

Reading emotions in a second language

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Credit: Suzanne Schroeter

If we read about someone who is smiling and happy, without realizing it, we smile as well, and a similar reaction also occurs for the other emotions. If, however, the text is not in our mother tongue but in a

second language, then our mind and body react in a blander manner. This effect, according to Francesco Foroni, the author of a new study that observed the phenomenon for the first time, may depend on the different way we learn our mother tongue and a second language.

In the "NeverEnding Story", Bastian feels so involved in the narration that he experiences the same emotions as the characters (and in the end he really enters the book). What happens to the main character of Micheal Ende's book is exactly what happens to each of us when we read a novel or a short story: we literally replicate the [physiological processes](#) and emotions of the characters described in the text. Francesco Foroni, research scientist at the International School for Advanced Studies (SISSA) of Trieste, already demonstrated this phenomenon a few years ago in a study published in *Psychological Science* (2009). In a new study, published in *Brain and Cognition*, he now shows what happens when we read in a second [language](#) learnt in adulthood.

"The interpretation of these phenomena", explains Foroni, "is accounted for by the theory of embodiment: when we process [emotional information](#), our body 'mimics' the specific emotion by enacting those physiological states that are typical of the emotion". This means, he explains, that when we read about a happy person we smile, whereas if the character is angry we frown (in most cases, these expressions are imperceptible and we are not necessarily aware of them).

"The phenomenon is very intense when we read in our native language but, according to the new study, if we read in a second language learnt after our [mother tongue](#), then this physiological response, while not disappearing completely, is drastically lessened".

Foroni measured the facial expressions (by electromyography, a technique that records muscle activation) of 26 subjects reading texts in English. The subjects were Dutch native speakers who had learnt English

at school after the age of twelve. Differently from what was observed in their mother tongue, the [facial expressions](#) recorded in response to emotional content were much blander.

The result is in bearing with the embodiment theories: in fact, this view states that we normally learn emotional words "first hand" in emotional contexts (our mother smiling as she asks us to smile at her, for example), whereas a second language is normally acquired in less [emotional](#) environments and using formal methods, as occurs, for example, at school. This way, the association between the word representing the emotion and the experience of the emotion itself is looser, "hence, the far milder responses I observed in my study".

The finding has several implications. "Think, for example, of situations in which individuals have to make decisions" explains Foroni. "The literature reports that when we are influenced by emotions we tend to be less rational and make decisions that are not based on an accurate assessment of the problem. It's possible that finding oneself in a context implying the use of a second language may affect the types of decisions we make, by limiting the potential negative impact of emotions."

More information: "Do we embody second language? Evidence for 'partial' simulation during processing of a second language." *Brain and Cognition* Volume 99, October 2015, Pages 8–16 [DOI: 10.1016/j.bandc.2015.06.006](#)

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