There are Higher Levels of Conspiracy Beliefs in More Corrupt Countries

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Data for Study 1 is accessible at [https://docs.cdn.yougov.com/msvke1lg9d/Globalism2020 Guardian Conspiracy Theories.pdf](https://docs.cdn.yougov.com/msvke1lg9d/Globalism2020%20Guardian%20Conspiracy%20Theories.pdf)

Data for Study 2 is accessible at https://osf.io/qzxv9/?view_only=852910a2c08c42018edf84a0b556aa14

Data for Study 3 is accessible at <https://osf.io/y7ckt/>

The corresponding author of Rutjens et al., 2021 should be contacted for the data used in Study 4.

Online supplementary material, codebook (data dictionary) and analysis codes are available at https://osf.io/bctkd/files/?view_only=e208d813d5264a5ba9c7e1f5e28154ab

The current study is based on secondary analyses of previously published datasets and thus an ethical permission was not required. Similarly, no informed consent was required.

I have no conflict of interest to declare.

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Abstract

In four studies, I found evidence that people living in countries with higher levels of corruption have a greater tendency for conspiracy ideation. In Study 1 (21 countries, $N = 20,207$), participants living in more corrupt countries reported having higher COVID-19 and generic conspiracy beliefs. Study 2 (25 countries, $N = 4,935$), Study 3 (25 countries, $N = 24,424$), and Study 4 (24 countries, $N = 5,973$) replicated the same finding. Internal meta-analysis suggested that this association remained significant after adjusting for other relevant cross-country differences. Studies 1 and 2, but not 3 and 4, also showed that corruption moderated the association between individuals' gullibility (i.e., lack of education) and their conspiracy beliefs, and this association was significant only in low corruption countries. The findings suggest that country-level corruption breeds conspiracy beliefs and moderates the effect of individuals' gullibility to conspiracy theories.

Keywords: conspiracy, corruption, COVID-19, education, analytical thinking, science literacy

There are Higher Levels of Conspiracy Beliefs in More Corrupt Countries

The common denominator of all conspiracy theories is the suspicion that people in power are pursuing a secret agenda. Although most of these theories are completely detached from reality and can go as far as believing the world is ruled by shape-shifting reptilian aliens (Oksman, 2016), not all conspiracy theories have turned out to be incorrect: the CIA did indeed conduct secret mind-control experiments during the Cold War (Horrock, 1977) and, in the infamous Tuskegee syphilis experiment, healthcare officials did intentionally stop treating Black male patients for syphilis to monitor the natural course of the illness (Warren, Forrow, Hodge, & Truog, 2020). At first glance, these appear to be conspiracy theories made up and believed by cognitively rather unsophisticated people, but they were real incidents. Secretive and sinister plans sometimes are carried out, especially in highly corrupt countries in which a small circle of elites frequently exploits the majority (e.g., Jain, 2001). In this paper, I argue that conspiracy beliefs are not only about individuals' gullibility but also about situational factors and provide evidence that there is significantly higher belief in conspiracy theories in countries with higher "actual conspiracies", which is operationalized as the level of corruption in the country. This does not mean that conspiracy beliefs are limited to the acts of corruption, as there are many different forms of conspiracy beliefs (e.g., Nera, Wagner-Egger, Bertin, Douglas, & Klein, 2021). However, corruption stands out as one of the ideal proxy variables that can be used to quantify the actual prevalence of malevolent and hidden allegiances in a certain social context.

Individuals' Gullibility and the Conspiracy Beliefs

The psychological literature on conspiracy theories generally focuses on individual-level factors that make certain people more receptive to such unfounded beliefs: People with an intuitive (as opposed to analytical) thinking style (e.g., Alper, Bayrak, & Yilmaz, 2020; Pennycook, Fugelsang, & Koehler, 2015; Swami, Voracek, Stieger, Tran, & Furnham, 2014),

lower level of education (Douglas, Sutton, Callan, Dawtry, & Harvey, 2016; van Prooijen, 2017), hypersensitive agency detection (Douglas et al., 2016), illusory pattern perception (van Prooijen, Douglas, & De Inocencio, 2018), and lack of scientific reasoning (Čavojová, Šrol, & Ballová Mikušková, 2020a; Čavojová, Šrol, & Jurkovič, 2020b) are more likely to believe in conspiracy theories. Similarly, actively open-minded thinking (Erceg, Ružojčić, & Galić, 2020; Rizeq, Flora, & Toplak, 2021) and need for cognition (Lobato, Mendoza, Sims, & Chin, 2014) negatively predict conspiracy beliefs. In the current research, I define gullibility as the lack of rational reasoning abilities, which are known to correlate with conspiracy beliefs, and use both status-based (educational attainment, which is a proxy for estimating someone's reasoning skills; e.g., van Prooijen, 2017) and performance-based (analytical thinking and science literacy) indicators of gullibility.

Thus, the results suggest that different forms of gullibility are related to susceptibility to conspiracy beliefs. However, this is not the only factor as the social context is also related to the level of conspiracy beliefs.

The Social Context and the Conspiracy Beliefs

Human societies are organized across a spectrum of social inclusiveness (Acemoglu & Robinson, 2012): Some countries possess politically and economically *inclusive* institutions that distribute power broadly, include as many people as possible in the decision-making. These are usually democracies with institutionalized protection of individuals' rights and freedoms where everyone is equal before the law. Less inclusive (or more extractive) countries, on the other hand, are organized around institutions that aim to exploit the majority to provide for a small group of elites. These are usually non-democratic, totalitarian systems where the majority are overexploited, treated unfairly and excluded from the decision-making processes. These systems are intrinsically unfair and make it extremely difficult for regular people to breach the inner circle of prosperity (see Acemoglu & Robinson, 2012, for a

historical overview). In these countries, the entire system is rigged in a way that always benefits a small coalition of elites at the expense of the regular people that make up the majority. I argue that looking at the level of *corruption* in a country is one way to distinguish these different types of political systems and people living in countries with high levels of corruption would have a greater receptivity to conspiracy theories. In highly corrupt countries, there is less transparency and more unfairness (e.g., Ariely & Uslander, 2017; Jain, 2001) which would serve as cues to suggest that conspiracies might be taking place. Therefore, conspiracy theories would appear more believable in countries suffering from high levels of corruption. Although it is true that individual-level differences cannot always be deduced from macro-level variables (see Lavrakas, 2008), I argue that corruption as a country-level variable would be able to explain why some groups (i.e., nationally representative samples from certain countries), not individuals, have higher average conspiracy beliefs than others.

