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## Author Reply: Incompatible Conclusions or Different Levels of Analysis?

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### Abstract

This exchange provides an array of perspectives on the questions of what emotions are, how they function, and how they should be studied. While my approach is evolutionary and functionalist—viewing each distinct emotion as having evolved to serve a particular function (though not necessarily one entirely unique to that emotion)—this approach is not the only one needed to fully understand emotions. Furthermore, several of the accounts offered here might be effectively synthesized by accepting the importance of *both* universal evolutionary factors and sociocultural particulars in shaping emotion experiences.

### Keywords

distinct emotions, evolution, functionalist approach

What is the payoff for connecting the social and cultural levels of analysis to the psychological and biological ones? It is the thrill of discoveries that could never be made within the boundaries of a single discipline. (Pinker, 2002, p. 72)

Researchers are learning a great deal about the biology of fear—and the psychology of fear—from studies of the amygdala, but this does not mean that fear is activity in the amygdala. That is simply not the meaning of the term. “Fear” is not reducible to biology. (Miller & Keller, 2000, p. 212)

These passages encapsulate some of the core issues that have arisen in this thought-provoking discussion. Superficially, there is a surprising amount of disagreement on the seemingly simple question of what an emotion is. Several views may in fact be incompatible; Barrett’s (2014) definition of emotions as distinct only in the minds of individuals who conceive them is difficult to reconcile with the evolutionary model I espoused (Tracy, 2014), in which each distinct emotion evolved in response to distinct selection pressures. Others, however, are

more convergent; the model I discussed fits well with “first flavor” appraisal models highlighted by Moors (2014). In many cases, the core disagreement lies not in the question of what emotions are, but rather in the *level of analysis* used to answer it.

Like Mesquita and Boiger (2014) and Shweder (2014) and Clay-Warner (2014), I take seriously that emotions are contextually situated, and that much of their function pertains to the regulation of behavior within those contexts. As Mesquita and Boiger (2014) note, “shame is not generally dysfunctional, but only in cultures that highlight individual success and self-sufficiency” (p. 299). Indeed, this may explain an anomaly in the research mentioned in my target article (Tracy, 2014), in which individuals from numerous cultures, as well as the congenitally blind, displayed shame following public failure (Tracy & Matsumoto, 2008). The one group of participants who failed to reliably show this response were those from Western, individualistic cultures. These individuals apparently inhibited shame because of differing cultural norms about its social value. In related work in North America, we have found that recovering alcoholics’ shame about past drinking predicts worsened health and relapse (Randles & Tracy, 2013). The present discussion raises the question: Would we find a similar problematic effect in cultures that consider shame necessary for social harmony?

These kinds of questions are currently being addressed both by researchers who adopt a sociocultural approach and those who adopt a more evolutionary approach, which can and should incorporate cultural differences. This emphasis on culture within evolutionary-based emotion research is not new; it dates back at least to Ekman (1971), who labeled his early model of emotions a “neuro-cultural” theory. Nonetheless, the recognition of major cultural variation in emotional processes does not require abandoning a basic-level, aggregation-oriented approach, which is necessary to explain the many commonali-

ties these diverse experiences share. These are two different levels of analysis, and to fully understand emotions, we need both.

For example, Mesquita and Boiger (2014) argue that to understand the emotions experienced by a couple arguing, we need to know a great deal about the situation; the dispute “cannot be reduced to each individual’s emotions; nor can the emotions be fully disentangled from the interaction” (p. 298). While this is true in terms of understanding this particular dispute, we can also learn a great deal about emotions by closely observing this argument and many similar ones, then aggregating across individuals’ subjective feelings, physiological arousal levels, and nonverbal behavior. Studies that have done so have effectively addressed basic-level questions about what anger is, and more contextually situated questions such as the couple’s likely longevity (e.g., Gottman & Levenson, 2002).

At another level, much is gained by Clay-Warner’s (2014) sociological emphasis on the role of power in shaping emotional interactions—but particularly so when viewed in combination with approaches examining how certain emotions might have evolved specifically to influence status and power dynamics. Likewise, Moor’s (2014) second flavor appraisal approach emphasizes the level of emotion inputs (appraisals) and outputs (behaviors), rather than the level of the broader construct tying these together. While a different kind of explanatory power is gained from viewing inputs and outputs as part of an evolved whole, as is suggested by Buss (2014), Nesse (2014), and my own approach (Tracy, 2014), Moor’s model encourages a close examination of the linkages between specific appraisals and responses regardless of any other emotion components that may or may not also occur in a given instance.

In sum, these perspectives vary widely in their chosen level of analysis. My suggestion is to embrace the kaleidoscope of

perspectives that has emerged, and accept that emotions are, at some level, all these things.

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