

# Brain detects happiness more quickly than sadness

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Our brains get a first impression of people's overriding social signals after seeing their faces for only 100 milliseconds (0.1 seconds). Whether this impression is correct, however, is another question. Now an international group of experts has carried out an in-depth study into how we process emotional expressions, looking at the pattern of cerebral asymmetry in the perception of positive and negative facial signals.

The researchers worked with 80 psychology students (65 women and 15 men) to analyze the differences between their cerebral hemispheres using the "divided visual field" technique, which is based on the anatomical properties of the visual system.

"What is new about this study is that working in this way ensures that the information is focused on one cerebral hemisphere or the other", J. Antonio Aznar-Casanova, one of the authors of the study and a researcher at the University of Barcelona (UB), tells SINC.

The results, published in the latest issue of the journal *Laterality*, show that the right hemisphere performs better in processing emotions.

"However, this advantage appears to be more evident when it comes to processing happy and surprised faces than sad or frightened ones", the researcher points out.

"Positive expressions, or expressions of approach, are perceived more quickly and more precisely than negative, or withdrawal, ones. So happiness and surprise are processed faster than sadness and fear",

explains Aznar-Casanova.

## **The two faces of the brain**

This research study adds to previous ones, which had revealed asymmetries in the way the brain processes emotions, and enriches the international debate in cognitive-emotional neuroscience in terms of how to define the exact way in which human beings process these facial expressions.

People make deductions from the expressions on people's faces. "These inferences can strongly influence election results or the sentences given in trials, and have been studied before in fields such as criminology and the pseudoscience of physiognomy", the neuroscientist tells SINC.

Two theories are currently "competing" to explain the pattern of cerebral asymmetry in processing emotions. The older one postulates the dominance of the right hemisphere in the processing of emotions, while the second is based on the approach-withdrawal hypothesis, which holds that the pattern of cerebral asymmetry depends upon the emotion in question, in other words that each hemisphere is better at processing particular emotions (the right, withdrawal, and the left, approach).

"Today there is scientific evidence in favour of both these theories, but there is a certain consensus in favour of the lateralisation of [emotional](#) processing predicted by the approach-withdrawal hypothesis", concludes Aznar-Casanova.

Source: Plataforma SINC ([news](#) : [web](#))

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