Similar arguments have been made before: The salience of antagonistic groups has been proposed to increase conspiracy beliefs (van Prooijen, 2020). Belief in conspiracy theories could be an evolutionary adaptation to detect ill-intentioned coalitions and rival groups (van Prooijen & van Vugt, 2018). Experimental studies on economic games have documented that people can easily slip into free-riding when given the chance (e.g., O’Gorman, Henrich, & Van Vugt, 2009), and can collaborate with others to engage in corruption and bribery to maximize their benefits at the expense of others (Muthukrishna, Francois, Pourahmadi, & Henrich, 2017; Weisel & Shalvi, 2015). It has been theorized that entire human morality has evolved to solve cooperation-related problems such as these (Curry, Whitehouse, & Mullins, 2019), and humans have an evolved tendency to look for and punish cheaters (e.g., Cosmides, Barrett, & Tooby, 2010), and monitor others’ cooperative and competitive behaviors to identify alliances (Kurzban, Tooby, & Cosmides, 2001; Pietraszewski, Cosmides, & Tooby, 2014; see van Prooijen & van Vugt, 2018).

Corruption has a self-perpetuating role of enabling further corruption: Punishing free-riders is an important way to sustain large-scale cooperation (Gächter, Renner, & Sefton, 2008; O’Gorman et al., 2009; Sigmund, De Silva, Traulsen, & Hauert, 2010); however, the very institutions that are expected to punish the violators (e.g., the judicial system) can fall into the hands of corrupt alliances. Experimental studies have shown that there is an increase in corruption when it is possible to bribe the punitive authority (Muthukrishna et al., 2017). This resembles the chronic situation in more corrupt societies. In countries where corruption is very salient, people would be more eager to participate in corruptive alliances; thus, the salience of corruption would render conspiracy theories sound more reasonable.

Similarly, it has been previously argued that perceived unreliability of the authoritative sources (Pierre, 2020) and distrust in institutions (van Prooijen, Spadaro, & Wang, 2021) are likely to increase conspiracy beliefs, and lack of social justice could be the driving force behind conspiracy theories (van Prooijen, 2021). Distrust not only in institutions but also in other people (e.g., Abalakina-Paap, Stephan, Craig, & Gregory, 1999; Douglas & Sutton, 2018; Goertzel, 1994; van Prooijen & Acker, 2015), media (e.g., Bruder & Kunert, 2021; Su, Lee, Xiao, Li, & Shu, 2021), and science (e.g., Constantinou, Kagialis, & Karekla, 2020; Erceg et al., 2020) are positively related to the beliefs in conspiracy theories. As corruption is negatively related to social trust (Richey, 2010; Rothstein & Eek, 2009), people living in highly corrupt places would be expected to be more suspicious of others, and such suspicion would breed conspiracy beliefs (see Alper & Imhoff, 2022).

In addition to arguing that country-level corruption would predict higher levels of conspiracy beliefs, I also propose that corruption would interact with factors related to individuals’ gullibility, like education level or thinking ability. To have a strong association between gullibility and conspiracy beliefs, conspiracy beliefs should be unreasonable. However, in countries with high levels of corruption, people would be relatively more likely

to take illegal and unethical actions. Past research showed that people who grew up in more corrupt societies are more likely to engage in bribery (Muthukrishna et al., 2017) and act dishonestly (Gächter & Schulz, 2016) in experimental games. Therefore it would be expected that the negative association of conspiracy beliefs with education and thinking ability would be stronger in less corrupt countries (where suspicions of conspiracies would be relatively less realistic) and weaker in more corrupt countries (where suspicions of conspiracies would be relatively more realistic).

Overview of the Current Research

Based on the reasoning given above, I hypothesize that there is higher belief in conspiracy theories in countries with higher levels of corruption. However, considering that this association could be confounded by other cross-country differences, I also check the robustness of this relationship by controlling for potentially relevant differences between countries: (1) *wealth* (gross domestic product per capita based on purchasing power parity, constant 2017 international \$; The World Bank, 2021), as the difference between less and more corrupt countries might simply be a reflection of the difference between the developed and the developing nations; (2) *educational performance* (country-level mean performance in mathematics, science, and reading; Programme for International Student Assessment, 2019), as the difference could be due to some countries providing better education and reducing the mean gullibility of their citizens; cultural differences in (3) *individualism*, (4) *power distance*, and (5) *masculinity*, as recent research showed that individualism negatively and power distance and masculinity positively predict conspiracy beliefs (Adam-Troian et al., 2020; van Prooijen & Song, 2021); and (6) cultural differences in *uncertainty avoidance*, as individual-level uncertainty avoidance was shown to be positively related to conspiracy beliefs in some studies (e.g., Alper et al., 2020; Larsen, Donaldson, Liew, & Mohanty, 2021; see Moulding et al., 2016, for a contradicting result). I hypothesize that the association between corruption and

conspiracy beliefs would remain significant, even after adjusting for differences in these six control variables. In the following four studies, I test both the main association between corruption and conspiracy beliefs and whether this association remains significant after adjusting for control variables. Study 1 (21 countries, $N = 20,207$) tests these associations separately for COVID-19 and generic conspiracy beliefs. Study 2 (25 countries, $N = 4,935$), Study 3 (25 countries, $N = 24,424$), and Study 4 (24 countries, $N = 5,973$) replicates the same procedure on generic, COVID-19, and vaccine conspiracy beliefs, respectively (see the Supplementary Material, SM, for the list of countries and their scores on the country-level variables).

In all four studies, I also investigate how the associations of conspiracy beliefs with country-level educational performance (Study 1), individual-level education status (Study 2), individual-level analytic thinking ability (Study 3), and individual-level science literacy (Study 4) are moderated by the country-level corruption.¹ I hypothesize that these associations would be stronger in less corrupt countries, as compared to countries with high corruption.

[Online supplementary material \(SM\), codebook \(data dictionary\), analysis codes, and hyperlinks for access to the datasets are available at
https://osf.io/bctkd/files/?view_only=e208d813d5264a5ba9c7e1f5e28154ab.](https://osf.io/bctkd/files/?view_only=e208d813d5264a5ba9c7e1f5e28154ab)

Study 1

The dataset used in Study 1 does not include information on individual-level education status. Thus, in Study 1, I used mean country-level educational performance on mathematics, science, and reading (Programme for International Student Assessment, 2019) as both a control variable to be adjusted for in the analyses tapping into the relationship between

¹ An additional study is reported as an online supplementary material at [https://osf.io/uk4xd/?view_only=e208d813d5264a5ba9c7e1f5e28154ab.](https://osf.io/uk4xd/?view_only=e208d813d5264a5ba9c7e1f5e28154ab)

corruption and conspiracy beliefs, and a predictor variable in the analyses looking into how corruption moderates the association between education and conspiracy beliefs.

