PNAS LETTER

The co-occurrence of ingroup and outgroup prosociality requires cross-group partner choice

Qinyu Xiao[a,1] and Hirotaka Imada[b]

Otten (1) reported a robust individual-level positive association between ingroup and outgroup prosociality across six cross-cultural datasets, including diverse self-report and behavioral measures. Hence, prosociality appears to generalize beyond group boundaries when people are not made to choose between ingroups and outgroups. Based on this finding, Otten suggests that a promising strategy to "establish prosociality across group boundaries" is to restructure the interdependence of cross-group interactions so that it is less negative on the group level (i.e., benefiting one group does not necessarily harm another), or less perceived as such.

We note a qualification regarding the effectiveness of this strategy for promoting cross-group prosocial behaviors. Specifically, the relevance of less negative interdependence presupposes intergroup exposure and contact, and Otten's prescription may be effective only if people are generally willing to interact with outgroups. A substantial body of evidence, however, indicates that this is unlikely to be the case in practice. Even for likely positive-sum interactions, people preferentially interact with ingroups (2). As such, even though ingroup and outgroup prosocialities are positively correlated, prosocial behaviors toward ingroups and outgroups may not co-occur, not because people enter interactions with "preimposed negative interdependence" and discriminate within those interactions, but because they selectively avoid cross-group interactions, not to mention that the opportunities of such interactions are often already less available due to social network structures (3–5).

Recent field and laboratory evidence underscores a potentially more central role of partner choice relative to behavioral discrimination in suboptimal intergroup relations. Studies jointly assessing partner choice and behavior within interactions consistently found preferences for ingroups at the partner-choice stage, whereas evidence for behavioral discrimination conditional on interaction is sometimes mixed. A lab-in-the-field experiment conducted in Milan with a representative Italian sample found no systematic behavioral discrimination between coethnics and immigrants when the Italian participants were pushed to interact with them (therefore, corroborating Otten's findings), but clear preferences for coethnics in both partner choice and behaviors when they could choose partners for trust-based strategic interactions (6). In a laboratory experiment using minimal groups, participants, particularly those who were risk-averse, were willing to pay a cost to interact with ingroups. The experiment was set up in a way such that this choice might not be realized, and interestingly, when participants could (vs. could not) choose interaction partners, they displayed reduced ingroup bias in behaviors (7).

These findings suggest that promoting cross-group prosociality requires addressing partner choice dynamics in addition to reshaping the payoff structures of cross-group interactions. Reducing the actual or perceived negativity in interdependencies, though undoubtedly critical, may be insufficient if people sort into homogenous networks and develop ingroup preferences in partner choice. In research aimed at insights for promoting cross-group prosocial behaviors, measurements of prosociality should not only consider self-reports of attitudes and behaviors but also reflect the social dynamics that create opportunities for prosociality to materialize. In practice, increasing group boundary permeability—so that cross-group interactions can occur—and creating incentives that facilitate and reward those interactions (8, 9) may be as important as modifying interdependencies in promoting universal prosociality.

ACKNOWLEDGMENTS. The authors declare the use of generative AI in the research and writing process. According to the GAIDeT taxonomy (2025), the following tasks were delegated to GAI tools under full human supervision: proofreading and editing; adapting and adjusting emotional tone. The GAI tool used was: ChatGPT-5.2. Responsibility for the final manuscript lies entirely with the authors. GAI tools are not listed as authors and do not bear responsibility for the final outcomes. Declaration submitted by: Q.X.

Author affiliations: [a]Department of Occupational, Economic, and Social Psychology, Faculty of Psychology, University of Vienna, Vienna 1010, Austria; and [b]Department of Psychology, Royal Holloway, University of London, Egham TW20 0EX, United Kingdom

Author contributions: Q.X. and H.I. conceptualized the paper; Q.X. wrote the initial draft; and Q.X. and H.I. revised and finalized the submission.

The authors declare no competing interest.

[1]To whom correspondence may be addressed. Email: qinyu.xiao@univie.ac.at.

Published June 8, 2026.

1. K. Otten, The co-occurrence of ingroup and outgroup prosociality across 121 societies. *Proc. Natl. Acad. Sci. U.S.A.* **123**, e2517013123 (2026).
2. M. McPherson, L. Smith-Lovin, J. M. Cook, Birds of a feather: Homophily in social networks. *Annu. Rev. Sociol.* **27**, 415–444 (2001).
3. G. A. Huber, N. Malhotra, Political homophily in social relationships: Evidence from online dating behavior. *J. Polit.* **79**, 269–283 (2017).
4. L. X. Zou, S. Cheryan, Diversifying neighborhoods and schools engender perceptions of foreign cultural threat among White Americans. *J. Exp. Psychol. Gen.* **151**, 1115–1131 (2022).
5. D. Hangartner, D. Kopp, M. Siegenthaler, Monitoring hiring discrimination through online recruitment platforms. *Nature* **589**, 572–576 (2021).
6. D. Baldassarri, J. Gereke, M. Schaub, Prosociality beyond in-group boundaries: A lab-in-the-field experiment on selection and intergroup interactions in a multiethnic European metropolis. *Sociol. Sci.* **11**, 815–853 (2024).
7. S. Currarini, F. Mengel, Identity, homophily and in-group bias. *Eur. Econ. Rev.* **90**, 40–55 (2016).
8. J. Gross *et al.*, The evolution of universal cooperation. *Sci. Adv.* **9**, eadd8289 (2023).
9. J. Gross, M. Götz, K. Reher, F. Toscano, Free mobility across group boundaries promotes intergroup cooperation. *Commun. Psychol.* **3**, 10 (2025).