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Pandemic and prejudice

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Pandemic and prejudice: Revisiting Bogardus's social distance concept in a time of COVID-19

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Abstract

This study examined when the realistic threat of COVID-19 leads to prejudicial social distancing. American participants reported social distancing preferences from Chinese or Italian people (out-group target) after viewing increasing or decreasing COVID-19 case numbers (threat level) in China or Italy (threat relevance). On the Bogardus Social Distance Scale, there was support for a disease avoidance hypothesis: greater social distancing preferences were expressed under higher than under lower relevant threats. Responses on a bespoke COVID-19 Social Distance Scale, however, supported an a priori prejudice hypothesis: greater social distancing preferences were expressed toward a Chinese than toward an Italian out-group. Moreover, responses on a separate bespoke Modern Social Distance Scale supported a complex prejudice hypothesis: greater social distancing preferences were expressed toward Chinese than toward Italian out-groups under higher than under lower threat, regardless of threat relevance. These findings suggest that the threat of COVID-19 may enable prejudice expression accompanied by the rationale of disease avoidance.

Keywords

prejudice, realistic threat, social distance

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In February 2020, 2 months after the first COVID-19 outbreak in China, the parents of a hospitalized child in Australia directed the attending physician to “stay away” when they learned of her Asian background (SBS News, 2020). Such expression of anti-Asian sentiment represents just one instance of a broader resurgence of prejudice endured by many in the wake of the COVID-19 pandemic (Karaliss Noel, 2020). Unfortunately, COVID-19 not only facilitated the increased expression of prejudice

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(e.g., Croucher et al., 2020), it fostered conditions that impede prejudice-reducing intergroup contact (e.g., Allport, 1954; Pettigrew & Tropp, 2006) through disease-avoiding social distancing (e.g., Qian & Jiang, 2020). Although the Australian parents in the mentioned case may have believed they were not prejudiced, the avoidance of contact with members of a specific out-group (e.g., Chinese people, but not others) emerging from a non-group-specific, general threat (e.g., COVID-19) suggests an expression of prejudice (much as with homophobia in response to AIDS; Herek & Capitanio, 1999).

To examine conditions under which the avoidance of intergroup contact is motivated by disease avoidance or is, instead, an expression of prejudicial attitudes, the current study examined people's preferences to maintain social distance from different out-groups in the presence of increasing or decreasing intergroup COVID-19 threat levels. We begin by providing a brief review of the nature of prejudice and the bases for its expression. From this, hypotheses are derived that we examine in an experiment focusing on anti-Chinese prejudice.

Prejudice and the Role of Threat and Threat Relevance

In its extreme form, prejudice is characterized by unconcealed expressions of hatred and antipathy toward others on the basis of their group memberships in a manner violating collectively held values such as equality and fairness (Brown et al., 2009; Pedersen & Walker, 1997). In its more symbolic or "modern" forms, prejudice is expressed as negative intergroup attitudes framed within culturally accepted values. This framing serves as a means by which people justify their views and seek to exonerate themselves from condemnation for the expression of these attitudes (Gaertner & Dovidio, 2005; Henry & Sears, 2002; McConahay, 1983).

A range of social and psychological processes have been identified as contributing to the development and expression of prejudice (e.g., Sherif & Sherif, 1953; Sibley & Duckitt, 2008; Tajfel & Turner, 1986). One set of processes particularly

relevant to the present research is outlined in integrated threat theory (Stephan & Stephan, 2000). Within this theory, prejudice is hypothesized to be the outcome of material or symbolic threat. One form of threat is "realistic" threat, in which group members' material outcomes (e.g., physical well-being, job security) are potentially endangered. Empirical evidence confirms the role of realistic threat as a predictor of negative intergroup attitudes. For example, Australians (Pattison & Davidson, 2019) and Americans (Zarate et al., 2004) who perceived realistic threats from immigrants also expressed relatively negative attitudes toward them. In another study, domestic students who perceived a threat to their academic success expressed less favorable attitudes toward international students than those who did not perceive such a threat (Harrison & Peacock, 2009).

Although the experience of threat is clearly linked to the expression of negative intergroup attitudes, the nature of this expression is not arbitrary. Instead, realistic threats are often associated with negative attitudes expressed toward particular out-groups only when the threat is perceived as emerging from those groups. In other words, the perceived relevance of a threat from target out-groups is important. Often, these perceptions of threat relevance reflect broader social stereotypes (e.g., Butz & Yogeewaran, 2011; Mancini et al., 2015). In a study with non-Asian American participants, for example, a perceived economic threat led to the expression of negative attitudes toward Asian Americans; a climate change threat, however, did not (Butz & Yogeewaran, 2011). The authors explained this pattern by noting that stereotypes of Asian Americans as hardworking and successful (e.g., Lin et al., 2005) rendered an economic threat psychologically relevant to Asian Americans, while a climate change threat did not. A second study confirmed this by showing that an economic threat did not enhance prejudice expression toward African Americans, for whom this stereotype did not apply, despite this group being a frequent target of prejudice (Weaver, 2012). These findings suggest that stereotypes and broad societal narratives contribute to specific threats becoming perceived as associated with specific out-groups, regardless of the actual threat presence.

This work on threat relevance implies that people often seek what they believe to be legitimate grounds to express negative intergroup attitudes. The process by which prejudice expression is enabled in this manner is outlined in Crandall and Eshleman's (2003) justification-suppression model. This model assumes the existence of a priori negative attitudes that are suppressed due to their socially unacceptable nature. Prejudice is hypothesized to be expressed only when some perceived rationale emerges that serves as a justification for the expression of the negative attitudes one already holds. Realistic threats that are perceived as relevant to a specific out-group, irrespective of actual relevance, can serve as precisely this justification. This can lead people to feel exonerated from accusations of prejudice, much as it occurs with the expression of modern prejudice.

The processes outlined in the justification-suppression model present an empirical challenge for social psychologists to determine when realistic threat serves as a post hoc justification for the expression of a priori negative attitudes versus when it serves as a causal basis for the origin of these attitudes. This challenge has been laid bare by the threat of COVID-19 and people's avoidance of intergroup contact as a form of social distancing. Disease avoidance, after all, is a legitimate reason to avoid contact with others (Oaten et al., 2009), with social distancing promoted to manage the spread of COVID-19 (e.g., Australian Government Department of Health, 2022; Centers for Disease Control and Prevention, 2022). At the same time, however, the simple act of maintaining social distance from out-group members is often understood by psychologists as prima facie evidence of prejudice (e.g., Bogardus, 1925b; Tausch et al., 2009; Vartanian et al., 2016). For example, people are less likely to engage in intergroup contact via out-group friendships if they already express negative intergroup attitudes (Levin et al., 2003). The above-mentioned empirical challenge becomes an applied challenge upon recognizing that intergroup contact is precisely a means by which prejudice reduction is often pursued (e.g., Allport, 1954; Pettigrew & Tropp, 2006; Pettigrew et al., 2011). Knowing whether avoidance

of intergroup contact arises from a priori prejudice or whether it purely reflects a process motivated by disease avoidance becomes essential, as avoiding intergroup contact can inhibit efforts to reduce prejudice.

The Current Study

The literature reviewed suggests that (a) both disease avoidance and a priori prejudice can lead to enhanced social distancing preferences and, in this way, (b) realistic threats can be both the cause and the justification for negative intergroup attitudes. The real threat posed by COVID-19 provided a fertile context in which to examine these processes. To do so, we measured people's preferences for social distancing from one of two out-groups in an experiment in which the COVID-19 threat was described as either increasing or decreasing, and emerging from one of these two out-groups.