Data

As a part of its “Globalism Project”, the YouGov-Cambridge Center (YouGov-Cambridge Globalism Project, 2020) conducted an international survey in 21 countries on beliefs in different types of COVID-19-related and other generic conspiracy theories. In all countries, nationally representative samples were recruited. The final sample size was 20,207. The summary data are publicly accessible at

[https://docs.cdn.yougov.com/msvke1lg9d/Globalism2020 Guardian Conspiracy Theories.pdf](https://docs.cdn.yougov.com/msvke1lg9d/Globalism2020%20Guardian%20Conspiracy%20Theories.pdf).²

Materials

Conspiracy Beliefs. Participants stated how much they agreed with each of the conspiracy theories on a 5-point scale (1 = *definitely true*; 4 = *definitely false*; 5 = *don't know*). There were seven items on COVID-19 conspiracy theories (e.g., “Coronavirus is a myth created by some powerful forces, and the virus does not really exist”) and seven items on other generic conspiracy theories (e.g., “The 1969 moon landings were faked”) (see the SM for the list of items). The participants who picked the “don't know” option were excluded, and the scores from 1 to 4 were reversed so that a higher score indicated a higher level of belief in the conspiracy theory. For both COVID-19-related ($\alpha = .98$) and generic conspiracy theories ($\alpha = .98$), there were high levels of internal consistency.³

² Percentage scores were reported in the publicly available data. I used the counts version of the same data in the current study.

³ Four items were excluded from the analyses, because they could not be considered as conspiracy theories. See the online supplementary material for more detailed explanation.

Country-Level Indicators. The following country-level indicators were used in the analyses.

Corruption. Countries' corruption scores were retrieved from the Corruption Perceptions Index (Transparency International, 2020; see https://images.transparencycdn.org/images/CPI2020_Report_EN_0802-WEB-1_2021-02-08-103053.pdf for methodological details). In its original form, higher scores indicated lower corruption. To avoid confusion, I multiplied all scores with -1, so that higher score indicated higher corruption.

GDP. As a measure of wealth, gross domestic product (GDP) per capita based on purchasing power parity (constant 2017 international \$; The World Bank, 2021) was used. A higher score indicated greater wealth.

Educational Performance. Scores on country-level educational performance were retrieved from the PISA 2018 results (Programme for International Student Assessment, 2019). PISA results provide countries' average scores on reading, mathematics, and science. The scores are available at https://www.oecd.org/pisa/Combined_Executive_Summaries_PISA_2018.pdf. In the current study, the mean scores of educational performance in reading, mathematics, and science were used.

Cultural differences. Country-level scores on the cultural dimensions of individualism (i.e., the degree to which a culture emphasizes individual autonomy over group belonging), power distance (i.e., the degree to which inequalities of power are expected and perceived as justified in a culture), masculinity (i.e., the degree to which a culture emphasizes masculine traits, such as assertiveness, achievement, and success), and uncertainty avoidance (i.e., the degree to which a society tolerates ambiguity) were retrieved from Hofstede, Hofstede, and

Minkov (2010). The dataset is available at <http://geerthofstede.com/wp-content/uploads/2016/08/6-dimensions-for-website-2015-08-16.xls>. Higher scores indicated higher level of the cultural orientations in question.

Analysis Procedure

I conducted a series of linear mixed model analyses, using GAMLj package of the Jamovi statistical software (The Jamovi Project, 2021). Data were clustered based on the countries, the intercept of the model was treated as a random coefficient, and a restricted maximum likelihood estimation was used. All covariates in the model were standardized by calculating their z -scores.

In the first set of analyses, the predictor was country-level corruption while the dependent variable was either COVID-19 or generic conspiracy beliefs of the individuals. In the next set of analyses, there were seven predictors, including corruption and the six control variables (PISA, GDP, individualism, power distance, masculinity, and uncertainty avoidance) and the dependent variable was either COVID-19 or generic conspiracy beliefs of the individuals. These analyses aimed to investigate the association between corruption and conspiracy beliefs while controlling for other cross-country differences.

Next, I investigated the potential interactions: The dependent variable was the individual-level COVID-19 conspiracy beliefs while the predictors were the country-level educational performance, country-level corruption, and the interaction between these two predictors. I then re-ran the same analysis with generic conspiracy beliefs as the dependent variable. Lastly, I analyzed the association between educational performance and conspiracy beliefs for low (-1 SD), mean-level, and high ($+1$ SD) corruption countries.

Countries with missing values on country-level variables were excluded from the analyses which include the variables in question.

Results

Linear mixed model analyses showed that corruption was positively associated with both COVID-19-related, $b = .181$, $SE = .029$, 95% CI [.124, .238], $t(18.915) = 6.215$, $p < .001$, and generic conspiracy beliefs, $b = .199$, $SE = .030$, 95% CI [.134, .259], $t(18.872) = 6.531$, $p < .001$. The fixed and random effects together explained 6.3% of the variance in COVID-19-related and 6.6% of the variance in generic conspiracy beliefs. When GDP, mean country-level education performance, individualism, power distance, masculinity, and uncertainty avoidance were entered into the model, the positive association between corruption and COVID-19-related, $b = .340$, $SE = .054$, 95% CI [.234, .445], $t(9.170) = 6.329$, $p < .001$, and generic conspiracy beliefs, $b = .301$, $SE = .070$, 95% CI [.164, .438], $t(9.020) = 4.303$, $p = .002$, remained significant (see Table 1 and 2).

