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Conjoining uncooperative societies facilitates evolution of cooperation.

Evolution occurs in populations of reproducing individuals. The structure of a population can affect which traits evolve and the emergence and maintenance of cooperation. Here, we study the evolutionary dynamics of cooperation in fragmented societies, and show that conjoining segregated cooperation-inhibiting groups, if done properly, rescues the fate of collective cooperation. We highlight the essential role of intergroup ties, which sew the patches of the social network together and facilitate cooperation. We point out several examples of this phenomenon in actual settings. We explore random and non-random graphs, as well as empirical networks. In many cases, we find a marked reduction of the critical benefit-to-cost ratio needed for sustaining cooperation. Our finding gives hope that the increasing worldwide connectivity, if managed properly, can promote global cooperation. (Received January 27, 2020)