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Anti-immigration conspiracy beliefs are associated with endorsement of conventional and violent actions opposing immigration and attitudes towards democracy across 21 countries

Check for updates

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Despite widespread speculation that conspiracy beliefs foster anti-democratic outcomes, the empirical picture is inconsistent. To clarify this literature, we examine the relationships that conspiracy beliefs have with commitment to reactionary action and criticism of democracy, focusing on a global issue: immigration. We expected that people who believe that their government uses immigration to diversify the population against citizens' wishes (anti-migration conspiracy beliefs) would be more committed to conventional and violent action to oppose immigration, and more critical of democracy. However, societal-level factors – economic performance and democratic functioning – were expected to influence (strengthen, weaken) these links. As hypothesized, multi-level analyses (N = 4353) from 21 countries revealed that economic prosperity attenuated the positive link between anti-migration conspiracy beliefs and commitment to reactionary action. Paradoxically, more democratic societies evidenced stronger links between conspiracy beliefs and conventional (but not violent) action to oppose immigration. Thus, more democratic societies appear to invite conventional forms of action to oppose immigration which may, in turn, weaken democratic norms of inclusion. Results highlight the interplay of individual- and societal-level factors underlying illiberal movements.

There are widespread concerns about the impacts of conspiracy beliefs for politics and society. Conspiracy beliefs are theorized to increase reactionary movements which seek to restore society to its "former glory"¹, promote intolerance, damage social cohesion² and weaken support for democracy across the world^{3–5}. But do they? And are such links universal (i.e., evidenced across societies)? Or are there significant societal-level features that explain, attenuate or exacerbate these associations such that the destructive effects of conspiracy beliefs are stronger in some countries

relative to others? We answer these important questions by examining the relationship between anti-immigration conspiracy beliefs (e.g., the great replacement conspiracy)⁶ and commitment to (conventional and violent) reactionary action to oppose immigration, as well as criticism of democracy itself, across 21 countries (see Fig. 1). Because conspiracy beliefs fundamentally reflect a criticism of the status quo, we reason that societal-level factors that capture the conditions within a particular nation (e.g., economic vitality, strength of democratic norms and institutions)

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Fig. 1 | Map of the 21 countries sampled in the current study. Color denotes the level of democratic functioning within the country according to the Democracy Index and circle size denotes the economic prosperity of the country according to Gross Domestic Product per capita. The European region has been enlarged for clarity.



Fig. 2 | **Conceptual overview of key hypotheses (H)**. H1 and H2 probe individuallevel effects of conspiracy beliefs on outcomes; H3-4, H7-8 probe societal-level effects of democratic functioning and economic performance on outcomes; H5-6, H9-10 probe interactions such that societal-level factors impact the relationships between individual-level beliefs and outcomes.

should shape the relationship between conspiracy beliefs and outcomes. Fig. 2 displays the primary hypotheses.

Conspiracy beliefs are those that suggest that "the public is being pervasively lied to regarding some aspect(s) of reality, to allow some group(s) to enact a harmful, self-serving agenda."⁷ Notably, there is wide-spread popular speculation and theorizing about the perverse impacts of conspiracy beliefs for the emergence of illiberal or *reactionary movements*⁸. Reactionary movements are a form of collective action whereby people act with others to make society more hierarchical or unequal¹, by promoting the rights and access of hegemonically dominant or advantaged groups⁹. However, the empirical research testing the links between conspiracy belief

and collective action has been sparse¹⁰ and, where it does exist, the empirical findings are inconsistent¹¹.

On the one hand, some studies demonstrate that exposure to conspiracy beliefs reduces conventional forms of political engagement (e.g., donation, voting¹². However, longitudinal data from five democracies (United States, Japan, United Kingdom, Poland, and Estonia) showed little support for the hypothesis that generalized conspiracy mentality is related to political actions like voting, attendance at rallies, protests, or online actions (i.e., a null effect¹³. On the other hand, there is growing theoretical recognition^{8,14} and empirical evidence^{15,16} that people who endorse conspiracies may be more likely to engage in action. Imhoff et al.¹¹ reconciled some of these mixed findings by suggesting that conspiratorial thinking fosters support for more violent forms of action but not for non-violent forms of action (see also^{15,17} In this paper, we follow Imhoff et al.¹¹ in distinguishing between actions that involve conventional tactics (contacting authorities, peaceful protests, petitions) as opposed to more radical, violent tactics (i.e., those involving confrontation or violence) - referred to as conventional action and violent action to oppose immigration, respectively^{18,19}.

Another reason for the mixed and inconsistent effects between conspiracy endorsement and outcomes for politics may be because much of the existing literature primarily addresses the relationship between conspiratorial mentality and political engagement *in general*. Imhoff et al.²⁰, however, highlight that specific conspiracy beliefs are conceptually distinct from conspiracy mentality in general. Whereas conspiracy mentality reflects a relatively stable readiness to interpret events as being caused by plots hatched in secret by malevolent actors, conspiracy beliefs relate to beliefs about specific events, moments or people²⁰. A similar distinction can be made for political engagement: when people engage in collective action, it is usually with a particular social change goal in mind⁹ and more general measures of political engagement will not be sensitive to those goals. For instance, someone who believes that climate change is a hoax may be motivated to vote for a candidate or attend a protest that expresses those beliefs but would be unlikely to vote or protest for climate justice. Thus, endorsing specific conspiracies may influence the motivation to engage in actions that address those particular grievances, but not action on unrelated matters¹⁶.

