

Field study suggests human facial expressions are not universal

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(Medical Xpress)—A small team of researchers with members from Spain and the U.S. has found evidence that suggests human facial expressions are not as universal as has been thought. In their paper published in *Proceedings of the National Academy of Sciences*, the group describes how they carried out facial recognition studies on native people living in New Guinea and the difference they found in one facial expression from most other people in the world.

For nearly a half-century, scientists have accepted the conventional view that the facial expressions used by humans have the same meanings regardless of location or culture, due to work done by psychologist Paul Ekman in the 1960s—he conducted studies in which he showed pictures of people with different expressions on their faces to an isolated group of people living in New Guinea and had found that they matched up with Western interpretations. But recently, some in the field have begun challenging the results of his experiments and conducting their own.

In this new effort, the four researchers on the team, Carlos Crivelli, James Russell, Sergio Jarillo

and José-Miguel Fernández-Dolsa, invited themselves to live with a group of people on the island of Trobriand off the coast of Papua New Guinea—this culture has managed to exist without interacting with others for hundreds, if not thousands of years. But rather than simply testing the people right away, the researchers immersed themselves in the culture, learning both their language and their ways. Only then did they ask some of the young people to sit down with them to look at photographs of people with various expressions on their faces.

The researchers found that the Trobrianders viewed all of the expressions the same way as westerners, with one notable exception—photos showing wide-eyed people with mouths slightly agape were viewed as threatening—westerners generally associate such facial expressions as expressing fear. This finding, the team suggests, indicates that human [facial expressions](#) are not quite as universal as has been assumed. They acknowledge that they cannot say with any certainty whether the differences in interpretation were due to the way that a group interprets the same emotion or whether they were actually feeling something different when looking at the pictures.

More information: The fear gasping face as a threat display in a Melanesian society, Carlos Crivelli, *PNAS*, [DOI: 10.1073/pnas.1611622113](https://doi.org/10.1073/pnas.1611622113)

Abstract

Theory and research show that humans attribute both emotions and intentions to others on the basis of facial behavior: A gasping face can be seen as showing "fear" and intent to submit. The assumption that such interpretations are pancultural derives largely from Western societies. Here, we report two studies conducted in an indigenous, small-scale Melanesian society with considerable cultural and visual isolation from the West: the Trobrianders of Papua New Guinea. Our multidisciplinary research team spoke the

vernacular and had extensive prior fieldwork experience. In study 1, Trobriand adolescents were asked to attribute emotions, social motives, or both to a set of facial displays. Trobrianders showed a mixed and variable attribution pattern, although with much lower agreement than studies of Western samples. Remarkably, the gasping face (traditionally considered a display of fear and submission in the West) was consistently matched to two unpredicted categories: anger and threat. In study 2, adolescents were asked to select the face that was threatening; Trobrianders chose the "fear" gasping face whereas Spaniards chose an "angry" scowling face. Our findings, consistent with functional approaches to animal communication and observations made on threat displays in small-scale societies, challenge the Western assumption that "fear" gasping faces uniformly express fear or signal submission across cultures.

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