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COVID-19 threat and perceptions of common belonging with outgroups: The roles of prejudice-related individual differences and intergroup contact

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ABSTRACT

COVID-19 represents a multidimensional threat with the potential to worsen intergroup relations, but perceiving a common belonging with various outgroups may prevent intergroup tensions. During the Italian lockdown, we conducted an online survey with 685 Italian participants investigating whether perceptions of common belonging (belonging to a common group, sharing a common destiny, perceiving the difficulties faced by other groups) with disadvantaged and national outgroups were associated with perceived COVID-19 threat and prejudice-related individual differences, namely social dominance orientation (SDO), need for cognitive closure (NFC), deprovincialization, pre-lockdown positive and negative face-to-face contact with immigrants. We also explored the moderating roles of individual differences in the link between perceived threat and perceptions of common belonging. Results showed that common belonging was negatively associated with COVID-19 perceived threat, SDO, and NFC, and positively associated with deprovincialization and positive contact, with differences depending on the common belonging index and on the type of outgroup. Moderations showed that negative relationships between common belonging and COVID-19 threat held only at low levels of NFC (floor effect), deprovincialization, and positive contact. Summarizing, positive contact with minorities and openness to other cultures can favor a sense of communion with other social groups in a global health emergency.

1. Introduction

The outbreak of COVID-19 – the disease caused by SARS-CoV-2 – dramatically changed the way we view, feel about, and interact with other people. First, COVID-19 represents a disease and pathogenic threat: such threats increase prejudice toward people that are perceived as different, because they activate the behavioral immune system, a set of psychological processes aimed at detecting and avoiding potential sources of pathogen infection (Murray & Schaller, 2012). Past research showed that a salient pathogenic threat increased xenophobic and ethnocentric attitudes (Faulkner et al., 2004; Navarrete & Fessler, 2006), behavioral and attitudinal conformity (Murray & Schaller, 2012), and avoidance of contact with foreigners for those who hold unfavorable attitudes toward them (Krings et al., 2012). Second, as COVID-19 had and has major economic, social, and psychological consequences, it mostly brings about a generalized sense of threat. Generalized threat makes social identity salient, consolidates ingroup boundaries, strengthens ingroup compliance, and increases distance

among social groups: therefore, the current pandemic could have detrimental consequences for intergroup relations (Dovidio et al., 2020).

Recent research showed the repercussions of COVID-19 threat on intergroup relations and attitudes. In the early phases of the pandemic, xenophobic reactions toward Asian people, especially those of Chinese descent, increased in non-Asian countries, and discrimination increased toward people from minority subgroups, such as light-skinned people in some African countries or people from Wuhan in China (Roberto et al., 2020). Empirical evidence showed that worry about COVID-19 was positively associated with both xenophobia and colder attitudes toward Asian American people in the United States (Reny & Barreto, 2020), and a Polish study found that people frequently looking for and sharing information about COVID-19 reported higher anxiety and negative affect toward Italians – the people then most affected by coronavirus (Sorokowski et al., 2020).

Taken together, these findings suggest that COVID-19 threat may induce or exacerbate intergroup tensions and hostility, thereby generating disregard, distrust, or a grudge toward those that are perceived as

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different (Van Bavel et al., 2020). Recently, social psychologists have suggested that the perception of a shared common belonging or a common identity with the various social groups during the pandemic can prevent such tensions (Dovidio et al., 2020). This is consistent with Gaertner and Dovidio's common ingroup identity model, which has accumulated considerable evidence that recategorizing outgroup members as ingroup members within an inclusive superordinate category is associated with reduced intergroup hostility (Gaertner et al., 2016).

In principle, once we establish an inclusive superordinate identity "forged by common fate or by interdependence in the face of (...) a mutual enemy" (Dovidio et al., 2020; p. 145), such as humanity fighting against the virus, we would all become part of a larger ingroup, thereby erasing intergroup threat. This process may, however, depend on individual differences interfering with or promoting feelings of common belonging with outgroup members. What are the most likely candidates for such individual differences?

