In Defense of a Psychological Constructionist Account of Emotion: Reply to Zachar

James A. Russell

Boston College

Abstract

An account of emotion must include categories and dimensions. Categories because humans categorize reality, and a person's categorization of their own state influences aspects of that state. Dimensions because humans are always in some state of Core Affect, which varies by degree along dimensions of valence (feeling good or bad) and activation (feeling lethargic or energized). In Psychological Construction, Core Affect and a host of other "components" are separate on-going processes, always in some pattern. Occasionally the pattern resembles a prototype of a category of emotion sufficiently to count as an instance of that category.

Zachar (2006) raised far too many interesting issues for me to be anything but highly selective in this comment. He showed how much I need to clarify and develop the account of emotion that I have been working on (Russell, 2003), and so I restrict myself to his remarks that bear directly on that account.

Let me begin with a distinction between what I'll call emotional episodes and people's understanding of those episodes (what for short I'll call the folk psychology of emotion). The task of providing an analysis of emotional episodes and the task of providing an analysis of folk understanding of those episodes are entirely different. The two topics are obviously related, but much confusion is avoided by distinguishing them. This is a distinction I had in mind when I used analogies from astronomy and astrology. An astronomer studies the stars, an anthropologist studies different people's beliefs about stars, such as a belief in astrology. Both studies are valuable and fascinating, but different. In the realm of emotion, it is perhaps confusing that we have no such division of labor. Further, in contrast to the current inability of human beliefs to influence the stars, folk psychology influences emotional episodes themselves. Even so, the distinction stands and is helpful in charting that influence.
Zachar (2006) may be right about the virtues of multiple systems of classification and in finding no philosophical problems in categorical accounts of emotion. The distinction between folk psychology and emotional episodes allows us to be more definitive. When the task is an account of the folk psychology of emotion, then categories are part of the object of study. People everywhere categorize those episodes we in English call emotion. Emotion itself is a label for a category used by speakers of English. People need categories to navigate their everyday lives. English-speakers use categories labeled fear, anger, jealousy, and so on. People in other cultures speaking other languages use other categories. Categorization is a fundamental psychological process in dealing with reality. Zachar wrote, “the world is made up of many particular things... We group particulars into kinds” (p. 134). In the study of folk psychology, our task is not to modify, criticize or eliminate categories, but to study them.

On the other hand, when the task is a scientific account of emotional episodes themselves, emotion, fear, anger, and so on are often treated as scientific concepts. (As folk concepts, they play a role in some emotional episodes, but that is a different matter.) As the science of emotional episodes evolved, the earliest accounts were articulations of folk psychology and hence relied on folk-psychological categories as scientific categories. Indeed, the most productive research program in the science of emotion in the last fifty years, the theory of basic emotions, has at its core a set of folk-psychological categories from English-speaking culture: happiness, surprise, fear, anger, disgust, and sadness. As evidence accumulated, however, problems were exposed. We must be willing to abandon those initial formulations and develop new ones. In accounting for emotional episodes, there may be no philosophical problem with such categorical accounts, but there are scientific problems. We cannot rule categorical accounts out logically, but the ones tried so far are in trouble empirically. In the study of emotional episodes themselves, our task may require us to modify, criticize, or eliminate prior scientific categories, including emotion, fear, anger, and so on.

Might new categorical accounts do better? I cannot say much about categorical accounts not yet proposed, but I am not optimistic. Consider the entire population of events in the extension of the concept of emotion. Surely, they can be categorized in an uncountable number of different ways. The question is whether any of the resulting category systems will prove useful to the science of emotional episodes. Similarly, stars in the heavens can be grouped into an uncountable number of different constellations. Doing so was useful in a preliminary way in astronomy and remains useful in navigation. Still, no grouping of stars into constellations proved useful in advancing astronomy, to the devel-
opment of a deep scientific understanding, for the simple reason that constellations are not causal entities.

The root problem in categorical accounts is not the formation of categories but the assumption that the inferred emotion is a causal entity. Guided by a folk psychology inherited from ancestors, the person who witnesses (in another or in him- or herself) certain events infers the existence of anger, fear, jealousy or another category of emotion as the cause of those events. In defending categorical accounts of emotion, specifically basic emotion accounts, Zachar countered my claim that basic emotions are not causal entities. Zachar pointed out that emotions have "causal relevance" (p. 128). Before clarifying just what I mean in saying that emotions are not causal entities, let me point to two senses in which emotions have causal relevance.