A disease avoidance hypothesis (H1) predicts that people will prefer greater social distance from out-group members under conditions of higher rather than lower threat of COVID-19, but only if the threat is actually relevant (i.e., posed by the specific target out-group in question). This hypothesis implies an interaction between the threat level (i.e., lower or higher) and the relevance of the out-group to that threat (i.e., relevant or irrelevant). If the target out-group is unrelated to the threat, then social distance preferences from that target should not vary as a function of threat level. However, if the target out-group is related to the threat, then participants should express greater social distance preferences under conditions of higher rather than lower threat.

In contrast, a simple a priori prejudice hypothesis (H2) predicts that people will prefer greater social distance from out-group members about whom there are relatively less favorable a priori attitudes, regardless of the level or relevance of the COVID-19 threat. H2 is, thus, akin to the traditional Bogardus's (1925b, p. 217) analysis in which social distance directly represents "antipathy and dislike." This hypothesis implies a main

effect only for the favorability of a priori attitudes toward the target out-group.

Finally, a more complex prejudice hypothesis (H3) emanating from the justification–suppression model predicts that people will prefer greater social distance from out-group members about whom there are relatively less favorable a priori attitudes under conditions of higher COVID-19 threat, regardless of the actual relevance of that threat. Under H3, the presence of any threat, including irrelevant threat, is thus used as a justification for the expression of one’s a priori prejudice. This hypothesis implies an interaction between the threat level and the a priori favorability of people’s attitudes toward the target out-group. If there exists an unfavorable attitude toward the target out-group, then the salience of any threat would be taken as an opportunity for enhanced social distance preferences. This is not expected to occur if the prior attitude toward the out-group is not unfavorable.

Method

Overview of Experimental Context

Given increased reports of prejudice and discrimination toward Chinese individuals (and others of Asian appearance) with the emergence of COVID-19 (Borja et al., 2020; Haynes, 2020; Karalis Noel, 2020), Chinese people were a group of particular interest for the present study. Italian people were selected as an appropriate contrast group, as evidence confirms that Americans are generally less accepting of Chinese people a priori than they are of Italian people (Parrillo & Donoghue, 2005). An Italian contrast group was also suitable as Italy was similarly experiencing a high number of COVID-19 cases at the time of the study, replacing China as the “epicenter” of the virus in March 2020 (Horowitz et al., 2020). In other words, a realistic threat of COVID-19 was present at some point in early 2020 from both China and Italy. While in reality the peak of the number of active COVID-19 cases in both China and Italy was over by the time of data collection, previous research suggests that

reminding people of a past threat can increase levels of prejudice (de Rooij et al., 2015).

Participants and Design

Four hundred thirty-seven Americans, recruited from MTurk (remuneration was US\$0.75), participated in the study (entitled “COVID-19 and Views Toward Society”) in June and July 2020, and agreed to have their data included in the final analyses. An American sample was intentionally sought because COVID-19 posed a real threat to the US at the time of data collection. Each participant was randomly assigned to one condition of a 2 (relative threat level: lower/higher) \times 2 (a priori favorability toward target out-group: less favorable/more favorable) \times 2 (relevance of threat to target out-group: relevant/irrelevant) between-subjects factorial design.¹ The less favorable target out-group was operationalized as Chinese people, while the more favorable target out-group was operationalized as Italian people.

From the initial sample, 13 participants were removed from analyses because of failure on one or more categorical manipulation checks (described in what follows), or three or more items from the Conscientious Responders Scale (Marjanovic et al., 2014). The final sample included 188 women, 234 men, one nonbinary person, and one person who did not provide their gender. An a priori power analysis (Faul et al., 2007) indicated this sample size was sufficient for the intended tests of our hypotheses to observe a medium-sized effect ($f = .25$) at the 95% confidence level.

Ages ranged from 20 to 78 years (*Median age* = 38.50). Nearly all participants (99.30%) were U.S. citizens. Participants were most commonly Caucasian (71.21%), followed by Black or African American (11.32%), Hispanic or Latino (6.13%), and Asian (4.72%). On average, participants were more politically liberal than conservative, as measured by Jost’s (2006) single-item Political Orientation Scale (1 = *extremely liberal*, 7 = *extremely conservative*; $M = 3.65$, $SEM = 0.08$). This value significantly differed from a politically neutral midpoint, $t(423) = -4.10$, $p < .001$. Generally, participants had little prior contact

with the target out-group in their respective experimental condition, as measured by an adapted version of Abrams et al.'s (2018) four-item Contact Inventory ($0 = \text{no contact}$, $10 = \text{a lot of contact}$; $M = 2.23$, $SD = 2.21$; Cronbach's $\alpha = .87$).

Materials and Procedure

Participants read a statement of informed consent and completed a reCAPTCHA check for nonhuman responding. An introduction then indicated that we were "interested in knowing how people understand and interpret [COVID-19] information, as well as people's views toward society more generally." Next, participants were informed that "we have collated some graphs of COVID-19 data from a number of different countries which have had reported cases" and that they would be presented with one chosen at random. After viewing this graph, participants proceeded to answer a series of questions. The five attention check items from the Conscientious Responders Scale were dispersed throughout these questions (Marjanovic et al., 2014).

Independent variables. One of four potential graphs was then randomly presented to each participant. The relative threat level independent variable was operationalized by these graphs, as two portrayed a steady increase in the number of active COVID-19 cases over a 2-week period (higher threat condition), while the other two portrayed a steady decrease (lower threat condition). The country whose COVID-19 cases were depicted also varied, with one of each threat level graph representing data from China, and one of each representing data from Italy.² As such, the four potential graphs were as follows: (a) Cases increasing in China, (b) Cases increasing in Italy, (c) Cases decreasing in China, and (d) Cases decreasing in Italy.

The target out-group independent variable was operationalized by asking participants their views toward either Chinese people (less favorable a priori attitude) or Italian people (more favorable a priori attitude). This manipulation, in combination with the manipulation of the

country whose COVID-19 cases were depicted in the graphs, constituted the threat relevance independent variable. That is, participants who either viewed a graph of China's COVID-19 case numbers and were also assigned to the Chinese target out-group condition, or viewed a graph of Italy's COVID-19 case numbers and were also assigned to the Italian target out-group condition, comprised those in the relevant threat condition. By contrast, an irrelevant threat was captured by a mismatch between the country whose COVID-19 case data were depicted and the target out-group assigned.

Manipulation checks. Following the presentation of the graph, two multiple-choice manipulation check questions were administered. The first asked if the graph had displayed the COVID-19 rate as "increasing," "decreasing" or "constant." The second manipulation check asked about the country that was depicted in the graph. Participants were provided with one of two sets of answer options to ensure that each experimental condition was uncontaminated by the other ("China," "Japan," "South Korea" for graph of cases in China; "Italy," "Spain," "France" for graph of cases in Italy). Participants who answered either categorical manipulation check question incorrectly were given the opportunity to answer a second time.

After answering the multiple-choice manipulation check questions, participants were presented with a subjective threat manipulation check for which they were asked to respond how they felt along the following, randomly presented items: "angry," "anxious," "distressed," "scared," "stressed," "threatened," "worried," "calm," "empowered," "hopeful," "indifferent," "informed," "safe" (e.g., Wohl et al., 2010). These items were measured on 7-point Likert scales ($1 = \text{strongly disagree}$, $7 = \text{strongly agree}$). Immediately afterwards, and using the same 7-point Likert scales, participants' perceptions of the validity of the information in the graph were assessed along the following dimensions: "accurate," "factual," "logical," "valid," "truthful," "legitimate," "objective," and "like something I've seen before." This last item was included because graphs of this

Table 1. Traditional and modern social distance scales' items used in the current study.

