Basic Emotions and the Rocks of New Hampshire

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Abstract

This article describes James’s distaste for taxonomic classification of emotion and argues that he would not have been pleased by current scholarship which still focuses on the definition and classification of discrete emotions, distracting scholars from more fundamental underlying processes. I argue that as in James’s time, current taxonomies are still arbitrary and still constrain the kinds of questions psychologists ask.

Keywords

basic emotions, William James

Of all of William James’s comprehensive writings on psychology, his work on emotions is probably the most widely cited, and of all of his comprehensive writing on emotion, his paragraph about the bear and the importance of bodily responses is probably the most widely cited. James himself was very likely proud of this paragraph, regarding it as especially original and expressing it in language that was especially sensational: “the bodily changes follow directly the perception of the exciting fact, and that our feeling of the same changes as they occur IS the emotion” (1890/1950, p. 449, emphasis in original). Later, he regretted “the slapdash brevity” of the language he had used in this famous paragraph (1894, p. 519), and attempted to explain that the essence of his idea was that bodily feedback was necessary for the experience of emotion, but that it was not the whole story. Of course it was too late. Retractions and revisions rarely supersede a conspicuous original, and James’s 1894 article is no exception (Winton, 1990).

I have already written about the life of the bear in the subsequent history of psychology (Ellsworth, 1994). One of the legacies of this paragraph was that much of the rest of James’s writing on emotion was eclipsed. Here I want to talk about another belief that James held strongly and expressed vehemently, and that is his rejection of the categorical, taxonomic approach to studying emotions, and indeed of the whole idea of basic emotions.

James felt that the emotions were endlessly fascinating and exciting, but that the psychological literature about emotions was “one of the most tedious parts of psychology” (1890/1950, p. 448). He believed that most scholars of the time confined themselves to identifying the defining features of emotion in general and to meticulously describing the distinctive features of each specific emotion, and this kind of enterprise struck him as a waste of time. Although he quoted several of their descriptions of specific emotions at length, beginning his chapter with Lange’s description of grief, Darwin’s of fear, and Mantegazza’s of hatred, he felt that none of them actually captured the variety and idiosyncrasies of the emotions they described, and thus that the effort was doomed to failure, and infinitely boring: “I may have been surfeited by too much reading of classic works on the subject, but I should as lief read verbal descriptions of the shapes of rocks on a New Hampshire farm as toil through them again” (1890/1950, p. 448).

James was dead set against efforts to discover the defining features of each emotion if the purpose was to define the features that would differentiate it from other emotions and determine its place in the taxonomy. He rejected the categorical view of emotion. Instead he saw emotions like the color spectrum or like the weather—a vast domain with infinite gradations from one region to another with no clear boundaries: “The internal shadings of emotional feeling … merge endlessly into each other” and “its subdivisions are to a great extent either fictitious or unimportant” (1890/1950, p. 448). Weather is perhaps a better analogy than color, because even in James’s time the color spectrum could be defined by a few easily specified dimensions (hue, brightness, and saturation) and because the color of an object usually remained the same over the course of a day, unlike the weather. The words people use to create subdivisions in complex continuous spaces like color,
weather, or emotion vary across time and space, and James would have argued that it would be ridiculous to assume that the English emotion terms most popular in 1890 represented fixed, eternal emotional entities.

The English emotion terms most popular in 2013 differ somewhat from those of 1890, and so do the emotions that most capture the attention of psychologists. James talked about the vicious delight people derive from hurting animals or other people or watching them get hurt, an emotion that has pretty much dropped out of scholarly consideration today, and may even be considered vaguely pathological, our passion for football and hockey notwithstanding. The variety of pleasant emotions studied by today’s positive psychologists vastly exceeds those that were considered a century ago (and does not include the joy of inflicting pain). There is no reason to believe that today’s favorite emotions come any closer to representing fixed, eternal emotional entities than did those of 1890. The Romantic 19th-century preoccupation with the nuances of grief and gloom (Houlbrooke, 1989) has given way to a preoccupation with the varieties of happiness. People’s perceptions of the domain of emotions, and no doubt their actual emotional experiences, change with history and with culture.

