RESEARCH ARTICLE

EASP WILEY

Cracks before the crisis: Polarization prior to COVID-19 predicts increased collective angst and economic pessimism

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Funding information
Australian Research Council Laureate Fellowship, Grant/Award Number: FL180100094

Abstract

We examine how polarization within societies is associated with reduced confidence in national responses to the coronavirus disease 2019 (COVID-19) crisis. We surveyed 4,731 participants across nine countries at Wave 1 (France, Germany, Indonesia, Italy, Netherlands, Spain, Thailand, the United Kingdom and the United States), and then, at Wave 2 (3 months later), we recontacted 840 participants from two countries (the United Kingdom and the United States). We found that perceived polarization in the years preceding COVID-19 predicted an enhanced perception that a country's COVID response was anomic (i.e., disorganized, chaotic), which in turn predicted greater collective angst and economic pessimism. Moreover, polarization measured at Wave 1 continued to predict perceptions that the COVID-19 response was anomic at Wave 2, and, in turn, enhanced collective angst, pessimism, and the perception that dramatic political change was required to recover from COVID-19. Our findings highlight how polarization may be associated with reduced confidence in leaders and governments at times of crisis, and how this predicts future-focused anxiety and pessimism.

KEYWORDS
anomie, collective angst, COVID-19, polarization

This virus is dangerous. It exploits cracks between us . . . Take as an example, ideology, or in one country it could be the differences along party lines. It exploits that. That's why I said we need national unity and whoever has whatever ideology—whether that person is from left or right or centre—they should work together to fight this virus . . . If we don't do that, this virus will stay longer with us . . . and we will lose more precious lives.

(Dr Tedros Adhanom Ghebreyesus, Director-General of the World Health Organization, World Health Organization, 2020).

1 | INTRODUCTION

As coronavirus disease 2019 (COVID-19) began to spread across the globe, the impending threat posed by the virus was not recognized universally. In many countries, ideological differences came to the fore, and groups clashed over the seriousness of the potential threat and what action, if any, should be taken (Clinton et al., 2021; Crimston & Selvanathan, 2020). Some governments called for a swift response and strict lockdown measures but others downplayed the threat and accused their opposition of using alarmist language and stoking fear for political gain. This was not only witnessed in the

media and in debates between ordinary citizens but also extended to exchanges between national leaders (Allcott et al., 2020; Hart et al., 2020). Almost as quickly as it had spread, COVID-19 became a divisive issue.

Increasingly, social scientists are uncovering ways in which polarization (defined here as perceived group division and opposition on the basis of conflicting ideas, attitudes, or beliefs) can disrupt social cohesion (Crimston et al., 2021; Enders & Armaly, 2019; Heltzel & Laurin, 2020; Rapp, 2016). However, the extent to which polarization may be associated with discord that undermines a country's response to a crisis and predicts enhanced anxiety and future pessimism is unknown. We argue that social psychological theory (the social identity approach; Tajfel & Turner, 1979; Turner et al., 1987) can help us understand how the perception of underlying cracks in the form of ideological divisions may shatter confidence in a country's ability to respond to, and ultimately overcome, the threat of a once-in-a-generation crisis like COVID-19 (Jetten et al., 2020; Van Bavel et al., 2020). In the current research, we examine the extent to which perceived polarization within a society prior to COVID-19 may be associated with reduced confidence in a government's response to the crisis (i.e., a perceived anomic response to COVID-19), thereby predicting collective anxiety and fears about future recovery.

1.1 | The nature and consequences of polarization

Social identity (Tajfel & Turner, 1979) and social categorization (Turner et al., 1987) theorizing can help us understand the dynamics of polarization. According to these theories, when we identify with a particular group such that this group becomes an important part of our self-concept, we see the world through the eyes of the group (i.e., the ingroup) and differences with other groups (i.e., outgroups) become salient, fuelling a pervasive "us versus them" mindset (Ellemers et al., 2002; Jetten et al., 2004). In line with the *comparative fit* principle, polarization can be understood as the result of increased salience of intragroup similarities and intergroup differences, thereby enhancing fit of the social categorization (Oakes et al., 1994). A consequence of this process is that we often perceive outgroup members as holding more extreme ideologies than they actually do (Robinson et al., 1995), and frequently overestimate levels of polarization within society (Enders & Armaly, 2019; Westfall et al., 2015).

