

## Antecedent Events and Emotion Metaphors

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When I first wrote about emotion and its expression (Ekman & Friesen, 1969; Ekman, 1972), I believed that antecedent events for each emotion were socially learned and therefore likely to be culture-specific, although expressions of emotion were universal. A few years later my former student Jerry Boucher (Boucher & Brandt, 1981) showed that I was wrong about the antecedent events. He and his colleague asked subjects which events typically precede an emotion, and they found commonalities across very different non-Western cultures. These commonalities were evident on an abstract or conceptual level, not in terms of the very specific details that were described. This work has been further advanced by Klaus Scherer and his colleagues (Scherer, Wallbott, & Summerfield, 1986) in their research on the antecedents of emotion in a number of literate cultures.

I should have known that I was wrong in proposing total cultural variability in emotion antecedents because of my own experience working in a preliterate culture in New Guinea in 1967. In my initial trip I showed subjects photographs of facial expressions and asked them to tell me what had occurred to bring about each expression. The most common story for the fear expressions was being attacked by a wild pig. Substitute a rabid dog and the story would work in America for fear—different in detail, but similar in general theme: the threat of physical harm, in this instance by an animal. And so it was for each of the six emotions I studied. (The following year I reversed the procedure and told the subjects one of the emotion stories and asked them to pick which expression fit the picture [Ekman, 1972; Ekman & Friesen, 1971]).

Informed by Boucher's work I subsequently proposed "[t]here are variations in the particulars of what elicits a particular emotion, yet there are also common features in what are identified as the elicitors for an emotion . . . [across cultures]" (Ekman, 1977, p. 58). Based on Boucher's findings and our own observations, we (Ekman & Friesen, 1975) described what those common features were likely to be. An actual or threat of harm for fear. The loss of an object to which one was attached for sadness. An event that is either unexpected or contrary to expectation for surprise.

Something that is repulsive, to the senses or to one's beliefs, for disgust. Disapproving and feeling morally superior to someone for contempt. For anger we suggested five antecedents: frustration resulting from interference with one's activity; a physical threat; an insult; seeing someone do something that violates one's values; another person's anger directed at oneself. For happiness we suggested four antecedents: sensory pleasure; excitement; praise; relief when something unpleasant has ceased.

My descriptions are similar to what Lazarus (1991) later posited as the "core relational themes" for each emotion; they are nearly identical for sadness, fear, and disgust, and differ in some regards in the other emotions. We must note that such proposed commonalities in emotion antecedents are abstract rather than detailed. For example, there are many different ways in which someone's activity can be interfered with, many different ways in which to obtain sensory pleasure, and so on. It is hard at this time to judge the merit of these proposals, other than how well they fit folk beliefs about what brings forth emotions.

Hereafter, I will capitalize Antecedents whenever I am referring to these commonalities across cultures in the events that reportedly often call forth specific emotions. I say "often" because I believe individual experience probably can counteract an Antecedent. Perhaps it is also possible for an entire social group or culture to counteract an Antecedent, but no definitive evidence exists to prove that. The closest case is Levy's (1984) report that the Tahitians do not have a word for sadness, and do not recognize the constellation of sad behaviors as caused by the loss of a loved person. But this is not sufficient to assert that the relationship between the sadness Antecedent and sadness responses is absent in that culture. It would be necessary to find that the Tahitians do not show the constellation of sad behaviors when experiencing loss. That was not what Levy observed. The Tahitians did show sad behaviors in response to loss even though they did not label it as sadness, and attributed those responses to illness rather than to the loss.

I presume that the commonalities in the antecedent events that call forth each emotion are the product of our evolution and reflect the most important or frequent events our ancestors encountered. (See Panksepp's discussion of archetypal ancestral memories in Question 9: What is the relation between emotion and memory?). Our emotional responses are the product of that evolution, and begin to mobilize us to respond in ways that were adaptive for our ancestors. It is not a fixed or closed system, solely the product of phylogeny. Ontogeny also plays a large role. Our experience not only fills in the details of each Antecedent, and adds new events unrelated to the Antecedents, but also offers individualized responses that become part of an emotional episode as it unfolds.