James pointed out that language discriminates a few points in the infinite spectrum of emotional experience, but the chosen points vary with time and culture. James would have been distressed to see that the urge to create taxonomies of emotion continued unabated throughout the 20th century and into the 21st. Scholars have divided the entire domain of emotions into “basic emotions” and other emotional experiences, which are sometimes characterized as blends, members of one of the basic emotion families, or not an emotion at all, and sometimes just ignored. Other scholars have concentrated on differentiating similar emotions within a smaller region of the domain, for example differentiating shame, guilt, and embarrassment (Tangney & Dearing, 2002) or sympathy, empathy, and compassion (Batson, 2009). Still other scholars have concentrated on a single emotion such as pride or compassion, and have attempted to demonstrate that it too deserves to be considered a basic emotion (Goetz, Keltner, & Simon-Thomas, 2010; Tracy, Shariff, & Cheng, 2010). While James would have had no objection to the detailed analysis of particular kinds of emotional experience, and indeed engaged in such analyses himself, he would have regarded the effort to define the experience as basic and categorically distinct as uninteresting and futile.

In 2011 Sara Konrath and I hosted a speaker series on emotion at the University of Michigan Research Center for Group Dynamics. Topics ranged from neural circuits to feelings-as-information theory and covered a variety of different theoretical orientations. Nonetheless, I was struck by how many of the speakers, particularly the younger ones, seemed to take the idea of basic emotions for granted as a sort of background reality. Some of them had research programs devoted to a particular emotion with detailed descriptions such as those of Lange, Darwin, and Mantegessia quoted by James, and were trying to prove that it too should be considered a basic emotion. James would, of course, have found this approach disturbing, and might have felt despondent that the psychology of emotion had changed so little over the course of a century. He might have been somewhat gratified that most of the speakers seemed to feel that physical correlates were an essential criterion of a basic emotion, but only somewhat; physical correlates of emotion were generally accepted in James’s day, and their detailed descriptions were among the things that he found tedious. It was the role of the bodily responses as central and definitive that was interesting to James, the underlying processes that led to emotional experience.

Slightly over a hundred years later, I too was struck by the uncritical acceptance of basic emotions, but even more by the unexamined acceptance of what the basic emotions were. Several speakers confidently referred to the “canonical six” as though these were generally accepted as the only truly basic emotions. And they were right: These six emotions are widely used in designing brain and behavioral research (see LeDoux, 2012, for a critical review of this approach) and the term “canonical” is often used to describe them.

The canonical six are the six emotions studied by Paul Ekman and Wallace Friesen in their initial demonstration that facial expressions were seen as registering the same emotions by members of different cultures, including preliterate cultures with minimal contact with the West (Ekman & Friesen, 1971; Ekman, Sorenson, & Friesen, 1969). The emotions in that research were happiness, sadness, fear, anger, disgust, and surprise. I remember them well, because long ago I felt guilty that there were so few. When I was a graduate student at Stanford I spent the summers of 1967 and 1968 working in Paul Ekman’s lab at the Langley Porter Neuropsychiatric Institute in San Francisco. None of the professors at Stanford were interested in the nonverbal expression of emotion, or indeed in emotion in general, and there were few graduate students at Langley Porter, so it was a valuable arrangement on both sides and certainly an exciting one for me. Sitting around a table with smart people who cared about emotion and its expression, arguing about how to study emotion, how to measure it, and what were the most burning immediate questions, were exhilarating high points of intellectual excitement in my life, and I will always be grateful for them.

One of the most challenging projects I worked on was planning and preparing the cross-cultural research. The accepted wisdom of the day was that expressions of emotion were culturally determined, rather like language, and we believed that that was wrong. This belief was consistent with the cultural relativism that dominated anthropology at the time. Psychology also rejected the idea that facial expressions corresponded to emotions. Most of the popular introductory psychology textbooks of the day had a demonstration designed to show that students’ beliefs that facial expressions of emotion were meaningful was a delusion. They would show a picture of the face of a person expressing some extreme emotion—often apparently some form of agony, and ask the reader to guess what the emotion was. A few pages later they would show the whole picture—for example, the person screaming because she had just been chosen as Miss America. The caption would smugly point out how wrong the student was to believe in facial expressions.
The best-known psychological theory of emotion at the time was the constructionist theory of Schachter and Singer (1962), who proposed that emotions were situational interpretations of a generalized psychological arousal, a position that was perfectly consistent with cultural relativism, although they did not talk about culture. Certainly Schachter and Singer’s theory was consistent with the idea that emotions were learned responses, and thus unlikely to be universal.

