Published in final edited form as:

Emot Rev. 2012 July ; 4(3): 251–252. doi:10.1177/1754073912439788.

Basic Emotions: A Rejoinder

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Abstract

A principal theme of our article is that emotions, including what are called basic emotions, cannot be exhaustively categorized as “innate” or “acquired.” Instead, we argue that basic emotions are more realistically viewed as emergent phenomena, the result of complex interrelations of environmental and organismic factors at all levels of organization. While the commentators apparently accepted the proposed developmental paradigm, they took exception to aspects of our treatment of basic emotions and made a number of helpful comments, to which we respond below.

Keywords

basic emotion; component schemas; development; early experience; nature–nurture; New Paradigm

In this reply, we present the rudiments of an *organismic-comparative-epigenetic* paradigm of development. Within this perspective basic emotions are emergent phenomena that are the result of complex genetic and environmental interactions at all levels of organization. We argue that this paradigm and its supporting evidence provide a timely and realistic alternative to the traditional assumption that basic emotions are either innate (unlearned, hard-wired) or acquired (social learning, culture).

The commentators (Botero, 2012; Parrot, 2012; Zachar, 2012) understand the broad outlines of our organismic approach and apparently accept its relevance to emotional development. However, for different reasons each expresses a concern with some aspect of our treatment of the basic emotion issue. Part of the problem may relate to the focus of our approach on explaining the ontogeny of commonly observed emotional phenomena that are given names from the popular lexicon (such as fear, anger, affection, and so on) that some emotion scientists place in a special category termed basic emotions. As such, these phenomena are assumed to have qualities that distinguish them from nonbasic emotions, including “hard-wiredness” (Levenson, 2011). Ontogeny and environmental influences have not been prominent in theories of basic emotions.

Parrott

In contrast to the traditional criteria of basic emotions, including a small number of discrete, hard-wired, behaviorally and physiologically distinct basic emotions that are continuous across species, Parrott (2012) proposes what he describes as a new category called *ur-emotions*. His descriptions of *ur-emotions* (fuzzy, yet discernible boundaries, action tendencies, dependence on experience, differences and similarities between and within species) are in good accord with the facts as we know them. Parrott may well be correct that the concept of *ur-emotions* may be more helpful than that of *basic emotions* in accounting for similarities between emotions across cultures and species. We suspect, however, that he does not share our appreciation of the pervasive, enduring, and fundamental effects of experience on the *organization* of emotional behavior throughout life—an isolate and a socialized monkey may both show evidence of the *ur-emotion* of “antagonism,” for example, but the nature of the eliciting stimuli of the emotion, the threshold for and magnitude of the response, and the ability for feedback to alter the animals’ streams of behavior are aspects of the emotion that have important fitness consequences for the animals and can be remarkably refractory.

Zachar

A primary concern of our essay was to examine the merits of a developmental paradigm stressing emergence, relative to the concept of basic emotions as fixed entities. Zachar (2012) plainly understood our perspective, but argued that we did not indicate what would count as a “basic emotion.” It is a fair criticism. To return to an earlier distinction, we think it is important to show that the phenomena of so-called basic emotions can be accounted for without recourse to a questionable construct. This reviewer’s skepticism about the concept of the environment of evolutionary adaptedness (EEA) is understandable, but we like the idea because it serves the valuable heuristic purpose of calling attention to the relevance of multiple environments to development in different times, different physiological systems, different individuals, and different species. Although we do not dwell on the subject, we agree entirely (and the evidence supports) the possibility of positive (life promoting) and negative (harmful) environmental influences throughout life. In fact, there is considerable ongoing theorizing in the life-history literature on the idea that “heterogeneity” may itself be part of the EEA that an organism inherits (Del Giudice, Ellis, & Shirtcliff, 2011). Finally, we believe our essay is quite consistent with the author’s suggestion that “the social construction of emotional experience and behavior is a biological process” (Zachar, 2012, p. xxx).

Botero

Botero (2012) suggests that we could have said more about social influences on development from an organismic standpoint. We concur completely. The social environment is a critically important factor in the cognitive–emotional development of many birds and most, if not all, mammals. It has been an abiding theme in primate research for generations. An excellent example of the reviewer’s emphasis on the role of mother–infant interactions within the broader community context was demonstrated nearly 30 years ago in a report on

social separation. Bonnet monkeys, when separated from their mothers, show an attenuated protest/despair response compared to that seen by pigtailed monkey infants, due to the solicitousness of other bonnet adults. But if a bonnet infant is raised in an environment with both bonnet and pigtailed adults, and when separated is allowed to remain only with the familiar pigtailed adults, behavioral and physiological responses to the separation parallel strongly those found in separated rhesus or pigtailed infants (Reite & Snyder, 1982). What are the implications of the altered environmental circumstance for this animal's emotional status? Unfortunately, we do not know. But we agree that laboratory and field studies of many species will continue to highlight the interrelations of environment–cognition–emotion in the natural process of development.

Conclusion

The phenomena that have been termed “basic emotions” are manifestly important in human affairs and in the lives of nonhumans. This is true regardless of differences in theoretical interpretations, and we are grateful for the reviewers' helpful suggestions and the opportunity for further dialog.

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