Ingroup identification moderates blame attributions for the COVID-19 crisis, and willingness to help ingroup and outgroup members

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Abstract

The present studies focussed on how blame attributions for an existing problem and decisions to help those negatively impacted by it are affected by group membership and social identity considerations. This was investigated in the context of the COVID-19 pandemic, asking British nationals about their attributions regarding the pandemic in terms of culpability of the British national ingroup and the Chinese, a national outgroup to the participants. Willingness to help those negatively impacted by the pandemic was also assessed, separately for help offered to ingroup and outgroup members. It was hypothesized that blame attributions and helping decisions would be driven by identity concerns, such that outgroup blame would be stronger than ingroup blame, that ingroup help would be offered more willingly than outgroup help, and that these effects would be especially pronounced for those strongly identified with their national ingroup. Support for the predictions were found in an exploratory online survey of British nationals (N = 250), and in a pre-registered second study (N = 250). Theoretical and practical implications of the findings are discussed.

Keywords: Intergroup helping, donation, group identity, ingroup identification, prosociality, attribution, blame, ingroup blame, outgroup blame, COVID-19, monetary donation

Ingroup identification moderates blame attributions for the COVID-19 crisis, and willingness to help ingroup and outgroup members

When things go wrong, people like to point fingers and search for culprits, all the more so the bigger the problem. The global COVID-19 pandemic is no exception. Unsurprisingly, many theories – some more outlandish than others - have sprouted on social media and have been proposed by politicans about the factors that have led to the spread of the disease in China, Britain, and around the world (Biddlestone et al., 2020). Of particular interest to this investigation were attributions about culpability of the national ingroup and national outgroups regarding the pandemic. The studies focussed on how British nationals attribute blame for the coronavirus pandemic to actions by the British national ingroup on the one hand and the Chinese national outgroup on the other hand. Willingness to help those negatively impacted by the pandemic was also studied, with a comparative focus on help offered to British ingroup members and help offered to Chinese outgroup members. It was hypothesized that blame attributions and helping decisions would be driven by identity concerns, such that outgroup blame would be stronger than ingroup blame, that ingroup help would be offered more willingly than outgroup help, and that these effects would be especially pronounced for those strongly identified with their national ingroup.

There were heated discussions in the media about culpability at the start of the pandemic, and so the context of attributions to British and Chinese errors in managing the coronavirus crisis was chosen to investigate these issues. Because blame attributions can be assumed to have many important psychological as well as political consequences, this seemed a topic of not only theoretical but also practical importance. For example, US President Trump repeatedly blamed China for the pandemic (e.g., CNN, 2020; see also WHO, 2020). Although discussions of Chinese culpability were very prominent in British

media coverage towards the start of the pandemic in the spring of 2020 (both by commentators who propagated and those who opposed blame attributions to China, see e.g. The Guardian, 2020), the focus then shifted later on in 2020 towards incompetence of the British government in managing the crisis, and towards reflections on whether or not the British as whole - or certain segments of the population - were to blame themselves, e.g. because of a failure to follow social distancing guidelines (e.g., The Independent, 2020). The present contribution sought to study to which extent British nationals buy into blame attributions to the Chinese outgroup on the one hand and their British ingroup on the other hand, and how blame attributions and helping decisions might be contingent on the extent to which people care about their national group membership – the extent to which they are identified with their national ingroup.

Blame attributions to ingroup and outgroups. Social Identity Theory (SIT) suggests that people draw a positive sense of self-esteem from their group memberships. In as far as they can feel good about their social ingroup(s), they feel good about themselves (Tajfel & Turner, 1986). People therefore strive to see their ingroup as positively distinct from – better than – relevant outgroups. There is strong evidence that this central tenet of SIT holds across a number of different groups and contexts (Brown, 2000). There is indeed consistent evidence for ingroup favouritism, for example in a large meta analysis which found that intergroup discrimination in cooperation results from ingroup favoritism rather than outgroup derogation (Balliet et al., 2014). It has been argued that ingroup favouritism evolves because it enables groups of heterogeneous individuals to form populations needed to solve important coordination problems (Efferson et al., 2008). A logical result of ingroup favouritism would be to avoid blame attributions to ingroups that are both salient and subjectively important, and to prefer prosocial acts directed at assisting ingroup members over those directed at assisting outgroup members.

Group memberships and social identity concerns are also of pivotal relevance for behavioural responses to the COVID-19 pandemic (Cruwys et al., 2020; Jetten et al., 2020). For example, social identity can be harnessed to faciliate behaviour change in response to the pandemic, such as adherence to social distancing guidelines (Bowe et al., 2021; Van Bavel et al., 2020).

As suggested above, a desire to see the ingroup in a positive light conflicts with the idea that the ingroup is at fault or is culpable for negative events that lead to large numbers of casualties, as the COVID-19 pandemic has done. Believing that the ingroup is to blame is therefore at odds with a positive view of the ingroup, causing cognitive dissonance (Festinger, 1962). Because people will be motivated to defend a positive view of their ingroup, at least in situations where other identity management strategies such as leaving the group are not an option (Ellemers, 1993), they will therefore play down ingroup culpability for problems such as the coronavirus crisis, and instead prefer to blame readily available outgroups, such as – in this context – the Chinese.

This is also what can be expected on the basis of work on the ultimate attribution error, which also suggests that attributions for ingroup and outgroup behaviour are driven by a desire to see the ingroup in a positive light (Hewstone, 1990; Pettigrew, 1979). This body of work shows that there is a psychological tendency to internally attribute negative outgroup and positive ingroup behaviour and to externally attribute positive outgroup and negative ingroup behaviour. Although the present investigation did not focus on internal versus external attributions, the present prediction that there are psychological motivations to see the ingroup in a positive light and therefore to blame outgroups more so than ingroups is entirely consistent with the psychological mechanisms that give rise to the ultimate attribution error.

Having said that, it is important to acknowledge that people vary in the extent to which they care about and identify with their social groups. Moreover, often group-relevant

information will trigger stronger responses amongst those people who are highly identified with their social group (e.g., Doosje et al., 2006). This is, for example, what Doosje et al. (1998) found in their study of reactions to group-image-threatening emotions such as guilt, which elicited stronger defensive reactions among those who were highly identified with their ingroup. It seems plausible to assume that a similar moderating effect of ingroup identification would be evident in the context of blame attributions to national ingroups and outgroups in the context of COVID-19, and that a preference for outgroup over ingroup blame would be strongest among high identifiers.