I do not know why Paul Ekman and Wally Friesen were convinced that this position was wrong. My own conviction had its roots in The Family of Man (Museum of Modern Art, 1955), an exhibition of photographs of people from many cultures and walks of life, loving, working, grieving, celebrating—doing and feeling the things that all people do and feel. It emphasized our common humanity, common joys, and common predicaments, and made an indelible impression on me when I first encountered it at the age of 15. Later on, when I read that emotions and their expressions were culturally specific, I could not believe that the Asians and Africans in those deeply moving pictures were actually not experiencing the emotions I saw in their faces and bodies.

Belief is easy. Figuring out how to test that belief was hard. We needed to show the same facial expressions of emotion to people in different cultures and find out whether they saw them as showing the same emotions. My job was to go through all of the old research that had used pictures of facial expressions and find the ones that had gotten the highest agreement in the original research, and then to test them out on American samples to get current American norms on the same scales for all pictures. (Earlier researchers had used a variety of different measures and we hoped to develop scales which could be used in the cross-cultural work.) The goal was to come up with a set of pictures that unambiguously showed each emotion when tested on American samples.

Which emotions were we looking for? We had both empirical and theoretical criteria. Empirically, any emotion that had elicited high agreement in past research was a candidate—that is, our criterion was more or less “whatever we could find.” Theoretically, we were loosely guided by the theory of Silvan Tomkins, who had been an advisor to Paul, and who stopped by from time to time like an itinerant schoolmaster to approve or disapprove the pictures we had found for the cross-cultural work, to tell us whether the face really expressed the right emotion. Silvan’s theory proposed nine emotions: interest/excitement; enjoyment/joy; surprise/startle; distress/anguish; anger/rage; fear/terror; shame/humiliation; disgust; and “diss-mell” (contempt; cf. Tomkins & McCarter, 1964). I scoured the files and reports of contemporaneous and earlier researchers for examples of facial expressions of these emotions, and when I found pictures that had gotten high consensus in the original research, I retested them on contemporary American samples at Stanford. Some continued to be recognized as the intended emotion by almost all of the new judges, and some did not. (It is striking to me to see how much hair styles and other “old-fashioned” stigmata influence judgments of emotion, and perhaps worth studying.) We also wanted to have pictures of both men and women, and, if possible, children, for each emotion. I kept looking—all of us did—but eventually time ran out, and we had to make do with the pictures that we had. So interest, shame, and contempt did not make the voyage to New Guinea, sometimes because we were only missing one or two pictures (e.g., we did not have a good male shame expression). With a few more weeks or months, the list of canonical emotions might have been longer.

So the canonical six were an accident. We simply fell short of Tomkins’ canonical nine, which still constituted just one canon among many—far fewer, for example, than the number of emotions described by Darwin (1872/1998). Carroll Izard, at about the same time, conducted cross-cultural research and found evidence for all nine of Tomkins’ emotions (Izard, 1971), but this work did not establish a canonical nine. Although he tested people from eight different cultures, including Japanese and Africans, all of his subjects were college students, so there was always the possibility that they were influenced by American magazines and movies. The New Guinea research, with its visually isolated participants, was the only research that was not subject to this criticism, and in the New Guinea research there were only six emotions. Ekman and Friesen later conducted research demonstrating that by the same criteria, contempt should be included on the list of basic emotions (Ekman & Friesen, 1986), but people are still far more likely to refer to the canonical six than to the canonical seven. Certain findings, and certain articles, get stuck as definitive, regardless of the subsequent statements of their authors.

The New Guinea research persuaded the scientific community that emotional expressions were not entirely culturally determined. Since then a great deal of research has been done on cultural similarities and differences in emotion and emotional expression, much of it starting with the canonical six, some attempting to show that one or more of the six emotions is missing in a particular culture, some attempting to show that other emotion is important or even unique to a particular culture (see Niedenthal, Krauth-Gruber, & Ric, 2006, Chapter 9). Even the original research did not find that all six of the emotions were recognized in New Guinea: surprise was not reliably distinguished from fear. This could be seen as evidence of a cultural difference, or as evidence of cultural similarity, as even in America the most common mistake participants made when judging surprised or fearful faces was to mistake each for the other. William James was perfectly comfortable with the idea that emotional experience is different in different cultures. If the human nervous system allows for infinite possibilities, cultural differences are to be expected, “each race of man having found names for some shade of feeling which other races have left undiscriminated” (1890/1950, p. 485). The underlying neurological processes could be universal, but the selection of which ones to emphasize and recognize with verbal labels was not.