A growing body of research has documented the collective level (mostly negative) consequences of polarization. This research has examined polarization in various forms (i.e., both the perception of group divides and the actual divergence of attitudes within a society). For example, perceived polarization has been shown to enhance the perceived breakdown of social cohesion within a society and lower the perceived legitimacy and effectiveness of government institutions and leadership (Crimston et al., 2021). In line with this, polarization, in perceived and objective forms, has been linked to increased outgroup hostility, selfishness and prejudice, and associated with reduced trust and political efficacy (Arvan, 2019; Enders & Armaly, 2019; Luhan et al., 2009; Myers & Bishop, 1970; Tappin & McKay, 2019). Similarly, polar-

ization has also been linked to a range of political consequences, such as the erosion of democratic processes (Heltzel & Laurin, 2020; McCoy et al., 2018; Vegetti, 2019), the rise of populism (Norris & Inglehart, 2019), and increased support for political change in the form of both authoritarian and progressive strong leaders (Crimston et al., 2021). Moreover, there is evidence that these negative effects are consistent across cultures, with data from the World Values Survey showing that objective polarization was linked to reduced trust within society across 39 countries (Rapp, 2016). In addition to consistently overestimating the levels of polarization that are present within a society (Westfall et al., 2015), there is evidence that *perceived* polarization is a stronger predictor of negative outcomes than is *objective* polarization (Enders & Armaly, 2019). It is hence perceived polarization that is under investigation in the current research.

In the context of COVID-19, research has demonstrated links between societal polarization and responses to the pandemic. For example, it has been found that the polarization of COVID-19 media coverage in the United States (i.e., politicized coverage of the pandemic) may have contributed to diverging COVID-19 attitudes (e.g., regarding social distancing adherence; Hart et al., 2020). The facilitation of "us" versus "them" mindsets arguably developed as a lens through which people interpreted and responded to the COVID-19 threat. In line with this, smartphone location data from the United States showed that regions with a greater proportion of Republicans were less likely to engage in social distancing than Democratic regions, even after controlling for regional policies, population density, and local COVID cases and deaths (Allcott et al., 2020). Similarly, the political polarization of COVID-19 was associated with liberals (compared to conservatives) perceiving the virus as a greater risk, while placing less trust in politicians to handle the crisis (Kerr et al., 2021).

1.2 | Polarization, anomie and collective angst

In addition to polarization creating a lens through which people viewed and responded to COVID-19, polarization within a society may also undermine confidence that a society is capable of effectively managing and overcoming a crisis. This is consistent with work that has shown that perceived polarization leads to perceived cracks in the cohesion and functionality of a society (Crimston et al., 2021), or so-called anomie (see Teymoori et al., 2016). Anomie refers to the *perceived* breakdown of society across two dimensions: disintegration, which refers to the perception that the social fabric within a society is breaking down (e.g., the erosion of social trust), and dysregulation, the perception that leaders and government institutions are broken and ineffective (Teymoori et al., 2016). Notably, the perception of long-standing divisions within society prior to the pandemic may come to the fore at a time when society is most tested (and when cohesion and confidence in leadership is desperately required). These existing divisions may therefore be associated with a lack of confidence in leaders and government institutions to effectively manage crises, and in the case of COVID-19, the perception that a country's response to the pandemic was disorganized and ineffective.

The perception that a country is poorly equipped to respond effectively to COVID-19 may predict enhanced anxiety and pessimism about a post-COVID future. Indeed, there is evidence to suggest that if people feel that political divisions and conflict are characteristic within a country, citizens are more fearful of their collective future (Liu & Hilton, 2005). More specifically, the perception of society in a state of anomie has been shown to predict increased future pessimism (Teymoori et al., 2016). In addition, the negative impact of COVID-19 on the global economy has been highly publicized (Nicola et al., 2020; Pak et al., 2020), and this may be anticipated, especially, among those who perceive their society to be highly polarized. We therefore predicted that perceiving an anomic COVID-19 response would be associated with general collective angst and future economic pessimism.

1.3 | The current research

In the current work, we conduct a cross-cultural examination of the associations between polarization, perceived national COVID-19 response, and expectations of future recovery. Specifically, we tested the hypothesis that perceived polarization within a society in the years prior to COVID-19 would predict people's perception that their country's response to the pandemic has been anomic (i.e., that the handling of the crisis has been disorganized and ineffective), as well as predicting increased collective angst and pessimism regarding economic recovery (H1). We also predicted that the link between polarization and collective angst and economic pessimism would be mediated by the perception of an anomic country-level COVID-19 response (H2). We tested these predictions across two waves of data collected at a time in 2020 when the rates of infection were rapidly increasing globally. Wave 1 consisted of nine countries (France, Germany, Indonesia, Italy, the Netherlands, Spain, Thailand, the United Kingdom, and the United States) and data collection took place between 17 March and 7 April 2020. Wave 2 consisted of a targeted follow-up in two countries (the United Kingdom and the United States) and took place between 24 June and 2 July 2020. The purpose of Wave 2 was to test these predictions longitudinally as the intensity of the pandemic heightened in the United States and the United Kingdom.