Helping for ingroup and outgroup members. There is strong evidence that social and group identities affect decisions on who to help (Stuermer & Snyder, 2010; van Leeuwen & Zagefka, 2017), and also that social identities impact on decisions of one specific type of prosociiality, i.e. monetary donations to those in need (Chapman et al., 2020). By and large, people are more readily prepared to help ingroup members rather than those they see as belonging to social outgroups (Dovidio et al., 2010; Levine & Manning, 2013). This is what Levine et al. (2005) found in a study of intergroup helping that varied the salience of group membership of a person in need of assistance in the participants' own (versus a rival) football club, and what James and Zagefka (2017) found in a study on reactions to a road accident involving victims that either shared a national group membership with the participants/ potential donor or not. Although people do sometimes help members of social outgroups, they often do so more reluctantly (Sierksma et al., 2015; Stürmer et al., 2006). It was expected that this pattern would also hold in the context of the coronavirus crisis, and that British nationals would be more inclined to donate money to help British ingroup members suffering from the effects of the pandemic than to help Chinese outgroup victims.

Again, because of the fact that group-relevant cues often trigger stronger responses in those who are more strongly identified with their social group (Doosje et al., 1998), it was

further expected that the preference to donate to ingroup over outgroup members would be especially strong for those who are strongly identified with their national ingroup. This is in line with findings from a large-scale study that found a positive association between identification and willingess to engage in prosocial actions designed to help other fellow ingroup members cope with the effects of the COVID-19 pandemic (Van Bavel et al., 2021; see also Vignoles et al., 2021). However, Van Bavel and colleagues mainly focussed on behaviours designed to protect and support fellow ingroup members, whereas the present research extends the focus to also study help offered to outgroup members.

Overview of the research. In sum, then, the present research focussed on the bi-national context of Britain and China in the setting of the COVID-19 pandemic, and asked two samples of British nationals about blame they attributed for the pandemic and desire to help those suffering from the pandemic, to test the following hypotheses: H1) Blame attributions to the outgroup will be higher than blame attributions to the ingroup; H2) The effect of blame will be moderated by identification, so that blame for the outgroup over the ingroup will be especially evident for those who are strongly identified; H3) Willingness to donate to the ingroup will be higher than willingness to donate to the outgroup; and H4) The effect of willingness to donate will be moderated by identification, so that preference to donate to ingroup over outgroup members will be particularly strong for those who are highly identified.

By investigating these questions, this contribution aims explore psychological processes with clear applied and policy relevance. A further aim was, however, to also make a theoretical contribution by exploring attribution and blame processes in an intergroup context. Although – as seen above - ingroup biases in prosocial behaviour are well documented, very little research exists to date that speaks to how group psychology and social identity affects blame attributions. Attributions have traditionally been studied by

scholars interested in interpersonal processes, with little reference to the group memberships of social perceivers. Hence, this contribution aimed present empirical evidence that would allow to theoretically link attribution processes to group psychology.

The study made use of the global nature of the problem at hand, whereby difficulties were encountered simultaneously by the ingroup in Britain and outgroup members in China. Hence, although the hypotheses outlined above were about overall effects of blame and helping, we took the opportunity to measure attributions in a more fine-grained way, by separately investigating perceptions about 'outgroup blame for outgroup problems', 'ingroup blame for outgroup problems', 'outgroup blame for ingroup problems', and 'ingroup blame for ingroup problems'. Study 1 was an exploratory study conducted early October 2020, and Study 2 was a pre-registered confirmatory study conducted late November 2020.

Study 1

Method

Participants

Two hundred and fifty participants completed the study on the Prolific online platform in October 2020 (mean age = 36.08 years, *SD* = 12.57; 172 females, 77 males, 1 differently identified). Only participants who had identified themselves as having British nationality participated.[1] The sample size was determined by the fact that effects stabilize around *N* = 250 (Schönbrodt & Perugini, 2013), and that this sample size generated sufficient power to similar effects in previous work on intergroup helping in the context of COVID-19 (Zagefka, 2021a). A sensitivity analysis with G*Power revealed that given the present sample size, when requesting a *F* test and assuming an alpha of .05, with a power of .80 the interaction would detect effects of *f* = .18.

Measures

All measures were assessed with Likert scales (1 = *strongly disagree* to 5 = *strongly agree*). British *ingroup identification* was measured with three items based on Brown et al. (1986): 'I see myself as British'; and 'I am glad to be British', and 'I identify with being British'; $\alpha = .80$.

Blame items captured the extent to which the ingroup was blamed for ingroup problems and outgroup problems, and the extent to which the outgroup was blamed for ingroup and outgroup problems. After all, a degree of culpability for all four types of effects is possible: given the global nature of the pandemic, it is, for example, at least theoretically possible that Chinese negligence leads to the spread of the virus around the globe causing problems in China (outgroup blame for outgroup problems) and after further spreading of the virus around the globe in Britain (outgroup blame for ingroup problems), and it is equally possible that British negligence in managing the virus leads to spreading of the virus in Britain (ingroup blame for ingroup problems) and that the virus then potentially boomerangs back to China (ingroup blame for outgroup problems).

Blame to the outgroup was measured in relation to both problems suffered by the ingroup and the outgroup. Regarding ingroup problems, participants read: 'The fact that pandemic is causing problems for people in Britain might be blamed on many things. To which extent do you think the problem can be blamed on these factors?', followed by the item 'The Chinese are to blame' (*Outgroup blame for ingroup problems*). Regarding outgroup problems, participants read: 'The fact that pandemic is causing problems for people in China might be blamed on many things. To which extent do you think the problem can be blamed on these factors?', followed by the item 'The Chinese are to blame' (*Outgroup blame for outgroup problems*).

Blame to the ingroup was measured with the same items, but this time asking about the extent to which problems for people in Britain were seen to be due to the British (*Ingroup*

blame for ingroup problems), and the extent to which problems for people in China were seen to be due to the British (*Ingroup blame for outgroup problems*). The order in which the blame items were presented was randomized between participants.

