

Smile as you read this: Language that puts you in touch with your bodily feelings

August 7 2009

Louis Armstrong sang, "When you're smilin', the whole world smiles with you." Romantics everywhere may be surprised to learn that psychological research has proven this sentiment to be true — merely seeing a smile (or a frown, for that matter) will activate the muscles in our face that make that expression, even if we are unaware of it. Now, according to a new study in *Psychological Science*, a journal of the Association for Psychological Science, simply reading certain words may also have the same effect.

Psychologists Francesco Foroni from VU University Amsterdam and Gün R. Semin from the University of Utrecht conducted two experiments to see if emotion language has an influence on facial muscle activity. In the first experiment, a group of students read a series of emotion verbs (e.g., "to smile," "to cry") and adjectives (e.g., "funny," "frustrating") on a monitor, while the activity of their zygomatic major (the muscle responsible for smiles) and corrugator supercilii (which causes frowns) muscles were measured.

The results showed that reading action verbs activated the corresponding muscles. For example, "to laugh" resulted in activation of the zygomatic major muscle, but did not cause any response in the muscles responsible for frowning. Interestingly, when presented with the emotion adjectives like "funny" or "frustrating" the volunteers demonstrated much lower muscle activation compared to their reactions to emotion verbs. The researchers note that muscle activity is "induced in the reader when reading verbs representing [facial expressions](#) of emotion."

Can this innate bodily reaction affect our judgments? In another experiment, volunteers watched a series of cartoons and were subliminally shown emotion verbs and adjectives after each one. They were then asked to rate how funny they thought the cartoons were. Half of the participants held a pen with their lips, to prevent them from smiling, while the remaining participants did not have their muscle movement blocked.

The results reveal that even when emotion verbs are presented subliminally, they are able to influence judgment — volunteers found cartoons to be funnier when they were preceded by smiling verbs than if they were preceded by frowning-related verbs. However, this effect only occurred in the volunteers who were able to smile — volunteers who had muscle movement blocked did not show this relationship between emotion verbs and how funny they judged the cartoons as being.

The results of these experiments reveal that simply reading emotion verbs activates specific facial muscles and can influence judgments we make. The researchers note these findings suggest that "language is not merely symbolic, but also somatic," and they conclude that "these experiments provide an important bridge between research on the neurobiological basis of language and related behavioral research."

Source: Association for [Psychological Science](#) ([news](#) : [web](#))

Citation: Smile as you read this: Language that puts you in touch with your bodily feelings (2009, August 7) retrieved 10 April 2024 from <https://medicalxpress.com/news/2009-08-language-bodily.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.