Perceiving a common belonging with outgroups may be harder for those who support social hierarchies (social dominance orientation, SDO; Sidanius & Pratto, 1999) or who desire firm answers, and are averse to ambiguity (need for cognitive closure, NFC; Roets & Van Hiel, 2011). Individuals higher in SDO want to maintain boundaries and differences between groups; accordingly, research showed that SDO was positively associated with prejudice against various minority groups and pro-ingroup biases (Sidanius & Pratto, 1999). Similarly, individuals higher in NFC desire predictability and tend to rely on cognitive categories, including group membership and stereotypes (Kruglanski, Pierro, Mannetti, & De Grada, 2006). Accordingly, NFC was found to be positively related to blatant and subtle prejudice (Roets & Van Hiel, 2011), and ingroup biases (Shah et al., 1998).

In contrast, perceiving a common belonging with outgroups may be easier for deprovincialized people, who are more open and accepting toward other cultures and groups (Pettigrew, 2011), and who showed higher benevolence toward others and endorsement of universalistic values, together with lower levels of prejudice, nationalism, and ingroup identification (Boin et al., 2020). Similarly, as research showed that positive intergroup contact experiences were associated with decreased salience of intergroup boundaries, higher perceived common identity with the outgroup (Capozza et al., 2013), and more inclusive social identities (Reimer et al., 2020), feeling a common belonging with outgroups is more likely for people experiencing high levels of positive, and low levels of negative, intergroup contact.

This study was conducted in Italy between April 17 and May 8, 2020, when Italy was going through the peak and the initial decline phases of the COVID-19 first wave, and was facing a complete lockdown (which went from March 9 to May 18, 2020, with lighter restrictions starting from May 4). Simultaneously, the initial prejudice against Chinese people – documented especially during February and early March (Muzi, 2020) – had been largely replaced by hostility toward other targets: on the one hand, European countries opposing coronabonds and debt mutualization in favor of Italy (Business leader, 2020); on the other hand, minorities more usually present in the political debate, such as immigrants and refugees (see, e.g., Boin et al., 2020). For instance, "Matteo Salvini, former Deputy Prime Minister of Italy, wrongly linked COVID-19 to African asylum seekers, calling for border closures" (Devakumar et al., 2020, p. 1194). Therefore, intergroup relations in Italy were tense and complex during the data collection.

This study had two broad aims. Firstly, we aimed to test how perceiving a common belonging (sharing a common destiny, belonging to a common group, understanding the difficulties faced by other groups) with outgroups during a pandemic would be associated with perceived threat related to COVID-19, SDO, NFC, deprovincialization, and pre-lockdown intergroup contact with immigrant people. Based on the abovementioned literature, we expected that common belonging would be negatively related to COVID-19 threat, SDO, NFC, and negative contact, and positively related to deprovincialization and positive

contact. Secondly, we tested whether SDO, NFC, deprovincialization, and intergroup contact would moderate the association between COVID-19 perceived threat and perceptions of common belonging.

As the type and status of the outgroup might play a role in the perception of common belonging, and considering the tense and intricate intergroup relations at the time of the study, as mentioned above, we chose to study Italian citizens' outgroup attitudes and perceptions of common belonging related to multiple disadvantaged outgroups and national outgroups that could be relevant during the pandemic. There were four disadvantaged outgroups, defined in terms of their being perceived as having low status and competence (Cuddy et al., 2008): immigrant people, drug addicts, people with mental health problems, homeless people. Importantly, such disadvantaged outgroups could also be able to activate the behavioral immune system, according to previous research (Faulkner et al., 2004; Navarrete & Fessler, 2006). Considering the geographic diffusion of SARS-CoV-2 and the frictions related to the management of the pandemic between Italy and other countries at the time of the study (Business leader, 2020), we selected seven national outgroups: Chinese, German, US, Spanish, French, Dutch, and English people. We assessed intergroup contact, however, only with reference to immigrant people, the main outgroup and minority in Italy (10% of the workforce; 2018 Italian National Institute of Statistics data), both in terms of opportunity for contact and salience in the political debate (Boin et al., 2020).

2. Method

2.1. Participants

The convenience sample ($N = 685$) was recruited from the general population of Italian adults having Italian parents, to avoid overlapping with most outgroups (immigrant people, national outgroups). One third of participants were recruited by a research collaborator, who relied on her direct and indirect social network; the other two thirds were recruited by psychology undergraduates in return for credit in an on-line course. Each undergraduate identified three adult Italian individuals who were willing to participate in the study, who were not students in the course, and, if possible, belonged to different age and gender groups. The sample included 288 men, 393 women, two people identifying themselves as "other", and two who did not report their gender. The age range was 18 to 71 years ($M_{age} = 32.64$, $SD = 13.94$). Respondents came from various regions in Italy: 13% were from North-West of Italy, 54% were from the North-East, 23% lived in the South or in the Islands, and 1% came from Central Italy.