The question is how to account for the commonalities in antecedent events and also allow for variability in the specifics of the events that call forth each emotion. There may be completely idiosyncratic events that elicit emotions unique to a single person, and these may be quite unrelated to the Antecedent for that emotion. There also could be an idiosyncratic event that calls forth an emotion that is related to an Antecedent. And there should be a variety of specific events that are shared by members of a social group or culture, which differ from other groups in detail but on a more abstract level show commonalities, and thus are derivative or at least conforming to an Antecedent.

Before addressing the question of how these commonalities in emotion antecedents are transmitted from one generation to another, I need to digress for a moment to describe two types of emotional appraisal. I distinguished *automatic* appraisal from *extended* appraisal (Ekman, 1977). In the automatic appraisal, the organism responds in milliseconds to an event, with the cascade of emotional response changes occurring immediately, and often coincident but not necessarily prior to awareness of what has occurred. The issue I will address shortly is: How does our evolutionary history influence automatic appraisal to respond to the commonalities in the antecedent events for each emotion? Extended appraisal involves an activity that resembles problem-solving rather than reflexive or habitual behavior. An event is evaluated, considered, and then after some time the cascade of emotional responses may occur.

Scherer and Ellsworth have each offered models of how emotional appraisal occurs, and presumably their models apply to both automatic and extended appraisal. (See also Roseman, 1991, and Stein and Trabasso, 1992, for still other such models.) I find no reason to argue with any of these models, but I do not view them as convincing descriptions of how the mind actually operates during an emotion. They are instead attempts to account for how people explain what brings about their emotions. This is important information; it may tell us much about how people represent their emotional experience, and this may be very relevant to how they cope, how they justify, how they remember, and how they discuss their emotions with others. These appraisal models perhaps also may have provided a veridical account of what transpires during extended appraisal, or at least for one's memory of or attempt to explain one's extended appraisals. But they cannot tell us what happens during automatic appraisal.

If we were to ask people about their emotions the moment we notice that they occur, we would not be much better off. I presume that most automatic appraisal takes place in milliseconds, prior to awareness. Furthermore, I expect that people do not have the ability to identify during the emotional episode, or afterwards, the initial processes that occurred in those milliseconds. Thus, I believe we should not rely on what people tell us for evidence about how automatic appraisal operates. This is not to deny the importance of what people say about their emotions in understanding many other aspects of emotion—it is just not likely to be useful for understanding automatic appraisals.

In trying to answer the question of how automatic appraisal can allow for both variability and commonalities in what calls forth each emotion, I have borne in mind the need to devise a proposal that has some hope of being subject to empirical test. As explained earlier, I posit a limited number of abstract, antecedent events for each emotion. Is information about these abstract events genetically transmitted—pre-tuning, alerting, or sensitizing in some fashion automatic appraisal to occurrences that conform to them? Possibly, but let me suggest a more limited view of what is transmitted genetically, using fear as my example. There may be only one or two fear-relevant events that are genetically transmitted, and all others may be acquired, more or less readily depending on how closely they resemble these fear events. Let me suggest four candidates, based on conjecture about what events might have been most frightening during our evolutionary history. (1) Anticipating physical pain. (2) An object moving very quickly toward you, which would injure you if you did not duck. (3) A sudden loss of physical support, so that you are falling through space.

(4) Being touched from behind when you do not believe anyone else is present.<sup>1</sup> Conceivably, there might be just one such event or a limited number that are *the* fear events.

Any antecedent event that resembles one of these four would be easily acquired; and the greater the resemblance, the more easily it would be acquired. These events stand as metaphors for most of the specific antecedents that become part of our repertoire for calling forth fear. I believe it should be possible to learn other specific antecedent events for fear—or any other emotion—that are not related to one of these three events, but it should take longer to acquire those unrelated fear antecedents.

Measuring the latency of emotional reactions when presented with an emotional event could be a way to test this formulation. I am presuming that when automatic appraisal operates, there might still be some variation in the speed of operation as a function of how closely any particular event resembles the given fear event(s). The greater the resemblance, the shorter the response. The responses to be examined in such research should not be peripheral, such as expression or autonomic nervous system activity, but measures of central nervous system activity. The place to begin is with one of the themes that I or anyone else has proposed, and to compare stimulus events that more or less resemble it.

No one knows how automatic appraisal operates to call forth emotion, in ways that both show commonalities and differences across people and cultures. The challenge is to figure out a way of beginning empirically to find some reasonable approximations.

#### Note

1. This was suggested by Alexandra Kostic (personal communication, May 1993).