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# The Role of Language in a Science of Emotion

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## Abstract

Emotion scientists often take an ambivalent stance concerning the role of language in a science of emotion. However, it is important for emotion researchers to contemplate some of the consequences of current practices for their theory building. There is a danger of an overreliance on the English language as a transparent window into emotion categories. More consideration has to be given to cross-linguistic comparison in the future so that models of language acquisition and of the language–cognition interface fit better the extant variation found in today's peoples.

## Keywords

cross-linguistic, categories, emotion, language, semantic

The articles by Dixon (2012), Mulligan and Scherer (2012), and Scarantino (2012) in this issue explore how to define emotions for the purposes of scientific study. Although the articles take different perspectives on the issue, there are a set of recurrent themes that appear. Here I consider the role of language in a science of emotion.

## The Language of Science

One recurring tension palpable in the perspective articles is how to talk about the science of emotion and not be trapped by the semantics of English. As Dixon (2012) very nicely illustrates, the definitional criteria of the term *emotion* in English has changed in historical time and was, in part, originally defined by the concerns of scientists. However, contemporary usage of *emotion* by English speakers doesn't always correspond to the myriad scientific terminologies. Scarantino (2012) argues that today a Scientific Emotion Project ought to have a prescriptive agenda and, thus, provide definitional criteria for membership into the categories of “emotion,” “anger,” “fear,” etcetera. There are certainly precedents to this view. Putnam (1975), in his groundbreaking *The meaning of “meaning”*, persuasively argued that there is a “division of linguistic labor” between those who acquire the terms of the language and those who have a method for recognizing or distinguishing referents. To take his

example of *gold*: English speakers know the word *gold*—that it is a precious metal with symbolic value and monetary worth—but only specialists, that is, metallurgists, would be able to tell us if the ring that I am wearing is “really” gold (or whether it is a fake). Putnam's point was that there are various parts to knowing the “meaning” of a term and these parts are distributed over a linguistic community as a whole; they are not the provenance of every individual speaker. I take Scarantino to be proposing something similar for the study of emotion: the speakers of English know the meanings of *anger*, *fear*, etcetera, but it would be the scientists who would provide the criteria for recognizing if something is “really” fear, anger or whatever.

This is fine as it stands but, nevertheless, I see some methodological challenges ahead. The most problematic point is the overreliance on English to provide the foundations of a theory of emotion (which Scarantino [2012] mulls over in the concluding sections of his paper). When challenged directly, emotion theorists are rather ambivalent about the role of language in their theory construction. Do words map directly onto the corresponding emotion category? Or is there only a loose connection between the words and underlying concept? Regardless of the specific stance taken on this issue, the history of science has shown repeatedly that restricting ourselves to English terminology has fatal consequences. Take the case of *umami*. As early as 1909 the Japanese chemist Kikunae Ikeda isolated glutamic acid ( $C_5H_9NO_4$ ) as a new taste substance, and yet it took another 70 years before this finding seriously penetrated Western science (Lindemann, Ogiwara, & Ninomiya, 2002). I won't speculate on the myriad factors that were doubtless responsible for this blindness, but only point out that at least one of the factors was likely the lexical gap for this basic taste in our own language. Taste is not the only domain where the scientific blinkers of the English language have played a role (cf. Majid & Levinson, 2010). Thus it is problematic, if not downright dangerous, to ground our theories on English terminology alone.

## The Languages of the World

Mulligan and Scherer (2012) claim that there are universals in the meaning of emotion terms. If this were true, then we need

not fear our reliance on the English language: It is an equally good representative as any of the extant 6,000 world languages. But I think there are a number of reasons to think that it is premature to claim substantive universals in this domain. To say “there is a large degree of universality for terms concerning fundamental psychological phenomena” presupposes that we have the relevant facts to hand, and we do not.

In comparison to the study of universals in phonology or grammar, the typology of semantics is a relatively new field and standards for comparison or even what counts as “meaning” are still nascent (Evans, 2011). To evaluate pronouncements of universality, we need to know precisely which aspects of emotion language we are measuring. Is it that all emotion terms can be described in terms of some decompositional metalanguage (Wierzbicka, 2009) or that they refer to some external standard in similar ways (be they facial expressions or scenarios)? These are very different claims. When claiming universals of emotion language we need to know whether this holds for the size of emotion lexicons in languages, or in the boundaries of those terms, or whether the claim is about how the terms are related to each other (in terms of hyponymy, synonymy, antonymy, etc.), and so on. Note that there could well be universals in some of these but not others.

In the wonderfully comprehensive overview by Ogarkova (in press), we find that some languages lack superordinate terms for emotion or have a term that embraces other psychological states as well; many cultures use high levels of somatic vocabulary to describe affective feelings; and that even “basic” feeling states such as “anger” and “fear” are frequently conflated under a single term. It requires careful language-specific investigation to uncover whether in such a language the term is polysemous (with two distinct meanings encoded) or instead vague over the two possible senses. On first glance it may be difficult to conceive of a meaning that could cover both the states of anger and fear. This is like finding that a language has a single term for “sweet” and “salty” (Chamberlain, 1903; Myers, 1904). An incredulous scholar may ask how on earth these two qualities could be collapsed. But it turns out that in many languages the single term covering these qualia, in fact, means something like “tasty” and doesn’t specify quality at all. Likewise, only detailed, painstaking analysis can tell us about the semantics of emotion terms such that we can conduct comparison and generalization. We know that absolute universals in language are uncommon, if present at all (Evans & Levinson, 2009). Instead, we must quantify the degree of common structure in semantic domains (e.g., Majid, Boster, & Bowerman, 2008; Majid, Evans, Gaby, & Levinson, 2011), as we do for other types of linguistic structures (e.g., Dunn, Greenhill, Levinson, & Gray, 2011).

Dixon quite rightly notes, “words derive their meanings from the company they keep” (Dixon, 2012, p. 341), so when a language conflates two states, such as anger and fear under a single term, that system of emotion terminology is arguably quite different from a comparable language with equivalent terminology but distinct terms. For example, in a language that has a morphological contrast between singular and plural (e.g., like the *-s* we add from English nouns), the “meaning” of plural is quite different from that of a language that makes a contrast between singular, dual, and plural. In the former case, plural means two and more, whereas in the latter case, plural does not include two but now refers to three and more. Similarly, in a language with a

three-color system of black–white–red, the meaning (extension) of black is quite different from a language with a black–white–red–green–yellow–blue vocabulary (Berlin & Kay, 1969). And so, when we compare across emotion lexicons, we must bear in mind that it is not just single words we must compare but whole systems of terms.

On a final note, Mulligan and Scherer argue that categorization comes before language based on studies with prelinguistic infants, but we also know that children are language-specific in their categorization as soon as they learn their specific language system, and even before the age of 2 years (e.g., Choi & Bowerman, 1991). This further underlies the importance of diligent comparison of linguistic systems. By glossing over critical differences in linguistic systems in how they package meaning, we grossly underestimate the problems of language acquisition and for articulating the processes involved in the language–cognition interface; issues that I hope a future science of emotion will elucidate.

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