2 | WAVE 1

2.1 | Participants

A total of 4,731 participants were sampled across nine countries: France, Germany, Indonesia, Italy, the Netherlands, Spain, Thailand, the United Kingdom, and the United States. Surveys conducted in Dutch, French, German, Indonesian, Italian, Thai, and Spanish were translated by the authors (all native speakers in their respective languages). Participants were sampled via either the Prolific platform (Germany, Italy, the Netherlands, Spain, the United Kingdom, and the United States) or through social media (Thailand and Indonesia), with the exception of France, which was sampled both through Prolific and social media. Data

collection for Wave 1 took place between 17 March and 7 April 2020. Countries were selected on the basis of logistical convenience, access, and the upper limit for our samples was decided as a function of funding constraints. In addition, we ran a post hoc Monte Carlo power analysis for indirect effects (Schoemann, et al., 2017) and determined that, to achieve at least 90% power to detect our hypothesized indirect effects (based on the strength of associations between our predictor, mediator and outcome variables) we required a sample of 235 participants per country. We therefore aimed for a sample of at least 300 participants per country in Wave 1 to account for possible attrition in Wave 2. We note that our final samples were sufficiently powered to detect our hypothesized effects at the individual level.

Of the total Wave 1 sample, 468 participants (9.89%) were excluded after having failed an attention check ("To ensure you are a real human-being (and not a bot), please select strongly agree for this item"). This left a final sample of 4,263 (51.60% identified as female, 45.60% as male, and 2.80% as nonbinary/other; $M_{age} = 30.54$, $SD = 11.65$). Additional sample characteristics for each country are presented in Table S1 (adapted from Hornsey et al., 2021).[1]

2.2 | Measures

2.2.1 | Polarization

Pre-existing levels of political polarization in society were measured using a single item, "Over the last 5 to 10 years there have been deep political divisions in my country" (1 = strongly disagree to 7 = strongly agree).

2.2.2 | Anomic COVID-19 response

Established scales that measure perceptions of anomie are not context specific (Teymoori et al., 2016) so we developed a novel measure that assessed directly perceptions that a society's response to the COVID crisis was disintegrated and dysregulated. Specifically, the perception that a society's response to COVID-19 was anomic was measured across four items, "I would describe my country's response to COVID-19 as . . ."; 1 = professional to 7 = unprofessional; 1 = controlled to 7 = panic stricken; 1 = organized to 7 = disorganized; 1 = orderly to 7 = chaotic ($\alpha = .91$).[2] An unconstrained factor analysis across all nine countries revealed that all items loaded onto a single factor (factor loadings ranged from 0.74 to 0.91).

2.2.3 | Collective angst

Perceived collective angst was measured across two items: "I am worried about the future vitality of (insert country)" and "I have the

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[1] Data included in this publication are from the same data set reported in Hornsey et al. (2021).
[2] Cronbach's Alpha scores and bivariate correlations for multi-item measures broken down by country are presented in Table S4 in the supplementary material.

TABLE 1 Correlations between key variables, Wave 1

Variable	M	SD	Correlations			
			1	2	3	4
1. Polarization	5.58	1.23	1			
2. Anomie	3.96	1.60	.21***	1		
3. Collective angst	4.75	1.43	.28***	.36***	1	
4. Economic pessimism	3.89	1.61	.06***	.25***	.49***	1

***$p < .001$.

impression that things in (insert country) are taking a turn for the worse" (1 = *strongly disagree*, 7 = *totally agree*; $r = .64$, $p < .001$; Jetten & Wohl, 2012; Wohl & Branscombe, 2008).

2.2.4 | Economic pessimism

Future economic outlook was measured using a single item: "Now think about (insert country)'s economic situation in the next 10 years. To what extent do you expect the country's economic situation to be worse, the same, or better in the next 10 years?" (1 = *a lot better*, 4 = *remain the same*, 7 = *a lot worse*).

2.2.5 | Additional measures

In addition to age and gender, a single item was used to assess political orientation: "People typically describe their political views from 'left' to 'right'. How would you describe your political views? (0 = *very left-wing* to 100 = *very right-wing*)."

