

Is environmentalism in our genes?

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As global environmental crises mount, numerous policies have been proposed with an eye toward a more sustainable future. However, such recommendations have often gone unheeded, falling by the wayside for lack of public support.

Writing in *BioScience*, Chia-chen Chang, of the National University of

Singapore, and colleagues argue that a greater understanding of people's support—or lack thereof—for proenvironmental policies is fundamental to achieving [environmental sustainability](#). In particular, the authors highlight a perhaps unexpected contributor to pro-conservation sentiment: our genes. Using data from TwinsUK (N = 2312), the largest adult twin registry in the United Kingdom, the authors compared [survey results](#) from monozygotic (or "identical") twins with those of [dizygotic twins](#), who share fewer genes.

"We found that MZ twins were consistently more similar to each other in concern for nature, environmental movement activism, and personal conservation behavior than were DZ twins, suggesting genetic influences on these phenotypes," state the authors. The results also demonstrated "moderate heritability (30%–40%) for concern for nature, environmental movement activism, and personal conservation behavior and high genetic correlations between them (.6–.7), suggesting a partially shared genetic basis." According to Chang and colleagues, this finding is well aligned with evolutionary studies describing the heritability of altruistic and cooperative behavior and those traits' benefits for future generations.

Despite these striking findings, the authors caution that high heritability does not suggest the insignificance of environments. In many cases, they say, "Environmental interventions, such as policies, may influence heritability," pointing to a need for further study to untangle these complexities.

The findings were published in *BioScience*.

More information: Chia-chen Chang et al, Genetic Contribution to Concern for Nature and Proenvironmental Behavior, *BioScience* (2021). doi.org/10.1093/biosci/biab103

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