Meta-analysis of the 'ironic' effects of intergroup contact

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Results

Search results

Preregistered analyses

As preregistered, we ran three random-effects meta-analysis models, one for each outcome variable. Figure 3 shows posterior distributions from these analyses.

Perceived injustice. Across 200,229 participants from 117 samples in 81 studies, we found strong evidence for a weak association ($r = -.07, [-.11, -.04]$) between intergroup contact and perceived injustice, with $> 99.9\%$ of posterior samples for the mean correlation coefficient falling below zero. We found evidence that correlation coefficients varied across studies ($\tau_J = .14, [.12, .17]$) and across samples within studies ($\tau_I = .09, [.06, .13]$). Based on these analyses, we predicted that 80% of studies would result in correlation coefficients between $-.25, [-.30, -.21]$ and $.11, [.06, .16]$ and that researchers would need sample sizes of at least 2,226, [1,521, 3,248] participants to find significant associations ($\alpha = .05$, two-sided) in 80% of their studies.[1]

Collective action. Across 118,584 participants from 36 samples in 23 studies, we found some evidence for a weak association ($r = -.06, [-.14, .01]$) between intergroup contact and collective action, with 95.0% of posterior samples for the mean correlation coefficient falling below zero. We found evidence that correlation coefficients varied across studies ($\tau_J = .17, [.12, .24]$) and across samples within studies ($\tau_I = .09, [.06, .15]$). Based on these analyses, we predicted that 80% of studies would result in correlation coefficients between $-.27, [-.38, -.18]$ and $.15, [.06, .27]$ and that researchers would need sample sizes of at least 1,801, [848, 3,458] participants to find significant associations ($\alpha = .05$, two-sided) in 80% of their studies.

Policy support. Across 13,703 participants from 19 samples in 14 studies, we found some evidence for a weak association ($r = -.07, [-.14, -.00]$) between intergroup contact and policy support, with 98.1% of posterior samples for the mean correlation coefficient falling below zero. We found evidence that correlation coefficients varied across studies ($\tau_J = .10, [.06, .18]$) and, to a lesser extent, across samples within studies ($\tau_I = .03, [.00, .12]$). Based on these analyses, we predicted that 80% of studies would result in correlation coefficients between $-.20, [-.32, -.13]$ and $.06, [-.02, .18]$ and that researchers would need sample sizes of at least 2,992, [949, 8,077] participants to find significant associations ($\alpha = .05$, two-sided) in 80% of their studies.

As preregistered, we ran another three random-effects meta-analysis models to estimate the relationships between the three outcome variables. As we were not interested in the direction of these relationships, we used cross-sectional correlation coefficients as effect sizes for longitudinal studies. Across 111,252 participants from 24 samples in 13 studies, we found evidence for a moderate association ($r = .29, [.21, .37]$) between perceived injustice and collective action. Across 6,244 participants from 12 samples in 9 studies, we found evidence for a moderate association ($r = .23, [.08, .35]$) between perceived injustice and policy support. Across 8,558 participants from 6 samples in 3 studies, we found evidence for a moderate association ($r = .30, [.13, .42]$) between collective action and policy support.

[1] Sample sizes are based on posterior predictions from the three models, which implied that, for 80% of studies, the absolute correlation coefficient would be $|r| > .042, [.034, .050]$ for perceived injustice, $|r| > .046, [.033, .067]$ for collective action, and $|r| > .036, [.022, .064]$ for policy support.