Traditional Bogardus Social Distance Scale	Modern Social Distance Scale
I would exclude [Chinese/Italian] people from my country.	Receive an email for further information on this program.
I would be willing to accept [Chinese/Italian] people as visitors in my country.	Participate in an online discussion with [Chinese/Italian] people.
I would be willing to accept [Chinese/Italian] people as citizens in my country.	Exchange text messages with a [Chinese/Italian] person.
I would be willing to accept a [Chinese/Italian] person as a coworker.	Talk on the phone with a [Chinese/Italian] person.
I would be willing to accept a [Chinese/Italian] person as a neighbor on the same street.	Participate in a face-to-face meet up session with [Chinese/Italian] people.
I would be willing to accept a [Chinese/Italian] person as a close personal friend.	Share a dorm room with a [Chinese/Italian] person.
I would be willing to accept a [Chinese/Italian] person as a close relative by marriage.	

Note. Items from both scales are listed in order of decreasing social distance. The items from the Traditional Social Distance Scale are based on Bogardus (1925a). The items from the Modern Social Distance Scale were developed specifically for this study.

nature were prominently displayed in media sources at the time.

Later in the questionnaire, we sought to evaluate our assumption that Chinese people would be perceived less favorably than Italian people.³ To do this, we employed the Adler et al.'s (2000) status ladder method. This was chosen on the basis that groups that hold relatively lower social status in society tend to be more frequent targets of negative attitudes than those of higher status (Putra & Wagner, 2017). An image of a ladder was presented and participants were asked to "Think of the ladder as representing where people stand in our society. Please rank order the following groups based on where you think they stand on such a ladder, from high status to low status." Fourteen groups were then presented, including participants' in-group (Americans) and the two focal groups for this study (Chinese and Italians).

Dependent variables. Three measures were employed to operationalize the dependent variable of social distance. We were guided in our choice of measures by the recognition that enhanced social distance can be pursued for both disease avoidance and prejudiced motives. As noted before,

Bogardus (1925a) developed the concept of social distance as an expression of prejudice. To that end, we first employed an adaptation of Bogardus Social Distance Scale. Participants were asked to indicate their relative willingness to accept out-group members, either Chinese or Italian, along various degrees of social distance. There were seven statements in total (see column 1 of Table 1), to which participants responded on the same 7-point Likert scales as before. This represents a variation on the original way of responding to Bogardus's scale, and has been shown to be valid (Mather et al., 2017).

This scale was followed by a Social Distance Scale developed specifically for the current research. As can be seen in column 2 of Table 1, the items had more contemporary forms of interaction and were developed to (a) capture what were assumed to be more socially accepted forms of social distance than the traditional Bogardus's items, yet (b) still retain the hierarchical aspects of distance operationalized in Bogardus's scale. We refer to this as a "Modern" Social Distance Scale to differentiate it from Bogardus's "traditional" Social Distance Scale. The items on this Modern Social Distance Scale are presented in Table 1 in descending order of

Table 2. COVID-19 Social Distance Scale items used in the current study.

Not sitting next to a [Chinese/Italian] person on public transport.
Not going to a [Chinese/Italian] restaurant specifically.
Requesting a different doctor at a hospital if the initial doctor assigned was [Chinese/Italian].
Not sitting next to a [Chinese/Italian] person in a movie theatre.
Taking a detour to avoid a known [Chinese/Italian] neighborhood.
Not using a supermarket trolley that a [Chinese/Italian] person had just used.
Not shaking hands with a person during an introduction because they are [Chinese/Italian].

Note. Items were developed specifically for this study.

social distance as determined by an independent pilot study of 20 people. This scale was prefaced with a preamble to provide a context in which participants would respond to the items, fictitiously advising that,

In a later phase of this project, we would like to implement a program to bring people from different countries together, even during these challenging times. We are interested to know your views if we were to work on one for American and [Chinese/Italian] people.

As before, target out-group members were either Chinese or Italian, and responses on this Modern Social Distance Scale were measured on 7-point Likert scales. Participants then responded to seven social distance items more explicitly associated with COVID-19 (see Table 2), including items that focused on the potential spread of the disease while retaining features allowing them to measure potential prejudice (e.g., requesting a different doctor at a hospital if the initial doctor assigned was [Chinese/Italian]). These seven items were developed uniquely for the current study based upon both formal health advice and media discussions about social behavior at the time; indeed, they represented the types of actions that were being expressed in both traditional and social media during the early days of the COVID pandemic. Unlike the mentioned traditional and modern social distance scales, the items on this COVID-19 Social Distance Scale were not structured hierarchically because COVID-19 hierarchical social distances remained unclear when the items were developed (May

2020). Instructions stated, “Given COVID-19, there has been some debate about whether certain social distancing behaviors toward particular groups are a reasonable health precaution, or if they are discriminatory. Please indicate your agreement about how appropriate the following behaviors would be.” Participants responded on 7-point Likert scales (1 = *very inappropriate*, 7 = *very appropriate*).⁴

Although the traditional Bogardus Social Distance Scale was designed to measure prejudice and the currently developed COVID-19 Social Distance Scale described behaviors more associated with health management, we made no a priori prediction about potential differences in responses to the three different social distance scales. The reason we had no such a priori prediction is precisely because of our recognition that potential threat could be used as either a justification for prejudice or for the pursuit of disease avoidance, as indicated before.

The final section of the experiment comprised a series of demographic questions, including measures of political orientation and prior intergroup contact. Upon completion of the experiment, participants received a full written debriefing.

Results

Evaluation of a Priori Attitudes

A three-level, one-way, within-participants analysis of variance (ANOVA) was conducted on the mean status rankings of participants’ in-group (Americans) and the two focal out-groups of this study (Chinese and Italians). A significant effect

was observed, $F(1.89, 793.47) = 364.42, p < .001, \eta_p^2 = .47$ (using a Greenhouse–Geisser correction). With a ranking of 1 representing the most favorable status evaluation (and 15 the least), Americans were perceived more favorably ($M = 2.74, SEM = 0.16$) than Italians ($M = 7.13, SEM = 0.15$) and Chinese people ($M = 9.13, SEM = 0.19$). Most importantly for the current study, Chinese people were viewed less favorably than Italians ($p < .001$).⁵

Perception of the Validity of the Graph

A mean of the eight perceived validity items was calculated for each participant (Cronbach's $\alpha = .92$). The grand mean of 4.98 ($SEM = 0.05$) was significantly greater than indifference (scale midpoint of 4), $t(423) = 18.37, p < .001$. Overall, participants perceived some degree of validity in the graph. A 2 x 2 between-participants ANOVA as a function of the manipulations introduced at this point in the study (relative threat level and the country source of threat) revealed an unexpected significant main effect for the country source of threat, $F(1, 420) = 33.34, p < .001, \eta_p^2 = .07$. Participants perceived the graphs portraying case numbers in Italy as more valid ($M = 5.28, SEM = 0.07$) than the graphs portraying the case numbers in China ($M = 4.69, SEM = 0.07$). Critically, the means for case numbers in both Italy and China remained significantly greater than the scale midpoint, $t(209) = 20.72, p < .001$ and $t(213) = 8.37, p < .001$, respectively. As such, participants perceived both sets of graphs as at least somewhat valid. The main effect for relative threat level, $F(1, 420) = 0.91, p = .34$, and the interaction, $F(1, 420) = 0.12, p = .73$, were nonsignificant.