Our analysis addresses these limitations to provide a robust, multinational test of the links between conspiracy beliefs and (conventional/ violent) reactionary action in the context of a particular "real world" conspiracy belief, and a movement with specific political goals (i.e., to oppose immigration). Thus, we investigate the proposition that conspiracies specifically about migration can act as a "call to arms" for movements that oppose immigration (following²¹. For example, the great replacement theory is a conspiracy theory purporting that politicians are deliberately orchestrating the extinction of white people by replacing white people with nonwhite people via immigration policies. Such beliefs have been linked with hostility towards immigrants and commitment to violence in countries with a historically white majority population (e.g., Denmark, Norway⁶). In this paper, we focus on conspiracy beliefs about government use of immigration programs to impose (cultural, racial) diversity on an unwilling population²² in 21 countries - termed anti-immigration conspiracy beliefs. We focus broadly on beliefs about the nefarious role of the government but do not specify specific government representatives, administrations or institutions per se.

We propose that believing that immigration policies are part of a government conspiracy should correlate positively with commitment to both conventional and violent reactionary action to oppose immigration in one's country (*Hypothesis 1*, Fig. 2). Such conspiracy beliefs directly implicate a clear target (immigrants) and/or conspirator (the government) and are therefore likely to foster actions designed to hold that government to account via conventional forms of collective action^{16,23}. At the same time, conspiracy theories provide narratives that question the fairness and legitimacy of processes that authorities use to make decisions and have been shown to decrease trust in government institutions (even if the theory is unrelated to those institutions²⁴. A conspiracy mindset correlates negatively with trust in government institutions and their processes¹³. Thus, endorsement of immigration conspiracies should also be associated with more radical, violent actions – actions that do not appeal to, and conflict with the norms of, the political institutions per se^{25,26}.

Our analyses also test the relationship between anti-immigration conspiracy beliefs and support for democracy itself (*Hypothesis 2*)²⁷. Public concerns about immigration have coincided with diminished trust in democratic government and institutions²². Although there is widespread concern about how conspiracy beliefs diminish support for democracies across the world, systematic empirical tests of these claims are sparse. Corroborating the observations about conspiracy beliefs and their association with decreased trust in democratic institutions, conspiracy beliefs correlate negatively with support for representative democracy (i.e., the form of government in most Western liberal democracies³). We provide a comprehensive test of the proposition that conspiracy beliefs about immigration will be associated with commitment to both conventional and radical action to oppose immigration (Hypothesis 1), and greater criticism of democracy (Hypothesis 2) in 21 countries (see Fig. 2).

Cordonier et al.²⁸ suggest that conspiracy theories are more likely to flourish in some countries than others and there is evidence that attitudes towards immigration are influenced by societal-level factors^{29,30}. Recent frameworks of collective action similarly emphasize the importance of understanding the societal conditions in which actions emerge³¹. However, Hornsey and Pearson³² note the rarity of data that provide robust tests of the individual- and societal-level drivers of conspiracy belief side-by-side, and in a specific context that has meaning across countries. What aspects of a society might meaningfully explain variation in anti-immigrant conventional and violent action, and democratic attitudes? Here, we consider the role of two societal-level factors in predicting outcomes directly, as well as moderating the relationship between conspiracy belief and outcomes: economic performance and democratic functioning.

Conspiracy beliefs in general, and sentiment towards immigrants specifically, are both shaped by perceived and actual economic performance. Hornsey et al.³³ show that generalized conspiracy beliefs about the trust-worthiness of authorities are negatively associated with both perceived and actual economic performance across 36 countries (see also³⁴. Elsewhere, perceptions of realistic threat at the individual-level (i.e., competition over economic resources) has been linked with anti-immigrant collective action³⁵. Thus, societal-level gross domestic product (GDP) should correlate negatively with commitment to conventional and violent action to oppose immigration (a direct effect; *Hypothesis 3*)³⁰. On the other hand, given the links between economic performance and governance, 32 countries that are performing well economically should report stronger, more supportive democratic attitudes (direct effect; *Hypothesis 4*).

While 'macro' societal-level features may shape commitment to action and democratic attitudes directly (reflected in Hypotheses 3 and 4, respectively), those societal-level features could also *influence* or *moderate* the links between individual-level conspiracy beliefs and commitment to reactionary action. Bilewicz³⁶ suggests that part of the cross-cultural variation in the uptake of conspiracy beliefs stems from cultural trauma – adverse societal conditions that make conspiracy beliefs a functional adaptation so that people can "fight for their own." Drawing on this analysis, we reasoned that the direct links between individual-level conspiracy belief and action (Hypothesis 1) and conspiracy belief and criticism of democracy (Hypothesis 2) will be qualified by societal-level GDP per capita (i.e., a crosslevel interaction, *Hypotheses 5 and 6*).

Two specific, yet opposing, patterns seem plausible, reflected in Hypotheses 5 and 6 respectively. On the one hand, countries with stronger economic performance should evidence weaker links between conspiracy belief and reactionary action (Hypothesis 5a)³⁰, as well as weaker links between conspiracy belief and critical democratic attitudes (Hypothesis 6a). Specifically, stronger economic performance should signal greater competence and trust, and, therefore, attenuate the links between conspiracy belief and action, and criticism of democracy (see also³⁷. Another possibility is that, if conspiratorial thinking is more prevalent in economically weaker countries³², these types of beliefs may be more normative and, therefore, attract broader support from across the population. As such, the relationships conspiracy belief has with action and attitudes towards democracy should be more diffuse. Under these circumstances, the relationships between conspiracy belief and action (Hypothesis 5b), as well as conspiracy beliefs and criticism of democracies (Hypothesis 6b), would be stronger in more prosperous societies where conspiracy beliefs are held by people who are more politically extreme⁵. Our approach tests these cross-level interactions to examine how factors that characterize societies (nations) shape the relationships between variables at the individual-level.