It is natural for people to think in categories. Research on cultural differences typically shows that some cultures emphasize categories that others lack, or lack categories that others emphasize, as James suggested, but none of this research suggests that there are cultures without names for emotions or without emotion categories. In the West, philosophers have debated
the definition and value of emotion, but they have all divided emotion into categories. The Greeks, the Christians, and the Enlightenment philosophers emphasized different categories, and included and excluded different states in their answers to the question “What is an emotion?” but they all thought in terms of categories (Solomon, 2000).

Not even James himself could resist the attraction of categories. He begins his chapter on the emotions by describing grief, fear, and hatred, although he is careful to say that none of the physiological or psychological reactions typical of these emotions is universal, and he decides to stop with these three because the exercise of documenting the particulars of every possible emotion is ultimately boring and pointless. The chapter before the emotions chapter is on instinct, and there James describes a number of discrete instincts that most current researchers would classify as emotions, although not as the basic ones, for example, sympathy, shyness, shame, desire, parental love, jealousy acquisitiveness, and the urge to kill and destroy. The differences between the experiences James considers instincts and those he considers emotions seem to involve their association with specific action tendencies, which are tighter for instincts than for emotions, although by no means irresistible. Nor does James bother with clear distinctions between instincts and emotions: Fear and anger, for example, appear in both chapters.

Thinking in categories is not “wrong”; in fact it seems to be inevitable. And understanding the emotion categories that exist in a culture is crucially important for understanding the emotions that the people in that culture feel. Emotions are often disturbing and disruptive, and having a label is a comfort. Theories of “folk emotions” or “lay theories of emotion” cannot be separated from theories of the actual experience of emotion because folks actually feel the emotions in their folk theories. By now it has been amply demonstrated that cognition and emotion are largely inseparable, and if emotions are influenced by a person’s cognitions about the world they must be influenced by the person’s cognitions about what kinds of emotions there are. So an understanding of the categories of emotion that people take for granted is essential to understanding their actual emotions—not the whole story, but an important element, because people’s emotional experiences are influenced by the way they have learned to experience them—typically as categories.

Some fraction of humanity—probably a small fraction—has always suspected that the reality we live in is largely socially constructed. In the West this idea appears in Epictetus, who argued that “what upsets people is not things themselves but their judgments about the things” (White, 1983, p. 13), and may have existed earlier. In 20th-century social science it is embodied in Thomas and Thomas’s widely influential statement that “if men define situations as true, they are true in their consequences” (1928, p. 572), in Merton’s self-fulfilling prophecy (1948) and in Ross’s “naïve realism” (Ross & Ward, 1996). So the emotion categories people have learned are real to them (Barrett, 2012; Russell, 2003). James would not have denied this, but it was not what interested him. He was interested in the reality that was not socially constructed, and he believed that it could not be explained by anyone’s particular collection of labels.

Modern social constructionists also believe that there is some underlying neurological or physiological process which a social group understands by means of a set of concepts that are assumed and transmitted in the culture. This underlying process has been seen as general autonomic arousal (Schachter & Singer, 1962) or as a combination of general arousal and valence (Russell, 1980; Schlosberg, 1952) or as a three-dimensional space (Osgood, May, & Miron, 1975; Wundt, 1896). Others postulate five or six dimensions, corresponding to the organism’s appraisal of its current environment (Ellsworth & Scherer, 2003) or to its underlying survival needs (LeDoux, 2012). This underlying process was what James cared about. He regarded the naming of separate emotional states as a more-or-less arbitrary social construction, variable across cultures and across individuals who differed in their “introspective vocabulary” (1890/1950, p. 485), but especially reprehensible when proposed and promoted by scientists.

James’s view of the underlying reality—the reality that was not socially constructed, was somewhat different from that of the modern social constructivists, who tend to believe that the physiological and neurological processes are amenable to definition by social construction because they are vague and amorphous, either a generalized allover excitation or an excitation with a general positive or negative valence. Like the diviner looking into a bowl of swirling liquid, the culture can imagine different images in the formless eddy, which are reified as beliefs about the nature of emotion and as emotion labels. For James, the underlying processes were not formless, but infinitely and precisely various, with no distinct boundaries, “merging endlessly into each other” (1890/1950, p. 448) so that no person or culture could possibly recognize them all. Emotional experience then, is not so much a process of construction as a process of selection, each culture drawing boundaries around certain regions of the infinite complexity and leaving others undiscriminated. Just as different languages privilege certain sounds as significant so that they are meaningful phonemes in that language, so they privilege certain physical, neurological distinctions as significant so that they serve as meaningful markers of different emotional states. According to James, emotion labels do in fact describe different physiological and neurological processes, but there are far more processes than there are labels in any language, and individuals differ in their use of these labels, so the labels are a poor guide to the underlying processes.