3 | RESULTS

3.1 | Descriptive results

Table 1 displays the overall means, SDs, and bivariate correlations of key variables collapsed across the nine Wave 1 countries. Means, SDs, and bivariate correlations broken down by country are presented in Table S2. Political divisions prior to COVID-19 were significantly associated with increased perceived anomie in response to COVID-19, as well as higher collective angst, and a more pessimistic economic outlook (see Table 1).

3.2 | Multilevel mediation

To test our primary hypotheses, we conducted multilevel mediation using MPlus version 8.3, which takes into account the clustering of the data (nine countries, total $N = 4,001$). The key difference between multilevel mediation and a standard mediation is the presence of ran-
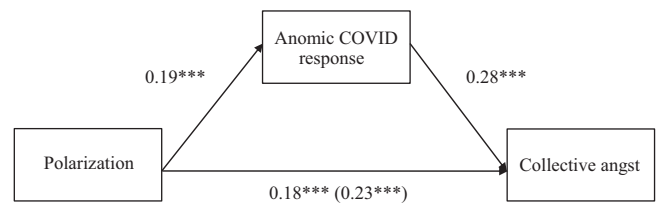

FIGURE 1 Wave 1 mediation model of the effect of polarization predicting collecting angst via perceived anomic COVID-19 response, ***$p < .001$

dom intercepts (i.e., allowing the intercept within each country to vary), which allowed us to control for country-level differences. Our hypotheses focused on individual-level variables (i.e., participants' perceptions and attitudes within each country), so we focused on the within-level mediation effects[3] and used group-mean centring of the predictor variables to centre the predictors within each country (Enders & Tofighi, 2007), but we note that a significant amount of variance in collective angst (intraclass correlation coefficient (ICC) = 0.21) and economic pessimism (ICC = 0.14) is attributable to country-level differences. All analyses controlled for participants' age, gender and political orientation (see Table S5 for the indirect, direct and total effects broken down by country).

3.2.1 | Collective angst

First, we tested multilevel mediation between polarization and collective angst, mediated by the perception that a government's response to COVID-19 was anomic. Polarization predicted greater perceived anomic response to COVID-19 ($b = .19$ [.06, .32], standard error (SE) = .05, $p < .001$), and perceived anomic response in turn predicted greater collective angst ($b = .28$ [.23, .34], $SE = .02$, $p < .001$). The indirect effect between polarization and collective angst via anomie was significant ($b = .05$ [.02, .09], $SE = .02$, $p < .001$). After accounting for this indirect effect, the direct effect between polarization and collective angst remained significant ($b = .18$ [.11, .24], $SE = .03$, $p < .001$; see Figure 1).

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[3] By within-level mediation we are referring to the results at the individual level as opposed to the country level.
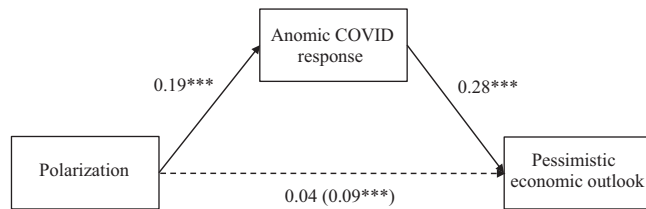
FIGURE 2 Wave 1 mediation model of the effect of polarization predicting pessimistic economic outlook via perceived anomic COVID-19 response, ***$p < .001$

3.2.2 | Economic pessimism

Next, we tested multilevel mediation between polarization and economic pessimism, again mediated by perceived anomie. Polarization predicted an enhanced perception that the government's response to COVID-19 was anomic ($b = .19$ [.06, .32], $SE = .05$, $p < .001$), and anomie in turn predicted enhanced economic pessimism ($b = .28$ [.35, .22], $SE = .03$, $p < .001$). The indirect effect between polarization and economic pessimism via anomie was significant ($b = .05$ [.08, .02], $SE = .01$, $p < .001$). After accounting for this indirect effect, the direct effect between polarization and economic pessimism was not significant ($b = .04$ [−.09, .02], $SE = .02$, $p = .074$; see Figure 2).[4]

4 | DISCUSSION

Overall, stronger perceived political divisions in a country prior to COVID-19 were associated with the perception that a country's response to COVID-19 was more anomic, as well as being associated with enhanced collective angst and a more pessimistic economic outlook. Moreover, in line with predictions, the perception of an anomic COVID-19 response mediated the association between prior political divisions and enhanced collective angst about the future state of society and more pessimistic post-COVID-19 economic development. In our Wave 2 follow-up, our aim was to examine these relationships longitudinally as the intensity of the pandemic heightened in the United States and the United Kingdom. Prior work has shown that polarization can lead, via perceived anomie, to increased support for dramatic political change in the form of populist strong leaders (Crimston et al., 2021). At Wave 2 we therefore also examined the link between perceived political divisions and a third outcome variable: the perceived need for dramatic political change to recover from the impacts of COVID-19.