We test the proposition that there will be a negative relationship between economic performance and anti-immigration collective action. Specifically, more prosperous societies (higher GDP) will evidence lower conventional and radical action (Hypothesis 3) and lower anti-democratic attitudes (Hypothesis 4). We also test the competing predictions that more prosperous societies will evidence weaker links between conspiracy beliefs and conventional/violent action (Hypothesis 5a), and anti-democratic attitudes (Hypothesis 5b); *or* that, in stronger economies, belief in immigration conspiracies is held only amongst a fringe of people and is therefore more strongly associated with commitment to anti-immigrant action (Hypothesis 6b) and critical attitudes (Hypothesis 6b).

A similar logic underpins our tests in the context of societal-level democratic function. Our analyses distinguish between attitudes towards democracy and democratic institutions that can be held at the *individual level*³⁸, and variation in the degree to which democratic government and institutions function effectively at the *societal level*. Anti-democratic attitudes are held by individual people whereas democratic functioning describes functioning of societies or nation states more generally (see Fig. 2). Previous research has found that macro, societal-level indicators of the

strength of a democracy correlate negatively with anti-immigrant attitudes³⁹. Having a stronger democratic system should be associated with lower collective hostility because the affordances of strong democratic institutions (i.e., procedural justice, free and open elections, political participation, rule of law) should promote support for the decisions of those institutions, including immigration policies. Accordingly, we predicted that the more democratic the society, the lower the commitment to conventional and violent action to oppose immigration at the individual level (a direct effect; *Hypothesis 7*). Additionally, the more functional democracy is in terms of having effective norms and institutions at the societal level, the more it correlates positively with support for democracy at the individual level (direct effect; *Hypothesis 8*).

There are also reasons to think that having strong democratic norms and institutions (at the societal-level) would shape the relationship between (individual-level) conspiracy belief and outcomes (cross-level interactions; Hypotheses 9 and 10). Here, again, competing hypotheses are plausible. On the one hand, strong democracies have a free and open media, separation of powers, and rule of law (i.e., all people are equal before the law). Greater legal protections, procedural justice and equal treatment for all people (underpinned by democratic principles) should also attenuate the links conspiracy beliefs have with willingness to act and criticism of democracy. Thus, having a relatively stronger democracy could weaken the links between immigration conspiracy beliefs and both action²⁹ (Hypothesis 9a) and antidemocratic attitudes (Hypothesis 10a). On the other hand, weaker democratic institutions at the societal level may make endorsement of immigration-related conspiracies more widespread (normative) but without necessarily fostering concerted action or criticism. Under these circumstances, the relationships between conspiracy belief and action (Hypothesis 9b), as well as belief and criticism of democracy (Hypothesis 10b), would be weaker for countries that have fragile democratic governance but stronger for robust democracies where conspiracy beliefs are held by people who are more politically extreme⁵. Our approach tests these competing possibilities by modelling the cross-level interaction between individual-level beliefs and societal-level democratic functioning on our focal outcomes (Fig. 2).

Specifically, we test the hypotheses that there more robust democracies (i.e., higher Democracy Index) will evidence lower conventional and radical action (Hypothesis 7) and lower anti-democratic attitudes (Hypothesis 8). We also test the competing predictions that the affordances of more strongly democratic societies will attenuate the links between conspiracy beliefs and conventional/violent action (Hypothesis 9a), and anti-democratic attitudes (Hypothesis 10a); *or* that, in stronger democracies, belief in immigration conspiracies is held only amongst a fringe of people and is therefore more strongly associated with commitment to anti-immigrant action (Hypothesis 9b) and critical attitudes (Hypothesis 10b).

Immigration is a global phenomenon, yet we know little about the factors that directly influence action to oppose immigration at the individual- or societal-level, nor how conspiracy beliefs about immigration affect support for democratic institutions and values. Despite the clear real-world importance, the empirical literature addressing the relationship between conspiracy beliefs and commitment to reactionary social movements is inconclusive. It also seems likely that particular societal conditions could strengthen or weaken the links between conspiracy beliefs and action. Yet there are few robust tests of the individual- and societal-level factors side-byside, nor those situated within a specific context that has meaning across countries^{32,33}. We address these oversights by examining the relationships between immigration conspiracy beliefs and commitment to (conventional and violent) reactionary action and democracy (Fig. 2) in 21 countries that varied in their democratic functioning and economic performance (Fig. 1).

Hypotheses 1–3 and 8 were pre-registered in November 2022 (see https://osf.io/wyr7t/?view_only=df5b3b9c896e412dbb8a95dfe5768956). Note that the numbering of hypotheses in the pre-registration documentation differs from the numbering reported here. Specifically, Hypothesis 1 here relates to H1-2 in the pre-registration; Hypothesis 2 reflects H3 in the pre-registration. While we pre-registered tests of the direct

effects of the societal factors (GDP, DI) on conventional and violent reactionary action, we did not do so for criticism of democracy (that is to say, Hypotheses 4 and 7 here were not pre-registered). In the pre-registration, we articulated competing hypotheses for Hypotheses 5–6 and 9–10; these were, therefore, exploratory and are described at H6a/b, H7a/b of the preregistration. We also referred to the distinction between normative and nonnormative collective action in the pre-registration but have conceptualised these as conventional and violent action here given that these terms are more widely used in the interdisciplinary literature and based on past work in the area^{18,19}. Although we mentioned 'mediation' in the pre-registration, this was an error and none of the hypotheses articulate a test of indirect effects. Data are available at the links above and any other deviations from the preregistered approach are noted below. Code and output for the analyses can be found in the supplementary materials.

