Toward a Domain-specific Scale to Verbally Measure Odour-elicited Emotions

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cated by the modulation of the sensitivity of participants' responses.

Toward a Domain-specific Scale to Verbally Measure Odour-elicited Emotions

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For most of research on odors and emotions, the measurement of subjective experience elicited by olfactory stimuli has been limited to self-report questionnaires derived from two types of approaches: i) the discrete emotion theory, postulating the existence of a small number of so-called basic emotions based on phylogenetically stable neuromotor programs or ii) the dimensional theory that reduces the subjective experience of emotions to positions in a two or three dimensions space that most economically accounts for some similarities and differences in affective experience. Recently, we have developed a domain specific 6-scale model (Geneva Emotion and Odour Scale, GEOS), based on empirical data, to specifically account for the highly differentiated responses and feeling states produced by odours. The goal of the present study was to specifically evaluate whether this new scale is more appropriate for the olfactory domain than the current emotional prominent scales. To evaluate the comparative validity of the three models, we examined to what degree respondents reported their experience of each of the emotions derived from the discrete emotion model, the dimensional model or the GEOS, to each of the presented olfactory stimuli. The set of stimuli included both everyday odours and fine fragrances in order to cover a large range of odour types. The comparison, based on 3 main criteria: (i) the relevance of the scales to describe the emotional effects elicited by the different olfactory stimuli, (ii) the inter-rater agreement in using the different emotion scales and (iii) the power of the scales to discriminate among various odorous substances, provided strong evidence for a better account of the domain-specific model (GEOS) of odour-elicited emotional experiences compared to the two classical models. Our findings lend support to the view that an accurate description of odor-elicited affective feelings seems to require a specific affect vocabulary and taxonomy, which differ from those provided by classical emotion theories.

Sequential Unfolding of Novelty and Pleasantness Appraisals of Odors

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We investigated the appraisal processes of odors and consequent emotional responses. The main goal of the study was to test whether an odor is detected as novel or familiar before it is evaluated as pleasant or unpleasant, as predicted by many appraisal theories of emotion. Participants performed a delayed matching to sample recognition task in which they were presented with pairs of unpleasant or pleasant odors (sample and target odors). Within a pair, the sample and target were either identical or different to assess participants' novelty detection; unpleasant and pleasant target odors were contrasted to examine participants' appraisal of pleasantness. We measured facial expressions (electromyography) and physiological reactions (electrocardiogram and electrodermal activity). The earliest effects on facial muscles (frontalis) and heart rate occurred in response to novelty detection. Later effects on facial muscles (corrugator and frontalis) and heart rate were related to