First, when a person witnesses or experiences an event and then categorizes it as, for example, anger, that act of categorization has causal relevance: the observer's behaviors and thoughts would be different if the observer had categorized the same event as, for example, jealousy or deceit or manipulation or insanity (or as liget, a concept in the Ilongot language; Rosaldo, 1980). The categories and propositions of folk psychology have causal relevance. Constellations have causal relevance in just the same way: A person who perceives a constellation (or an emotional episode) and believes in astrology (or in a particular folk theory of emotion) then adjusts beliefs and actions accordingly. Poker hands also have causal relevance in the same way because certain patterns of cards have meaning within the rules of poker. As Zachar points out, in draw poker, players act so as to alter the probabilities of certain hands. Folk psychology guides the observer's understanding of the events witnessed or experienced and hence the observer's behavior. As inferences, emotions have causal relevance.

Second, components of emotional episodes have causal relevance. Any actual emotional episode involves components, such as facial and vocal "expressions," subjective experiences, cognitive appraisals and attributions, overt actions, changes in the central nervous system, changes in peripheral physiology, and so on. Much research purported to show the effect or function of emotion can be reinterpreted as showing the effect or function of one or more of the components of the episode. Each component has causal power.

When I say that emotions are not causal entities, I mean to deny a specific common presupposition in much thinking about emotion, namely, that these components are effects of the emotion. On the traditional view, emotion is an entity that produces these components: anger made him tremble, fear made him flee, grief brought tears to his eyes. Current scientific literature on emotion is filled with claims of the effects (functions) of emotions. In more modern categorical accounts, emotion is thought of as an affect program or module that mediates
between the eliciting event and the emotion's components. On my alternative account, each component has its own causal chain (or at least explanation), but emotion is not one of the events in the chain.

One might respond by saying that we must posit an emotion – or at least some single cause such as an affect program or module — to account for the coherence (the patterning) among the components. Coherence is a matter of degree, and categorical emotion theories, like folk psychology, presuppose a high degree of coherence. By that, I mean a high correlation in time and intensity among the components. In folk psychology, concepts such as fear or anger include a prototype in which all the components cohere. In the science of emotional episodes, the degree of coherence is an empirical question — and the weight of evidence is that correlations among components are surprisingly weak and easily accounted for without supposing a single causal mechanism. Therefore, there is no demonstrated need to posit a single causal entity to account for coherence. There is little coherence to account for.

Of course, an explanation is needed for each token emotional episode. My proposal, which I call Psychological Construction, is that the explanation for a particular emotional episode (for example, the event in which Sally interpreted her friend's comment as an insult, blushed, perceived herself to be annoyed, and sat silently for several minutes) is to be had entirely by explaining each of the separate components. Such a research program may seem radical, but much research ostensibly on emotion can be reinterpreted as addressing individual components. So interpreted, this research is part of rather than competes with my account. For example, Panksepp's (1998) basic emotions (his systems such as CARE and RAGE) can be re-interpreted as ancient mammalian mechanisms that produce certain classes of behavior and may influence other components. CARE behavior and RAGE behavior, for example, might well be components of some emotional episodes. Such mechanisms are likely more ancient than the mechanism of Core Affect that I have focused on. Like Zachar, I doubt that there is a one-to-one correspondence between Panksepp's mechanisms and everyday categories of emotion (that CARE behavior occurs in all and only cases of love or that RAGE behavior occurs in all and only cases of anger). Panksepp uses all capital letters to distinguish his systems from everyday English terms.

Similarly, Sundararajan's (2008) analysis of the subtle mental processes involved in experiencing an emotion can become part of the account proposed here. An analysis of each such component process, including its neurobiological underpinnings and the genetic and epigenetic forces that shape it, should be the focus of our research. Psychological Construction is agnostic on the nature-nurture debate. Each emotional episode will also be witnessed, at least by the person under-
going the emotion, and here is one entry point for the causal relevance of folk psychology. (Which is different from assuming that the components and their temporal order are as specified in folk psychology.) Such a research program will reveal links between components. Still, rather than starting with the assumption of close links and then having to explain the dissociations, I suggest starting with the assumption that components are separate processes and then discovering what links actually exist.

Once each actual component of the emotional episode is explained, nothing is added by positing an additional causal entity that produced the components or the coherence among them. Zachar refers to the emotional episode as I envision it as a “mere construction” (p. 129). Indeed, I do eliminate an inferred unobserved causal entity that categorical accounts posit to explain the observed components. Still, my account does not challenge the reality of emotional episodes. On my account, every actual component of an actual episode token is as real as is a star in the Big Dipper or a card in a hand of poker. And the components occur in a temporal and causal order that is as real as the geometric configuration among those stars.

My account does not posit any single cause (an affect program or module or emotion or attribution or conceptual act) of all emotional episodes. The extension of the concept of emotion is heterogeneous. Emotional episodes are not fixed ahead of time, either genetically or culturally. Rather, the components are recruited on the fly to fit the particular circumstances of that particular individual person.