Methods

Participants and procedure

We collected data between December 2020 and November 2021 as part of a larger project investigating cross-cultural factors in collective action. All participants (N = 4353) were undergraduate students recruited through convenience samples of the authors (e.g., SONA panels), who gave informed consent before starting the survey. The OSF contains details of the specific sample size and demographics of participants (age, gender), by country (see Table 1). Gender was not considered in the study design. Ethical approval was obtained from the Ethical Committee of the Social Sciences Department, at University of Gdansk as well as each participating institution when required. All authors were either local to the locations in which the data were collected or had recently relocated from that location, and all were involved in co-authorship of this paper.

There was a larger set of measures than those reported here. The data, questionnaire and de-identified papers from the dataset are available via the OSF link (https://osf.io/r4y6s/?view_only= 0fef0882380a4a04b49cb4ef65ba251a). Surveys were translated and backtranslated by the research team into languages other than English and distributed via Qualtrics software. Although the full dataset includes 22 countries, one of these countries (Singapore) was excluded prior to analysis because we could not secure ethical approval to collect politically sensitive measures of conspiracy belief or collective action. Consistent with our preregistration, we removed 57 people who dropped out prior to completing the full survey, and 211 people who failed an attention check embedded within the questionnaire. An additional 44 participants were missing more than one response on a focal measure and were removed via listwise deletion prior to analysis. Since this additional removal was not explicitly pre-registered, we conducted a sensitivity analysis to determine whether this decision affected the outcome. The pattern of results reported below was unchanged when using the full dataset (i.e., including missing data). A post-hoc sensitivity analysis is reported below to address issues of power to detect effects.

Measures

Items were measured on a 1–7 Likert-type scale unless otherwise described. An important precondition of cross-national analyses is that the measures display a minimum of configural invariance and metric invariance is considered necessary for indirect comparisons between groups (for example, comparisons of strength of relationships between nations). Given the well-known limitations of establishing full measurement equivalence where there are many groups (nations), we adopted the alignment and Baysean approximate invariance testing to distinguish error from cultural variance. Details of scale construction and measurement invariance testing for each of the measures are available in the supplementary materials (see Supplementary Note 1; https://osf.io/r4y6s/?view_only=0fef0882380a4a04b49cb4ef65ba251a). These supplementary analyses show that all scales met the minimal condition of configural invariance for cross-cultural analyses (Supplementary Table 2 and Supplementary Table 3). Commitment to violent action to oppose

 Table 1 | Sample composition and country-level indicators for each nation

Country	N	Percent of		Age		DI	GDP per
		Men	Women	М	SD		сарна
Australia	215	16.7	80.5	23.68	9.22	8.96	\$30,472.40
Bosnia & Herzegovina	153	33.3	65.4	25.97	10.47	4.84	\$16,846.50
Canada	148	16.9	80.4	20.54	8.97	9.24	\$52,085.00
Chile	182	49.5	48.4	23.17	3.75	8.28	\$29,104.10
France	212	17.1	80.5	25.22	13.33	7.99	\$50,728.70
Germany	221	19.7	78.0	21.54	12.10	8.67	\$37,502.60
Hungary	196	26.0	73.5	21.86	3.74	6.56	\$36,752.50
Italy	350	14.1	84.8	20.93	8.70	7.74	\$45,936.00
Japan	67	13.4	83.6	19.48	1.16	8.13	\$42,940.40
Kosovo	309	49.0	51.0	22.94	4.36	6.08	\$12,721.00
Malaysia	220	50.0	50.0	23.81	6.03	7.19	\$29,617.30
Nepal	218	46.3	52.3	23.81	6.03	5.22	\$4,260.80
Netherlands	197	20.8	78.7	18.21	12.01	8.96	\$63,766.90
New Zealand	208	20.2	78.4	20.76	3.56	9.25	\$46,419.50
Norway	170	27.1	70.6	24.18	3.92	9.81	\$79,201.20
Poland	210	14.8	84.8	21.31	3.03	6.85	\$37,502.60
Spain	208	29.8	67.8	23.19	5.26	8.12	\$40,775.30
Turkey	230	27.3	71.4	22.05	16.15	4.48	\$30,472.40
United Kingdom	188	27.7	70.2	23.84	12.85	8.54	\$49,675.30
Ukraine	246	30.3	67.2	18.45	11.07	5.81	\$14,219.80
United States	194	25.6	71.3	19.84	1.38	7.92	\$69,287.50

N number of observations, M mean, SD standard deviation, DI Democracy Index, GDP per capita Gross Domestic Product per capita. Demographic information (age, gender) was self-reported by participants.

immigration demonstrated full scalar invariance, whereas conspiracy beliefs, criticism of democracy and commitment to conventional action to oppose immigration all displayed partial metric and partial scalar invariance (Supplementary Table 1 and Supplementary Table 2 for details). Here, we report the items that formed the final, manifest variables that we used in the primary analyses.

Anti-migration conspiracy beliefs. Four items, adapted from Gaston and Uscinski (2018)²², measured conspiracy beliefs about immigration. The items were: "The government is hiding the true cost of immigration to taxpayers and society", "Those who have spoken out against immigration in the media and politics have been treated unfairly", "The government is concealing the true economic and social costs of immigration" and "Successive governments have deliberately sought to make our society more diverse through its immigration policy." The four items were averaged to form a manifest scale, $\alpha = 0.79$.

Criticism of democracy. Four items, adapted from Dowley and Silver (2002) and Louis et al. (2022)^{40,41}, measured criticism of democracy and ideals. Example items are: "Democracies are indecisive and have too much squabbling", "Democracies aren't good at maintaining order" and "Freedom of expression is not very important in society". The items were averaged to form a manifest scale, $\alpha = 0.70$.

