

Comment

What is reconfigured?

Comment on “The quartet theory of human emotions: An integrative and neurofunctional model” by S. Koelsch et al.

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The research group around Koelsch presents a neurobiological emotion theory that is supposed to have the following plus factors: (1) Interdisciplinary approach towards understanding human emotions and their neural correlates, (2) concentration on human emotions, (3) interaction between language and emotion, (4) allows research on short-term emotional phenomena and takes long-term emotional phenomena into account, as well as the differences of the neural correlates underlying short-term and long-term emotions [5]. This is a very ambitious program. My comment will focus on (3) and (4).

The transformation of emotions via language is an important approach in research because the object of inquiry is not the same when it is a neurological unprocessed one or one that has been transformed by language. For that reason it seems to be a somehow counterintuitive result of this research that the OFC generates moral affects and is involved in sentiments and long-term emotions like guilt, shame or gratitude, vengeance, worship, nostalgia, and admiration, even though the OFC is not a language area and its internalized contents cannot be directly verbalized, and are thus non-conscious [5]. How might a long-term sentiment like nostalgia be not verbalized and non-conscious? I have the suspicion that the picture behind this is the following: for every emotion and sentiment—even the long-term ones—there exists a neurological substratum beforehand. However, it is not this neurological substratum that might be reconfigured by language and cultural practice, it is—according to the authors—the emotion percept that is reconfigured in such a way.

Emotion percepts are said to be synthetizations of the information (!) from the feeling-components [5] and they are supposed to be preverbal subjective feelings that are reconfigured by linguistic expressions [5]. But it may be the other way round: Language and cultural practices may reconfigure the neurological material and therefore build up neural correlates for the thereby arising long-term emotions. Take for example malicious joy (gloating), it does not seem to exist in the form we know it in every culture—or at least, a number of cultures reveal no word and no mental concept for it [1]. If this is so, there are two possibilities: (1) either there exist neurological substrata that are not reconfigured by language and cultural practice in some cultures, or, as I have indicated, (2) it is language and culture that reconfigures some neurological material and therefore builds up neural correlates for the arising long-term emotions. (Note, that this is still another claim than the one that there are nonbasic emotional events, which are shaped

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to a greater extent by culture than basic ones [6] and therefore more by learning [4].) I don't think that we are able to decide between option (1) and (2) at the moment, but we should not disregard that (2) is an option.

Another point I would like to mention is the following: the notion of an emotion percept is very attractive but there is a problem with preferring this concept to the one of 'basic emotion'. Why is this so? If there were not something such as a basic emotion, it would not be possible to teach a word for an emotion at the beginning of the process of learning words for sentiments and emotions. Why not? The reason is that basic emotions—the way they are (very often) defined—combine two aspects in a universal way: the sensation process and the bodily expression [2]. It would not be possible to teach the child the use of the word 'fear' for example because the teacher would not know when the child was feeling fear if the child would not show it in an unambiguous way. The teacher would therefore not know when to utter the word with respect to the child. The language acquisition only works in this case because the feelings of the child and his or her bodily expressions are linked.

The basic emotion has—in contrast to the emotion percept—the advantage that its expression is part of it. The latter is necessary in order to learn a concept for the emotion and therefore to shape the subjective feeling [2,3]. (Note that for long-term emotions the connection between the element of subjective feeling, expression and the role of language is different.) However, the authors of the "Quartet Theory" define 'emotion' as an integrated result of the activity of affect systems as well as effector systems (which include the motor expression), emotional percept and language as well as conscious appraisal. They might therefore argue that 'emotion' plays the role in their theory that 'basic emotion' has in the picture just described. But to get the language acquisition process and the reconfiguration process of emotion percepts started one needs some cases in which the subjective feeling and the emotion expression are linked in a unique way. The latter is the case with basic emotions whereas 'emotion' in the "Quartet Theory" is a much broader term than 'basic emotion'.

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