Table 1

Results of Linear Mixed Model Analysis of the Associations of Corruption and Other Control Variables with COVID-19 Conspiracy Beliefs in Study 1

Predictors	b	SE	95% Confidence Interval		Df	t	p
			Lower	Upper			
(Intercept)	1.78947	0.01842	1.75338	1.82557	9.10663	97.17431	< .001
Corruption	0.33967	0.05367	0.23449	0.44486	9.16983	6.32942	< .001
Mean PISA score	0.17196	0.04286	0.08795	0.25597	9.25847	4.01166	0.003
GDP	0.08736	0.04768	-0.00609	0.18082	8.98988	1.83215	0.100
Individualism	-0.05035	0.03725	-0.12335	0.02265	9.18471	-1.35189	0.209
Power Distance	-0.00319	0.04299	-0.08745	0.08107	9.18501	-0.07422	0.942
Masculinity	-0.04098	0.02519	-0.09034	0.00839	9.18765	-1.62679	0.138
Uncertainty Avoidance	0.01851	0.04234	-0.06448	0.10150	9.13640	0.43712	0.672

Table 2

Results of Linear Mixed Model Analysis of the Associations of Corruption and Other Control Variables with Generic Conspiracy Beliefs in Study 1

Predictors	b	SE	95% Confidence Interval		Df	t	p
			Lower	Upper			
(Intercept)	1.88833	0.02398	1.84133	1.93534	8.99672	78.73530	< .001
Corruption	0.30120	0.06999	0.16402	0.43837	9.01993	4.30344	0.002
Mean PISA score	0.12405	0.05595	0.01438	0.23372	9.06713	2.21703	0.054
GDP	0.10221	0.06223	-0.01976	0.22417	8.93909	1.64242	0.135
Individualism	-0.11612	0.04853	-0.21124	-0.02101	9.04431	-2.39279	0.040
Power Distance	-0.01594	0.05605	-0.12581	0.09392	9.01232	-0.28445	0.782
Masculinity	-0.00182	0.03261	-0.06574	0.06209	9.06108	-0.05590	0.957
Uncertainty Avoidance	-0.02757	0.05504	-0.13545	0.08031	8.98699	-0.50087	0.629

Next, I investigated whether corruption moderates the association between educational performance and conspiracy beliefs. I conducted two separate linear mixed model analyses, one for COVID-19 and one for generic conspiracy beliefs, in which corruption, PISA, and the interaction between corruption and PISA were the predictors. For COVID-19 conspiracy beliefs, the association of corruption, $b = .145$, $SE = .043$, 95% CI [.061, .229], $t(14.098) = 3.365$, $p = .005$, was significant while educational performance, $b = -.080$, $SE = .053$, 95% CI [-.184, .024], $t(14.229) = -1.505$, $p = .154$, had a nonsignificant association. The interaction between corruption and educational performance, $b = .125$, $SE = .044$, 95% CI [.039, .211], $t(14.041) = 2.841$, $p = .013$, was significant. The association between educational performance and COVID-19 conspiracy beliefs was significant in low, $b = -.205$, $SE = .088$, 95% CI [-.393, -.016], $t(14.157) = -2.325$, $p = .035$, but not in mean-level, $b = -.080$, $SE = .053$, 95% CI [-.194, .033], $t(14.229) = -1.505$, $p = .154$, or high corruption countries, $b = .045$, $SE = .042$, 95% CI [-.045, .134], $t(14.132) = 1.071$, $p = .302$. Thus, the negative association between educational performance and COVID-19 conspiracy beliefs was significant only in less corrupt countries (Figure 1).

Figure 1. The association between country-level educational performance and (a) COVID-19 and (b) generic conspiracy beliefs for different levels of country-level corruption in Study 1. Shades represent 95% confidence intervals.

For generic conspiracy beliefs, the associations of corruption, $b = .118$, $SE = .050$, 95% CI [.020, .217], $t(14.086) = 2.353$, $p = .034$, was significant while, educational performance, $b = -.093$, $SE = .061$, 95% CI [-.213, .026], $t(14.278) = -1.537$, $p = .146$, and the interaction, $b = .077$, $SE = .051$, 95% CI [-.023, .176], $t(14.030) = 1.509$, $p = .153$, were nonsignificant. The association between corruption and conspiracy beliefs was nonsignificant in low, $b = -.170$, $SE = .101$, 95% CI [-.386, .046], $t(14.188) = -1.684$, $p = .114$, mean-level, $b = -.093$, $SE = .061$, 95% CI [-.224, .037], $t(14.278) = -1.537$, $p = .146$, and high, $b = -.017$, $SE = .048$, 95% CI [-.121, .087], $t(14.119) = -.347$, $p = .733$, corruption countries. However, the pattern of results resembled the results on COVID-19 conspiracy beliefs as the association between educational performance and conspiracy beliefs appeared relatively stronger in low corruption countries (see Figure 1).

Study 2

One limitation of Study 1 was that country-level PISA scores were assigned to each participant, potentially underplaying within-country educational differences. Study 2 replicates Study 1 using individual-level education status, rather than country-level educational performance, in the moderation analysis.

Data

Data were retrieved from an existing dataset (Hornsey, Harris, & Fielding, 2018). Data were collected from the following 25 countries. All samples were nationally representative in terms of gender and age distributions. The total N was 5,323 in the original study. Participants with missing values were excluded, which resulted in an N of 4,935. The dataset is available at https://osf.io/qzxv9/?view_only=852910a2c08c42018edf84a0b556aa14.

Materials and Procedure

On a 5-point scale (1 = *strongly disagree*, 5 = *strongly agree*), participants stated their agreement with four conspiracy theories on the assassination of J. F. Kennedy, the death of Princess Diana, 9/11 attacks, and New World Order (e.g., “The assassination of John F. Kennedy was not committed by the lone gunman Lee Harvey Oswald but was rather a detailed organized conspiracy to kill the President”) (see the SM for the complete list of items). The items had a good internal consistency ($\alpha = .79$), and their mean score was calculated.

Participants reported their educational status on a 5-point scale (1 = *less than high school*, 2 = *high school*, 3 = *trade school*, 4 = *university*, 5 = *postgraduate*).

The same country-level indicators as in Study 1 were used. The analysis procedure was the same as Study 1, except that individual education status (standardized by calculating its z -score), not country-level educational performance, was used as the predictor in the moderation analyses.

Results

Corruption level was positively related to conspiracy beliefs, $b = .175$, $SE = .045$, 95% CI [.088, .263], $t(23.016) = 3.925$, $p < .001$. The fixed and random effects together explained 7.1% of the variance in conspiracy beliefs. When GDP, mean country-level education performance, individualism, power distance, masculinity, and uncertainty avoidance were entered into the model, the positive association between corruption and conspiracy beliefs was not significant, $b = .041$, $SE = .080$, 95% CI [-.116, .198], $t(15.152) = .510$, $p = .618$ (see Table 3).

