rated the importance of religion in their life on a 7-point Likert scale from “Not important” to “Extremely important” and categorized their political orientation on a slider scale (left-right, coded 0 to 100). The religious-orientation scale by Francis et al. (2016) that we slightly adjusted for this study consisted of the three dimensions of extrinsic religiosity (8 items,  $\alpha = .89$ , e.g., “A key reason for my interest in attending religious services is that it is socially enjoyable.”), intrinsic religiosity (8 items,  $\alpha = .96$ , e.g., “My religious faith shapes how I live my daily life.”), and religious quest (8 items,  $\alpha = .91$ , e.g., “I value my religious doubts and questions.”). The questionnaire also comprised 9 selected items from the New Age Orientation Scale (NAOS, Granqvist & Hagekull, 2001,  $\alpha = .92$ , e.g., “Compared to most religious and non-religious people, I am probably somewhat of a spiritual seeker with an unusually open mind.”) and 11 selected items about supernatural beliefs adapted from Eckblad and Chapman (1983) and Tobacyk (2004) ( $\alpha = .88$ , e.g., “Horoscopes are right too often for it to be a coincidence.”). We included the 5-item short version of the conspiracy mentality scale (Imhoff & Bruder, 2014,

**Table 5.** Correlations and Descriptive Values in the U.S. Dataset (Study 5)

Measures	<i>M (SD)</i>	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) Importance religiosity	3.24 (2.29)	–							
(2) Conspiracy mentality	3.72 (1.45)	.272**	–						
(3) Conspiracy beliefs	3.16 (1.59)	.356**	.752**	–					
(4) Political orientation	41.26 (31.60)	.486**	.278**	.328**	–				
(5) Intrinsic religiosity	3.05 (2.06)	.926**	.259**	.353**	.448**	–			
(6) Extrinsic religiosity	2.79 (1.55)	.675**	.205**	.291**	.327**	.722**	–		
(7) Religious quest	3.19 (1.64)	.378**	.128**	.172**	.029	.417**	.560**	–	
(8) NAOS	3.00 (1.50)	.428**	.388**	.451**	.150**	.462**	.566**	.414**	–
(9) Supernatural beliefs	2.25 (1.15)	.293**	.407**	.476**	.093*	.296**	.460**	.295**	.718**

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

$\alpha = .80$ ) and 5 specific CTs items ( $\alpha = .84$ , e.g., “The cure for cancer actually exists but is being suppressed.”; other topics: Coronavirus, Kennedy assassination, 9/11, power of nonelected officials) into the questionnaire. All scales had a 7-point Likert response format from “Strongly disagree” to “Strongly agree.”

## Results

As predicted in Hypothesis 1, the intercorrelations between religiosity and conspiracy mentality as well as between religiosity and conspiracy beliefs were significant with medium effect size (Table 5). The study also yielded evidence in favor of Hypothesis 2: Correlations went substantially down when controlling for political orientation in case of the mentality,  $r_{\text{part.}} = .163$  (formerly.272),  $p < .001$ , and in case of the conspiracy beliefs,  $r_{\text{part.}} = .239$  (formerly.356),  $p < .001$ . The indirect effects of political attitudes were significant (mentality: 0.196, 95% CI [0.126, 0.268]; conspiracy beliefs: 0.196, 95% CI [0.135, 0.260]).

The pattern of results concerning supernatural beliefs yielded important exploratory findings. When including political attitudes and supernatural beliefs as covariates, the partial correlation with religiosity breaks down to  $r_{\text{part.}} = .057$  ( $p = .203$ ) for the mentality and to  $r_{\text{part.}} = .123$  ( $p = .006$ ) for conspiracy beliefs. The overlapping constructs of New Age spirituality ( $\beta = .138$ ,  $p = .025$ ) and supernatural beliefs ( $\beta = .268$ ,  $p < .001$ ) are more strongly connected to conspiracy mentality than religiosity ( $\beta = .135$ ,  $p = .003$ ) in a joint regression ( $R^2 = .20$ ). The medium to high correlations between supernatural beliefs and conspiracy mentality,  $r_{\text{part.}} = .399$  (formerly.407),  $p < .001$ , and conspiracy beliefs,  $r_{\text{part.}} = .478$  (formerly.476),  $p < .001$ , are not significantly affected by political attitudes.