Occupations were varied: 43% were students, 7% manual workers, 29% retailers, employees or teachers, 13% professionals or university professors, 5% unemployed or retired. The highest education level achieved was secondary school for 8% of the sample, high school diploma for 49% of the sample, bachelor's degree for 26% of the sample, and higher degrees (master, PhD) for 17% of the sample.

2.2. Measures

The questionnaire, administered on-line, was composed of four sections, each referring to a different time frame: life before the COVID-19 lockdown, dispositional variables independent of the time frame, life during the COVID-19 lockdown, and the time of completing the questionnaire (during the lockdown period). At the beginning of each section, participants were asked to answer the questions with reference to the specific time frame.

2.2.1. Measures referring to life before the lockdown

2.2.1.1. Positive and negative contact.

We measured positive and negative face-to-face contact with immigrants before the lockdown with two

items each (then averaged): “How many positive [negative] face-to-face interactions with immigrant people did you have?”, “How often did you meet immigrants (in person) and perceive the experience as positive [negative]?”. Participants responded on a five-point scale (quantity of contact: 0 = none; 1 = very few; 2 = few; 3 = quite a lot; 4 = a lot; frequency of contact: 0 = never, 1 = rarely, 2 = sometimes, 3 = often, 4 = very often). The Spearman-Brown coefficient (the reliability index for two-item measures) was good for both positive ($\rho = 0.82$) and negative ($\rho = 0.86$) contact.

2.2.2. Measures of dispositional variables independent of the time frame

2.2.2.1. Social dominance orientation (SDO). We used the average score of the 16-item SDO scale (Sidanius & Pratto, 1999) in its Italian version (Aiello et al., 2005). Responses were provided on a 7-point scale (from 1 = strongly disagree to 7 = strongly agree; $\alpha = 0.87$).

2.2.2.2. Need for closure (NFC). To measure need for closure, we used the average score of the 15-item short version of the Need for Closure Scale (Roets & Van Hiel, 2011; in its Italian version, Pierro et al., 1995). Participants rated each item on a 6-point scale (from 1 = strongly disagree to 6 = strongly agree; $\alpha = 0.83$).

2.2.2.3. Deprovincialization. We measured deprovincialization with the average score of a 6-item scale developed by Boin et al. (2020) that assesses Cultural Deprovincialization (example item: “Knowing customs and traditions of different cultures helps me feel closer to other people”). Participants responded on a scale from 0 (=does not describe me at all) to 4 (=describes me very well); the scale had good reliability ($\alpha = 0.80$).

2.2.3. Measures referring to life during the lockdown

2.2.3.1. Threat related to COVID-19. We measured threat related to COVID-19 with 14 items specifically created for this study (conceptual and methodological details in Supplementary Materials, page 1 and Table S1). The items assessed individuals’ fears and threats related to the COVID-19 pandemic consequences on various levels (i.e., personal, family/close others, regional, national) and encompassing different topics (i.e., health, occupation, income, justice, social issues). Examples of items are: “I was scared for my health”, “I thought that I could face work and/or financial difficulties”. Participants had to report how much each item described their feelings and thoughts related to the COVID-19 emergency using a scale from 1 (not at all) to 7 (very much). Items were averaged to form a reliable composite score ($\alpha = 0.85$).

2.2.4. Measures referring to the time of completing the questionnaire

2.2.4.1. Perceptions of common belonging related to the ingroup and outgroup members. We measured three types of perceptions of common belonging: sharing a common destiny (“To what extent do you think you share a common destiny with the people belonging to each of the groups listed below?”), belonging to a common group (“To what extent do you think you and the people belonging to each of the groups listed below are part of the same group?”), and perceiving the difficulties faced by other groups (“To what extent do you think the people belonging to each of the groups listed below faced difficulties and risky conditions during the lockdown?”). Each item was asked referring to each specific group separately: the four disadvantaged outgroups (immigrant people, drug addicts, people with mental health problems, homeless people), the seven national outgroups (Chinese, German, US, Spanish, French, Dutch, and English people), and the ingroup (Italians); the response scale ranged from 1 (not at all) to 7 (very much). To empirically confirm the theoretical distinction between disadvantaged and national outgroups, for each index we performed an Exploratory Factor Analysis (oblimin rotation) on the eleven outgroups. Outgroups always clustered in

disadvantaged and national outgroups, with loadings ranging from 0.66 to 0.97, and very low cross-loadings (full results in Supplementary Materials, Table S2). The separation between disadvantaged and national outgroups was thus empirically grounded.

