Cross-cousin marriages among the Yanomamo found to benefit grandparents

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Uncontacted indigenous tribe in the brazilian state of Acre. Credit: Gleilson Miranda / Governo do Acre / Wikipedia

(Phys.org)—A small team of researchers affiliated with the University of Missouri and the University of Nebraska has found that cross-cousin

breeding among the Yanomamö people in the Amazon rain forest is beneficial to the parents of young people who wed due to arranged marriages. In their multi-year study, the team describes how they conducted a genealogical study of over 5000 people over the course of 30 years to learn more about Yanomami culture and the impact of cross-cousin marriages.

Cross-cousin marriage is where cousins from opposite sex siblings are wedded, generally as part of an arrangement between the parents of the cousins, who are, of course, siblings. As the researchers note, it is more common than parallel cousin marriages in cultures around the globe, though it is not known why. In South America, a group of indigenous people called the Yanomamö live in over 200 villages, which adds up to approximately 35,000 people. Researchers have studied them to learn more about their culture, which includes arranged marriages. The researchers with this effort were interested in cross-cousin or consanguineous marriage, and what benefits it might provide.

To learn more about birth rates and patterns, the researchers conducted a long-term genealogical study to find out who, if anyone, benefited from consanguineous marriage. In looking at their charts and family trees, the researchers observed that pairing cross-cousins resulted in lower than average fertility rates for both the male and female in such a union. They also found that doing so resulted in lower fertility rates for their offspring, as well. But, oddly enough, such unions benefited the parents of the cousins because it resulted in more grandchildren. This, the researchers explained, was because the Yanomamö practice prescriptive consanguineous marriage in which males marry the daughters of their parents' opposite-sex siblings. This cultural exchange of daughters with relatives allows parents to get more wives for their sons, which, in the long run, results in more grandchildren being born.

The team suggests their findings might help explain why marriage

between cousins persists among many cultures of the world despite it being considered taboo in so many others.

More information: Napoleon A. Chagnon et al. Cross-cousin marriage among the Yanomamö shows evidence of parent–offspring conflict and mate competition between brothers, *Proceedings of the National Academy of Sciences* (2017). DOI: 10.1073/pnas.1618655114

Abstract
Marriage in many traditional societies often concerns the institutionalized exchange of reproductive partners among groups of kin. Such exchanges most often involve cross-cousins—marriage with the child of a parent's opposite-sex sibling—but it is unclear who benefits from these exchanges. Here we analyze the fitness consequences of marrying relatives among the Yanomamö from the Amazon. When individuals marry close kin, we find that (i) both husbands and wives have slightly lower fertility; (ii) offspring suffer from inbreeding depression; (iii) parents have more grandchildren; and (iv) siblings, especially brothers, benefit when their opposite-sex siblings marry relatives but not when their same-sex siblings do. Therefore, individuals seem to benefit when their children or opposite-sex siblings marry relatives but suffer costs when they, their parents, or same-sex siblings do. These asymmetric fitness outcomes suggest conflicts between parents and offspring and among siblings over optimal mating strategies. Parental control of marriages is reinforced by cultural norms prescribing cross-cousin marriage. We posit that local mate competition combined with parental control over marriages may escalate conflict between same-sex siblings who compete over mates, while simultaneously forging alliances between opposite-sex siblings. If these relationships are carried forward to subsequent generations, they may drive bilateral cross-cousin marriage rules. This study provides insights into the evolutionary importance of how kinship and reciprocity underlie conflicts over who controls mate choice and the origins of cross-cousin marriage

prescriptions.