Donations to ingroup members was measured with the question: 'Would you be willing to donate money to help British people suffering due to the coronavirus crisis?' followed by two items: 'I would be willing to donate money to help British people suffering due to coronavirus', and 'I think it is important to donate money to help British people', $\alpha = .82$.

Donations to outgroup members was measured with the question: 'Would you be willing to donate money to help Chinese people suffering due to the coronavirus crisis?' followed by two items: 'I would be willing to donate money to help Chinese people suffering due to coronavirus', and 'I think it is important to donate money to help Chinese people', $\alpha = .82$. The order in which ingroup and outgroup donations were measured was randomized between participants.

Both studies adhered to research ethics guidelines published by the APA and BPS, and the studies received ethical approval by the home institution of the lead author. For both studies, all measures relevant for testing the present hypotheses are disclosed in this manuscript; there are no unreported experimental conditions; no data was excluded and missing values on individual items were dealt with by listwise deletion; and information on the sample size and power is included below. Data and code for both studies can be viewed here: https://osf.io/zgqf8/?view_only=c26a75e81f46426fa7b4c92aef451c10.

Results

Analytic Strategy. Because each participant provided multiple data points, a mixed-effect research design captured our data well. In other words, a respondent's responses to measurement items were nested within that individual, and the data demonstrated both within-subjects variability and between-subjects variability. Therefore, we implemented a multilevel

mixed-effect model to test the hypotheses. R software version 4.1.1 (packages lme4, effects, interactions) was used to probe main effects and moderation effects. Predictors were centred for all analyses. Descriptives and bivariate correlations are displayed in Table 1.

Results for blame. To test H1 and H2, the prediction that blame attributions to the outgroup will be higher than blame attributions to the ingroup, and that this effect would be moderated by ingroup identification, first two new scores were calculated, one for overall blame attributed to the ingroup (averaging across problems in Britain and China attributed to the British ingroup) and one for overall blame attributed to the outgroup (again, averaging across problems in Britain and China attributed to the Chinese outgroup). Then, a series of mixed-effect models were run with blame serving as the within-subject factor and identification as the between-subject factor. Beginning with the unconditional model (random intercept), we tested alternative models by adding predictors and interaction effects in a sequential manner. Results are displayed in Table 2 and Figure 1.

Supporting H1, this analysis yielded a significant main effect of the level-1 factor ($b^* = 0.62$, $SE = 0.07$, $p < .001$). As expected, ingroup blame attributions were lower than outgroup blame attributions. As expected on the basis of H2, the effect was moderated by identification (interaction term $b^* = 0.39$, $SE = 0.08$, $p < .001$). In line with predictions, overall outgroup blame was stronger than ingroup blame, but the effect was particularly evident for high identifiers. Interpreting the interaction the other way around was also in line with predictions, in that outgroup blame was higher for high identifiers than for low identifiers. The observed power for the interaction (partial eta squared = .06) was .98.

Results for donations. To test H3 and H4, the prediction that willingness to donate to the ingroup would be higher than willlingness to donate to the outgroup, and that this effect would be moderated by identification, mixed-effects models were run with donations to ingroup and outgroup members as two levels of a within-subject factor, and identification as

a between subjects factor. Results are displayed in Table 3 and Figure 2. Results showed a significant main effect of group membership on donations (b^* = -.58, SE = 0.06, $p < .001$), which was moderated by identification (interaction term b^* = -0.39, SE = 0.07, $p < .001$). In line with predictions, overall ingroup donations were favoured over outgroup donations. Moreover, high identifiers significantly favoured ingroup donations over outgroup donations, whereas this was not the case for low identifiers. Looking at the interaction the other way around yielded a pattern also compatible with the hypothesis: ingroup donation willingness was higher for high identifiers than for low identifiers, and outgroup donation willingness was lower for high identifiers than for low identifiers.

Note that support for the predictions could also already be gleamed from the table of bi-variate correlations. Here, too, identification was negatively associated with ingroup blame measures, positively associated with outgroup blame measures, and positively with ingroup donations and negatively with outgroup donations.

Blame more fine-grained. Because it is of theoretical and practical relevance not only to analyse blame attributions to ingroups and outgroups overall, but also to observe the pattern separately for problems caused at home and abroad, next an additional analysis was conducted with outgroup blame for ingroup problems, ingroup blame for ingroup problems, outgroup blame for outgroup problems, and ingroup blame for outgroup problems as four levels of a within-subject factor. Results showed a statistially significant effect of the level-1 factor after dummy coding ($p < .001$) and a significant interaction effect ($p < .001$). Results are displayed in Table 4 and Figure 3. As can be seen, while low identifiers did not differ in blame attributions assigned to the ingroup and outgroup for ingroup problems, high identifiers blamed the outgroup significantly more for ingroup problems than the ingroup. Also in line with hypotheses, low identifiers did not differ in blame attributions to ingroup for

ingroup problems and the outgroup for outgroup problems, but high identifiers did. Again, this is entirely compatible with the hypotheses.

Discussion

Results confirmed the hypotheses and clearly showed that blame attributions and helping decisions are driven by identity concerns in the context of COVID-19. Next, a second survey was run to confirm the results of this exploratory study in a pre-registered follow-up study. The opportunity was also used to improve some of the measures used in Study 1, by using additional items to measure different types of blame.

Study 2

Method

Participants

Two hundred and fifty participants completed the study on the Prolific online platform in November 2020 (mean age = 34.92 years, *SD* = 12.27; 169 females, 80 males, 1 differently identified). Only participants who had identified themselves as having British nationality participated. The sample size was determined to match the *N* of the first study, and indeed power analysis for an a priori test of a repeated measures ANOVA, using the smallest effect size found in Study 1 as a base and assuming an alpha level of .05, suggested that this sample size was sufficient to exceed a statistical power of .80. A sensitivity analysis with G*Power revealed that given the present sample size, when requesting a *F* test and assuming an alpha of .05, with a power of .80 the interaction would detect effects of $f = .18$.

Measures

All measures were assessed with Likert scales (1 = “strongly disagree” to 5 = “strongly agree”). British *ingroup identification* was measured with the same three items as in the previous study; $\alpha = .87$.