Commitment to conventional action to oppose immigration. Four items measured intention to "...become involved with a group (or political party) focused on opposing migration", "...contact my local government representatives to indicate my opposition for migration in my country (email, write a letter)", "...sign a petition indicating my opposition for migration to the government of my country", and "...

attend a rally focused on the opposition for immigration." The items were averaged to form a manifest scale, $\alpha = 0.93$.

Commitment to violent action to oppose immigration. Two items, adapted from Simon and Grabow $(2010)^{42}$, measured commitment to violent action to oppose immigration. The items were: "I would participate in a protest action to oppose migration to my country, even if it may involve a confrontation with the police" and "I think violent protest actions to oppose migration and raise awareness about threats related to migration are sometimes the only means to wake up the public." The two items were averaged to form a manifest scale, r = 0.68.

Democratic functioning. Democratic functioning was quantified via the Democracy Index $(DI)^{43}$. The DI reflects domains including political participation, election process and pluralism, civil liberties, and political culture. Countries ranged from 0 to 10 with scores from 0 to 4 capturing authoritarian regimes, and scores from 6.01 to 10 describing flawed and full democracies, respectively. In our sample, the lowest and highest DI scores were for Turkey (4.48) and Norway (9.81), respectively (see Fig. 1, Table 1).

Economic performance. We used the Gross Domestic Product per capita (GDP per capita) in 2021 as a country-level indicator of economic performance. GDP is the measure of the value added by the production of goods and services in a country. In our sample, the lowest and highest GDP scores were for Nepal (4260.8) and Norway (79201.2), respectively (see Fig. 1, Table 1).

Reporting summary

Further information on research design is available in the Nature Portfolio Reporting Summary linked to this article.

Results

The model was tested using the manifest/observed variables for which we had established reliable cross-cultural (partial) metric and scalar measurement invariance. Intraclass correlations (0.11–0.22) suggested small effects of the national-level clustering in the data. We therefore conducted a series of Multi-Level Models using Mplus Version 8.6, using maximum likelihood estimation with robust standard errors (MLR) and Huber-White (Sandwich) estimator to correct for non-independence of observations. We did not test for the assumptions for multi-level modelling (normality, non-normal residuals) because the Huber-White (Sandwich) estimator is robust to violations.

The models examined the relationship between (individual-level) anti-immigrant conspiracy belief (IV) on commitment to conventional (DV1) and violent (DV2) action to oppose immigration, as well as criticism of democracy (DV3), conditioned on the between-group (societal) factors of democratic functioning (MV1) and economic performance (MV2). The moderators were standardized so that the results were not affected by scale values, and both the predictor (conspiracy belief, group mean) and moderators (democratic functioning, economic performance, grand mean) were centered to address multicollinearity and aid in interpretation of the cross-level interactions (see ref. 44. The DVs were allowed to correlate, as were the two moderator variables, to account for their shared variance. No covariates were tested and a two-sided p-value of > 0.05 was taken as evidence of a significant effect. We note that the output displayed a warning suggesting problems with the standard errors due to the complexity of the model. However, none of the standard errors were out of range and there were no other indications of model nonidentification. We conducted a sensitivity analysis by running an identical model for each outcome separately (i.e., a less complex model) and the error did not appear, nor were results different from those reported here. As such, we reported the full, comprehensive model for parsimony. Table 2 displays the results of the two focal models. Fig. 3 provides an overview of the findings across both models.

Does individual-level conspiracy belief predict reactionary action and criticism of democracy?

The top panel of Table 2 displays the results of the random intercepts model, which provides a test of the individual-level predictors. Fig. 4 displays the effects for each of the 21 countries. Consistent with Hypothesis 1, anti-immigration conspiracy belief correlated positively with both conventional and violent reactionary action to oppose immigration. Effects for both conventional and violent action were of a similar magnitude (Table 2). Contrary to Hypothesis 2, conspiracy belief was significantly *negatively* related to criticism of democracy. Given this unexpected finding, we examined the bivariate correlations to see if this was an effect of statistical suppression. Contrary to this possibility, the zero-order correlations between conspiracy belief and critical attitudes were also negative (r = -0.32, p < 0.001).

Do societal-level factors predict reactionary action and criticism of democracy?

The lower panels of Table 2 display the regression values with the random slope added (i.e., a random intercept, random slope MLM) as a test of the direct and moderating effects of the societal-level factors on the outcomes. Looking first at the tests of the direct effects of societal-level predictors (bottom panel Table 2), societal-level economic performance (GDP) was negatively associated with commitment to reactionary conventional and violent action, supporting *Hypothesis 3*. However, there was not a statistically significant association with democratic attitudes (contrary to *Hypothesis 4*). Contrary to Hypotheses 7 and 8, societal-level democratic functioning also did not directly predict variation in any of the outcomes (see also Fig. 3).

Do individual- and societal-level factors interact to predict reactionary action and criticism of democracy?

Finally, the cross-level interactions between conspiracy beliefs and outcomes under discrete societal conditions revealed a negative relationship between conspiracy beliefs and both conventional and violent forms of action varied by economic conditions (middle panel, Table 2). Fig. 5 displays the slopes, by country. Under conditions of weaker economic performance (1 SD below the mean), there was a positive association between conspiracy beliefs and conventional action, $\gamma = 0.38$, s.e. = 0.05, p < 0.001. Consistent with Hypothesis 5a, this relationship was significant but weaker under conditions of higher economic performance (1 SD above the mean), $\gamma = 0.16$, s.e. = 0.06, p = 0.003. Also supporting Hypothesis 5a, conspiracy beliefs were positively associated with violent action under conditions of weaker economic performance, $\gamma = 0.40$, s.e. = 0.05, p < 0.001, but not when economic performance was relatively stronger, $\gamma = 0.11$, s.e. = 0.06, p = 0.07. The slope was not significant for individual-level democratic attitudes (Table 2) (no statistically significant effect for *Hypothesis 6*).

