Hand anatomy has no influence on emotional reactions during stone tool handling

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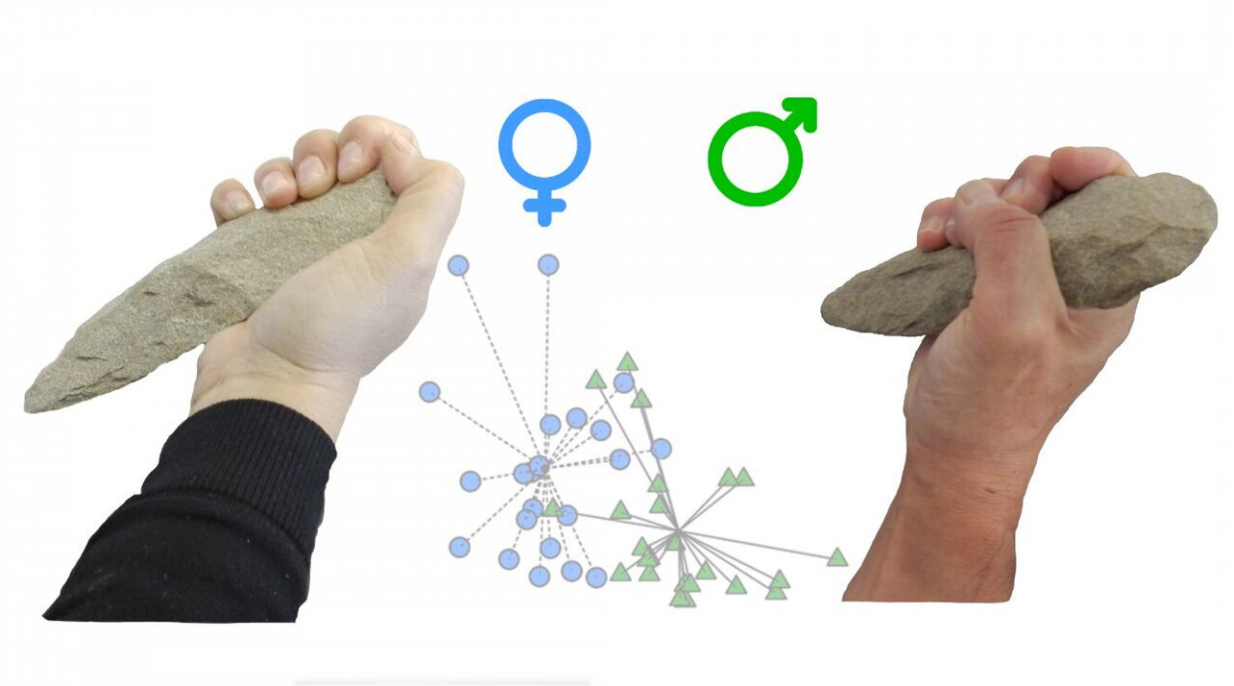

Credit: CENIEH

Within the framework of electrodermography studies applied to cognitive archaeology, the Paleoneurology team of the Centro Nacional de Investigación sobre la Evolución Humana (CENIEH), led by Emiliano Bruner, has published an article in the *American Journal of Human Biology* on the influence of the anatomy of the hand on haptic (or tactile) perception while handling stone tools

The results suggest that the dimensions and proportions of the hand are not factors that directly influence emotional response during manipulation. The differences between men and women are due to biological or cultural factors, and not to differences in the hand size.

"In an earlier study, it was observed that women have a more marked and variable emotional reaction than do men. In this case, the objective was to determine if it was the size and shape of the hand that was responsible for this difference," explained Annapaola Fedato, corresponding author.

To achieve these results, the morphology of 62 subjects was measured while handling Lower Palaeolithic artifacts, as well as the electro-mechanical response, which is used in forensics and neuromarketing with polygraphs to measure fluctuations in levels of general emotion and attention.

Haptic capacity

Humans have different levels of haptic capacity, and these abilities depend on different levels of learning and can be improved with training.

"At an evolutionary level, it is worth asking whether some biomechanical characteristics of the body or morphometric tools could have promoted a better hand—object interaction by increasing the prosthetic capacity, not only at the ergonomic but also the perceptive," concludes Fedato.

The article is titled "Hand morphometrics, electro-dermal activity and Stone tool haptic perception."

More information: Annapaola Fedato et al. Hand morphometrics, electrodermal activity, and stone tools haptic perception, *American Journal of Human Biology* (2019). DOI: 10.1002/ajhb.23370

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