To measure *blame assigned to the outgroup*, participants were told: "The coronavirus crisis can be blamed on many things, for example people not observing social distancing, or government incompetence in setting up test-and-trace systems. In your view, whose fault is it that the pandemic is causing problems for people in China"? Items were "The Chinese government is to blame", "It is the fault of the Chinese government", "The Chinese people are to blame", and "It is the fault of the Chinese people" (outgroup blame for outgroup problems), $\alpha = .88$. Then, the same items were used but in relation to problems caused by the pandemic for people in Britain (outgroup blame for ingroup problems), $\alpha = .91$.

To measure *blame assigned to the ingroup*, participants again responded to problems caused for people in China and Britain separately, and they indicated for each the extent to which "The British government is to blame", "It is the fault of the British government", "The British people are to blame", and "It is the fault of the British people", $\alpha = .97$ for ingroup blame for outgroup problems, and $\alpha = .91$ for ingroup blame for ingroup problems.

Donations to ingroup members was measured with three items similar to those in Study 1, $\alpha = .93$; and *Donations to outgroup members* was also measured with three items similar to those in Study 1, $\alpha = .95$. Data and code can be viewed here: https://osf.io/zgqf8/?view_only=c26a75e81f46426fa7b4c92aef451c10, and the preregistration for Study 2 can be viewed here: https://osf.io/qa32e/?view_only=4beb82cde4dc4724ad3315e147fd354d. Please note that a more powerful statistical method was used in the analyses than the pre-registered analyses entailing median splits on the identification measure, but if the results are replicated with the less optimal median-split analyses, the pattern of results that emerges is exactly the same as the one reported here.

Results

Results for blame. Descriptives and bivariate correlations are displayed in Table 1. To test H1 and H2, the prediction that blame attributions to the outgroup will be higher than blame attributions to the ingroup, and that this effect would be moderated by ingroup identification, first two new scores were calculated, one for overall blame attributed to the ingroup (averaging across problems in Britain and China attributed to the British ingroup) and one for overall blame attributed to the outgroup (averaging across problems in Britain and China attributed to the Chinese outgroup). We employed the same procedure of mixed-effect modeling in study 1 to test the hypotheses in study 2. Results are displayed in Table 5 and Figure 4.

Supporting H1, this analysis yielded a significant main effect of the level-1 factor ($b^* = 0.37$, $SE = 0.06$, $p < .001$). As expected, ingroup blame attributions were lower than outgroup blame attributions. As expected on the basis of H2, the effect was moderated by identification ($\beta = 0.29$, $SE = 0.07$, $p < .001$). In line with predictions, overall outgroup blame was higher than ingroup blame. Moreover, outgroup blame was stronger than ingroup blame for high identifiers, but not for low identifiers. Interpreting the interaction the other way around was also in line with predictions, in that outgroup blame was higher for high identifiers than for low identifiers. High identifiers also had a lower mean for ingroup blame than low identifiers.

Results for donations. To test H3 and H4, the prediction that reported willingness to donate to the ingroup would be higher than to the outgroup, and that this effect would be moderated by identification, a mixed-effect model was run with donations to ingroup and outgroup members as two levels of a repeated measures factor, and identification as a between-subjects factor. Results are displayed in Table 6 and Figure 5. Results showed a significant main effect of group membership on donations ($b^* = -0.53$, $SE = 0.06$, $p < .001$), which was moderated by identification (interaction term $b^* = -0.31$, $SE = 0.07$, $p < .001$). As

expected, ingroup donations were higher than outgroup donations. In line with predictions, the pattern was particularly evident for high identifiers.

Blame more fine-grained. Again, an additional analysis was conducted with outgroup blame for ingroup problems, ingroup blame for ingroup problems, outgroup blame for outgroup problems, and ingroup blame for outgroup problems as four levels of a repeated measures factor. Results showed a statistially significant effect of the level-1 factor after dummy coding ($p < 0.001$) and a signifciant interaction effect ($p < .001$). Results are displayed in Table 7 and Figure 6. As can be seen from the plot of the interaction effect, the pattern was hypothesis-consistent and matched that of Study 1. In Study 1, the pattern was driven by the fact that high identifiers (but not low identifiers) blamed ingroup problems more on the outgroup than the ingroup. In Study 2, the pattern was driven by the fact that low identifiers (but not high identifiers, who should be less willing to acknowledge ingroup culpability) blamed the ingroup problems *more* on the ingroup than the outgroup. As in the previous study and again compatible with the hypotheses, outgroup blame for outgroup problems was higher than ingroup blame for ingroup problems for high identifiers only, and this comparison was not significant for low identifiers.

Discussion

In sum, Study 2 replicated the patterns found in Study 1, and again confirmed the hypotheses, this time using multi-item measures of blame attributions, and with the benefit of pre-registering the hypotheses in advance. The patterns in both studies are in line with the hypotheses. The patterns were entirely consistent with the hypotheses that blame attributions and helping decisions are driven by identity concerns, and that patterns will depend on the extent to which people care about their group, i.e. their level of group identification.

General discussion

Overall, results supported all four hypotheses. Outgroup blame was higher than ingroup blame, ingroup help was higher than outgroup help, and both effects were more pronounced for high identifiers. These results are in line with what would be expected on the basis of SIT (Tajfel & Turner, 1986): group identities matter, and they shape how people make sense of the world. A desire to see the ingroup in a positive light therefore leads to a downplaying of ingroup culpability (compared to outgroup culpability) for existing problems, and an affinity to other group members leads to greater willingness to engage in prosocial behaviours if those behaviours are for the benefit of ingroup members (rather than outgroup members). This was demonstrated in the context of the COVID-19 pandemic, and in relation to blame attributed to the British national ingroup and the Chinese national outgroup.