In order to measure perceived common belonging with outgroups compared to common belonging felt toward the ingroup, we first computed the means of the measures of common destiny, common group, and perceived difficulties separately for disadvantaged outgroups ($\alpha = 0.86$ – 0.94) and national outgroups ($\alpha = 0.96$ – 0.97), then we subtracted the score of this measure referring to Italians from the same scores referring to outgroups. This procedure yielded six indexes portraying the differences in perceptions of common destiny, common group, and difficulties, for disadvantaged and national outgroups compared to the ingroup. We computed the differences instead of using the simple scores for the two types of outgroup for two reasons. First, we aimed to eliminate the person-specific response tendency on such items (e.g., the tendency to choose always central values of the response scale). Second, we wanted to portray inclusive perceptions of belonging, compared to a more ingroup-based idea of “we”: without the difference from the ingroup, a low score in common belonging (e.g., 2 on the 1–7 scale) could represent either lower connectedness to the outgroup compared to the ingroup (e.g., scoring 2 for outgroups and 7 for the ingroup), or low connectedness to any collective entity, including the ingroup (e.g., scoring 2 for outgroups and 2 for the ingroup). With the difference from the ingroup, a low score in common belonging (e.g., –5 on the new response scale from –6 to 6) clearly represents lower connectedness to the outgroup compared to the ingroup (scoring 2 for outgroups and 7 for the ingroup), hence the preference for an ingroup-based, less inclusive, membership, whereas a zero-score (e.g., the result of scoring 2 for outgroups and 2 for the ingroup), which is the central value of the scale, represents absence of preference for a more or less inclusive membership.

3. Results

Descriptive statistics of the variables and intercorrelations are reported in Table 1.² We then investigated the factors predicting our six indexes of common belonging (common destiny, common group and difficulties, for national and disadvantaged outgroups): in linear regression models, common belonging indexes were predicted by threat related to COVID-19, dispositions, and intergroup contact, controlling for age and gender: results are reported in Table 2.

For both national and disadvantaged outgroups, positive contact with immigrants was positively associated with the perception of sharing a common destiny and a common group with the outgroups, whereas COVID-19 threat was negatively associated with the perception of sharing a common group and difficulties faced by outgroups during the COVID-19 lockdown. Consistent with past research showing that SDO and NFC predict prejudice proneness (e.g., Roets & Van Hiel, 2011; Sidanius & Pratto, 1999), both SDO and NFC had negative associations with sharing a common destiny with national outgroups and belonging to a common group with both disadvantaged and national outgroups; and SDO was also negatively associated with perceiving that disadvantaged outgroups faced difficulties during the lockdown. Consistent with research showing that deprovincialization is negatively associated with ingroup identification and positively associated with universalistic values (Boin et al., 2020), deprovincialization was positively linked to

² We assumed that perceptions of common belonging would be associated with a better social climate during the pandemic, as suggested by the common ingroup identity model (Dovidio et al., 2020). To confirm this assumption, we tested the correlations between perceptions of common belonging and attitudes toward the outgroups (measures and results reported in Supplementary Materials, p. 4 and Table S3). We found positive (in some cases non-significant) correlation coefficients, thereby supporting our assumption.

Table 1
Descriptive statistics: means, SDs, and Pearson correlations between the main variables.