Table 3

Results of Linear Mixed Model Analysis of the Associations of Corruption and Other Control Variables with Conspiracy Beliefs in Study 2

Predictors	b	SE	95% Confidence Interval		Df	t	p
			Lower	Upper			
(Intercept)	3.00368	0.03571	2.93369	3.07367	15.10262	84.11233	< .001
Corruption	0.04090	0.08026	-0.11641	0.19820	15.15223	0.50955	0.618
Mean PISA score	0.00041	0.05331	-0.10409	0.10490	15.14302	0.00760	0.994
GDP	-0.01545	0.06143	-0.13585	0.10495	15.20060	-0.25145	0.805
Individualism	-0.22440	0.06058	-0.34314	-0.10567	15.11033	-3.70415	0.002
Power Distance	-0.01956	0.06961	-0.15599	0.11686	15.11555	-0.28104	0.782
Masculinity	0.06091	0.03940	-0.01631	0.13813	15.28776	1.54595	0.143
Uncertainty Avoidance	0.02621	0.04069	-0.05354	0.10597	15.14935	0.64420	0.529

Next, I investigated whether country-level corruption moderated the association between individuals' education status and conspiracy beliefs. Linear mixed model analysis showed that corruption, $b = .183$, $SE = .048$, 95% CI [.090, .277], $t(23.135) = 3.852$, $p < .001$, education status, $b = -.051$, $SE = .015$, 95% CI [-.081, -.021], $t(4960.457) = -3.292$, $p = .001$, and the interaction between these two variables, $b = .035$, $SE = .016$, 95% CI [.003, .066], $t(4588.276) = 2.149$, $p = .032$, had significant associations with conspiracy beliefs. Higher education status predicted lower conspiracy beliefs in low, $b = -.085$, $SE = .021$, 95% CI [-.126, -.045], $t(4722.978) = -4.143$, $p < .001$, and mean-level corruption countries, $b = -.051$, $SE = .015$, 95% CI [-.081, -.0205], $t(4690.457) = -3.292$, $p = .001$, while the association was nonsignificant in high corruption countries, $b = -.016$, $SE = .024$, 95% CI [-.063, .031], $t(4497.507) = -.680$, $p = .497$ (see Figure 2). Similarly to Study 1, the relationship between education and conspiracy beliefs was stronger in low corruption countries.

Figure 2. The association between individual education status and conspiracy beliefs for different levels of country-level corruption in Study 2. Shades represent 95% confidence intervals.

Study 3

Studies 1 and 2 utilized education status as a proxy for individual gullibility to conspiracy theories. However, a more direct measure of gullibility would be individuals' thinking ability. Higher analytical thinking ability is related to lower conspiracy beliefs (Alper et al., 2020; Pennycook, Cheyne, Koehler, & Fugelsang, 2020; Swami et al., 2014; van Mulukom, Pummerer, Alper, Bai, Čavojová, Farias, ... & Žeželj, 2022; van Prooijen, 2017; Yelbuz, Madan, & Alper, 2022). Study 3 replicates previous studies using individual-level analytic thinking ability, rather than individual- or country-level education. Data were retrieved from Van Bavel et al. (2022) and only nationally representative samples were included (24,424 participants from 25 countries). The raw dataset is available at <https://osf.io/y7ckt/>.

Materials and Procedure

COVID-19 conspiracy beliefs were measured using four items (e.g., “The coronavirus (COVID-19) is a hoax invented by interest groups for financial gains”) to which participants responded using an 11-point scale (0 = *strongly disagree*, 10 = *strongly agree*). Cronbach’s alpha score was .91.

Analytic thinking ability was measured using the Cognitive Reflection Test (CRT; Frederick, 2005; Primi, Morsanyi, Chiesi, Donati, & Hamilton, 2016). CRT included three questions (e.g., “If it takes 3 nurses 3 minutes to measure the blood pressure of 3 patients, how long would it take 300 nurses to measure the blood pressure of 300 patients?”) for which the intuitive answer is incorrect while the correct answer required more reflective thinking. Incorrect answers were coded as 0 and correct answers were coded as 1. Sum score was calculated for each participant. Cronbach’s alpha score was .64.

Country-level measures (corruption and other control variables) were the same as Study 1 and 2. The analysis procedure was the same as previous studies, except for that CRT score (analytic thinking ability; standardized by calculating its z-score), not country- or individual-level education, was used as the predictor in the moderation analyses.

Results

Linear mixed model analyses showed that corruption was positively associated with COVID-19 conspiracy beliefs, $b = .664$, $SE = .160$, 95% CI [.350, .979], $t(23.094) = 4.139$, $p < .001$. The fixed and random effects together explained 13.5% of the variance in conspiracy beliefs. When GDP, mean country-level education performance, individualism, power distance, masculinity, and uncertainty avoidance were entered into the model, the association between corruption and COVID-19 conspiracy beliefs was nonsignificant, $b = .514$, $SE = .365$, 95% CI [-.202, 1.230], $t(14.978) = 1.408$, $p = .180$ (see Table 4).

Table 4

Results of Linear Mixed Model Analysis of the Associations of Corruption and Other Control Variables with COVID-19 Conspiracy Beliefs in Study 3

Predictors	B	SE	95% Confidence Interval		df	t	p
			Lower	Upper			
(Intercept)	3.50107	0.16804	3.17171	3.83042	14.90402	20.83459	< .001
Corruption	0.51429	0.36525	-0.20160	1.23017	14.97788	1.40802	0.180
Mean PISA score	-0.14488	0.17906	-0.49582	0.20606	14.97149	-0.80914	0.431
GDP	0.38341	0.28146	-0.16825	0.93506	15.00746	1.36220	0.193
Individualism	0.19375	0.23202	-0.26100	0.64851	14.89833	0.83507	0.417
Power Distance	0.57914	0.27191	0.04620	1.11207	14.84648	2.12988	0.050
Masculinity	0.07209	0.17455	-0.27003	0.41421	14.92800	0.41301	0.685
Uncertainty Avoidance	0.33089	0.17437	-0.01086	0.67265	14.96068	1.89766	0.077

Next, I investigated whether the association between analytical thinking and conspiracy beliefs was moderated by the country-level corruption. Corruption, $b = .636$, $SE = .153$, 95% CI [.337, .935], $t(23.100) = 4.169$, $p < .001$, and analytical thinking ability, $b = -.636$, $SE = .019$, 95% CI [-.673, -.600], $t(23532.597) = -34.242$, $p < .001$, were significant predictors but the interaction between these two factors, $b = .009$, $SE = .019$, 95% CI [-.028, .047], $t(23508.403) = .496$, $p = .620$, was not. Thus, there was no significant interaction between individual-level analytical thinking and country-level corruption in predicting COVID-19 conspiracy beliefs. Analytical thinking negatively predicted conspiracy beliefs in low, $b = -.646$, $SE = .026$, 95% CI [-.696, -.596], $t(23536.144) = -25.267$, $p < .001$, mean-level, $b = -.636$, $SE = .019$, 95% CI [-.673, -.600], $t(23532.597) = -34.242$, $p < .001$, and high corruption, $b = -.627$, $SE = .028$, 95% CI [-.681, -.573], $t(23476.550) = -22.718$, $p < .001$ countries (see Figure 3).

