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Anthropology

Origins of Genital Mutilation/Cutting

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An enduring puzzle in evolution is the maintenance of costly traits. Šaffa et al. ¹ examine phylogenetic evidence for the origins of genital mutilation/cutting (GM/C) in human societies and find that these practices likely emerged multiple times during the past 5-7,000 years, with female GM/C arising only after male GM/C was present in a society.

Over 200 million women and girls alive today have been genitally mutilated/cut². Due to the significant health risks, considerable resource has been invested in global campaigns to end female genital mutilation/cutting (FGM/C) practices². This has been accompanied by a demand for research on the origins and purpose of all forms of genital mutilation/cutting (GM/C). Using phylogenetic comparative methods, a new study by Šaffa et al. addresses gaps in our knowledge about the evolutionary origins of these practices¹. By mapping cross-cultural ethnographic data onto a “supertree” based on global genetic and linguistic data, the authors make a series of inferences about when these practices first emerged and under what conditions this may have occurred. One key finding is that there is no single evolutionary origin of GM/C, which has emerged independently at multiple times across human history. The earliest occurrence of GM/C may be much earlier than written records suggest, as far back as 5-7,000 years ago. Further, female genital mutilation/cutting (FGM/C) and male genital mutilation/cutting (MGM/C) are shown to be intrinsically linked, as FGM/C arises only after MGM/C is present in a society.

The authors also attempt to explain why the practice is adopted in the first place, by exploring the socio-ecological correlates of GM/C. Drawing upon existing hypotheses from evolutionary anthropology and psychology they test whether GM/C is linked to various predictors of mate-guarding, marriage market demands, Islam, inter-group conflict, fraternal interest groups, and more³. These analyses reveal considerable variation in the importance of these factors according to the type of GM/C practiced. The main correlates of MGM/C vary from those of FGM/C; there is also variation by type and severity of GM/C e.g., clitoridectomy, female excision, female infibulation, male circumcision, male superincision. That said, the authors argue that all forms of GM/C in their data (except male superincision) are most likely to originate from the need for mate-guarding in polygynous groups where paternity confidence is low. This is broadly consistent with some of the existing views on evolutionary function of FGM/C; how it serves to control a women’s reproduction, enhancing marriageability and access to resources through marriage³. It is, however, harder to explain how MGM/C would arise due to the need for mate-guarding. There remains uncertainty over

the extent to which GM/C prevents men or women from establishing sexual relationships outside marriage⁴. Even if this was guaranteed, then this raises questions about the need for both FGM/C and MGM/C. The authors show that FGM/C arises in a society only after MGM/C is present. Is FGM/C adopted as more reliable signal of sexual fidelity in instances where MGM/C does not? Or does having both MGM/C and FGM/C, simply reflect a strategy of “bolts and braces” in the face of low paternity confidence?

Ultimately, identifying one explanation for the emergence of all forms of GM/C is not straightforward. First, there are limits to what we can learn from comparative data analyses regarding GM/C function. For example, when the authors indicate that there is a correlation between polygyny and GM/C, this does not imply a causal relationship. There may be a third unmeasured factor that could influence both (e.g., wealth or social stratification). Second, the proxy measures which are used to test hypotheses can be based on untested assumptions. Šaffa et al. use a range of proxy measures, including the presence of polygyny with separate residence of co-wives in a society, as indicators of low paternity confidence and a need for mate-guarding. Yet studies demonstrating that polygyny increases the risk of extra-marital affairs in humans are lacking (as are those showing that GM/C ensures sexual fidelity⁴). Third, as the authors acknowledge there are challenges which arise from performing comparative analyses on data sets of different time periods and quality, including biases in ethnographic data collection. Until recently the majority of ethnographers were men, and it is likely that their informants were too, leading to an incomplete picture of female norms and behaviours. These data biases have prevented researchers from exploring viable alternatives to the mate-guarding hypothesis e.g., the role of women-only interest groups in FGM/C⁵. While GM/C may have evolved independently at separate times in our evolutionary history, the notion that this occurred due to the need for mate-guarding remains hypothetical. In each instance the emergence of GM/C may have been in response to different, intricately linked, perhaps yet to be identified socio-ecological conditions.

That the factors behind the origins of the practice are likely to differ from those maintaining the practice presents additional challenges for all researchers seeking to understand the function of GM/C⁶. The authors suggest that MGM/C may originate as a response to the need to mate-guard guard in polygynous societies where co-wives reside apart, but over time this is replaced by other factors, such as signalling respect for authority, identity, and courage. In addition, there is evidence that FGM/C once established may be maintained within communities entirely independent of its function through conformity biases, a tendency to copy the behaviour of the majority⁷. Studies exploring social transmission of GM/C norms, the influence of peers, kin, authorities, and external agencies are likely to add further to understanding of how GM/C can be spread, attenuated, or discontinued through similar cultural evolutionary forces⁸.

One key finding from this paper is that GM/C co-evolves with, and thus helps to reinforce or maintain social structures and institutions relating to marriage including polygyny, post-marital residence practices and bride wealth payments. Recognising that GM/C is not a stand-alone phenomenon but embedded within a “package” of cultural norms and practices is important for policymakers. It could explain why anti-FGM/C policy based on raising awareness of health risks has not always been successful. It also reinforces the need for further research on how dramatic shifts in marriage and gender norms and wider economic changes are affecting families’ decision to practice FGM/C today.

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⁶ Ross, C.T., Strimling, P., Ericksen, K.P, Lindenfors P and Borgerhoff-Mulder, M (2016) The origins and maintenance of female genital modification across Africa: Bayesian phylogenetic modeling of cultural evolution under the influence of selection. *Human Nature* 27, 173-200.

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⁸ <https://www.thebritishacademy.ac.uk/projects/heritage-dignity-violence-social-dynamics-female-genital-mutilation-cutting/>

Competing interests

The author declares no competing interests.