Perceived Threat

A mean of the 13 perceived threat items was calculated for each participant (Cronbach's $\alpha = .89$) and analyzed in a 2 x 2 between-participants ANOVA as a function of the two manipulations introduced at this point in the study (relative threat level and the country source of threat). A

significant main effect was found for relative threat level, $F(1, 420) = 230.71, p < .001, \eta_p^2 = .36$. Participants in the lower relative threat level condition perceived less threat ($M = 3.20, SEM = 0.07$) than participants in the higher relative threat level condition ($M = 4.63, SEM = 0.07$). Unexpectedly, the interaction was also significant, $F(1, 420) = 4.56, p = .03, \eta_p^2 = .01$. The magnitude of the perceived threat difference between lower and higher threat conditions was greater in the case of Italy ($M_{\text{lower threat}} = 3.06, SEM = 0.09; M_{\text{higher threat}} = 4.68, SEM = 0.09$) than China ($M_{\text{lower threat}} = 3.56, SEM = 0.09; M_{\text{higher threat}} = 4.58, SEM = 0.09$). This was driven primarily by the slightly higher perceived threat from China than Italy in the lower relative threat condition. Importantly, each of these four mean values differed significantly from the scale midpoint, confirming the success of the manipulation ($ps < .001$). The main effect for the country source of threat was nonsignificant, $F(1, 420) = 1.12, p = .29$.

Traditional (Bogardus) Social Distance Scale

After reverse coding all but the first item of the traditional Bogardus Social Distance Scale, all seven items were highly intercorrelated (Cronbach's $\alpha = .94$). An average of the items for each participant was calculated, with higher values indicating greater preference for social distance.⁶ A 2 (relative threat level) x 2 (a priori favorability toward target out-group) x 2 (relevance of threat to target out-group) between-participants ANOVA was conducted on this mean social distance score. The interaction between relative threat level and threat relevance was significant, $F(1, 416) = 6.70, p = .01, \eta_p^2 = .02$. Consistent with the disease avoidance hypothesis (H1), participants expressed a greater preference for social distance from out-group members when those out-group members posed a threat ($M = 3.06, SEM = 0.14$) than when they did not pose a threat ($M = 2.51, SEM = 0.14$), $t(211) = 2.82, p = .003$. Social distance preferences, however, did not significantly vary as a function of higher ($M = 2.81, SEM = 0.14$) or

lower threat ($M = 3.00$, $SEM = 0.14$) when the out-group was irrelevant to the specific threat, $t(209) = 0.19$, $p = .38$.

Nonsignificant main effects were obtained for relative threat, $F(1, 416) = 1.64$, $p = .20$; threat relevance, $F(1, 416) = 0.73$, $p = .39$; and a priori favorability toward the out-group target, $F(1, 416) = 2.62$, $p = .11$. The interactions between relative threat and favorability toward the out-group target, $F(1, 416) = 0.19$, $p = .66$; threat relevance and favorability toward the out-group target, $F(1, 416) = 0.23$, $p = .63$; and relative threat, threat relevance, and favorability toward the out-group target, $F(1, 416) = 0.60$, $p = .44$, were also nonsignificant.

Modern Social Distance Scale

The six items on the Modern Social Distance Scale were highly intercorrelated (Cronbach's $\alpha = .91$), and an average of the items was calculated for each participant (reverse scoring all items so that higher values again indicated greater preference for social distance). A 2 (relative threat level) \times 2 (a priori favorability toward target out-group) \times 2 (relevance of threat to target out-group) between-participants ANOVA was conducted on these modern social distance scores. The interaction between relative threat level and out-group target was significant, $F(1, 416) = 4.68$, $p = .03$, $\eta_p^2 = .01$. Consistent with the more complex prejudice hypothesis (H3), participants expressed greater preference for social distance from a group about whom their a priori attitudes were less favorable (i.e., a Chinese out-group) in the presence of higher threat ($M = 3.48$, $SEM = 0.14$) than lower threat ($M = 3.08$, $SEM = 0.14$), even if that threat was irrelevant to this group (i.e., from Italy), $t(209) = 1.82$, $p = .04$. In contrast, participants' social distance preferences from a group about whom their a priori attitudes were more favorable (i.e., an Italian out-group) did not differ as a function of the higher ($M = 3.00$, $SEM = 0.14$) or lower ($M = 3.22$, $SEM = 0.14$) threat level, $t(211) = 1.20$, $p = .12$.

Nonsignificant main effects were obtained for relative threat, $F(1, 416) = 0.35$, $p = .55$; threat relevance, $F(1, 416) = 0.46$, $p = .50$; and a priori

favorability toward the out-group target, $F(1, 416) = 1.42$, $p = .23$. The interactions between relative threat and threat relevance, $F(1, 416) = 0.03$, $p = .86$; threat relevance and favorability toward the out-group target, $F(1, 416) = 1.26$, $p = .26$; and relative threat, threat relevance, and favorability toward the out-group target, $F(1, 416) = 0.39$, $p = .53$, were also nonsignificant.

COVID-19 Social Distance Scale

The seven COVID-19 social distance items were highly intercorrelated (Cronbach's $\alpha = .94$), and a mean of the items was thus calculated for each participant. A 2 (relative threat level) \times 2 (a priori favorability toward target out-group) \times 2 (relevance of threat to target out-group) between-participants ANOVA was conducted on these COVID-19 social distance scores. A single main effect for the a priori favorability toward the target out-group was significant, $F(1, 416) = 4.13$, $p = .04$, $\eta_p^2 = .01$. Consistent with the simple a priori prejudice hypothesis (H2), participants perceived greater appropriateness of social distance from members of a Chinese ($M = 3.19$, $SEM = 0.11$) than an Italian ($M = 2.88$, $SEM = 0.11$) out-group.

Nonsignificant main effects were obtained for relative threat, $F(1, 416) = 0.33$, $p = .56$, and threat relevance, $F(1, 416) = 0.17$, $p = .68$. The interactions between relative threat and threat relevance, $F(1, 416) = 0.81$, $p = .37$; relative threat and favorability toward the out-group target, $F(1, 416) = 0.37$, $p = .54$; threat relevance and favorability toward the out-group target, $F(1, 416) = 0.07$, $p = .80$; and relative threat, threat relevance, and favorability toward the out-group target, $F(1, 416) = 2.14$, $p = .15$, were also nonsignificant.

Discussion

Previous social psychological theory and research have identified realistic threat as a basis for prejudice expression, including prejudice that manifests through enhanced social distancing from others. In our conceptual analysis, however, we noted that social distancing can be a rational response to real threats, particularly in

circumstances in which the spread of a disease is imminent. The COVID-19 pandemic is one such circumstance and provided the context in which we examined two alternative sets of hypotheses about the nature of social distancing: a disease avoidance hypothesis and two prejudice hypotheses, the latter reflecting a priori prejudiced attitudes. Through the use of a multifactor experimental design and three different dependent variables measuring social distancing preferences, we found evidence consistent with both the disease avoidance hypothesis and the prejudice hypotheses.

Support for the disease avoidance hypothesis was obtained in participants' responses to the traditional Bogardus Social Distance Scale (1925a). With this scale, participants expressed enhanced social distance preferences from out-group members in response to a COVID-19 threat when that threat was portrayed as emanating from the specific out-group in question. This occurred regardless of whether the potential target of contact was a Chinese or an Italian out-group. Social distancing was, thus, expressed as a direct response to a relevant threat. The main implication of the support for the disease avoidance hypotheses is that, in certain contexts, people do indeed make social distancing decisions as a function of the level and relevance of a realistic threat. They appear to assess a potential contact situation based on the nature of the risk it may pose, and behave accordingly to minimize that risk regardless of the out-group membership of the target of potential contact.