5 | WAVE 2

5.1 | Participants

A total of 840 participants from the United States ($n = 373$) and the United Kingdom ($n = 467$) took part in Wave 2. Data collection for

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[4] The mediation findings across the nine countries are presented in Table S5. We note that the indirect effects do not hold across each of the nine countries. This is considered further in the general discussion.

Wave 2 took place between 24 June and 2 July 2020. Participants were again sampled via the Prolific Academic platform. Of the total Wave 2 sample, 15 participants were excluded after having failed an attention check, leaving a final sample of 825 (56.60% identified as female, 42.50% as male, 0.80% as nonbinary/other; $M_{age} = 36.03$, $SD = 12.56$). Additional sample characteristics for each country are presented in Table S1.

5.2 | Measures

Participants at Wave 2 completed the same measures of anomic covid response ($\alpha = .93$), collective angst ($r = .64$, $p < .001$), economic pessimism used at Wave 1, and a novel measure assessing the perceived need for dramatic political change to recover successfully from COVID-19.

5.2.1 | Dramatic political change

The perceived need for dramatic political change to recover post COVID-19 was examined using a single item: "Our country needs to see dramatic political change if we are going to fully recover from the impacts of COVID-19" (1 = strongly disagree, 7 = totally agree).

6 | RESULTS

6.1 | Descriptive results

Table 2 displays the overall means, SDs, and bivariate correlations of key variables collapsed across the two Wave 2 countries. Means, SDs, and bivariate correlations broken down by country are presented in Table S3. In line with Wave 1 findings, polarization at Wave 1 predicted increased anomie, collective angst, and a more pessimistic economic outlook at Wave 2. In addition, polarization at Wave 1 also predicted increased support for dramatic political change at Wave 2 (see Table 2). These relationships held across both our US and UK Wave 2 samples (see Table S3).

6.2 | Multigroup mediation

To test our hypotheses, we conducted multigroup mediation using MPlus version 8.3 to test the mediation models in the United States and the United Kingdom simultaneously (total $N = 736$). This approach also allowed us to test whether the pathways differed between countries. Following recommendations by Rutkowski and Svetina (2014) and Chen (2007), to identify the most parsimonious model, we started with a freely estimated model (i.e., paths were free to vary between countries). These models were compared with models that gradually constrained one path at a time to be equal between countries. If the latter models did not substantially change the comparative fit index (CFI) and root mean square error of approximation (RMSEA) indicators, we retain and interpret the results of the more parsimonious constrained

TABLE 2 Correlations between key variables Wave 1 and Wave 2

Variable	M	SD	Correlations							
			1	2	3	4	5	6	7	8
1. Polarization (wave 1)	6.03	1.06	1							
2. Anomie (wave 1)	4.34	1.64	.33***	1						
3. Collective angst (wave 1)	5.08	1.32	.23***	.32***	1					
4. Economic pessimism (wave 1)	3.86	1.72	.05	.13***	.45***	1				
5. Anomie (wave 2)	4.87	1.57	.38***	.65***	.32***	.18***	1			
6. Collective angst (wave 2)	5.29	1.24	.25***	.26***	.54***	.30***	.35***	1		
7. Economic pessimism (wave 2)	3.89	1.64	.10**	.14***	.36***	.58***	.24***	.43***	1	
8. Support for political change (wave 2)	5.49	1.61	.25***	.38***	.30***	.17***	.48***	.30***	.18***	1

**p < .01.
***p < .001.

model in which the stability of variable scores across different time points is equal. To model the mediation effects longitudinally, we used polarization measured at Wave 1 as the independent variable. We used the mediators and dependent variables measured at Wave 2, while controlling for the same variables measured at Wave 1. The analysis further controlled for participants' age, gender, and political orientation reported at Wave 1.