Figure 3. The association between analytical thinking ability and COVID-19 conspiracy beliefs for different levels of country-level corruption in Study 3. Shades represent 95% confidence intervals.

Study 4

Similar to Study 3, Study 4 utilizes a more direct measure of cognitive sophistication, namely science literacy, instead of education status. Science literacy scale measures basic understanding of scientific facts (Rutjens et al., 2021). The dependent variable in Study 4 is a conspiracy belief regarding vaccines, a science-related subject, thus science literacy is anticipated to be a more direct measure of gullibility to such conspiracy beliefs.

Data

Data were retrieved from an international project on science skepticism (Rutjens et al., 2021).⁴ The sample consisted of 5,973 participants from 24 countries. Except for four countries (Brazil, China, Romania, UK), the samples were representative in terms of age, gender, education level, and region.

⁴ The corresponding author of the original research should be contacted for access to the dataset.

Materials and Procedure

Participants completed an 8-item science literacy scale in which they were asked to decide whether each statement (e.g., “All radioactivity is made by humans”) is true or false (Rutjens et al., 2021; see the SM for all items). The potential score for each participant ranged from 0 to 8. Participants also indicated their agreement with the statement “Vaccinations cause autism” on a 7-point scale (1 = *strongly disagree*, 7 = *strongly agree*), which was considered as the level conspiracy belief in this study. This was the only item that reflected a conspiracy belief. Ungrounded beliefs about the hidden side effect of vaccines are one of the most typical conspiracy beliefs (e.g., Jolley & Douglas, 2014) and included in questionnaires designed to measure conspiracy beliefs (e.g., YouGov-Cambridge Globalism Project, 2020).

Country-level variables and the analysis procedure were the same as in the previous studies. The only exception was that science literacy (standardized by calculating its *z*-score), instead of education or analytical thinking ability, was used as the predictor in the moderation analysis.

Results

Higher country-level corruption predicted higher conspiracy belief, $b = .208$, $SE = .080$, 95% CI [.052, .365], $t(21.987) = 2.610$, $p = .016$. The fixed and random effects together explained 10.6% of the variance in conspiracy belief. When GDP, mean country-level education performance, individualism, power distance, masculinity, and uncertainty avoidance were entered into the model, the association between corruption and COVID-19 conspiracy beliefs was nonsignificant, $b = -.015$, $SE = .280$, 95% CI [-.565, .534], $t(10.936) = -.055$, $p = .957$ (see Table 5).

Table 5

Results of Linear Mixed Model Analysis of the Associations of Corruption and Other Control Variables with Conspiracy Belief in Study 4

Predictors	B	SE	95% Confidence Interval		df	t	p
			Lower	Upper			
(Intercept)	1.73185	0.09750	1.54075	1.92295	10.98841	17.76256	< .001
Corruption	-0.01536	0.28040	-0.56493	0.53421	10.93632	-0.05478	0.957
Mean PISA score	-0.04828	0.14748	-0.33734	0.24078	11.09285	-0.32737	0.749
GDP	-0.05023	0.24442	-0.52929	0.42882	11.05679	-0.20552	0.841
Individualism	0.00078	0.25077	-0.49073	0.49229	11.00754	0.00312	0.998
Power Distance	0.14663	0.14932	-0.14604	0.43929	11.04007	0.98197	0.347
Masculinity	-0.04484	0.13875	-0.31678	0.22710	10.96558	-0.32318	0.753
Uncertainty Avoidance	-0.02152	0.13046	-0.27721	0.23417	11.03898	-0.16495	0.872

Moderation analysis showed that corruption positively, $b = .150$, $SE = .072$, 95% CI [.009, .291], $t(22.064) = 2.085$, $p = .049$, and science literacy negatively, $b = -.234$, $SE = .018$, 95% CI [-.269, -.199], $t(5959.569) = -13.155$, $p < .001$, predicted conspiracy belief, but the interaction between corruption and science literacy, $b = .021$, $SE = .017$, 95% CI [-.013, .055], $t(5966.560) = 1.185$, $p = .236$, was not significant. Science literacy negatively predicted conspiracy belief in low, $b = -.255$, $SE = .027$, 95% CI [-.307, -.202], $t(5961.410) = -9.540$, $p < .001$, mean-level, $b = -.234$, $SE = .018$, 95% CI [-.269, -.199], $t(5959.569) = -13.155$, $p < .001$, and high corruption countries, $b = -.213$, $SE = .023$, 95% CI [-.259, -.168], $t(5965.903) = -9.262$, $p < .001$ (see Figure 4).

Figure 4. The association between science literacy and vaccine conspiracy belief for different levels of country-level corruption in Study 4. Shades represent 95% confidence intervals.

Internal Meta-Analysis

The main association between corruption and conspiracy beliefs was significant in all studies. However, the analyses of the association after adjusting for control variables and the interaction in the moderation analyses yielded mixed results. To provide an overall picture of the findings, I conducted multiple meta-regressions to test each of the hypotheses. Using the meta-analysis package of JASP statistical software (JASP Team, 2021) and a restricted maximum likelihood method, I inserted unstandardized regression coefficients (b) and their standard errors (SE) for the five different findings (Study 1 had two findings, one for each COVID-19 and generic conspiracy beliefs) regarding how corruption predicted conspiracy beliefs. The association was significant, $b = .194$, $SE = .018$, $z = 10.625$, $p < .001$, 95% CI [.159, .230] (see Figure 5).

Figure 5. The forest plots for the internal meta-analyses. The plots represent the distribution of unstandardized regression coefficients predicting (a) conspiracy beliefs from corruption, and (b) conspiracy beliefs from corruption, adjusting for differences in other cross-country differences. Confidence intervals are in brackets and whiskers represent 95% confidence intervals.