So James probably would not have condemned the study of the processes by which people or cultures select meaningful events from the infinity of possibilities or the comparison of different emotional representations across individuals or cultures. What he did condemn was the assumption that some particular selection was the right one or the real one, that by studying and documenting one particular arbitrary set of distinctions in detail we might discover truths about emotion that would hold for all people and all times. He would have rejected the idea that there are 6 or 7 or 10 or 20 basic emotions, and the
James argued that a taxonomic, basic emotions point of view distracts us from the interesting questions about the infinity of emotional states—what they correspond to in neural processes, in awareness, in behavioral tendencies; how they shade from one to another over time; and how they may differ in individuals and in cultures. He assumed that the whole infinite range of emotions was available to everyone, although temperament and habit typically limit the range of emotions any given person actually experiences. He felt that a taxonomic approach distracted scientists from important questions of variety and process.

A taxonomic, basic emotions point of view not only makes it difficult to account for the ebb and flow and shifting of emotional experiences in the short run, but also for historical changes in emotion. New names for emotions appear and disappear over the centuries, and old words change their meanings. Samuel Pepys, in his diary (1659–1669/1942), says he is melancholy on occasions when we would say sad, and merry on occasions when we would say happy. Once in a while he described his wife as feeling “musty.” The taxonomy of emotions designated by the Christians as the seven deadly sins include some that we recognize as emotions today—anger, pride, and envy, although only anger is included in most lists of basic emotions; and some that are not included in anyone’s taxonomy—greed, gluttony, lust, and sloth. Descartes’ canonical six “primitive emotions” were wonder, love, hatred, desire, joy, and sorrow. Why do we now consider envy an emotion but not greed? This is the sort of question that drove James to distraction, because any taxonomy would be arbitrary, perhaps useful for some purposes but never for all. The seven deadly sins may have been useful as a guide for moral behavior, but not for other purposes. The Linnaean taxonomy was useful because it suggested relationships among species, and may have contributed to Darwin’s account of the origin and development of species. But Linnaeus’s attempt to account for the relationships among rocks with a similar branching taxonomy was a total failure. James was interested in the origin and development of emotions and he felt that no taxonomy yet devised contributed to answering that kind of question. That is particularly true of the basic six, which are a purely nominal collection.

Just as a basic emotions point of view influences what we look for in different cultures or social interactions or individual experiences, so it influences what we look for in the brain, and the problem is that it becomes hard to see anything else. If happiness, sadness, fear, anger, surprise, and disgust, or any other collection of emotion labels, is the signal, other potentially significant emotional processes may be dismissed as noise and ignored. LeDoux (2012) cites a review article (Fusar-Poli et al., 2009) reporting over 500 studies that examined brain activity in search of the basic six categories, and, like James, argues that these categories distract us from seeking other, perhaps more general, processes such as the “survival circuits” related, for example, to the organism’s need for food, sex, and safety. As James said:

The trouble with the emotions in psychology is that they are regarded too much as absolutely individual things. So long as they are set down as so many eternal and sacred entities, like the old immutable species in...
natural history, so long all that can be done with them is reverently to catalogue their separate characters, points, and effects. But if we regard them as products of more general causes (as “species” are now regarded as products of heredity and variation), the mere distinguishing and cataloguing becomes of subsidiary importance. Having the goose which lays the golden eggs, the description of each egg already laid is a minor matter. (1890, p. 449)

Note
1 It has always struck me as rather peculiar and unlikely that seeing a couple of foreign movies or reading a couple of foreign magazines should be enough to wipe out a lifetime of experience in people’s perceptions of something as fundamental as emotion, but that seemed to be the going hypothesis at the time. Also, the fact that it was easier to find pictures for these six emotions than for others may reflect the fact that they are more common, or at least that they were regarded as more important by the researchers of the preceding 50 years.

References