	M	SD	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. COVID-19 threat	4.57	1.07											
2. SDO	2.16	0.90	-.03										
3. NFC	3.69	0.77	.17***	.13***									
4. Deprovincialization	3.20	0.71	.01	-.51***	-.27***								
5. Positive contact	2.13	1.05	-.02	-.23***	-.25***	.33***							
6. Negative contact	1.02	0.77	.03	.21***	.08*	-.22***	.24***						
7. Destiny national outgroups	-1.51	1.63	-.06	-.21***	-.17***	.18***	.18***	-.07					
8. Destiny disadvantaged outgroups	-3.24	1.83	-.06	-.08	-.11**	.09*	.16***	.01	.54***				
9. Group national outgroups	-1.75	1.80	-.11**	-.20***	-.22***	.25***	.20***	-.06	.59***	.38***			
10. Group disadvantaged outgroups	-3.02	2.13	-.12**	-.19***	-.20***	.21***	.21***	-.03	.37***	.56***	.65***		
11. Difficulties national outgroups	-0.27	0.74	-.15***	-.07	-.11**	.11**	.09*	-.08*	.11**	-.01	.17***	.07	
12. Difficulties disadvantaged outgroups	0.55	1.51	-.11**	-.24***	-.15***	.20***	.13***	-.11**	.16***	.05	.15***	.09*	.44***

Note. “Destiny” denotes Common destiny; “Group” denotes Common group; “Difficulties” denotes Difficulties and risks. SDO denotes Social Dominance Orientation. NFC denotes Need for Cognitive Closure.

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

Table 2
Factors predicting perceptions of common belonging: linear regression models.

	Common destiny				Common group				Difficulties and risks			
	National outgroups		Disadvantaged outgroups		National outgroups		Disadvantaged outgroups		National outgroups		Disadvantaged outgroups	
	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>	<i>b</i>	<i>p</i>
Intercept	-0.02	.975	-2.55	.001	-0.31	.683	-1.21	.178	0.21	.508	2.13	.001
Age	-0.00	.618	0.00	.543	-0.01	.103	-0.01	.157	0.00	.965	-0.00	.980
Gender	-0.30	.014	-0.37	.010	-0.07	.622	0.02	.892	0.05	.405	-0.12	.301
COVID-19 threat	-0.06	.286	-0.06	.341	-0.15	.017	-0.20	.010	-0.10	<.001	-0.13	.017
SDO	-0.28	<.001	-0.07	.411	-0.23	.007	-0.29	.004	-0.02	.576	-0.30	<.001
NFC	-0.17	.047	-0.13	.188	-0.29	.002	-0.32	.004	-0.05	.181	-0.15	.051
Deprovincialization	0.08	.435	0.06	.620	0.27	.023	0.17	.228	0.03	.519	0.11	.293
Positive contact	0.20	.002	0.25	.001	0.18	.013	0.28	.002	0.05	.089	0.11	.070
Negative contact	-0.15	.082	-0.03	.783	-0.07	.472	-0.02	.865	-0.07	.105	-0.15	.061
Observations	675		675		672		673		672		672	
R ²	0.09		0.05		0.12		0.10		0.05		0.10	

Note. SDO denotes Social Dominance Orientation. NFC denotes Need for Cognitive Closure.

sharing a common group, but only with national outgroups.

To test the moderator roles of intergroup contact and the dispositions in the relationship between COVID-19 threat and common belonging indexes, we centered all predictors and added to the previous models the interaction between perceived threat and the moderator (Tables S4–S8, Supplementary Materials). Interactions were included for one moderator at a time to avoid possible multicollinearity issues arising from the simultaneous inclusion of five interaction terms sharing the same predictor.³ We plotted and decomposed the four statistically significant interactions at high (1 SD above mean) and low (1 SD below mean) levels of each moderator (Fig. 1).

First, we found a negative relationship between COVID-19 threat and common destiny with disadvantaged outgroups that held only at low levels of NFC. Although counterintuitive, this moderation may be explained by a floor effect: at medium and high levels of NFC, the perception of sharing a common destiny with disadvantaged outgroups is at the lowest possible level, regardless of COVID-19 perceived threat; the effect of the threat then appears only at low levels of NFC (see Fig. 1). Second, we found a negative relationship between COVID-19 threat and common destiny perceived with national outgroups that held only at low levels of deprovincialization and at low levels of positive contact. Similarly, the negative relationship between COVID-19 threat and perception of a common group with national outgroups held only at low

levels of positive contact.