The results further indicate that the single-item religiosity scale basically measures intrinsic religiosity (only significant predictor among all three facets,  $\beta = .92$ ,  $p < .001$ ,  $R^2 = .86$ ). Intrinsic religiosity was also the only significant dimension when using the three religious orientations to predict conspiracy mentality,  $\beta = .231$ ,  $p < .001$ ,  $R^2 = .07$ , and to predict the endorsement of specific conspiracy beliefs,  $\beta = .298$ ,  $p < .001$ ,  $R^2 = .13$ .

## Discussion

Replicating the results from the previous study, Study 5 returned positive correlations of medium size between religiosity and measures of CT endorsement in the U.S. context. The correlation is largely due to overlaps with political orientation and supernatural beliefs. Thus, compared to the previously examined European countries, the relation between religiosity and

CT endorsement in the United States appears to be more laden with political ideologies and shared spiritual/supernatural features (complement hypothesis) but less with need-based similarities (surrogate hypothesis). Among the three religious' orientations (quest, intrinsic, extrinsic), intrinsic religiosity appears to be most important for the CT endorsement. Again, this speaks against the importance of social and epistemic psychological needs, indirectly represented by the extrinsic and quest dimensions.

The exploratory analyses demonstrated that the spiritual/supernatural facet is more strongly related but less politicized than the religious dimension in the context of CT endorsement. Correlations between supernatural beliefs and CT endorsement suggest ideological and cognitive overlaps on other levels than political ones. This is compatible with results from Jasinskaja-Lahti and Jetten (2019) who found a significant positive correlation between the general importance of worldview and conspiracy mentality only among those with a (supernatural) belief in God.

## GENERAL DISCUSSION

The aim of the present study was to examine the relation between (mainly Christian) religiosity and the endorsement of CTs and if this correlation can indirectly be better ascribed to cognitive and ideological overlaps (positively correlated; H2, *complement hypothesis*) or to competing beliefs fulfilling the same needs (negatively correlated; H1 *surrogate hypothesis*). Furthermore, we expected lower correlations for the rather need-based conspiracy mentality—a general tendency to see the world governed by hidden forces—compared to rather ideologically laden specific conspiracy beliefs and more pronounced correlations in countries with higher levels of average religiosity.

The mere correlation of the endorsement of specific CTs with religiosity was significantly positive according to a meta-analysis (Study 1) and datasets from Poland (Study 3) and the United States (Studies 4/5). These relations share covariance to a large extent with political orientation, that is, on the left-right continuum. After controlling for political orientation, correlations of conspiracy beliefs and conspiracy mentality with religiosity decreased substantially (the United States and Poland). Conspiracy mentality showed either modest negative (Poland and Germany) or modest positive correlations (the United States and meta-analysis) with religiosity. The conclusions from these findings are twofold.

First, the study yielded predominantly evidence in favor of the cognitive-ideological complement hypothesis. The positive correlations suggest that similarities in the cognitive and explanatory style—like assuming hidden powers behind events—speak to the same persons and dominate the relation between CT endorsement and religiosity. Also, only intrinsic religiosity was related to CT endorsement whereas the other religious orientations quest and extrinsic religiosity did not play a role in this context. Overlaps between religions and specific CTs appear to be manifested in deeper cognitions and convictions rather than on need-based social or superficial levels or a joint search for meaning (epistemic need). Furthermore, shared political attitudes between religiosity and the endorsement of specific CTs demonstrate that they are embedded in a complex and partly overlapping belief system. The suspicious answers to societal and political questions that are reflected in the endorsement of CTs are rather dominated by shared (political) ideologies than by other competing facets of religiosity (e.g., need based). However, results also supported the need-based surrogate hypothesis in some aspects, presumably due to already fulfilled needs making individuals more content and less skeptical or mistrusting. This implication was suggested by higher correlations for the ideologically driven and content-contaminated specific conspiracy beliefs than for the more needs-related and broader conspiracy mentality as well as by small negative correlations between religiosity and the competing conspiracy mentality (for the European countries Poland and Germany), albeit not in the United States.