6.2.1 | Collective angst

First, we tested multigroup mediation between Wave 1 polarization and Wave 2 collective angst mediated by Wave 2 anomie. A fully constrained model provided the best fit for the data, χ^2 (18) = 73.62, $p < .001$, CFI = .91, RMSEA = .09, standardized root mean squared residual (SRMR) = .06. Across both countries, we found that Wave 1 polarization predicted greater Wave 2 anomie ($b = .24$ [.12, .37], $SE = .05, p < .001$), over and above the link between Wave 1 and Wave 2 anomie ($b = .56$ [.47, .65], $SE = .04, p < .001$). Wave 2 anomie, in turn, predicted greater Wave 2 collective angst ($b = .16$ [.07, .25], $SE = .04$, $p < .001$) over and above the link between Wave 1 and wave 2 collective angst ($b = .43$ [.33, .53], $SE = .04, p < .001$). The indirect effect between Wave 1 polarization and Wave 2 collective angst via Wave 2 anomie was significant ($b = .04$ [.01, .07], $SE = .01, p = .001$). After accounting for this indirect effect, the direct effect between Wave 1 polarization and Wave 2 collective angst was not significant ($b = .07$ [-.05, .18], $SE = .04, p = .104$). See Figure 3 for the mediation model.[5]

6.2.2 | Economic pessimism

Second, we tested a multigroup mediation between Wave 1 polarization and Wave 2 economic pessimism mediated by Wave 2 anomie.

A partially constrained model provided the best fit to the data, χ^2 (17) = 89.77, $p < .001$, CFI = 0.89, RMSEA = 0.11, SRMR = 0.07, such that all paths were constrained with the exception of the path between Wave 2 anomie and Wave 2 economic pessimism, which was unconstrained (i.e., allowed to vary between countries). Across both countries, we found that Wave 1 polarization predicted greater Wave 2 anomie ($b = .24$ [.12, .37], $SE = .05, p < .001$), over and above the link between Wave 1 and Wave 2 anomie ($b = .56$ [.47, .65], $SE = .04$, $p < .001$).

In the United Kingdom, Wave 2 anomie, in turn, predicted a more pessimistic Wave 2 economic outlook ($b = .22$ [.35, .10], $SE = .05$, $p < .001$) over and above the link between Wave 1 and Wave 2 economic outlook ($b = .52$ [.44, .61], $SE = .03, p < .001$). The indirect effect between Wave 1 polarization and Wave 2 economic pessimism via Wave 2 anomie was significant in the United Kingdom ($b = .05$ [.09, .01], $SE = .02, p = .001$). After accounting for this indirect effect, the direct effect between Wave 1 polarization and Wave 2 economic pessimism was not significant ($b = .03$ [.–10, .17], $SE = .05, p = .513$). See Figure 4 for the mediation model.

By contrast, in the United States, over and above the link between Wave 1 and Wave 2 economic pessimism ($b = 0.52$ [.44, .61], $SE = .03$, $p < .001$), Wave 2 anomie did not significantly predict Wave 2 economic pessimism ($b = .00$ [−.15, .15], $SE = .05, p = .975$). The indirect effect between Wave 1 polarization and Wave 2 economic pessimism via Wave 2 anomie was not significant in the United States ($b = 0.00$ [−.04, .04], $SE = .01, p = .975$).

6.2.3 | Support for dramatic political change

Finally, we tested multigroup mediation between Wave 1 polarization and Wave 2 support for dramatic political change mediated by Wave 2 anomie. A fully constrained model provided the best fit to the data, χ^2 (18) = 57.43, $p < .001$, CFI = 0.913 RMSEA = 0.09, SRMR = 0.06. We found that Wave 1 polarization predicted greater Wave 2 anomie ($b = .24$ [.12, .37], $SE = .05, p < .001$), over and above the link between Wave 1 and Wave 2 anomie ($b = .56$ [.47, .65], $SE = .04, p < .001$). Wave

