

# Are “sweet talks” literally sweet?: A study of taste imagery evoked by Japanese emotional words

Mizuki Yoshio

Hiroshima University, Higashihiroshima, Hiroshima, Japan

Toshimune Kambara

Hiroshima University, Higashihiroshima, Hiroshima, Japan

## Abstract

In many languages, the speakers use taste-related words to express emotions. This preregistered study extends preceding survey study findings by applying attribute conditioning paradigm to examine whether emotional words influence gustatory imagery of nonsense words. Native Japanese-speaking participants underwent an attribute conditioning consisting of five phases: the first evaluative phase, a conditioning phase, the second evaluative phase, a contingency awareness questionnaire, and a contingency memory task. In the evaluative phases, participants rated nonsense words on emotional (i.e., valence, arousal, and familiarity) and taste-related (i.e., sweetness, saltiness, sourness, bitterness, umami, and spiciness) impressions. Emotional words with positive (e.g., happy, vacation) or negative meanings (e.g., sad, thief) were used as unconditioned stimuli. Results demonstrated that nonsense words paired with positive-meaning words were associated with sweetness and umami, while those paired with negative-meaning words were associated with saltiness, sourness, bitterness, and spiciness. These findings provide psycholinguistic insights into metaphorical expression using taste-related words.