It is worth noting, however, that integrated threat theory (Stephan & Stephan, 2000) can be read as making the same prediction as our disease avoidance hypothesis: Relevant threat will lead to more negative attitudes toward the threatening out-group. So why was H1 not framed as prejudice *per se* in the current research? The answer lies in a deeper understanding of how prejudice is conceived both formally and by lay people (e.g., Platow et al., 2022; Wang et al., 2022). We suggest that most analyses of prejudice would not consider negative intergroup attitudes as prejudice if those attitudes were based upon some consensually

agreed-upon, legitimate criteria (Platow et al., 2019). If one person or group is really threatening another, then disliking the threatening party (or, in this case, maintaining distance from them) is effectively "merited by [their] own misconduct" and, hence, outside the ambit of prejudice (Allport, 1954, p. 10). Although misconduct was absent from the current study, threats from COVID-19 were real when actually relevant and, hence, formed a legitimate basis for social distancing preferences (as a health precaution) from any out-group that posed a real threat. A particular strength of our study was, thus, the ability to disentangle potentially illegitimate from legitimate criteria for dislike, allowing us to differentiate between social distancing caused by a real and relevant threat versus social distancing as an expression of preexisting prejudice.

Despite obtaining evidence that social distancing from Chinese people during the COVID-19 pandemic may have been based, at least in part, on disease avoidance motives, we also obtained evidence of prejudice-based social distancing preferences. Participants found it more appropriate to maintain social distance from Chinese people compared to Italian people when measured by the currently developed COVID-19 Social Distance Scale. This pattern was consistent with the a priori prejudice hypothesis (H2). Although greater expressions of prejudice toward a Chinese than an Italian out-group may be unsurprising in light of previous research demonstrating more prejudice toward Chinese people than people of various other nationalities (Parrillo & Donoghue, 2005), it is important to consider why this effect on the COVID-19 Social Distance Scale was unaffected by COVID-19 threat level and relevance.

Revisiting the broader social context in which the study was conducted may provide some insight. During the emergence of the COVID-19 pandemic (and for some time thereafter), U.S. media and political discourse often portrayed COVID-19 as linked to China—even as the transmission of the virus became a global issue (Huo, 2020; Karalis Noel, 2020). Through this process, the threat of COVID-19 was increasingly seen to be associated with Chinese people (Margolin,

2020; Tessler et al., 2020). Indeed, it is likely that the behaviors described in the COVID-19 Social Distance Scale were perceived by participants as relevant specifically to a Chinese out-group, irrespective of the actual source of COVID-19 threat made salient by the experimental threat manipulations. Consider, for example, the item on this scale describing avoiding a restaurant operated by the target out-group. In reality, businesses in Chinatowns across the world were heavily negatively impacted by the emergence of COVID-19, even prior to formal restrictions or “lockdowns” being implemented. This was likely to be, at least in part, driven by prejudicial attitudes toward Chinese people, awakened by the virus (Hartke, 2022; Ong et al., 2020; Russo et al., 2022; Taylor, 2021). With an understanding of the real, relatively high COVID-19 threat at the time, the COVID-19 Social Distance Scale may have captured attitudes that were precisely being enacted at the time of the study.

Further evidence for the expression of prejudice was obtained on the currently developed Modern Social Distance Scale. Here, we obtained support for our more complex prejudice hypothesis (H3). Participants expressed a preference for greater social distancing from Chinese out-group members in response to a relatively high COVID-19 threat (compared to a low threat), even if that threat emanated from Italy. This pattern did not occur in response to Italian out-group members. This result is consistent with Crandall and Eshleman’s (2003) justification–suppression model: prejudice toward Chinese people, but not toward the more favorably evaluated Italians, was only observed when the justification factor of a high threat was available. A higher threat did not quantitatively exacerbate expressions of prejudice on this scale, but rather enabled their qualitative emergence altogether. As such, this finding shows that rational disease avoidance practices (e.g., social distancing) can be enacted for less noble purposes—they can serve as a psychological justification to enable prejudice. This is consistent with the observations we made in our opening paragraph that the avoidance of intergroup contact is an

expression of prejudice when people refer to a general high threat to maintain social distance from specific out-groups but not others.

Together, the patterns of data across the three dependent variables suggest that people perceived social distancing behaviors as a basis to engage meaningfully in disease avoidance, but also as a basis for expressing prejudice. On the one hand, this may simply imply multiple motivations for social distancing behaviors. On the other hand, it highlights just how easy it is to engage in prejudiced behaviors in ways that may appear as rational and as conforming to broader norms (in this case, social distancing in pursuit of disease avoidance). Moreover, beyond solely enabling the expression of prejudice, the realistic COVID-19 threat could ultimately inhibit attempts at prejudice reduction by limiting intergroup contact (Pettigrew & Tropp, 2006). In the case of COVID-19, public health measures formally advised people to avoid *physical* contact. However, the current research highlights the broader implications of this advice for *social* contact, including limiting interpersonal interactions and relationships that have the potential to reduce prejudice. This presents a particularly challenging social problem, the implications of which are likely to be enhanced with extended social distancing norms and continued rhetoric associating some groups of people (e.g., Chinese people) with COVID-19 (e.g., Croucher et al., 2020; Perry et al., 2020).

Limitations

The multifactor design, multiple dependent variables, and context set within the very real threat of COVID-19 are all strengths of the current research that enabled us to examine a paradoxical feature of social distancing: pursuit of disease avoidance and the expression of prejudice. Nevertheless, we recognize potential limitations of this study. One limitation pertains to the threat level manipulation, as the actual trajectory of COVID-19 case numbers was unprecedented and could not be completely controlled experimentally. Participants’ knowledge of COVID-19 case numbers outside of this study

may have thus influenced their judgements. The experimental manipulation of threat level implied equal threat from China and Italy in both the higher threat and lower threat conditions. In reality, however, the severity of COVID-19 was higher in Italy than in China at the time of data collection in June and July 2020 (Worldometer, 2020). Despite this, a reconsideration of the findings in light of this limitation perhaps only lends further support to the complex prejudice hypothesis. If participants were aware that COVID-19 case numbers were higher in Italy than in China, and they understood there to be a higher threat from the former than the latter, disease avoidance behavior would have been reflected in a greater desire for social distance from an Italian out-group than a Chinese out-group. This did not occur.

Similarly, a second limitation pertains to the actual threat relevance manipulation. Again, the real landscape of COVID-19 at the time of data collection may have impacted participants' understandings of the nature of the threat operationalized in our study. It is plausible that participants understood and rightfully treated COVID-19 as a generalized threat, relevant to engaging with anyone regardless of the nature of our experimental relevance manipulation. This could reasonably account for the effects observed on the Modern Social Distance Scale. Nevertheless, the potential contamination of the actual threat relevance variable in this study is unlikely to explain the full story, given that this manipulation did yield effects consistent with the disease avoidance hypothesis on the Bogardus Social Distance Scale.

As a final limitation of note, we recognize the value that measuring actual behavior would have provided. Indeed, this was the original plan for this study. Unfortunately, the real threat of COVID-19 led us to pursue a socially distanced study both for ethical reasons and the reality that in-person research was prohibited by our institution at the time the study was conducted.

