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REPLY TO DE DREU:

# Shared partner nationality promotes ingroup favoritism in cooperation

Angelo Romano<sup>a,b,c,1</sup>, Daniel Balliet<sup>c</sup>, Toshio Yamagishi<sup>d</sup>, and James H. Liu<sup>e</sup>

In Romano et al. (1), we report an experimental study conducted across 17 societies that found that individuals gave more in the trust game to ingroup members (partner from own nationality), compared with outgroup members (partner from one of the other 16 nationalities) and strangers (partner with unknown nationality). This contrast can be used to infer ingroup favoritism and to test theories about this phenomenon. We also found that people extended greater cooperation to outgroup members than to strangers. De Dreu (2) interprets these analyses to mean that people extended equally greater cooperation with ingroup and outgroup members, compared with strangers, and then offers an alternative explanation of our findings that predicts “similar levels of trust towards ingroup and outgroup.” Romano et al. (1) do not report a statistical test comparing ingroup and outgroup members. Thus, we newly conducted a meta-analysis of our data across the 17 countries to estimate the overall mean difference in cooperation in the trust game with ingroup vs. outgroup members. Results were clear: people gave more in the trust game to ingroup compared with outgroup members [ $d = 0.14$ , 95% CI (0.11, 0.17)]. This finding fits within the confidence interval and prediction interval of a recent meta-analysis on ingroup favoritism in cooperation (3). Moreover, we found similar results to previous research on ingroup favoritism that has used partner nationality as a manipulation of group membership (4–8). Thus, our data replicate previous findings on ingroup favoritism in cooperation

using the trust game. Furthermore, these analyses clearly show that the pattern of means does not support the alternative perspective offered by De Dreu (2): individuation and social judgeability (9).

De Dreu’s (2) letter draws our attention to the finding that people extended greater trust to outgroup members than strangers [ $d = 0.10$ , 95% CI (0.07, 0.13)]. Comparing this effect size to the results of a previous meta-analysis (3), our study falls within the prediction interval of the outgroup vs. stranger comparison. The prediction interval estimates the range of values that can be true effect sizes for the observed phenomenon, and can be used to predict the true value of effect sizes in future studies (10). Thus, the outgroup vs. stranger comparison in our study falls within the range of values that would be expected based on past research.

In the outgroup condition in our study, participants’ partners were selected from one of 16 outgroups (nationalities) to control for national stereotypes (4). Perhaps, De Dreu’s (2) individuation and social judgeability perspective (9) may partially explain how people responded to a partner with multiple nationalities, but cannot account for responses to partner ingroup nationality. Future research can test theories about the conditions that result in outgroup favoritism (i.e., ingroup > outgroup > stranger). That said, we clearly observe that cues of ingroup membership (e.g., the flag of one’s nationality) increase cooperation, relative to outgroup members.

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The authors declare no conflict of interest.

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