On the other hand, stronger democratic functioning at the societal level strengthened the positive relationship between conspiracy beliefs and conventional action (Table 2). Specifically, conspiracy beliefs and conventional action correlated positively in countries with relatively stronger democratic functioning, $\gamma = 0.42$, s.e. = 0.06, p < 0.001, but this relationship is attenuated (and non-significant) in countries with weaker democratic functioning, $\gamma = 0.15$, S.E. = 0.08, p = 0.059, a pattern that supports *Hypothesis 9b*. Intriguingly, there was not a significant effect of the interaction between democratic function and conspiracy belief on violent action (Table 2). Finally, there was no significant effect of the interaction between democratic functioning and conspiracy beliefs on critical democratic attitudes (Table 2; per *Hypothesis 10*).

Power

Given the complexity of the model, we conducted a Monte Carlo simulation study to examine the power of the observed parameters given the sample size and clustering of the data using Mplus Version 8. We saved the parameter estimates from the primary analysis and used these as population parameters and coverage values in a simulation study with 10,000

Table 2 Regression coeff	ficients [confidence int	ervals], stan	dard errors and	d <i>p</i> values for Multi-Lev	el Models				
Predictor	Outcome								
Individual level/ Within country	DV: Direct effect – Commitr oppose immigration	nent to conventi	ional action to	DV: Direct effect – Commitme immigration	ent to violent act	iion to oppose	DV: Direct effect - Criticis	m of democra	ĸ
	Estimate [95% CI]	SE	d	Estimate [95% CI]	SE	d	Estimate [95% CI]	SE	d
Anti-migration conspiracy beliefs	0.27 [0.21, 0.33]	0.03	< 0.001	0.29 [0.23, 0.35]	0.03	< 0.001	-0.26 [-0.31, -0.20]	0.03	< 0.001
Societal level/ Between country	DV: Slope – Moderation of th beliefs and commitment to co	e relationship bet onventional anti-r	ween conspiracy nigrant action	DV: Slope – Moderation of the beliefs and commitment to viol	elationship betw ent anti-migrant a	een conspiracy action	DV: Slope – Moderation of conspiracy beliefs and critic	the relationship cism of democr	between acy
	Estimate [95% CI]	SE	d	Estimate [95% CI]	SE	d	Estimate [95% CI]	SE	d
Democratic functioning (DI)	0.11 [0.03, 0.23]	0.05	0.022	0.07 [-0.05, 0.20]	0.07	0.262	-0.03 [-0.11, 0.04]	0.04	0.354
Economic performance (GDP)	-0.14 [-0.28, -0.06]	0.05	0.008	-0.14 [-0.27, -0.012]	0.07	0.033	0.05 [-0.02, 0.12]	0.04	0.149
	DV: Direct effect – Commitme immigration	nt to conventions	al action to oppose	DV: Direct effect – Commitmen immigration	t to violent actior	to oppose	DV: Direct effect – Criticism	of democracy	
	Estimate [95% CI]	SE	d	Estimate [95% CI]	SE	d	Estimate [95% CI]	SE	d
Democratic functioning (DI)	-0.10 $[-0.32, 0.24]$	0.15	0.506	-0.002 [-0.22, 0.21]	0.11	0.985	0.07 [-0.11, 0.25]	0.09	0.423
Economic performance (GDP)	-0.41 [-0.81, -0.11]	0.19	0:030	-0.47 [-0.73, -0.21]	0.13	< 0.001	0.20 [-0.02, 0.42]	0.11	0.071
Bolded values indicate those values that	were significant at $p < 0.05$.		- -						

(**1**





Fig. 4 | Relationship between conspiracy belief and outcomes by country. Anti-immigration conspiracy beliefs' association with conventional and violent action to oppose immigration, denoted with the dotted and dashed lines respectively; criticism of democracy denoted by solid lines. *N* = 4353 participants.

replications. This analysis showed that we had excellent power to detect effects at the individual level (power ≥ 0.99). However, owing to the clustered nature of the data and variation in the effect sizes (see Fig. 1), the power was more variable for the societal-level direct effects and cross-level interactions (the slopes). Specifically, we were underpowered (0.12–0.17) to detect the direct effects of the democracy index on all outcomes. We had adequate power to detect the direct effect of economic performance on the two collective action outcomes (0.77–0.91) but not anti-democratic attitudes (0.44). We were also underpowered to detect the cross-level interaction (slopes) for the moderation of the democracy index on the relationships between conspiracy beliefs and violent action (0.54) and anti-democratic attitudes (0.24) but were well-powered for conventional action (0.93). Finally, we had excellent power to detect the moderation of economic

performance on the relationship between conspiracy beliefs and conventional action (0.98), violent action (0.91) but not anti-democratic attitudes (0.36). In short, all the paths that are significant in Fig. 1 evidenced adequate power but those that had smaller observed effect sizes (and were not significant) were not adequately powered.

Discussion

Despite widespread speculation about the damaging effects of conspiracy beliefs for politics and society, the literature addressing *outcomes* of conspiracies is relatively nascent¹⁰ and the empirical picture is mixed and inconclusive¹¹. Accordingly, it is unclear whether these links exist and under what conditions misinformation and conspiracy foster illiberal, anti-democratic sentiment and movements – partly because few studies have



Fig. 5 | Slopes reflecting moderation of individual-level conspiracy beliefs by societal-level factors. Countries ranked by Gross Domestic Product (GDP; top panel) and Democratic Index (bottom panel). *N* = 4353 participants.