Next, I repeated the same procedure for how corruption predicted conspiracy beliefs, after adjusting for control variables. This time I considered unstandardized regression coefficients and standard errors for the association between corruption and conspiracy beliefs in the analyses that account for control variables. The association was again significant, $b = .230$, $SE = .081$, $z = 2.833$, $p = .005$, 95% CI [.071, .389] (see Figure 5).

Lastly, I investigated whether the interaction between corruption and individual gullibility factors (country-level educational performance in Study 1, individual-level education status in Study 2, analytical thinking ability in Study 3, science literacy in Study 4) was significant. I included the unstandardized regression coefficients and standard errors for the interaction terms in each of the moderation analyses. The result was significant, $b = .030$,

$SE = .010$, $z = 3.1266$, $p = .002$, 95% CI [.011, .048]. I also checked whether Study 3 and 4 differed from the other studies. Studies 1 and 2 utilized education level as the predictor and found significant interactions, while Studies 3 and 4 utilized more direct measures of gullibility (analytical thinking ability and science literacy) and failed to find significant interactions with corruption. I coded Study 1 and 2 as 0, and Study 3 and 4 as 1, and added this to the model as a covariate. This covariate did not have a significant association, $b = -.038$, $SE = .024$, $z = -1.590$, $p = .112$, 95% CI [-.085, .009]. Adjusting for this covariate, the overall interaction between corruption and individual gullibility remained significant, $b = .053$, $SE = .018$, $z = 2.986$, $p = .003$, 95% CI [.018, .089] (see Figure 6).

Figure 6. The forest plot for the internal meta-analysis with study type as the covariate. The plot represent the distribution of unstandardized regression coefficients predicting conspiracy beliefs from the interaction between gullibility and country-level corruption. Confidence intervals are in brackets and whiskers represent 95% confidence intervals. Grey diamonds represent the predictions from the covariate (study type: education status, coded as 0, vs. direct measures of cognitive sophistication, coded as 1, as the predictor).

In short, internal meta-analyses supported all of the hypotheses: (1) There were higher conspiracy beliefs in more corrupt countries; (2) this association remained significant even after adjusting for other theoretically relevant cross-country differences; and (3) country-level corruption moderated the effect of individual-level gullibility.

Discussion

In four studies, I showed that there were higher levels of generic, COVID-19, and vaccine conspiracy beliefs in countries with high corruption. Such result was expected as corruption is a form of “actual conspiracy”, suggesting the existence of secret deals between different parties, which exclude the majority while maximizing the interests of a small circle of elites. Past research suggested that the five key elements of conspiracy theories are the existence of *patterns*, assumptions of *agency* behind events, multiple *groups* cooperating in a way that would pose *threat* to the majority, and the *secrecy* of such collusions (van Prooijen, 2018, 2021; van Prooijen & van Vugt, 2018). Countries suffering from chronic corruption would be more likely to experience all these elements, which would render the conspiracy theories sound more plausible. Consistent with this prediction, country-level corruption predicted higher conspiracy beliefs in all studies.

This finding aligns with past research: It has been previously shown that social injustice (van Prooijen, 2021; van Prooijen et al., 2022), lack of trust for institutions and other people (Goertzel, 1994; Golec de Zavala & Federico, 2018; Mari et al., 2021; Meuer & Imhoff, 2021), belonging to disadvantaged groups (Davis et al., 2018; Mao et al., 2020; van Prooijen et al., 2018) and lacking political control (Kofta et al., 2020; Pantazi et al., 2021) are some of the key factors reinforcing conspiracy beliefs. Societal context has effects on conspiracy beliefs beyond the factor of gullibility to conspirational ideation: Times of crises are hotbeds for conspiracy theories (van Prooijen & Douglas, 2017) as radical

transformations, like the COVID-19 pandemic (van Mulukom et al., 2022) or climate change (Douglas & Sutton, 2015; Uscinski et al., 2017), pose threat to people's sense of meaning and safety (Douglas et al., 2017). Thus, the past research, similar to the current findings, suggested that there is an increase in conspiracy beliefs when people feel threatened and vulnerable.

In this research, I focused on a specific vulnerability indicator, corruption, and, to my knowledge, provided the first piece of empirical evidence on the association between country-level corruption and individuals' receptivity to conspiracy theories.⁵ Four studies, all on large, representative samples, showed that higher level of country-level corruption predicts higher conspiracy beliefs, regardless of whether it is a generic, COVID-19, or vaccine conspiracy belief. However, this association could be due to other cross-country differences between low and high corruption countries. To control for alternative explanations, I checked the robustness of the association by controlling for differences in wealth and educational performance, which could explain the chronic difference between low and high corruption countries. I also controlled for cultural differences in individualism (Adam-Troian et al., 2020; van Prooijen & Song, 2021)⁶, power distance (van Prooijen & Song, 2021), masculinity (Adam-Troian et al., 2020), and uncertainty avoidance (e.g., Alper et al., 2020; Larsen et al., 2021), which are previously shown to be related conspiracy beliefs. The association between corruption and conspiracy beliefs, adjusting for differences in control variables, was significant in Study 1, but not in other studies. However, the internal meta-analysis of all

⁵ In their recent review, Hornsey and Pearson (2022) report the association of conspiracy beliefs with corruption as well as other country-level factors like culture and economic indicators. However, the first preprint of the current paper dates back to May 2021, which, to the best of my knowledge, makes the current findings regarding corruption the first of its kind.

⁶ In Study 1 (for generic conspiracy beliefs) and Study 2, individualism negatively predicted conspiracy beliefs, after adjusting for other cross-country differences. Although this goes beyond the scope of the current research, it should be noted this finding was consistent with the past literature (Adam-Troian et al., 2020; van Prooijen & Song, 2021) which showed that collectivism, as opposed to individualism, was positively related to conspiracy beliefs.

studies suggested that this association was significant. Thus, although the test was very conservative with a variety of control variables, country-level corruption's relationship with conspiracy beliefs was shown to be robust.

