October 25, 2020

Editorial Office

Nature Human Behaviour

Dear Editor,

We are submitting a new manuscript, “Non-Vertical Cultural Transmission, Assortment, and the Evolution of Cooperation”. This manuscript deals with a long-standing open question in evolution, the evolution of cooperation by viewing cooperation as a culturally transmitted trait. We show that horizontal transmission bias can be an important factor in the evolution of cooperation. Moreover, we find that if there is an association between horizontal transmission and social interactions, such that the same partner is likely to be chosen for both interactions, then cooperation is much more likely to evolve. We also analyze the evolution of such an association and find that it is likely to increase, thereby promoting the evolution of cooperation. Finally, we and analyze a stochastic model with population structure and show that it agrees with conditions derived from a deterministic model.

We feel that the readers of *Nature Human Beaviour* will be interested in our results, which highlight the role of non-vertical cultural transmission in the evolution of cooperation and that of the association between different social interactions.

Sincerely,



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