Table 3 | Overview of hypotheses and findings

Hypothesis	Prediction	Supported (✓) / No sig difference (¥)
1	Anti-immigration conspiracy beliefs will be positively associated with conventional and violent reactionary action to oppose migration	✓
2	Anti-immigration conspiracy beliefs will be positively associated with criticism of democracy	×
3	Societal-level GDP will be negatively associated with conventional and violent reactionary action to oppose immigration	✓
4	Societal-level GDP will be negatively associated with criticism of democracy	×
5	 a) Countries with greater GDP will evidence weaker links between conspiracy belief and conventional/violent action; or b) Countries with greater GDP will evidence stronger links between conspiracy belief and conventional/violent action 	5a supported ✔
6	 a) Countries with greater GDP will evidence weaker links between conspiracy belief and criticism of democracy; or b) Countries with greater GDP will evidence stronger links between conspiracy belief and criticism of democracy 	×
7	Societal-level democratic index will be negatively associated with conventional and violent reactionary action to oppose immigration	×
8	Societal-level democratic index will be negatively associated with criticism of democracy	×
9	 a) Countries with greater democratic index will evidence weaker links between conspiracy belief and conventional/ violent action; or b) Countries with greater democratic index will evidence stronger links between conspiracy belief and conventional/ violent action 	9b supported for conventional action only ✔
10	 a) Countries with greater democratic index will evidence weaker links between conspiracy belief and criticism of democracy; <i>or</i> b) Countries with greater democratic index will evidence stronger links between conspiracy belief and criticism of democracy 	×

examined individual- and societal-level factors side-by-side³³. The goal of the present study was to examine whether (individual-level) antiimmigration conspiracy beliefs were associated with violent and conventional reactionary action to oppose immigration, and criticism of democracy. We examined whether societal-level factors such as economic performance and democratic functioning both directly predict these outcomes and influence (strengthen, weaken) the individual-level relationships between conspiracy beliefs and outcomes (Fig. 2). Table 3 provides an overview of the key hypotheses and whether they were supported by the data.

The results revealed that anti-immigration conspiracy beliefs correlated positively with commitment to both conventional and violent reactionary action to oppose immigration, in 21 countries (supporting Hypothesis 1). Notably, we found that endorsement of anti-immigration conspiracy beliefs was also associated with commitment to conventional action - contrary to other work which suggests that conspiracy beliefs may uniquely foster more radical forms of action^{11,15}. Thus, whilst there is mixed evidence for the relationship between conspiracy mentality and general forms of political engagement¹³, the relationship between conspiracy beliefs and mobilization is clear in the context of specific beliefs and political actions^{20,25} Our study demonstrates that this relationship exists in the important context of immigration⁶ indicating that such beliefs pose a threat to social cohesion. Socially cohesive societies are those where there are high levels of mutual trust and positivity between people and groups². Conspiracy beliefs can incite intolerance of immigrants and help to mobilize protest against them, thus exacerbating tensions between different groups in society (see also 2,35).

Contrary to Hypothesis 2, anti-immigration conspiracy beliefs at the individual level were related to *greater* support for democratic values and norms. That is, believing that governments use immigration programs to promote ethnic and cultural diversity on an unwilling population²² was associated with less criticism of democracy. Given that conspiracy beliefs are more pronounced at the political extremes⁵, this unexpected relationship may reflect political engagement more broadly, such that the relationship between conspiracy beliefs and anti-democratic attitudes exist only for those at the extremes. Alternatively, given that conspiracy beliefs can foster

support for alternative forms of democracy (e.g., direct democracy³), participants may have imagined alternatives to representative democracy when forming their attitudes about democracy in general.

A particular strength of the current approach is that immigration is a global phenomenon, and it is increasingly clear that the form and direction of collective action is shaped by societal conditions^{30,31} and cultural values^{29,45}. These observations implicate a need to study immigration across multiple countries, yet, empirically, tests of how macro, societal-level factors influence the relationships between conspiracy belief and outcomes are sparse³⁰. The current research therefore offers a more contextually rich understanding of the drivers of (conventional and violent) anti-immigration action. Our results indicate that stronger economic performance at the society-level is linked to lower commitment to both conventional and radical action at the individual level (*Hypothesis 3*). We are unaware of many tests of societal-level predictors of collective action, although these are increasingly theorized to be an important part of understanding the interplay between people seeking to change society through collective action, and societal factors shaping the emergence of action per se^{31,45}.

Indeed, it stands to reason that some societal conditions would foster conspiracy-fuelled grievances more than others. In our data, economic performance - national GDP - qualified the links between conspiracy belief and reactionary action. Specifically, the links between immigration conspiracy beliefs and mobilization were weaker or non-significant for both forms of reactionary protest in societies with more flourishing economies (per Hypothesis 5a33). Countries with higher economic performance might have more stable economies and greater opportunities, leading to less feelings of insecurity among citizens. Countries with higher economic performance also often tend to be more diverse and cosmopolitan. Establishing positive interactions with individuals from diverse groups may mitigate the formation of detrimental intergroup conspiracy beliefs⁴⁶. On the other hand, our results suggest that conspiracy beliefs about the role of immigration may fall on fertile ground in societies with weaker economies by helping activate the sense of grievance or injustice that is a key antecedent to collective action⁴⁷.