Future Research

Although replication of the present results would provide greater confidence in our findings, this

study was conducted in a particular historical context in the early days of the COVID-19 pandemic that cannot be repeated at the operational level. Following data collection, the COVID-19 situation changed considerably, including through the development of vaccines, improvement in healthcare treatments, and even the narrative in many countries shifting from one of transmission prevention to one of economic recovery "post-COVID" (Ayouni et al., 2021; Jiang et al., 2022; "NSW and Victoria on Track to Scrap COVID," 2022). As such, pursuing a direct replication now would very likely yield different patterns of results, if only because the nature of the realistic threat has changed. Nevertheless, by capturing a unique point in time and place, the findings are valuable in explaining prejudicial behavior toward Chinese people and others of Asian appearance during the days of the emerging pandemic (Karalis Noel, 2020; Margolin, 2020). Furthermore, observing social distancing preferences under the real threat posed by COVID-19 provided a novel context to evaluate conceptual processes outlined in the integrated threat theory (Stephan & Stephan, 2000) and the justification-suppression model (Crandall & Eshleman, 2003).

In recognition of the ways in which the COVID-19 pandemic has unfolded, we encourage future studies to consider the relationship between COVID-19 and prejudice beyond treating the virus exclusively as a realistic health-based threat. As a physical disease, conceptualizing COVID-19 as a realistic threat to health was appropriate at the time this study was conducted. However, it has been suggested that alternative threat appraisals of COVID-19 have greater longevity beyond the initial health risk posed by it (Politi et al., 2021). Some of these alternative threat appraisals include how COVID-19 poses a threat to economic conditions, social harmony, the perceived legitimacy of politicians, and the satisfaction of psychological needs (Bonotti & Zech, 2021; Lemay et al., 2021; Politi et al., 2021). As such, future studies may wish to expand on the present research by testing how COVID-19 relates to intergroup attitudes when it is appraised as a symbolic, political, or economic threat, and discern each of their unique mechanisms in contributing to

expressions of prejudice. In a similar manner, future research may benefit from examining the related concept of intergroup anxiety (e.g., Stephan, 2014). It is certainly the case that our threat manipulation check included an anxiety measure, but our current design did not allow for a clear differentiation between threat and anxiety processes.

Conclusion

Recent correlational research has demonstrated how disease avoidance rhetoric can be used to justify prejudiced COVID-19 responses (Mandalaywala et al., 2021; Szymkow et al., 2021). The current research extends this to disentangle and demonstrate specific causal processes. The current research, thus, has important applied and conceptual implications for social change agents seeking to reduce prejudice through intergroup contact. Although maintaining physical distance from others is unobjectionably rational during a viral outbreak, the circumstances unfortunately provide a fertile opportunity for prejudice to flourish. In many instances, social distancing and the avoidance of contact reflect the expression of prejudice while inhibiting efforts to reduce it. Having all the right conditions for successful prejudice-reducing contact will ultimately be completely irrelevant if the intergroup contact fails to be initiated in the first instance. The challenge, thus, is to articulate not only the conditions needed for successful contact but the conditions needed to initiate contact, particularly during a global pandemic when reducing disease transmission also comes with reduced social interactions.

Authors' note

Ethical permission to conduct this research was provided by the Australian National University Human Research Ethics Committee (Protocol 2016/065). Dirk Van Rooy is now affiliated to university of Antwerp.

Data availability statement

The data that support the findings of this paper are available from the corresponding author upon reasonable request.

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Supplemental material

Supplemental material for this article is available online.

Notes

1. Participants who indicated being of the same ethnic background as the randomly assigned target out-group were not considered to be part of the initial sample. This is because their judgements would be of an in-group member rather than the intended out-group member.
2. For ethical reasons, we presented actual data in each case. This meant that the Chinese and Italian high and low threat graphs were slightly different from each other. However, we did not provide information on the y-axis, allowing us to make the graphs appear as similar as possible. The graphs are presented in the supplemental material.
3. This measure of status was presented in the questionnaire after the Bogardus Social Distance Scale, Modern Social Distance Scale, and COVID-19 Social Distance Scale. It was presented prior to the demographic and control questions.
4. Additional questions followed, which were relevant to hypotheses to be examined in separate papers.
5. A separate ANOVA that included the three manipulated variables revealed only one additional effect, a main effect for threat relevance. The evaluation of all three groups combined was more favorable in the high relevance condition ($M = 6.12$, $SEM = 0.12$) than the low relevance condition ($M = 6.54$, $SEM = 0.12$), $F(1, 412) = 5.66$, $p = .02$. Importantly, there was no qualification of our overall between-country effect.
6. We thank an anonymous reviewer for suggesting the use of this unweighted average. A separate ANOVA in which the dependent variable was based upon weighted values associated with the different social distance levels, as outlined in Mather et al. (2017), yielded the same pattern of results as currently reported.

References

- Abrams, J. R., McGaughey, K. J., & Haghghat, H. (2018). Attitudes toward Muslims: A test of the parasocial contact hypothesis and contact theory. *Journal of Intercultural Communication Research, 47*(4), 276–292. <https://doi.org/10.1080/17475759.2018.1443968>
- Adler, N. E., Epel, E. S., Castellazzo, G., & Ickovics, J. R. (2000). Relationship of subjective and objective social status with psychological and physiological functioning: Preliminary data in healthy White women. *Health Psychology, 19*(6), 586–592. <https://doi.org/10.1037/0278-6133.19.6.586>
- Allport, G. W. (1954). *The nature of prejudice*. Addison-Wesley.
- Australian Government Department of Health and Aged Care. (2022). Protect yourself and others from COVID-19. <https://www.health.gov.au/health-alerts/covid-19/protect-yourself-and-others#physical-distancing>
- Ayouni, I., Maatoug, J., Dhoub, W., Zammit, N., Fredj, S. B., Ghammam, R., & Ghannem, H. (2021). Effective public health measures to mitigate the spread of COVID-19: A systematic review. *BMC Public Health, 21*, 1–14. <https://doi.org/10.1186/s12889-021-11111-1>
- Bogardus, E. S. (1925a). Measuring social distance. *Journal of Applied Sociology, 9*, 299–308. <https://babel.hathitrust.org/cgi/pt?id=inu.30000104215342&view=1up&seq=303&q1=bogardus>
- Bogardus, E. S. (1925b). Social distance and its origins. *Journal of Applied Sociology, 9*, 216–226. <https://babel.hathitrust.org/cgi/pt?id=inu.30000104215342&view=1up&seq=226&q1=bogardus>
- Bonotti, M., & Zech, S. T. (2021). *Recovering civility during COVID-19*. Palgrave Macmillan. https://doi.org/10.1007/978-981-33-6706-7_1
- Borja, M., Jeung, R., Yellow Horse, A., Gibson, J., Gowing, S., Lin, N., Navins, A., & Power, E. (2020). *Anti-Chinese rhetoric tied to racism against Asian Americans* (Stop AAPI Hate Report). AAPI Equity Alliance. https://www.asianpacificpolicyandplanningcouncil.org/wp-content/uploads/Anti-China_Rhetoric_Report_6_17_20.pdf
- Brown, T. N., Akiyama, M. K., White, I. K., Jayaratne, T. E., & Anderson, E. S. (2009). Differentiating contemporary racial prejudice from old-fashioned racial prejudice. *Race and Social Problems, 1*, 97–110. <https://doi.org/10.1007/s12552-009-9010-6>
- Butz, D. A., & Yogeeswaran, K. (2011). A new threat in the air: Macroeconomic threat increases prejudice against Asian Americans. *Journal of Experimental Social Psychology, 47*(1), 22–27. <https://doi.org/10.1016/j.jesp.2010.07.014>
- Center for Disease Control and Prevention. (2022). Prevention Actions to Use at All COVID-19 Community Levels: Increasing Space and Distance. <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html#space>
- Crandall, C. S., & Eshleman, A. (2003). A justification-suppression model of the expression and experience of prejudice. *Psychological Bulletin, 129*(3), 414–446. <https://doi.org/10.1037/0033-2909.129.3.414>
- Croucher, S. M., Nguyen, T., & Rahmani, D. (2020). Prejudice toward Asian Americans in the COVID-19 pandemic: The effects of social media use in the United States. *Frontiers in Communication, 5*, article 39. <https://doi.org/10.3389/fcomm.2020.00039>
- De Rooij, E. A., Goodwin, M. J., & Pickup, M. (2015). Threat, prejudice and the impact of the riots in England. *Social Science Research, 51*, 369–383. <https://doi.org/10.1016/j.ssresearch.2014.09.003>
- Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods, 39*, 175–191. <https://doi.org/10.3758/bf03193146>
- Gaertner, S. L., & Dovidio, J. F. (2005). Understanding and addressing contemporary racism: From aversive racism to the common ingroup identity model. *Journal of Social Issues, 61*(3), 615–639. <https://doi.org/10.1111/j.1540-4560.2005.00424.x>
- Harrison, N., & Peacock, N. (2009). Cultural distance, mindfulness and passive xenophobia: Using integrated threat theory to explore home higher education students' perspectives on "internationalisation at home." *British Educational Research Journal, 36*(6), 877–902. <https://doi.org/10.1080/01411920903191047>
- Hartke, K. (2022, January 10). Chinatowns are struggling to survive. Grace Young is reminding Americans why they matter. *The Washington Post*. <https://www.washingtonpost.com/food/2022/01/10/chinatowns-struggle-covid-anti-asian-violence/>
- Haynes, S. (2020, March 6). As coronavirus spreads, so does xenophobia and anti-Asian racism. *Time*. <https://time.com/5797836/coronavirus-racism-stereotypes-attacks/>