Second, national contexts are also important. We observed countries with comparably strong intercorrelations between religiosity, conspiracy beliefs/mentality, and political orientation (Poland and especially the United States), and another country (Germany) with very small or zero correlations between these constructs. Only if religiosity tends to be rooted in politically more right-oriented social groups (e.g., the United States), then the relation between religiosity and the endorsement of CTs is substantially pulled into a positive direction due to ideological overlaps. Interestingly, this could be interpreted in a broader ideological framework as the linear relationship (vs. curvilinear) between political ideologies and CT endorsement emerges mainly in countries where the political right is also religious. It is further conceivable that the extent of religious fundamentalism explains some variance between countries (see control analyses for Study 4 in the online supporting information). Another important finding is that—even after controlling for political orientation—religiosity seems to differ culturally between the United States and Poland regarding conspiracy mentality and may be attributable to different functions of religions or different strengths of cognitions and ideologies that might dominate other similarities like needs.

However, conventional religiosity should not be equated with spirituality or other modern religions or belief movements like the esoteric *New Age* (for a comparison, see Zinnbauer et al., 1997). Although we demonstrated that they are positively correlated, spirituality seems to be less politicized and less rooted in political contexts. Spirituality and paranormal beliefs are indeed positively predictive of the endorsement of CTs (Enders & Smallpage, 2019; Gligorić et al., 2021; van Prooijen et al., 2018)—even after controlling for political orientation—and alternative religiosity is still a positive predictor of CT beliefs when controlling for religiosity (Ladini, 2022). The term *Conspirituality* summarizes the overlapping social groups with pronounced endorsements of CTs and spirituality combining political disillusionment and alternative worldviews (Ward & Voas, 2011). Presumably, conventional religiosity is an institutionalized mainstream phenomenon that does not appear to have as extreme alternative and stigmatized views as spirituality. But these are only tentative assumptions, and our study has some other limitations.

### Limitations

One of the caveats of the present study is that the present data are collected in predominantly Christian nations that do not necessarily generalize to societies with other dominant religions. From a methodological perspective, it would have been desirable if the exact same variables would have been collected in all datasets for better comparability. However, the questions were highly similar, that is, religiosity was always measured as extent or importance of religiosity, questions about political attitudes mainly differed only in the response formats, and conspiracy mentality items were adapted from the same scale (except for Study 4 measuring general suspicion towards powerful people, but the novel preregistered study in the same country including the mentality scale led to the same pattern of results). The specific conspiracy theories differed considerably between studies from denial of scientific results to (political) events, but the pattern of results was robust (see item analyses in the online supporting information).

Furthermore, the correlational design of the study does not allow one to draw any causal inferences from the results. The temporal order and the causal relationship of the variables remains unclear. Despite not directly inferring theoretical validity from the data, the pattern of results allows us to qualify them as (un)compatible with the two theory-driven hypotheses or to conclude which hypothesis is dominating. Whether people believe in conspiracies and in God might not only follow from their needs for control and certainty on the one hand and their cognitive styles and attributions on the other hand. Both might also be influenced by cues from political and religious leaders and their potential overlap. Theoretically it merely moves the explanatory model from the recipients of such cue to their authors. Do leaders who communicate a worldview of a benevolent and almighty

God also communicate that hidden plots of sinister elites determine political decisions? Or do they tend to rely on either one in a surrogate principle? Although our studies were not set up to test this on the level of leaders, we would still argue that even in the unlikely case that individual beliefs were predominantly the product of a one-way communication by leaders, it is then still informative to test the hypotheses. Independently, the present study offers valuable insights into the research question by analyzing large, cross-national data.

### Implications and Conclusions

Religiosity and CTs appear to share especially (political) ideological, but only to a small extent need-based similarities. Interrelations between political attitudes and religiosity as well as their consequences for conspiracy thinking appear to be partly specific for national contexts. It demonstrates that complex topics like religiosity and general worldviews are better investigated in cross-national studies and not only among frequently examined U.S. samples characterized by a special “intertwining of cultural and religious elements” (Reimer, 1995, p. 456). Further, conventional religiosity needs to be clearly conceptually separated from spirituality and other forms of modern alternative beliefs that are also related to CT endorsement but less to political attitudes.

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### DATA ACCESSIBILITY STATEMENT

The dataset (<https://osf.io/4ektr/>) and the preregistration (<https://aspredicted.org/blind.php?x=2sh6db>) of Study 5 are publicly available. We confirm that this study was registered prior to conducting the research and adheres to the requirements of the *Center for Open Science*.

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### Supporting Information

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

- Study overview of the meta-analysis (Study 1)
- Control analyses with religious fundamentalism (Study 4)
- Items and Correlations (Study 5)