Lastly, following recent research showing that positive and negative contact also have a combined effect on intergroup outcomes (Árnadóttir et al., 2018), we explored how their interaction was associated with common belonging and moderated COVID-19 threat. First, we re-estimated the models in Table 2 by adding the interaction between positive and negative contact (Table S10, Supplementary Materials): we found that the positive association between positive contact and common destiny with disadvantaged outgroups held only at medium and high levels of negative contact, consistent with past research (Árnadóttir et al., 2018). Second, we estimated the moderation analyses with threat by adding all possible interactions between threat and contact (Table S11, Supplementary Materials). We found a three-way interaction, showing that threat was negatively associated with common destiny with national outgroups when respondents simultaneously reported low positive contact and low or medium negative contact; conversely, the association was positive for respondents with simultaneous high positive and low negative contact, as if in this case a common threat favored feelings of communion with other countries. COVID-19 threat was unrelated to common destiny at high levels of both positive and

³ Results with all interaction terms together are reported in Table S9 (Supplementary Materials).

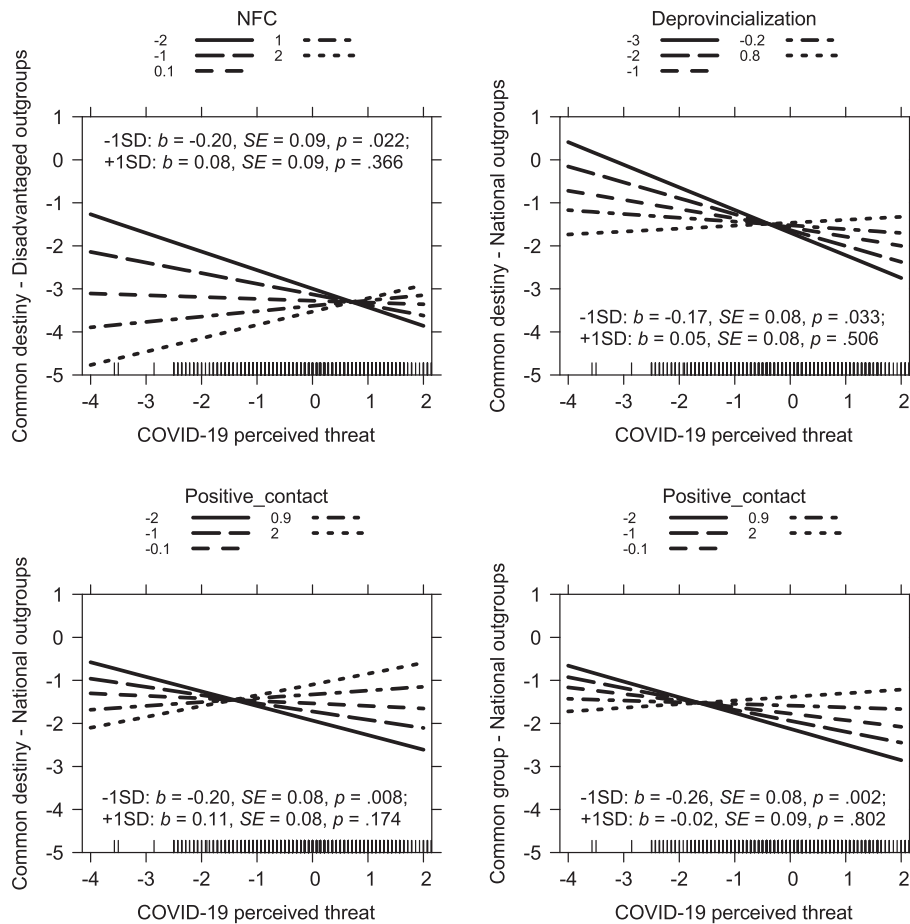


Fig. 1. The moderating roles of need for closure (NFC), deprovincialization and positive contact in the relationships between Covid-19 perceived threat and common belonging indexes.

negative contact.⁴

4. Discussion

Pathogenic threats are known to be detrimental to intergroup relations; however, believing that we share a common belonging or similar conditions with outgroups can help keep intergroup harmony. This study uncovered two key findings concerning the role of threat and prejudice-related individual differences in predicting perceived common belonging with national and disadvantaged outgroups during the lockdown in Italy.

