

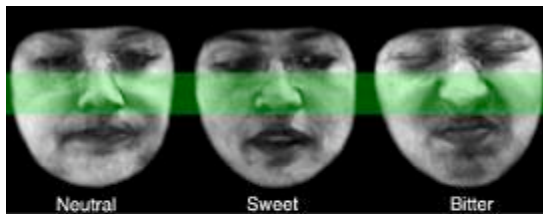
From oral to moral? Dirty deeds may prompt “bad taste” reaction

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Courtesy University of Toronto/Kim Luke and World Science staff

When people say immoral behaviours “leave a bad taste in your mouth,” that may be more than a metaphor, some psychologists say.

A new study suggests moral disgust triggers a physical reaction much like the one bad tastes provoke, and thus may be linked to older forms of revulsion related to poison and disease.



Appearance model-generated average facial expressions of the five most expressive individuals (from a total sample of 20) tasting neutral, sweet, and bitter solutions. The upper lip and nose areas are highlighted to show the action of the levator labii muscle (upper lip raise and nose wrinkle) across conditions.

[Image © Science/AAAS]

Our “sense of what is right and wrong may develop from a newborn’s innate preference for what tastes good and bad—what is potentially nutritious versus poisonous,” said principal investigator Adam Anderson of the University of Toronto.

Disgust is an ancient emotion that “played a key evolutionary role” in our ancestors’ survival, added Hanah Chapman, a graduate student at the university. She is the lead author of the study, published in the Feb. 27 issue of the research journal *Science*.

“Our research shows the involvement of disgust in morality, suggesting that moral judgment may depend as much on simple emotional processes as on complex thought,” she continued. “These results shed new light on the origins of morality, suggesting that not only do complex thoughts guide our moral compass, but also more primitive instincts.”

The researchers examined facial movements when study participants tasted unpleasant liquids and looked at photos of disgusting objects such as dirty toilets or injuries. They compared these to facial movements when participants suffered unfair treatment in a laboratory game. The scientists found similarities in the expressions.

The psychologists placed small electrodes on people’s faces to detect electrical activity associated with muscle movements. They focused on motion of the levator labii muscle, which raises the upper lip and wrinkles the nose in “disgust.”

“People show activation of this muscle region in all three situations – when tasting something bad, looking at something disgusting and experiencing unfairness,” said Chapman.