Such an approach may seem to leave unexplained the pattern among the components. So, what about patterns? In the account I am proposing, a component is not an isolated event with a beginning and an end. Rather, each component is an on-going continuous process. The face and head are always moving or at least have a certain degree of muscle tension. We are always appraising our environment. Our peripheral nervous system is always in some state. We are always behaving, typically with goals both explicit and implicit and with plans for reaching those goals. So, the various components are always in some pattern, and the pattern is changing frequently. Like most hands dealt in poker, most such patterns have no name in English, but a few patterns resemble the prototype of, say, anger or love close enough to count as an example of those categories. Resemblance to the prototype is a fact external to the components, not an additional internal causal entity, although noticing the resemblance can be part of the episode, as when Sally realizes that she’s annoyed but doesn’t want to be. In a fair game of poker, there is no straight-flush-generating mechanism; rather, hands are dealt and the cards always form a pattern. Only occasionally does a pattern occur that fits the definition of straight flush. Here too individuals are not passive in the process and can act to change the
components and their resemblance to certain prototypes (discarding cards to try for a straight flush).

The idea of psychological construction has no necessary connection to another idea I am developing, that of Core Affect, other than the fact that I happen to believe both of them. Because of Core Affect, Zachar places my account within the group of dimensional approaches, and he critically examines my claim that Core Affect is a real and primitive psychological element. Admittedly, there is an irony in my attempt to rid the science of emotional episodes of many of our essentialist folk-psychological notions while at the same time keeping Core Affect as pancultural (indeed perhaps panmammalian), primitive, elemental and real. As Zachar suggests, such a "bottom-up model should . . . be regarded suspiciously" (p. 132). Still, I think I can clarify the concept of Core Affect in a way that lessens some of Zachar’s concerns. Although Core Affect is elemental at a psychological level, it is decomposable at a biological level. Core Affect is elemental in the same way that sensations such as felt temperature or perceived color are elemental. Zachar points out that sensations in general are not as simple as is implied when they are treated as totally bottom-up processes. For example, the same shirt can seem brown under one lighting condition and green under another. Further, a person may come, through a top-down process, to see the shirt as green under all conditions. Similar processes likely occur with Core Affect. Core Affect is influenced by different environmental conditions and by top-down processes in much the same way that color sensation is influenced. Nevertheless, at any given moment, the way the shirt seems, or how Core Affect feels, is real.

Zachar rightly points out that we can distinguish different kinds of Core Affect based on its source: food, drink, etc. In English, we occasionally include the source as part of the concept, as in “romantic love” and “brotherly love.” Sometimes, the source is included in a single monolexeme, as in “narcissism” or “sunburn.” Consider a sunburn. The scientific questions are whether burns from the sun are different in important ways from burns from other sources: different physiological damage? Different means of cure? And what do burns from different sources have in common? For Core Affect, the scientific questions are whether pleasures and displeasures from different sources are different in important ways other than origin and the nature of what they have in common. I have offered one account, but I expect others to offer alternative accounts more along the lines Zachar suggested. The challenge will then be to find ways of bringing evidence to bear in choosing among them.

Finally, Zachar critically examined my claim that my dimensional account carves nature at its joints. Zachar pointed out that other dimensional accounts exist, but then the existence per se of alterna-
tives does not undermine any one account. I believe that my Core Affect account is the best available account of current evidence, but that is an empirical claim. Zachar pointed to the possibility that moods and emotions imply dimensions I have not included, such as changes over time. I agree. Moods and emotions both imply dimensions beyond Core Affect. My claim is that Core Affect is part of, not the whole of, what are called moods and emotions. For example, for a state of Core Affect to count as a mood, that state must generally persist for some time. A state would not count as a depressed mood if it disappeared after a few seconds. Ditto for the emotion of love. The extra dimensions such as time are not unique to mood or emotion but are applicable across domains.

Besides, analyzing what counts as mood or emotion is part of the task of understanding folk psychology and differs from the task of analyzing emotional episodes themselves. I began with this distinction, and now it is time to point toward the next step. In describing the latter task, I still used the folk-psychological concept of "emotional". Eventually, we must question this holdover from our past by discovering how to divide the world into domains that are more and more amenable to scientific analysis. The key to science is not answering all questions posed, but in finding questions that science can answer. The notion of psychological construction suggests that the concept of "emotional episodes themselves" is but a way station toward a scientific analysis.

References


Author Note

I thank Peter Zachar, Jaak Panksepp, and Louise Sundararajan for informal discussions that greatly contributed to this article. Correspondence concerning this article should be addressed to James A. Russell, Department of Psychology, Boston College, 140 Commonwealth Ave., Chestnut Hill, MA 02467. Email: james.russell@bc.edu