

Emotionally charged facial expressions can influence actions

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Credit: One Zilla

A face with an emotionally charged expression, especially if the emotion is anger, can influence the course of our actions, according to a study by the International School for Advanced Studies (SISSA) of Trieste

published in *Cognitive Neuroscience*. The distracting effect is potentially dangerous in some situations (for example, when driving).

A face that enters your field of view will distract your attention and influence the course of your actions (it works as a sort of attractor). But what exactly is there in a face that is so irresistibly "attractive"?

According to a study carried out at SISSA both the gender of the face and the emotion it expresses have distracting effects, though the latter seems to respond to a deeper, automatic and implicit mechanism.

Elisabetta Ambron, SISSA researcher, Raffaella Rumiati, SISSA professor and head of the INSULA laboratory, and Francesco Foroni, SISSA researcher, conducted experiments in which a [motor task](#) performed on a tablet display screen was disturbed by the appearance of [faces](#). The experiments were actually two. In the first one, during the motor task the subject was asked to observe and report the type of emotion expressed by the face, and in the second one its gender. In either case, the distractor-faces varied in gender and expression so that in experiment 1 the gender-variable was considered "not relevant" to the task, and expression the relevant variable. The opposite was true in experiment 2.

In both experiments the relevant dimension influenced the trajectory the subject's finger traced on the tablet (it attracted it towards the point on the screen where the face had appeared), but only in experiment 2 did the non relevant variable have the same effect as the relevant variable.

According to the authors, this means that emotionally charged expressions are a powerful distractor that works even at an implicit level (without attention being paid to this type of stimulus).

The danger of billboards

"Expressions, and in particular anger, which was shown to have the most pronounced effect in our experiments, are evolutionarily important stimuli as they can, for example, protect us from aggression. For this reason, the result is not surprising", explains Foroni. "The negative aspect of this distractor effect, on the other hand, is that it can lead to dangerous situations. Imagine a driver being distracted by billboards showing faces - it's not such an unlikely situation. Those in charge of road safety should take this into account."

More information: Elisabetta Ambron et al. "Do emotions or gender drive our actions? A study of motor distractibility," *Cognitive Neuroscience* (2015). [DOI: 10.1080/17588928.2015.1085373](https://doi.org/10.1080/17588928.2015.1085373)

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