If corruption is related to higher levels of conspiracy beliefs because conspiracy beliefs are found more reasonable in places with widespread corruption, then individuals' gullibility would be less relevant in these contexts, since the existence of conspiracies would be more likely. Studies 1 and 2 supported this expectation, as there was no negative relationship between education and conspiracy beliefs in high corruption countries (where conspiracy theories would sound relatively more reasonable) while there was a significant negative association in low corruption countries (where conspiracy theories would sound relatively less reasonable). Studies 3 and 4 tapped into more direct measures of cognitive sophistication, analytical thinking ability and science literacy, respectively, and failed to find them interact with country-level corruption. Analytical thinking and science literacy were negatively related to conspiracy beliefs, regardless of the level of country-level corruption. Analytical thinking (Alper et al., 2020; Pennycook et al., 2020; Swami et al., 2014; van Mulukom et al., 2022; van Prooijen, 2017; Yelbuz et al., 2022) and scientific reasoning skills (Čavojová et al., 2020a, 2020b) were found to be related to lower levels of conspiracy beliefs. Analytical thinking and science literacy could be more direct measures of people's (lack of) gullibility, compared to their education level, since the former measures performance while the latter merely states the mean country-level performance (Study 1) or the highest education degree participants earned (Study 2). The more direct relevance of analytical thinking and science literacy to conspiracy beliefs could have created a ceiling effect for the association in between, leaving little space for significant variation across different countries. Although the observed difference between different measures of gullibility should be further pursued in future research, the internal meta-analysis showed that the aggregate interaction between

corruption and gullibility was significant, and the study type (taking education vs. analytical thinking or science literacy as a measure of gullibility) did not explain the differences in effect sizes observed in Studies 1 and 2 vs. Study 3 and 4. In short, the overall pattern suggested a significant interaction between country-level corruption and individuals' gullibility, consistent with the expectation.

The current research sheds light on the importance of the societal context for conspiracy beliefs. Conspiracy beliefs are linked to socially destructive attitudes and behaviors, including prejudice and intergroup hostility (Golec de Zavala & Federico, 2018; Imhoff & Bruder, 2014; Swami, 2012), tendency to commit a crime (Jolley et al., 2019), distrust for others (Abalakina-Paap et al., 1999; Douglas & Sutton, 2018; Goertzel, 1994; Mari et al., 2021; Meuer & Imhoff, 2021; van Prooijen & Acker, 2015), self-centeredness (Imhoff & Lamberty, 2020; Hornsey et al., 2021), and lack of generosity (Alper et al., 2021; van der Linden, 2015). The current findings suggested that there might be a bidirectional relationship, and social problems, like corruption, can predict conspiracy beliefs as well, similar to what some of the past research suggested (van Prooijen, 2021; van Prooijen et al., 2022). In countries with widespread corruption, people find conspiracy theories as more believable, possibly because actual experiences reduce the credibility of the official narratives. This suggests that the conspiracy theories problem cannot be solved only at an individual level, since widespread corruption creates a breeding ground for conspiracy beliefs. Combating corruption, therefore, is not only important for the economy and human rights, but also for bolstering resistance to misinformation. Considering that misinformation is likely to lead to socially destructive tendencies both in daily life and during crises like COVID-19 or climate change, tackling corruption would break this self-perpetuating cycle.

The current results also showed that corruption does not only contribute to the level of conspiracy beliefs but also moderate the relationship between individuals' gullibility and their

conspiracy beliefs. Higher education predicted fewer conspiracy beliefs only in countries with low corruption. A major part of research on conspiracy beliefs focus on factors that change how much people are gullible to these theories, including factors like education (Douglas et al., 2016; van Prooijen, 2017; van Prooijen et al., 2015), analytical thinking (Alper et al., 2020; Pennycook et al., 2020; Swami et al., 2014; van Mulukom et al., 2022; van Prooijen, 2017; Yelbuz et al., 2022), actively open-minded thinking (Erceg et al., 2020; Pennycook et al., 2020), need for cognition (Lobato et al., 2014), and scientific reasoning (Čavojová et al., 2020a, 2020b). Although these factors are related to how much people are receptive to conspiracy theories, the current findings showed that their relationship with conspiracy beliefs is stronger in low corruption countries and weaker in high corruption countries. Therefore, the results suggest that simply educating people might not be sufficient, since the relevance of individuals' gullibility is moderated by the social context and becomes weaker in high corruption countries where conspiracy theories would be perceived to be relatively more plausible.

Potential Limitations and Directions for Future Research

The main limitation of the current study is its correlational design. Although it is more plausible that the corruption level in a country may influence conspiracy beliefs, rather than the opposite, the findings are not conclusive in terms of the causal direction. Future research should experimentally manipulate corruption, possibly utilizing experimental economic games, and establish causality. The lack of cross-country measurement invariance tests of the measures and the fact that conspiracy belief was measured by a single item in Study 4 were also noteworthy limitations.

Another limitation is that the tests with control variables and the moderation analyses provided mixed findings across different studies. Although the internal meta-analysis provided overall support, future research should aim to replicate these findings. It should be

noted that in the analyses including country-level control variables, countries with missing data on any one of the variables were excluded, which usually reduced the number of countries that were included. Considering that this could be one of the reasons for nonsignificant effects, future research should measure all variables at an individual level (e.g., personal income, personal educational performance, individual differences in cultural orientations) and thus avoid data loss and increase precision in capturing interpersonal variation. Related to this, future research should measure the perceived corruption on an individual level. As for the moderation analyses, Studies 1 to 3 provided significant results while Study 4 did not. As discussed before, the use of more direct measures of gullibility (analytical thinking and science literacy) in these studies could be driving this difference from other studies. However, the internal meta-analysis showed an overall pattern in which corruption significantly interacts with gullibility measures, regardless of their type. Future studies should aim to conceptually replicate the observed interaction and investigate whether there is variability based on the measure of gullibility being used.

Lastly, future research should distinguish between types of conspiracy theories: It has been argued that some conspiracy beliefs (e.g., believing that some things are hidden from the public) are better treated as indicators of rational skepticism which is conceptually different than implausible conspiracy ideation (Stojanov & Halberstadt, 2019). I argue that the effect of corruption would be stronger on rational suspicion as it would be more in line with actual conspiracies, which are likely to increase as a result of widespread corruption.

Conclusion

Researchers and policy-makers should avoid reducing the problem of conspiracy ideation to individual factors and be more aware of the societal factors at play. Conspiracy beliefs have proven detrimental in the current COVID-19 pandemic (van Mulukom et al., 2022), and they will keep on misdirecting the public in future crises such as climate change

(Uscinski et al., 2017). The current paper provides novel evidence supporting the need for a holistic approach to the problem of conspiracy ideation, beyond only providing better education, as well as for reforming our institutions and societal arrangements to combat corruption, which creates a breeding ground for conspiracy theories.

Conflict of Interest Statement

The author declares no conflict of interest. The current paper is a revised and extended version of a previously unpublished paper, which had received an award in an essay competition prior to the submission of the current paper.

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