The present findings relate to the existing social psychological literature in two important ways. First, although clearly there are individual-level variables that affects prosocial decisions (Bekkers, 2010), group-level factors are clearly also very important. The findings provide a demonstration of the importance of group memberships, and the potency of SIT in explaining responses to a wide range of situations, including global pandemics (Jetten et al., 2020). Second, the results highlight an exciting topic that has not received sufficient research attention and that could be explored further in the future: that of blame attributions to different sources, in the context of intergroup relations. Many types of attributions have been ignored to date in the context of intergroup relations. Previous research has mainly focussed on attributions of victim blame, and found that overall helping responses are diminshed to the extent that victims are blamed for their plight (Lerner, 1980; Zagefka et al., 2011). But, in may situations events might not be due to what the victims did. They might be due to what other ingroup members did (e.g., an inadquate response by the national ingroup government or a failure for ingroup members to make personal sacrifices for the common good by observing social distancing rules, as studied here), or due to what a third

group did (as studied in Zagefka, 2019, 2021a). Simplistic ingroup-outgroup dichotomies (Dixon et al., 2020) cannot do justice to the multitude of potential attributions in many situations. Future research could further explore the effects of blame attributed to the victims, the whole ingroup, certain segments within the ingroup, a victim outgroup, or a third outgroup separate from both the outgroup victims and the ingroup.

Some limitations of the present research should be acknowledge that could be addressed by future work. The current sample is of course not representative of the entire British population, and future research could aim for larger and more representative sampling methods. Having said this, at the same time there is good evidence that the data provided by Prolific workers is generally very high quality (Peer et al., 2017), and also that data patterns stabilize around the sample size utilized here (Schönbrodt & Perugini, 2013), so some careful conclusions are nonetheless possible. A second limitation is that of course the present correlational data cannot give clues about the causal direction of observed effects. For this, an experimental design that systematically varies strength of national identification would be necessary, but such an edeavour would pose significant challenges, given the rather fixed views many people hold about the topics the present exploration tapped into.

There are some interesting avenues for future research. In the present studies, the Chinese were chosen as an outgroup because at the time of the study it was a hotly debated issue in the Western media whether they were to blame for the pandemic negatively impacting other countries around the globe, for example because the Chinese authorities did not act fast enough upon initial identification of the virus, or even because, as suggested by some, the virus might have been humanly created and escaped from a laboratory. This made the Chinese a particularly pertinent outgroup to consider in a study on blame attributions. However, of course all manner of other outgroups might also be blamed to varying degrees for the way the pandemic evolves. For example, some people might be inclined to blame

countries such as Brazil who have implemented comparatively minimal measures to curb the virus, or people might blame their national neighbours for incompetence in managing the virus. As such, an interesting avenue for future research might be to test the mechanisms identified here on different outgroups.

One interesting question that could be explored by future research is whether processes investigated here might be exaccerbated for outgroups that are particularly strongly disliked. Indeed, there was and still is evidence for the existence of heightened anti-Asian prejudice is many Western countries since the start of the pandemic. Clearly, outgroups can be perceived along a range of different psychological dimensions, e.g. warmth and competence (Cuddy et al., 2008; Fiske et al., 2002), and future research could explore how general levels of prejudice and other dimensions of intergroup perception might moderate the processes demonstrated here. Future research could also explore in more depth the link between outgroup blame and outgroup derogation or even hate crime, with a view to identifying potential ways of buffering such effects to avoid intergroup violence. For example, is the link between outgroup blame and prejudice weakened if ingroup blame is also present? This and similar issues could be explored in the future, as it the question how the tendency to blame outgroups could be countered. Given the negative downstream consequences of outgroup blame that can be expected, this question is of pivotal importance.

Another interesting question would be to look at the flip side of the coin, and not explore blame attributions to outgroups but the consequences of being at the receiving end of blame. How do group members react if they perceive to be rightly or wrongly blamed by outgroups for the problems caused by the pandemic? There is much scope for further exploration on these matters.

As explained above, the reason the British-Chinese relations in the context of the pandemic were chosen as a setting to explore these basic psychological hypotheses and

processes is that the context seemed to be not only suited to investigate generic mechanisms, but also to yield data of practical relevance. There are two potential leverage points to consider: interventions aimed at encouraging intergroup helping could focus on trying to achieve a decrease on unmerited outgroup blame, or trying to achieve a greater acceptance of ingroup culpability where merited.

In terms of ingroup culpability, the present findings illustrate that there is psychologial reluctance to accept ingroup blame for existing problems. However, there is strong evidence that a acceptance of group-based guilt can have positive intergroup effects, such as greater willingness to make intergroup apologies or support reparation payments for previously victimised outgroups, e.g. indigenous outgroups (Brown et al., 2008; McGarty et al., 2005). It seems likely that a greater acceptance that ingroup acts can have negative consequences for others, e.g. those in the Global South, in the context of Covid-19 will go hand in hand with greater perceived responsibility for offering help and assistance to those others, for example by supporting vaccine donations to the COVAX initiative which works towards more equitable access to vaccines around the globe. Generating public support for this would be desirable, and greater acceptance of ingroup culpability might be one important mechanism through which to achieve this.

In terms of outgroup culpability, the present data suggest that British nationals are psychologically motivated to blame the Chinese for the crisis. However, blame aportioned to outgroups can be assumed to go hand in hand with greater prejudice and deteriorating intergroup relations (Becker et al., 2011). Moreover, victim blame is negatively linked to willingness to help the victim (Kogut, 2011, Zagefka et al., 2011), and this is also true in intergroup contexts and in the context of Covid-19: outgroup blame is negatively related to a willingness to help outgroups, also in the context of Covid-19 (Zagefka, 2021a). Because of these adverse effects of outgroup blame, it seems sensible to propose measures to counteract

unmerited outgroup blame attributions in the context of Covid-19, much as recommended by the WHO (2020).

Moreover, there was clear evidence that participants were more motivated to help ingroup members than outgroup members. However, in the context of a global pandemic there is great interdependence betweeen the ability of different nations to manage the crisis effectively, as those countries that have successfully reduced transmition rates are in danger of reimporting new cases from outside their national borders unless global solutions to the crisis are sought. In this situation, the widespread tendency to favor the ingroup over outgroups is inevitably counterproductive for overcoming the global pandemic. The most promising approach which would lead to most benefits is not to help those who are members of the ingroup, but to help those who are most at risk. Global collaboration and solidarity will be required to manage the crisis, but despite this there is a tendency towards 'vaccine nationalism', with rich states monopolising resources that would be more urgently needed elsewhere. Interventions aimed at improving the public's understanding of international interdependence would hence be very useful in this context. Having said this, such interventions will be challenging if they have to work against our tendency to favour the ingroup. Maybe the most promising results can be expected from interventions that work with, not against, ingroup favouritism, by trying to encourage the inclusion of all humans within the ingroup. Interventions that emphasise shared humanity (McFarland et al., 2008) and shared common fate (Ntontis et al., 2020), and that define the boundaries as a fight of all of humanity against the virus, are likely to be most effective. After all, the virus does not differentiate between different national groups either; to the virus, we are all one big group.