Indeed, countries with relatively stronger economic performance should foster stronger, more supportive democratic attitudes at the individual level³². Surprisingly, however, we did not find evidence for the direct role of democratic functioning on predicting democratic attitudes (contrary to *Hypothesis 4*), nor was there evidence that GDP qualified links between conspiracy belief and antidemocratic sentiment (as per *Hypothesis 6*). A null effect is not evidence of no effect, however, and the post-hoc sensitivity analysis suggested that we did not have adequate power to detect these paths. Some research suggests that varying responses to the country's economic situation and its influence on satisfaction with democracy are moderated by political ideology⁴⁸. These alternatives should be further explored in future research.

Democratic attitudes exist at the individual level where people can differ in their support for democratic institutions and values, but democratic norms and institutions also differ in their effectiveness at the collective, societal level (reflected in the Democratic Index43)³⁸. Our research is amongst the first to consider both levels simultaneously. Contrary to expectations, we did not find evidence that the strength of democracy directly predicted either form of collective action (contrary to *Hypothesis* 739), nor did it predict individual-level democratic attitudes (disconfirming *Hypothesis* 8). That is, measures relating to societal-level institutional and procedural qualities of democracy did not appear to relate to the more subjective evaluations of individual citizens directly (see⁴⁹, although power was again an issue here given the smaller magnitude of effects.

While we did not find support for Hypothesis 8, the (societal-level) robustness of democracy did moderate the relationship between immigration conspiracy beliefs and reactionary collective action: states with a stronger democracy exhibited stronger links between conspiracy beliefs and conventional action, but not radical, violent action (per Hypothesis 9b). Intriguingly, the relationship between conspiracy belief and action is stronger in robust democracies only when that action involves interacting with those democratic, political processes (i.e., via conventional collective action) but not for more radical forms of action²⁶. These results are somewhat paradoxical because our findings suggest that democracies foster the kind of contention (protest, collective action) that is so central to democratic rights and freedoms. Yet anti-immigrant protests signal an intolerance of immigrants and could directly impinge on the democratic rights and freedoms of immigrant communities (e.g., a right to be free from persecution). In this sense, democracies appear to encourage the kind of action that weakens support for democratic values. These nuances suggest that governments and authorities must strike a careful balance between allowing anti-immigrant protests as a legitimate form of democratic expression whilst managing its other harmful effects on democratic norms and societies.

Limitations

Although we are amongst the first to test the links between conspiracy beliefs and illiberal outcomes in 21 countries, we acknowledge several limitations. First, the research is correlational, which means that causal relationships between variables could not be determined. Conspiracy beliefs may be "contaminated" by other dispositions²⁰ - third variables that we did not control for. For example, realistic and symbolic threat are particularly important predictors of anti-immigrant attitudes⁵⁰⁻⁵² including antiimmigrant action³⁵. Future research could consider how these variables relate to the outcomes examined here. Conspiracy beliefs may also reflect prior commitment to reactionary groups, and/or are bidirectionally associated with the predictors and outcomes. Longitudinal studies with multinational samples and multiple timepoints could address these unresolved questions. Although our primarily student samples allowed us to adopt a common sampling approach across countries, the sample was relatively younger, more politically liberal and educated than more representative samples. At the cluster level, we did not include countries with authoritarian regimes (see Fig. 1), and some regions were not represented in our data. These sample characteristics may have truncated the range on some variables, providing a conservative test of our hypotheses and impacting power to detect effects - perhaps especially the cross-level interactions. Future studies could incorporate a broader, more representative community sample and examine non-linear (e.g., quadratic) relationships between conspiracy beliefs and outcomes. Such research could also include more people (at the individual-level) and nations (at the societal-level) to bolster power to reliably test hypotheses about predictors that involve smaller effects.

Conspiracy beliefs can differ in their level of specificity - while some allege harms perpetrated by the government and authorities more generally, others implicate particular people (representatives, politicians), administrations or institutions. Given our cross-national test, we required a measure that could be readily adapted across contexts and, therefore, assessed beliefs about government conspiracy more generally rather than specific people or institutions that may not generalize across context. Future research could examine the links between more specific conspiracies and also offer a more differentiated approach to the measure of criticism of democracy. "Democracy" involves specific actors (representatives, politicians), institutions (government, which can be both administrative and political) and values (e.g., respect for human rights) but conspiracy beliefs may affect some of these facets more than others. For example, there is evidence that conspiracy beliefs may promote support for direct democracy but not representative democracy.3 Future research should develop a more differentiated approach to the measurement of democracy that allows for an assessment of these effects.

Conclusion

The 2024 Global Risks Report cites the interconnected effects of false information, societal polarization and involuntary immigration as amongst the biggest short-term threats to global peace and security⁵³. The current research underscores the importance of considering both the individual, as well as the broader socio-economic and political contexts (i.e., economic performance and democracy functioning), in addressing these major challenges. Indeed, although anti-immigration conspiracy beliefs appear to foster reactionary action, our results demonstrate that this is particularly true in countries facing economic challenges. Conversely, societal-level democratic functioning paradoxically strengthens the positive association between conspiracy beliefs and conventional action to oppose immigration. These results indicate that attempts to identify the consequences of conspiracy beliefs for anti-democratic outcomes must consider both individualand societal-level factors. Doing so will advance understanding of one of the biggest contemporary threats to democracy and enable researchers and policymakers alike to develop the tools needed to address the proliferation of conspiracy beliefs.

Data availability

The data, questionnaire and de-identified papers from the dataset are available via the OSF link (https://osf.io/r4y6s/?view_only= 0fef0882380a4a04b49cb4ef65ba251a).

Code availability

Code and output for the analyses can be found in the supplementary materials (see Supplementary Note 2) and are available via the OSF link (https://osf.io/r4y6s/?view_only=0fef0882380a4a04b49cb4ef65ba251a).

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Author contributions

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Competing interests

The authors declare no competing interests.

Additional information

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