[5] When using an alternative (more stringent) model to test our longitudinal effects (Cole & Maxwell, 2003), significant indirect effects only emerge for collective angst in Wave 2, whereas the indirect effects for economic outlook and dramatic political change are no longer significant. See Figure S1 through to S3.
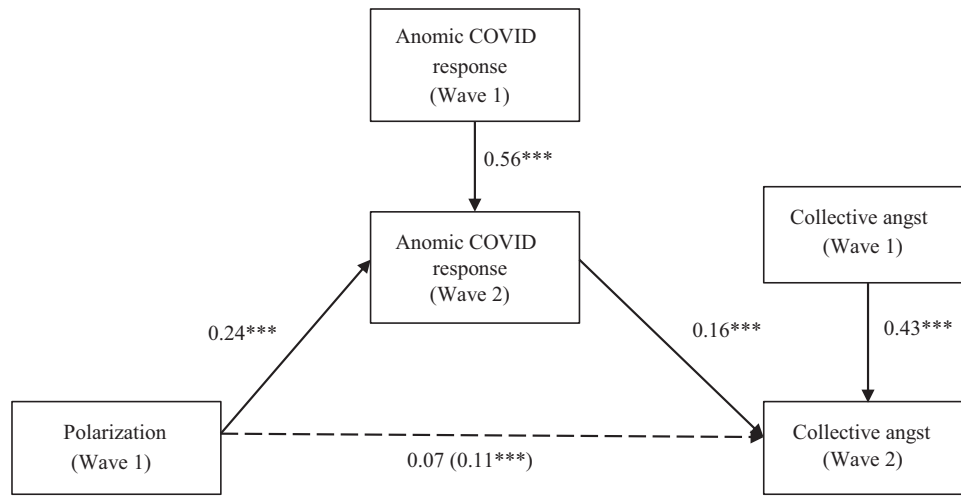
FIGURE 3 Longitudinal mediation model whereby polarization at Wave 1 predicts collective angst at Wave 2 via perceived anomic COVID-19 response, ***$p < .001$ (in the United States and the United Kingdom)
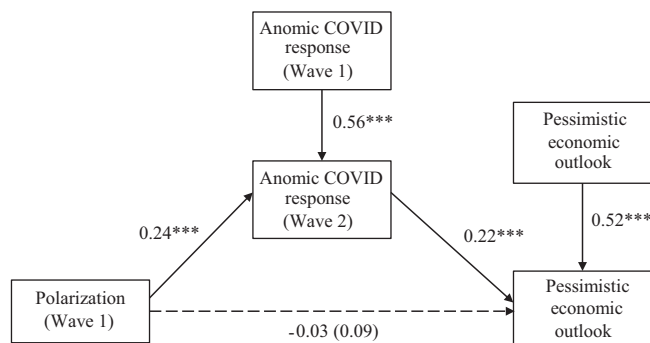
FIGURE 4 Longitudinal mediation model whereby polarization at Wave 1 predicts pessimistic economic outlook at Wave 2 via perceived anomic COVID-19 response, ***$p < .001$ (United Kingdom only)
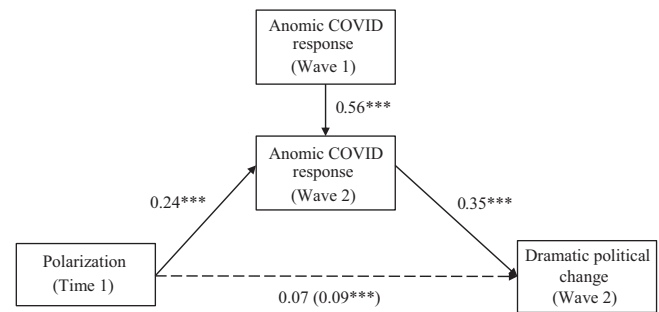
FIGURE 5 Longitudinal mediation model whereby polarization at Wave 1 predicts the desire for dramatic political change at Wave 2 via a perceived anomic COVID-19 response, ***$p < .001$ (United States and United Kingdom)

2 anomie, in turn, predicted greater Wave 2 support for political change ($b = .35$ [.24, .46], $SE = .04$, $p < .001$). The indirect effect between Wave 1 polarization and Wave 2 support for dramatic political change via Wave 2 anomie was significant ($b = .09$ [.03, .14], $SE = .02$, $p < .001$). After accounting for this indirect effect, the direct effect between Wave 1 polarization and Wave 2 support for dramatic political change was not significant ($b = .07$ [−.07, .22], $SE = .06$, $p = .205$). See Figure 5 for the mediation model.

7 | DISCUSSION

Wave 2 provided a longitudinal test of the relationships among perceived political divisions, anomie, and anticipated post-COVID-19 outcomes across the United States and the United Kingdom. In line with predictions, perceived political divisions in a country prior to COVID-19 measured at Wave 1 were associated with the perception that a country's response to COVID-19 was anomic at Wave 2. In turn, perceived state of anomie subsequently predicted increased collective angst, a more pessimistic economic outlook, and the belief that dra-

matic political change was required if a country was going to recover fully from the negative impacts of COVID-19. We note, however, that when applying a more stringent test of our longitudinal effects (Cole & Maxwell, 2003), an indirect link only emerges for collective angst (and not for economic outlook and dramatic political change; for detailed results see the supplementary materials). The indirect link between perceived anomie and economic outlook was not found in the United States at Wave 2. One possible explanation for this may be that the repeated assertions from President Donald Trump about a swift economic recovery from COVID-19 in the months between Wave 1 and Wave 2 collection went some way in limiting economic pessimism in the United States (Lynch, 2020, April 8).