Footnotes

1 The sample is identical to that in Zagefka (2021b); as the data were collected to test two separate research questions but measures were combined into one data collection drive to keep costs down. The present contribution is theoretically entirely distinct to the previous paper: there is no overlap in the predictor variables that feature on both contributions.

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Table 1

Bivariate correlations and means (Study 1 N = 250, Study 2 N = 250)

		1. British identifica-tion	2. Blame to outgroup for ingroup problems	3. Blame to ingroup for ingroup problems	4. Blame to outgroup for outgroup problems	5. Blame to ingroup for outgroup problems	6. Donations to ingroup members	7. Donations to outgroup members
1.	British identifi-cation	-	.21 ***	-.16 *	.10	-.03	.12 ●	-.15 *
2.	Blame to outgroup for ingroup problems	.21 ***	-	.07	.61 ***	.32 ***	-.13 *	-.34 ***
3.	Blame to ingroup for ingroup problems	-.14 *	.25 ***	-	.49 ***	.32 ***	-.03	.07
4.	Blame to outgroup for outgroup problems	.14 *	.79 ***	.45 ***	-	.13 *	-.10	-.23 ***
5.	Blame to ingroup for outgroup problems	-.11 ●	.34 ***	.47 ***	.27 ***	-	-.07	.07
6.	Donations to ingroup members	.22 ***	-.02	-.12 ●	-.07	-.07	-	.55 ***
7.	Donations to outgroup members	-.14 *	-.34 ***	.02	-.39 ***	.13 *	.44 ***	-
	Study 1 Means	3.87	2.80	2.66	3.11	2.00	3.20	2.62
	SD	0.88	1.20	1.15	1.23	0.88	0.89	1.02
	Study 2 Means	3.89	2.28	2.73	2.92	1.73	3.17	2.64
	SD	0.86	1.00	1.06	0.97	0.87	0.99	1.00

Note. ● $p < .08$, * $p < .05$, ** $p < .01$, *** $p < .001$. SD = Standard deviation. Study 1 correlations below the diagonal, Study 2 correlations above the diagonal.

Table 2

Model Parameters and Goodness of Fit for Linear Mixed-Effect Models on Blame, Study 1

Effect	Parameter	Model 1	Model 2	Model 3	Model 4
Fixed effect					
Intercept	γ_{00}	2.65*** (0.05)	2.33*** (0.06)	2.33*** (0.06)	2.33*** (0.06)
Blame (In- vs. Outgroup)	γ_{01}		0.62*** (0.07)	0.62*** (0.07)	0.62** (0.07)
Identification	γ_{10}			0.05 (0.06)	-0.15* (0.07)
Interaction	γ_{11}				0.39*** (0.08)
Random effect					
Intercept	σ_0^2	0.31	0.41	0.41	0.44
Residual	σ_ε^2	0.82	0.63	0.63	0.57
Goodness of fit					
Deviance		1463.0	1396.1	1395.4	1370.8
$\Delta\, x^2$			66.84***	0.68	24.65***
$\Delta\, df$			1	1	1

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

Table 3

Model Parameters and Goodness of Fit for Linear Mixed-Effect Models on Donations, Study 1

Effect	Parameter	Model 1	Model 2	Model 3	Model 4
Fixed effect					
Intercept	γ_{00}	2.91***	3.20***	3.20***	3.20***
		(0.05)	(0.06)	(0.06)	(0.06)
Donations	γ_{01}		-0.58***	-0.58***	-0.58***
(In- vs. Outgroup)			(0.06)	(0.06)	(0.06)
Identification	γ_{10}			0.03	0.22**
				(0.06)	(0.07)
Interaction	γ_{11}				-0.39***
					(0.07)
Random effect					
Intercept	σ_0^2	0.32	0.40	0.40	0.43
Residual	σ_ε^2	0.68	0.51	0.51	0.45
Goodness of fit					
Deviance		1389.2	1318.9	1318.8	1289.2
$\Delta\, x^2$			70.27***	0.66	29.54***
$\Delta\, df$			1	1	1

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

Table 4

Blame more fine-grained,

Model Parameters and Goodness of Fit for Linear Mixed-Effect Models by Groups,

Study 1

Effect	Parameter	Model 1	Model 2	Model 3	Model 4
Fixed effect					
Intercept	γ_{00}	2.65*** (0.05)	2.80*** (0.07)	2.80*** (0.07)	2.80*** (0.07)
BB vs. BC	γ_{01}		-0.14 (0.08)	-0.14 (0.08)	-0.14 (0.07)
CC vs. BC	γ_{02}		0.30*** (0.08)	0.30*** (0.08)	0.30*** (0.07)
CB vs. BC	γ_{03}		-0.80*** (0.08)	-0.80*** (0.08)	-0.80*** (0.07)
Identification	γ_{10}			0.05 (0.06)	0.29*** (0.08)
Dummy1*ident.	γ_{11}				-0.47*** (0.08)
Dummy2*ident.	γ_{12}				-0.10 (0.08)
Dummy3*ident.	γ_{13}				-0.41*** (0.08)
Random effect					
Intercept	σ_0^2	0.49	0.54	0.54	0.55
Residual	σ_ε^2	0.93	0.71	0.71	0.67
Goodness of fit					
Deviance		3049.3	2850.1	2849.4	2804.8
$\Delta\, x^2$			199.16***	0.68	44.64***
$\Delta\, df$			3	1	3

Note. * $p < .05$; *** $p < .01$; *** $p < .001$. Note: BB denotes blaming the British for British problems; BC denotes blaming the Chinese for British problems; CC denotes blaming the Chinese for Chinese problems; CB denotes blaming the British for Chinese problems. The group BC serves as the reference group in dummy coding.