- Henry, P. J., & Sears, D. O. (2002). The Symbolic Racism 2000 Scale. *Political Psychology, 23*(2), 253–283. <https://doi.org/10.1111/0162-895X.00281>
- Herek, G. M., & Capitanio, J. P. (1999). AIDS stigma and sexual prejudice. *American Behavioral Scientist, 42*(7), 1130–1147. <https://doi.org/10.1177/0002764299042007006>
- Horowitz, J., Bubola, E., & Povoledo, E. (2020, March 21). Italy, pandemic's new epicenter, has lessons for the world. *The New York Times*. <https://www.nytimes.com/2020/03/21/world/europe/italy-coronavirus-centerlessons.html>
- Huo, Y. J. (2020). Prejudice and discrimination. In J. Jetten, S. D. Reicher, S. A. Haslam & T. Cruwys (Eds.), *Together apart: The psychology of COVID-19* (pp. 113–118). SAGE.
- Jiang, D., Wang, X., & Zhao, R. (2022). Analysis on the economic recovery in the post-COVID-19 era: Evidence from China. *Frontiers in Public Health, 9*, 1–7. <https://doi.org/10.3389/fpubh.2021.787190>
- Jost, J. T. (2006). The end of the end of ideology. *American Psychologist, 61*(7), 651–670. <https://doi.org/10.1037/0003-066X.61.7.651>
- Karalis Noel, T. (2020). Conflating culture with COVID-19: Xenophobic repercussions of a global pandemic. *Social Sciences & Humanities Open, 2*, article 100044. <https://doi.org/10.1016/j.ssaho.2020.100044>
- Lemay, E. P., Jr., Kruglanski, A. W., Molinaro, E., Agostini, M., Belanger, J. J., Gützkw, B., Kreienkamp, J., Reitsema, A. M. vanDellen, M. R., PsyC-Orona Collaboration, & Leande, N. P. (2021). The role of values in coping with health and economic threats of COVID-19. *The Journal of Social Psychology*. Advance online publication. <https://doi.org/10.1080/00224545.2021.1979454>
- Levin, S., van Laar, C., & Sidanius, J. (2003). The effects of ingroup and outgroup friendship on ethnic attitudes in college: A longitudinal study. *Group Processes & Intergroup Relations, 6*(1), 76–92. <https://doi.org/10.1177/1368430203006001013>
- Lin, M. H., Kwan, V. S. Y., Cheung, A., & Fiske, S. T. (2005). Stereotype content model explains prejudice for an envied outgroup: Scale of Anti-Asian American Stereotypes. *Personality & Social Psychology Bulletin, 31*(1), 34–47. <https://doi.org/10.1177/0146167204271320>
- Mancini, C., Mears, D. P., Stewart, E. A., Beaver, K. M., & Pickett, J. T. (2015). Whites' perceptions about Black criminality: A closer look at the contact hypothesis. *Crime & Delinquency, 61*(7), 996–1022. <https://doi.org/10.1177/0011128712461900>
- Mandalaywala, T. M., Gonzalez, G., & Tropp, L. R. (2021). Early perceptions of COVID-19 intensity and anti-Asian prejudice among White Americans. *Group Processes & Intergroup Relations, 26*(1), 48–70. <https://doi.org/10.1177/13684302211049721>
- Margolin, J. (2020, March 27). FBI warns of potential surge in hate crimes against Asian Americans amid coronavirus. ABC News. <https://abcnews.go.com/US/fbi-warns-potential-surge-hate-crimes-asian-americans/story?id=69831920>
- Marjanovic, Z., Struthers, C. W., Cribbie, R., & Greenglass, E. R. (2014). The Conscientious Responders Scale: A new tool for discriminating between conscientious and random responders. *SAGE Open, 4*, 1–10. <https://doi.org/10.1177/2158244014545964>
- Mather, D. M., Jones, S. W., & Moats, S. (2017). Improving upon Bogardus: Creating a more sensitive and dynamic social distance scale. *Survey Practice, 10*(4), 1–9. <https://doi.org/10.29115/SP-2017-0026>
- McConahay, J. B. (1983). Modern racism and modern discrimination. *Personality & Social Psychology Bulletin, 9*(4), 551–558. <https://doi.org/10.1177/0146167283094004>
- NSW and Victoria on track to scrap COVID isolation rules for household contacts within days. (2022, April 19). *The Guardian*. <https://www.theguardian.com/world/2022/apr/19/nsw-and-victoria-on-track-to-scrap-covid-isolation-rules-for-household-contacts-within-days>
- Oaten, M., Stevenson, R. J., & Case, T. I. (2009). Disgust as a disease-avoidance mechanism. *Psychological Bulletin, 135*(2), 303–321. <https://doi.org/10.1037/a0014823>
- Ong, P., Comandom, A., DiRago, N., & Harper, L. (2020). *COVID-19 impacts on minority businesses and systemic inequality*. UCLA Center for Neighborhood Knowledge. <https://escholarship.org/uc/item/5jz7c4vd>
- Parrillo, V. N., & Donoghue, C. (2005). Updating the Bogardus social distance studies: A new national survey. *The Social Science Journal, 42*(2), 257–271. <https://doi.org/10.1016/j.soscij.2005.03.011>
- Pattison, E., & Davidson, G. R. (2019). The role of perceived threat in Australians' endorsement of asylum-seeker policies. *Journal of Pacific Rim Psychology, 13*, 1–11. <https://doi.org/10.1017/prp.2019.13>
- Pedersen, A., & Walker, I. (1997). Prejudice against Australian Aborigines: Old-fashioned and

