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Mari Kawakatsu*, mari.kawakatsu@princeton.edu, and **Yphtach Lelkes, Simon Levin** and **Corina Tarnita**. *Interindividual cooperation mediated by partisanship complicates Madison's cure for "mischiefs of faction"*.

Political theorists have long argued that a pluralistic republic can combat the dangers of factions by enlarging the political sphere to include a greater diversity of interests. While the scope of politics has expanded over the past 75 years, polarization is markedly worse. Motivated by this paradox, we take a bottom-up approach to explore how partisan individual-level dynamics in a multidimensional issue space can shape collective-level factionalization. We extend a model of cultural evolution grounded in evolutionary game theory, in which partisanship determines the likelihood of cross-party learning and the interaction network changes endogenously according to individual interests. We find that while expanding interest diversity can indeed improve both individual and collective outcomes, increasingly high partisan bias promotes a reduction in issue dimensionality via party-based assortment, promoting polarization. Extreme partisan bias can boost interindividual cooperation, creating a tug-of-war between individual cooperation and societal cohesion. These dangers of extreme partisanship are highest when interests are heavily shaped by peer learning, with little independent exploration. Our results highlight the need to study polarization in a coupled, multilevel context. (Received January 07, 2022)