Table 5

Model Parameters and Goodness of Fit for Linear Mixed-Effect Models on Blame, Study 2

Effect	Parameter	Model 1	Model 2	Model 3	Model 4
Fixed effect					
Intercept	γ_{00}	2.42***	2.23***	2.23***	2.23***
		(0.04)	(0.05)	(0.05)	(0.05)
Blame	γ_{01}		0.37***	0.37***	0.37***
(In- vs. Outgroup)			(0.06)	(0.06)	(0.06)
Identification	γ_{10}			0.03	-0.12
				(0.05)	(0.06)
Interaction	γ_{11}				0.29***
					(0.07)
Random effect					
Intercept	σ_0^2	0.21	0.24	0.24	0.26
Residual	σ_ε^2	0.52	0.45	0.45	0.42
Goodness of fit					
Deviance		1239.0	1203.7	1203.4	1185.4
$\Delta\, x^2$			35.26***	0.34	17.96***
$\Delta\, df$			1	1	1

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

Table 6

Model Parameters and Goodness of Fit for Linear Mixed-Effect Models on Donations, Study 2

Effect	Parameter	Model 1	Model 2	Model 3	Model 4
Fixed effect					
Intercept	γ_{00}	2.90***	3.17***	3.17***	3.17***
		(0.05)	(0.06)	(0.25)	(0.06)
Donations	γ_{01}		-0.53***	-0.53***	-0.53***
(In- vs. Outgroup)			(0.06)	(0.06)	(0.06)
Identification	γ_{10}			-0.02	0.13
				(0.06)	(0.07)
Interaction	γ_{11}				-0.31***
					(0.07)
Random effect					
Intercept	σ_0^2	0.48	0.54	0.54	0.56
Residual	σ_ε^2	0.58	0.44	0.44	0.41
Goodness of fit					
Deviance		1389.3	1321.0	1320.9	1299.9
$\Delta\, x^2$			68.29***	0.11	21.03***
$\Delta\, df$			1	1	1

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

Table 7

Blame more fine-grained,

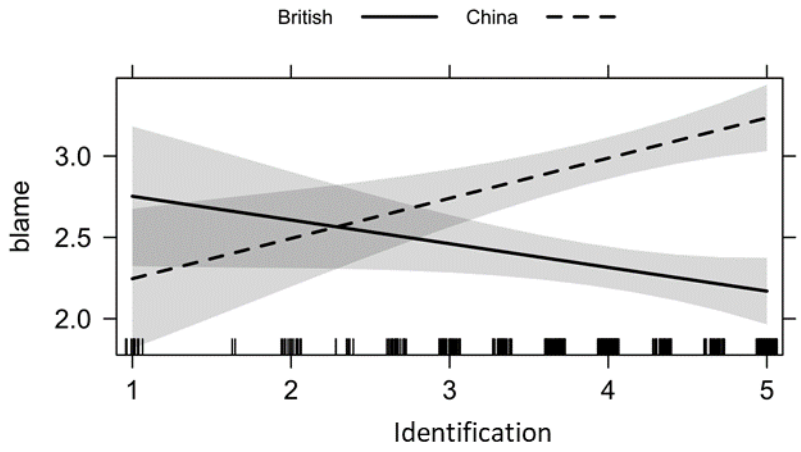
Model Parameters and Goodness of Fit for Linear Mixed-Effect Models by Groups,

Study 2

Effect	Parameter	Model 1	Model 2	Model 3	Model 4
Fixed effect					
Intercept	γ_{00}	2.42*** (0.05)	2.28*** (0.06)	2.28*** (0.06)	2.28*** (0.06)
BB vs. BC	γ_{01}		0.45 (0.07)	0.45 (0.07)	0.45*** (0.07)
CC vs. BC	γ_{02}		0.64*** (0.07)	0.64*** (0.07)	0.64*** (0.07)
CB vs. BC	γ_{03}		-0.55*** (0.07)	-0.55*** (0.07)	-0.55*** (0.07)
Identification	γ_{10}			0.03 (0.05)	0.24*** (0.07)
Dummy1*ident.	γ_{11}				-0.44*** (0.08)
Dummy2*ident.	γ_{12}				-0.13 (0.08)
Dummy3*ident.	γ_{13}				-0.28*** (0.08)
Random effect					
Intercept	σ_0^2	0.24	0.31	0.31	0.31
Residual	σ_ε^2	0.92	0.64	0.66	0.61
Goodness of fit					
Deviance		2931.8	2659.9	2659.6	2627.9
$\Delta\, x^2$			271.89***	0.34	31.66***
$\Delta\, df$			3	1	3

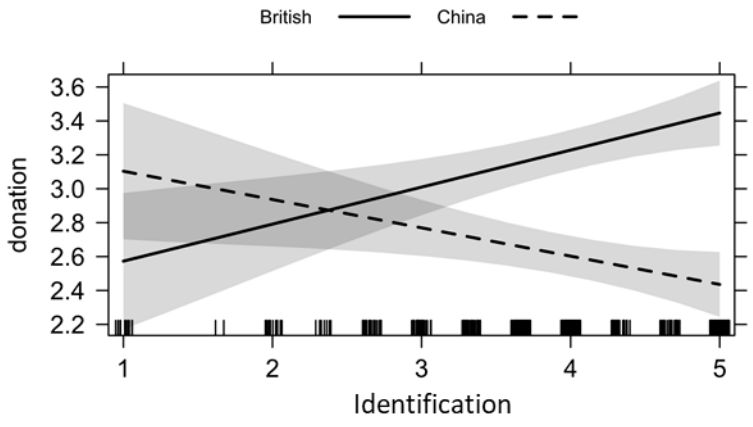
Note. * $p < .05$; *** $p < .01$; *** $p < .001$. Note: BB denotes blaming the British for British problems; BC denotes blaming the Chinese for British problems; CC denotes blaming the Chinese for Chinese problems; CB denotes blaming the British for Chinese problems.