- modern forms. *European Journal of Social Psychology*, 27(5), 561–587. [https://doi.org/10.1002/\(SICI\)1099-0992\(199709/10\)27:5%3C561::AID-EJSP833%3E3.0.CO;2-3](https://doi.org/10.1002/(SICI)1099-0992(199709/10)27:5%3C561::AID-EJSP833%3E3.0.CO;2-3)
- Perry, S. L., Whitehead, A. L., & Grubbs, J. B. (2020). Prejudice and pandemic in the promised land: How White Christian nationalism shapes Americans' racist and xenophobic views of COVID-19. *Ethnic and Racial Studies*, 44(5), 759–772. <https://doi.org/10.1080/01419870.2020.1839114>
- Pettigrew, T. F., & Tropp, L. R. (2006). A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychology*, 90(5), 751–783. <https://doi.org/10.1037/0022-3514.90.5.751>
- Pettigrew, T. F., Tropp, L. R., Wagner, U., & Christ, O. (2011). Recent advances in intergroup contact theory. *International Journal of Intercultural Relations*, 35(3), 271–280. <https://doi.org/10.1016/j.ijintrel.2011.03.001>
- Platow, M. J., van Rooy, D., Augoustinos, M., Spears, R., Bar-Tal, D., & Grace, D. M. (2019). Prejudice is about collective values, not a biased psychological system. *New Zealand Journal of Psychology*, 48(1), 16–22. <https://www.psychology.org.nz/journal-archive/Platow-16-22.pdf>
- Platow, M. J., van Rooy, D., Wang, C., Ollis, L., Knight, C. G., Blakey, P., Calaby, P., Cho, H., Kim, J., Naar, H., Oh, J., Stoney, C., Wilson-Woolley, K., Augoustinos, M., Bar Tal, D., & Spears, R. (2022). Lay perceptions of modern prejudice toward “White” and “Asian” people: It matters who said it, whom it's about, and who's judging. *Asian Journal of Social Psychology*. Advance online publication. <https://doi.org/10.1111/ajsp.12525>
- Politi, E., Lüders, A., Sankaran, S., Anderson, J., van Assche, J., Spiritus-Beerden, E., Roblain, A., Phalet, K., Dreluy, I., & Green, E. G. T. (2021). The impact of COVID-19 on the majority population, ethno-racial minorities, and immigrants: A systematic review on threat appraisals from an inter-group perspective. *European Psychologist*, 26(4), 298–309. <https://doi.org/10.1027/1016-9040/a000460>
- Putra, I. E., & Wagner, W. (2017). Prejudice in inter-religious context: The role of metaprejudice and majority–minority status. *Journal of Community & Applied Social Psychology*, 27(3), 226–239. <https://doi.org/10.1002/casp.2305>
- Qian, M., & Jiang, J. (2020). COVID-19 and social distancing. *Journal of Public Health: From Theory to Practice*, 30(1), 259–261. <https://doi.org/10.1007/s10389-020-01321-z>
- Russo, R. G., Ali, S. H., Mezzacca, T. A., Radee, A., Chong, S., Kranick, J., Tsui, F., Foster, V., Kwon, S. C., & Yi, S. S. (2022). Assessing changes in the food retail environment during the COVID-19 pandemic: Opportunities, challenges and lessons learned. *BMC Public Health*, 22, 1–11. <https://doi.org/10.1186/s12889-022-12890-x>
- SBS News. (2020, February 27). *Coronavirus: Melbourne health workers of “Asian appearance” report racial abuse*. <https://www.sbs.com.au/news/article/coronavirus-melbourne-health-workers-of-asian-appearance-report-racial-abuse/uoef84y3dp>
- Sherif, M., & Sherif, C. W. (1953). *Groups in harmony and tension: An integration of studies on intergroup relations*. Harper & Brothers.
- Sibley, C. G., & Duckitt, J. (2008). Personality and prejudice: A meta-analysis and theoretical review. *Personality and Social Psychology Review*, 12(3), 248–279. <https://doi.org/10.1177/1088868308319226>
- Stephan, W. G. (2014). Intergroup anxiety: Theory, research, and practice. *Personality and Social Psychology Review*, 18(3), 239–255. <https://doi.org/10.1177/1088868314530518>
- Stephan, W. G., & Stephan, C. W. (2000). An integrated threat theory of prejudice. In S. Oskamp (Ed.), *The Claremont Symposium of Applied Social Psychology: Reducing prejudice and discrimination* (pp. 23–45). Lawrence Erlbaum Associates Publishers.
- Szymkow, A., Frankowska, N., & Galasińska, K. (2021). Social distancing from foreign individuals as a disease-avoidance mechanism: Testing the assumptions of the behavioral immune system theory during the COVID-19 pandemic. *Social Psychological Bulletin*, 16(3), 1–28. <https://doi.org/10.32872/spb.4389>
- Tajfel, H., & Turner, J. C. (1986). The social identity theory of intergroup behaviour. In S. Worchel & W. G. Austin (Eds.), *Psychology of intergroup relations* (pp. 7–24). Nelson-Hall.
- Tausch, N., Hewstone, M., & Roy, R. (2009). The relationships between contact, status and prejudice: An integrated threat theory analysis of Hindu–Muslim relations in India. *Journal of Community & Applied Social Psychology*, 19(2), 83–94. <https://doi.org/10.1002/casp.984>
- Taylor, L. (2021, February 11). *On eve of Lunar New Year, COVID-19 pushes Chinatown businesses to the brink*. Reuters. <https://www.reuters.com/article/us-global-business-chinatowns-feature-tr-idUSKBN2AB1U0>

- Tessler, H., Choi, M., & Kao, G. (2020). The anxiety of being Asian American: Hate crimes and negative biases during the COVID-19 pandemic. *American Journal of Criminal Justice*, 45(4), 636–646. <https://doi.org/10.1007/s12103-020-09541-5>
- Vartanian, L. R., Trewartha, T., & Vanman, E. J. (2016). Disgust predicts prejudice and discrimination toward individuals with obesity: Disgust, prejudice, and discrimination. *Journal of Applied Social Psychology*, 46(6), 369–375. <https://doi.org/10.1111/jasp.12370>
- Wang, C., Platow, M. J., Bar-Tal, D., Augoustinos, M., van Rooy, D., & Spears, R. (2022). When are intergroup attitudes judged as free speech and when as prejudice? A social identity analysis of attitudes toward immigrants. *International Journal of Psychology*, 57(4), 456–465. <https://doi.org/10.1002/ijop.12775>
- Weaver, C. N. (2012). Prejudice in the lives of Asian Americans. *Journal of Applied Social Psychology*, 42(8), 1847–1869. <https://doi.org/10.1111/j.1559-1816.2012.00921.x>
- Wohl, M. J. A., Branscombe, N. R., & Reysen, S. (2010). Perceiving your group's future to be in jeopardy: Extinction threat induces collective angst and the desire to strengthen the ingroup. *Personality & Social Psychology Bulletin*, 36(7), 898–910. <https://doi.org/10.1177/0146167210372505>
- Worldometer. (2020). *Coronavirus cases* [Data set]. <https://www.worldometers.info/coronavirus/country/china> and <https://www.worldometers.info/coronavirus/country/italy>
- Zárate, M. A., García, B., Garza, A. A., & Hitlan, R. T. (2004). Cultural threat and perceived realistic group conflict as dual predictors of prejudice. *Journal of Experimental Social Psychology*, 40(1), 99–105. [https://doi.org/10.1016/S0022-1031\(03\)00067-2](https://doi.org/10.1016/S0022-1031(03)00067-2)