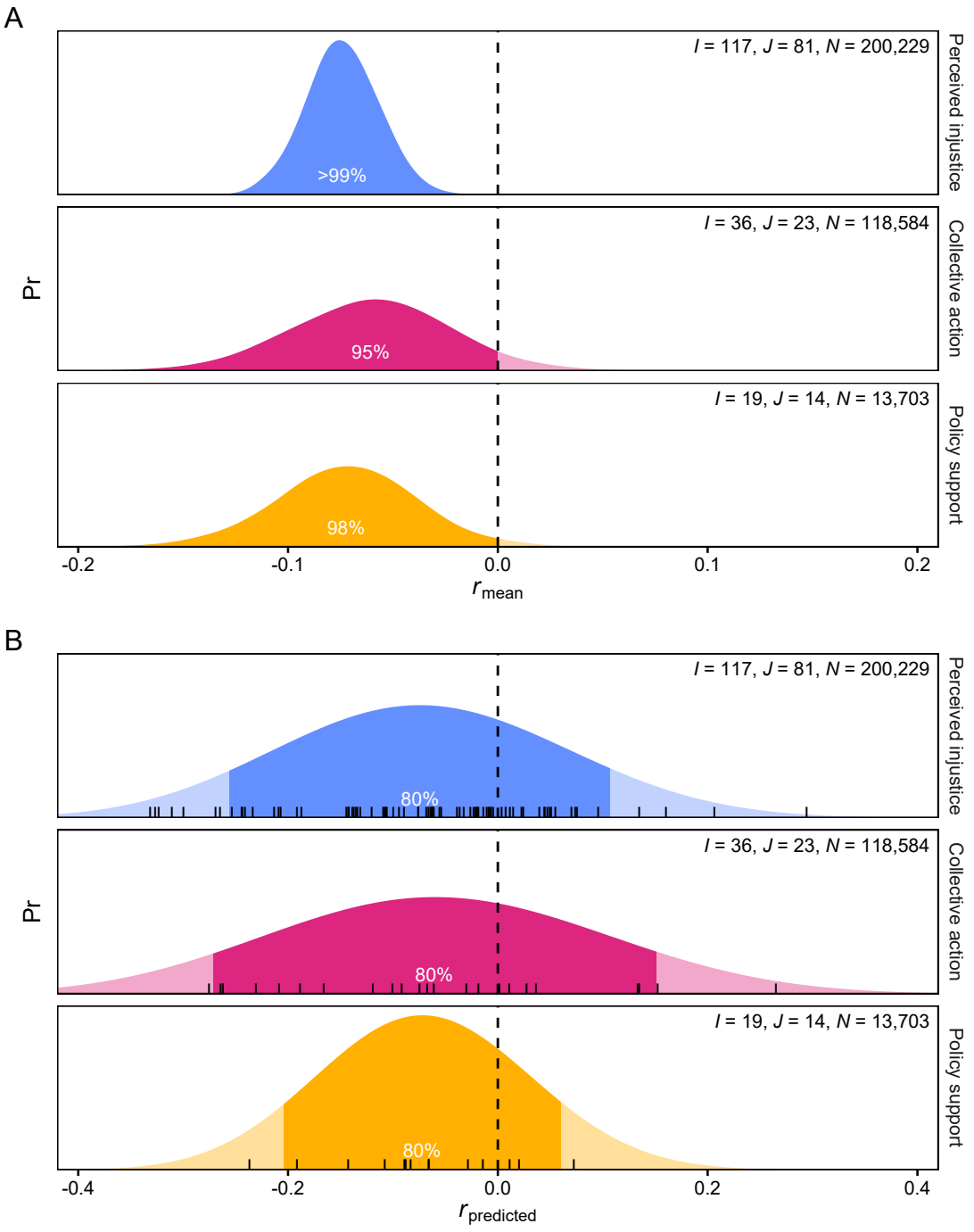

Figure 1: Results of preregistered analyses. (**A**) Posterior distributions for the estimated mean correlation coefficient, highlighting the proportion of posterior samples for which $r_{\text{mean}} < 0$. (**B**) Posterior predictive distributions for the estimated study-wise correlation coefficients, based on point estimates of the μ and τ_J parameters, with point estimates for the estimated correlation coefficients for all studies.

Robustness checks

First, we assessed to what extent our findings were sensitive to choosing narrower, $\mu \sim \text{Normal}(0, 0.1)$, or wider, $\mu \sim \text{Normal}(0, 1)$, prior distributions. Choosing narrower or wider prior distribution did not affect mean effect size estimates for perceived injustice ($\Delta r = -.00, [-.05, .05]$ and $\Delta r = -.00, [-.05, .05]$), collective action ($\Delta r = -.01, [-.11, .09]$ and $\Delta r = -.00, [-.10, .11]$), and policy support ($\Delta r = -.01, [-.10, .08]$ and $\Delta r = .00, [-.09, .10]$). Second, we assessed to what extent our findings were sensitive to including or excluding influential studies by repeating the preregistered analyses J times while leaving out one of J studies each time and by calculating the mean absolute difference (MAD) for the estimated mean effect size across left-out studies. For perceived injustice ($MAD = .02, [.01, .04]$), collective action ($MAD = .04, [.02, .09]$), and policy support ($MAD = .03, [.02, .08]$), the MAD was small. Leaving out the most influential study, for example, did not change estimates of the mean effect size for the three outcomes ($\Delta r = -.01, [-.05, .04]$; $\Delta r = .02, [-.09, .12]$; $\Delta r = -.02, [-.11, .07]$). Together, these analyses showed that our findings were robust to choosing different prior distributions and to excluding influential studies.