Figure 1: Identification moderates ingroup vs. outgroup blame, Study 1



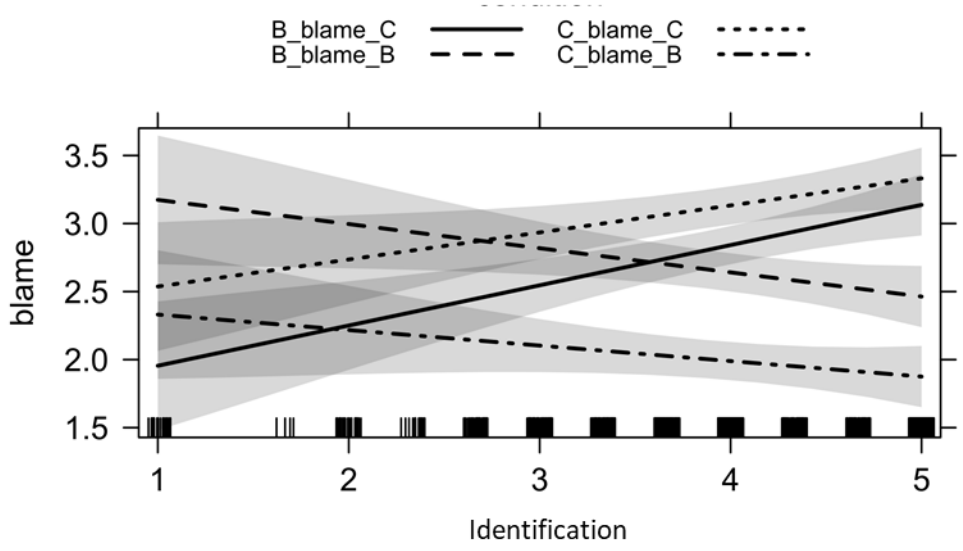
Note: The shaded band denotes the 95% confidence interval of the effect.

Figure 2: Identification moderates ingroup vs. outgroup donations, Study 1



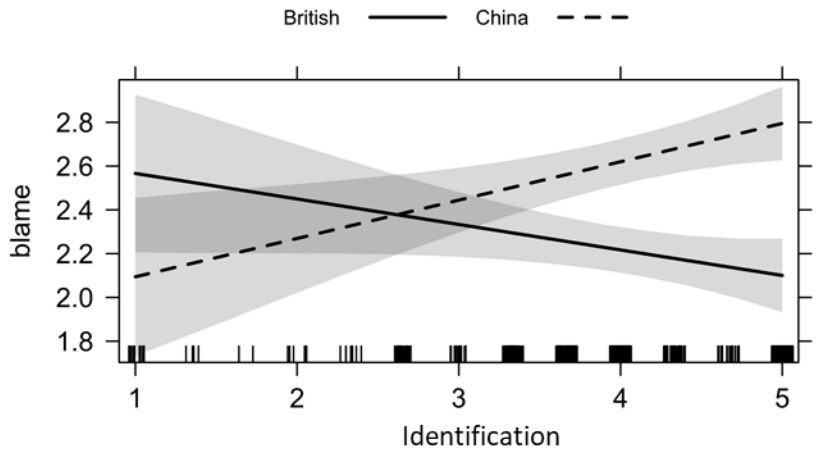
Note: The shaded band denotes the 95% confidence interval of the effect.

Figure 3: Blame more fine-grained, Study 1



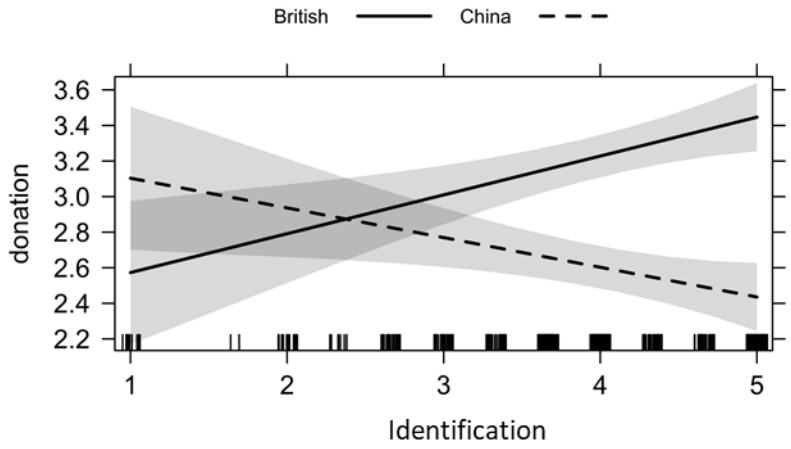
Note: B_blame_C denotes blaming the Chinese for British problems; C_blame_C denotes blaming the Chinese for Chinese problems; B_blame_B denotes blaming the British for British problems; C_blame_B denotes blaming the British for Chinese problems. The shaded band denotes the 95% confidence interval of the effect.

Figure 4: Identification moderates ingroup vs. outgroup blame, Study 2



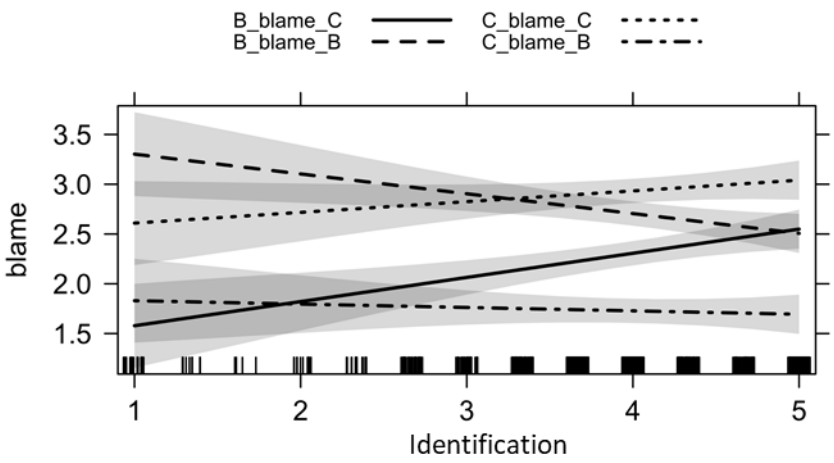
Note: The shaded band denotes the 95% confidence interval of the effect.

Figure 5: Identification moderates ingroup vs. outgroup donations, Study 2



Note: The shaded band denotes the 95% confidence interval of the effect.

Figure 6: Blame more fine-grained, Study 2



Note: B_blame_C denotes blaming the Chinese for British problems; C_blame_C denotes blaming the Chinese for Chinese problems; B_blame_B denotes blaming the British for British problems; C_blame_B denotes blaming the British for Chinese problems. The shaded band denotes the 95% confidence interval of an effect.

Author bios

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