

How religion promotes confidence about paternity

June 4 2012



Image: University of Michigan

Religious practices that strongly control female sexuality are more successful at promoting certainty about paternity, according to a study published in the current issue of the *Proceedings of the National*

Academy of Sciences.

The study analyzed [genetic data](#) on 1,706 father-son pairs in a traditional [African population](#)—the Dogon people of Mali, West Africa—in which Islam, two types of Christianity, and an indigenous, monotheistic religion are practiced in the same families and villages.

"We found that the indigenous religion allows males to achieve a significantly lower probability of cuckoldry—1.3 percent versus 2.9 percent," said Beverly Strassmann, lead author of the article and a biological anthropologist at the University of Michigan.

In the traditional religion, menstrual taboos are strictly enforced, with women exiled for five nights to uncomfortable menstrual huts. According to Strassmann, the religion uses the ideology of pollution to ensure that women honestly signal their fertility status to men in their husband's family.

"When a woman resumes going to the menstrual hut following her last birth, the husband's patrilineage is informed of the imminency of conception and cuckoldry risk," Strassmann said. "Precautions include postmenstrual copulation initiated by the husband and enhanced vigilance by his family."

Across all four of the religions practiced by the Dogon people, Strassmann and colleagues detected father-son Y DNA mismatches in only 1.8 percent of father-son pairs, a finding that contradicts the prevailing view that traditional populations have high rates of cuckoldry. A similar rate of cuckoldry has been found in several modern populations, but a key difference is that the Dogon do not use contraception.

The study, which was supported by funding from the National Science

Foundation, is part of Strassmann's ongoing, 26-year study of the Dogon people.

"The major world religions sprang from patriarchal societies in which the resources critical to reproduction, whether in the form of land or livestock, were inherited from father to son down the male line," Strassmann and colleagues write. "Consistent with patrilineal inheritance, the sacred texts set forth harsh penalties for adultery and other behaviors that lower the husband's probability of [paternity](#). The scriptures also place greater emphasis on female than on male chastity, including the requirement of modest attire for women and the idealization of virginity for unmarried females."

While previous studies have examined the evolutionary biology of patriarchy through primate antecedents or cultural factors, the current study is the first to investigate whether religions that more strongly regulate female sexuality are more successful at limiting the incidence of cuckoldry.

"Although world religions do not have menstrual huts, they do share many tenets that may foster cuckoldry avoidance," the authors write. "For example, in Judaism, menstrual purity laws increase coital frequency around the time of ovulation. In Islam, paternity confusion is prevented by the Qur'an's rule that, after divorce, a woman must wait for three menstrual periods before remarrying. The Hindu text, 'The Laws of Manu,' admonishes against cuckoldry or 'sowing in another man's field.'

"Strong statements against adultery and extramarital children are found in the Bible and, in Buddhism, adultery is a form of sexual misconduct. In preventing cuckoldry, religions use the dual strategy of social control in the public sphere (attendance at a place of worship or at a menstrual hut) and the fear of divine or supernatural punishment. In the United

States, frequent church attendance and belief that the Bible is the word of God were the two most robust predictors of lower rates of self-reported extra-partner copulations."

In short, Strassmann and colleagues maintain that the ideological and tactical similarities between these world religions and the Dogon religion have arisen in response to the same biological pressures. Religious patriarchy is directly analogous to the mate-guarding tactics used by animals to ensure paternity.

Provided by University of Michigan

Citation: How religion promotes confidence about paternity (2012, June 4) retrieved 2 May 2024 from <https://phys.org/news/2012-06-religion-confidence-paternity.html>

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