Biol. on-line: Vol. 11, Núm. 2 (Juliol de 2022) ISSN: 2339-5745 online

The paradox of dying for one's motherland

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Large-scale warfare is still an open question in the frontiers of evolutionary psychology. Why would your genes sacrifice themselves for your non-related war comrades? How does this idea coexist with the principles of the selfish gene? The solution to this paradox may be outside the realm of pure biology and needs to be analysed with a cultural perspective. Just as successful phenotypic traits are selected to pass to the next generation, cultural traits may undergo the same process ruled by group-structured cultural selection.

Human warfare meets the two basic requirements needed to be sensible to cultural selection, these being:

1. Obvious cultural differences between groups engaging in warfare
2. Warfare's outcome influences the spread of each group's cultural norms

The concept of group-structured cultural selection

This term involves: selection of culturally inherited traits, cultural (not genetic) transmission of the said traits and a group-structured population. A group is a subset of individuals in a population whose interactions with a trait vary from the outsiders'.

Cultural traits can also be broken down into three categories: war-related technological traits, as long as the between-group variation is maintained by trade or copying barriers; solidaristic in-group behaviour traits, which can be reinforced by punishment or rewards and, lastly, political and economic organization-related traits.

All in all, the inter-group variation of cultural traits feeds group-structured cultural selection.

Genetic vs cultural relatedness

Chimpanzee raids are carried out by larger patrols of related males which attack smaller ones, thus implying little to no risk for the raiders. In contrast, the Argentine ant's (*Linepithema humil*e) warfare behaviour resembles human large-scale conflicts in terms of scale and risk-taking. However, the main difference resides in relatedness: genetic vs cultural. The ant's drive is solely vertical transmission of genes, whereas humans' is spreading cultural norms both vertically and horizontally.

But how can we measure relatedness? Fst is used to indicate differences -either genetic or cultural- between groups. It ranges from 0 to 1, being:

0: both groups are identical
1: highest difference in measured traits

As shown in figure 1, the cultural differences (higher Fst) between human groups participating in conflicts are greater than the genetic differences (lower Fst), and consequently, they can better explain the origin of small and large-scale human warfare.

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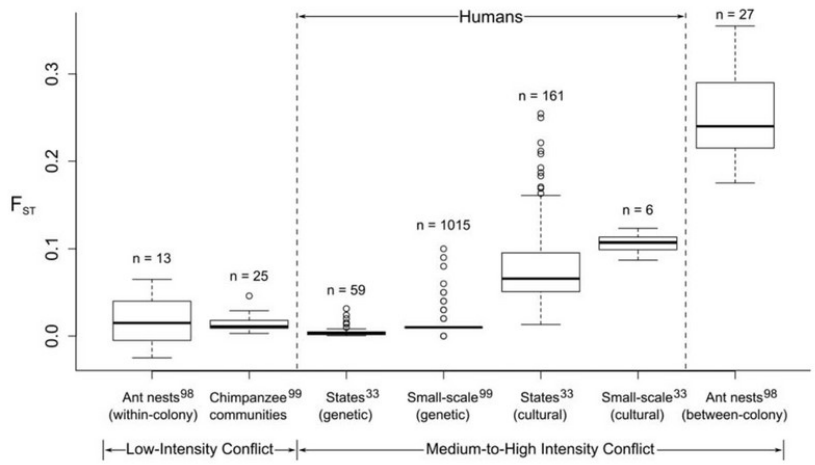

Figure 1: Fst -genetic or cultural- measured between groups of Argentine ant, chimpanzee, and human populations.

Are we peaceful or belligerent by nature?

Us humans are not genetically predisposed towards peace or war. Instead, we are predisposed to adopt social and cultural norms of our own community; this phenomenon is called norm psychology. Norm psychology could be at the base of the cultural variation that we see today among all human societies, and therefore feeding the mechanism of group-structured cultural selection. In summary, different social groups adopt different cultural norms, and this misalignment offers an opportunity for conflict to arise.

The fate of the losing side: mechanisms of selection

The losing side can suffer three possible outcomes:

1. Killing: killing the individuals of the losing group is effective in small group conflicts, and is usually a long process in time.
2. Absorption of losing members: just as the ancient Romans did, absorbing the population of the losing group is a way to homogenize the cultural norms.
3. Selective emulation: a group can copy the cultural norms of a more militarily successful group to avoid confrontation.

Conclusion

Warfare remains an intricate topic to discuss. Genetic and cultural explanations can work together to create a helpful frame to understand the complexity of human warfare. However, we must not use these explanations as a pretext to normalize the atrocities of modern warfare. Protecting all people should be the first and most important social norm, regardless of the cultural society.

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