8 | GENERAL DISCUSSION

Within our nine-country sample, we found that perceived political divisions in the years preceding COVID-19 predicted enhanced belief that a countries' response to the virus was anomic (i.e., disorganized and unprofessional). In turn, this perception of an anomic COVID-19

response predicted increased collective anxiety about the future state of society, as well as more pessimism regarding a country's future economic recovery. In our Wave 2 follow-up (in the United States and United Kingdom) we found that perceived pre-existing political divisions measured at Wave 1 still predicted the belief that a country's responses to COVID-19 was more anomic approximately 3 months later. In turn, perceptions of a more anomic COVID-19 response again predicted future anxiety, economic pessimism, and the perceived need for dramatic political change to ensure a full recovery from the impacts of COVID-19 (but note that these longitudinal effects only emerge for collective angst when applying a more stringent statistical approach; see the supplementary materials).

Prior work has shown that polarization predicted the breakdown of social cohesion and increased intergroup distrust, negativity and conflict (Crimston et al., 2021; Enders & Armaly, 2019; Luhan et al., 2009; Rapp, 2016). Here, we extend the existing literature by highlighting how polarization in a country prior to the outset of a crisis is not only associated with reduced confidence in the handling of that crisis in the present but in turn is also associated with future-focused anxiety, pessimism, and the desire for political change. Our findings are in line with the social identity perspective (Tajfel & Turner, 1979; Turner et al., 1987) and prior theoretical work emphasizing the fundamental role of cohesion and collective identification countering the negative impacts of collective level threats and crises (Jetten et al., 2021).

However, while the current research further emphasizes the potential dangers of polarization in our societies, additional research is needed if we are to develop a comprehensive understanding of the potential ways in which societal polarization may undermine responses to crises such as COVID-19. For instance, if citizens have little faith in leaders and government institutions to effectively manage a crisis like COVID-19, they might also be less likely to trust government directives and instead turn to alternative sources of information. This may in turn fuel conspiratorial thinking (see Bruder & Kunert, 2021). In addition, it is also not yet clear if the current findings are specific to the COVID-19 context and whether the explanatory power extends to other collective challenges and crises. For example, future research might examine how polarization might underline responses to environmental crises and disasters. This possibility is related to existing work demonstrating how social cohesion can help groups recover in the aftermath of natural disasters (Drury et al., 2016; Ntontis et al., 2018). If polarization serves to undermine a sense of shared identity and solidarity that could otherwise arise in the aftermath of disaster contexts, it could likely spell trouble for psychological resilience and ultimate recovery. This avenue of research is crucial given the increasing intensity and frequency with which climate change-induced disasters are occurring (see Jetten et al., 2021).

Looking forward, though the longitudinal component is a particular strength of the current research, as the current data is correlational in nature, we cannot make causal claims about the nature of the identified relationships which is something that might be examined in future experimental research. For example, future research could test the theorized causal links using fictional society paradigms as seen in research examining similar societal level phenomena that can be challenging to manipulate (e.g., Orinthia and Bimboola; Crimston et al., 2021; Jetten et al., 2015). In place of the COVID-19 anomie measure created for the current research, future research might examine whether the observed relationships hold beyond the COVID-19 context—i.e., using the established perceptions of anomie scale (Teymoori et al., 2016), which is not COVID specific.

Finally, we acknowledge the lack of empirical support for our theorized model across the full set of countries examined in the current dataset (i.e., when looking beyond the combined country effect, our hypothesized indirect effect emerged in five of the nine countries at Wave 1, and in both countries at Wave 2). We could not identify a clear discernible pattern with regard to the presence or absence of the indirect effects across the countries examined. Future research might further examine the robustness of these effects, and identify potential third variables at play (e.g., how the handling of a disaster is portrayed by politicians and the media within a country and narratives concerning future optimism and recovery).

8.1 | Concluding thoughts

As 2020 unfolded, it became clear that many nations were caught off guard and found themselves unprepared for the rapid spread of COVID-19. In many ways, COVID-19 was and is a global crisis that exposed each country's vulnerabilities. It is clear that in many parts of the world, underlying cracks in the form of societal divisions made the difficult task of confronting and overcoming COVID-19 even more challenging. Moving forward, there are important lessons to be learned. Finding ways to overcome underlying divisions and building a strong sense of "us" within our communities and societies may be crucial in fostering the levels of trust and cohesion required to respond to crises of this scale. The societies that are best able to do this might just be better prepared for the next pandemic when it inevitably hits.

CONFLICT OF INTEREST
The authors declare that there are no conflicts of interest.

ETHICS STATEMENT
This research received ethics approval from the University of Queensland.

DATA AVAILABILITY STATEMENT
Data is available on the Open Science Framework https://osf.io/6vztp/.

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