First, COVID-19 threat hindered feelings of common belonging with people from other groups, whereas dispositional openness toward other cultures and groups (assessed as deprovincialization), low reliance on categories and social hierarchies (assessed as NFC and SDO), and positive intergroup contact were positively associated with perceptions of common belonging during the COVID-19 pandemic. These results suggest that the previously reported negative effect of a pathogenic threat on intergroup relations (e.g., Faulkner et al., 2004) is also valid for the COVID-19 pandemic, and that despite the effect of perceived disease

threat, being more open toward other cultures and groups and less prejudice-prone helps people to feel more connected to outgroup members during the COVID-19 health emergency. Moreover, having had positive experiences with outgroup members before the lockdown was fundamental to perceptions of common belonging; this is consistent with previous research showing that intergroup contact can influence group representations, thereby favoring a recategorization process and fostering more positive orientations toward others formerly perceived as outgroup members (e.g., Reimer et al., 2020).

Second, individual differences in NFC, deprovincialization and positive contact moderated the negative relationship between COVID-19 perceived threat and some of the indexes of common belonging. Unfortunately, we detected a floor effect regarding NFC, because at medium and high levels of NFC the perception of common destiny was at the lowest possible level, regardless of the perceived threat posed by COVID-19; hence, the expected effect of threat only appeared at low levels of NFC. We found, however, a moderating role of both deprovincialization and positive contact, which showed their protective effect against the negative consequences of a pathogenic threat at the intergroup level.

These findings notwithstanding, we acknowledged some limitations in this study. First, we employed a non-representative convenience sample of Italian respondents, which cautions against generalizing our findings to other samples or target groups. Second, the self-report measures used may be affected by socially desirable responding. Third, cross-sectional data prevent us from drawing conclusions about the direction of the associations between the variables; in particular, threat and common belonging may mutually influence each other. Therefore, we are careful to refer to all results as associations; an experimental study would be

⁴ Because intergroup contact was assessed only in the case of immigrants, we performed the main analyses again by separating immigrant people from disadvantaged outgroups (Tables S12 and S13, Supplementary Materials): results fully replicated the results of disadvantaged outgroups including immigrants. We did the same by separating Chinese people from national outgroups: results were again the same, except for two coefficients (negative contact and NFC) in the model for common destiny.

needed to identify the direction of associations investigated in this paper. Fourth, we had to rely on retrospective reports of intergroup contact, which may be subject to memory biases. However, these limitations are mainly due to the context of the study - the pandemic in Italy - and to the need to collect all the data, with the largest sample size possible, during the sudden lockdown.

Despite these limitations, our findings showed that positive contact with immigrants and openness to other cultures can help develop a sense of communion with other people and social groups, thereby ameliorating the social climate during the COVID-19 health emergency and mitigating the detrimental effect of perceived COVID-19 threat on intergroup relations. From a practical point of view, several conclusions can be derived. First, there is a need for a communication style – especially by politicians and leaders – that is based on an inclusive idea of “we” and on superordinate identity (e.g., humanity instead of local or national identities), to improve the social climate during the COVID-19 health emergency and avoid intergroup tensions. Second, it is important to consider perceived threat and prejudice-related individual differences: public speeches and actions should try to allay people’s sense of threat related to COVID-19, which may result in intergroup hostility, and foster openness to and empathy toward other cultures and social groups. This may be useful especially to message-recipients that tend to have more rigid thinking patterns and to support differences and hierarchies between social groups. Third, positive contact experiences prior to the COVID-19 outbreak were associated with lower intergroup tensions even during the pandemic and the lockdown, that is, when direct contact was no longer possible. This suggests that positive intergroup contact can build an enduring sense of connectedness with members of various outgroups (both disadvantaged groups and national outgroups), a mindset that persists over time and in difficult conditions. Contact interventions could thus be an important tool to reduce hostility directed toward outgroups during a global health emergency.

Ethical standards

The manuscript does not contain clinical data. The Psychological Research Ethics Committee of the local University approved the procedures of this study, protocol #3572. Informed consent was obtained from all participants.

CRediT authorship contribution statement

Giulia Fuochi: Conceptualization, Investigation, Formal analysis, Writing – original draft, Writing – review & editing. **Jessica Boin:** Conceptualization, Investigation, Writing – original draft, Writing – review & editing. **Alberto Voci:** Conceptualization, Investigation, Supervision, Writing – review & editing. **Miles Hewstone:** Conceptualization, Writing – review & editing.

Appendix A. Supplementary materials

Supplementary materials to this article can be found online at <https://doi.org/10.1016/j.paid.2021.110700>.

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