What Do Emotion Words Represent?

Michelle N. Shiota and Dacher Keltner
University of California at Berkeley

In their target article, Sabini and Silver claim "that there are fewer [emotional] mental states than there might seem to be, but that they are related to language and its use in more complicated ways than had been thought" (this issue). They describe an unspoken assumption among psychologists that every emotion word in a given language corresponds to a different "mental state." Sabini and Silver invoke classic communication theory to counter this assumption, proposing that emotion vocabulary encodes information about the perspectives of the transmitter or speaker and the receiver or listener (Grice, 1968; Searle, 1969), as well as the perspective or mental state of the subject of conversation (the person feeling the emotion). To support this proposal they offer a few thought experiments and discuss several studies in which participants' emotion labels for the feelings of characters in scenarios can be explained by variation in social information properties of the situations.

We firmly agree that no one-to-one correspondence exists between emotion words and emotion states. In fact, this statement seems quite uncontroversial; we disagree that psychologists generally presume the existence of a different emotion state for each word, if by "emotion" is meant a motivational state with qualitatively distinct biological characteristics (as suggested by the phrase "mechanisms that generate certain mental states," this issue). The suggestion that psychologists, as a rule, adopt such an extreme perspective thus is something of a red herring in Sabini and Silver's (this issue) argument.

In our comments we address a key question implied in the target article: What do words represent? The statement "each of the lexicalized emotion terms names a different experiential state" is a specific case of the Sapir-Whorf hypothesis, that human perception and experience are constrained by the vocabulary available to describe them (Sapir, 1921; Whorf, 1956). We discuss an alternative approach to the meaning of human language—that words represent experiential prototypes about which a particular society finds it useful to talk (Hunt & Agnoli, 1991; Oatley, 1993; Pinker, 1999; Rosch & Lloyd, 1978; Shweder, 1993). On this basis, we agree that vocabulary encodes many aspects of emotion episodes, and reflects tremendous social construction of meaning (Oatley, 1993; Shweder, 1993). We emphasize, however, that such meaning-making neither perfectly reflects nor precludes the existence of underlying biological features of emotion. Thus language-based research should be used cautiously in the attempt to identify biologically

meaningful emotion constructs. We briefly discuss data regarding behavioral and nervous system correlates of embarrassment, shame, joy, and pride that challenge the target article's description of these states, and conclude by calling for more collaboration between the evolutionary and social constructivist camps of emotion research.

Emotion Words ≠ Mental States

As Sabini and Silver (this issue) rightfully note, considerable attention has been paid to variation in the emotion vocabularies of different languages. The absence of words for "disgust" in Polish (Wierzbicka, 1986) and "sadness" among Tahitians (Levy, 1973), for example, has been thought by some to reflect the absence of the corresponding emotional experience in those cultures. The converse is also true—the presence of untranslatable emotion words such as "amae" in Japanese (Doi, 1973) and "schadenfreude" in German (Leach, Spears, Branscombe, & Doosje, 2003) has been taken as evidence of culturally unique emotion states. Across cultures, the size and diversity of the emotion lexicon certainly does vary considerably (Russell, 1991).

This line of anthropological research had considerable influence on psychological emotion theory during the mid-20th century, primarily by discouraging evolutionary approaches to discrete emotions. In our reading of the literature, most psychologists seem not to have interpreted these findings as evidence of a large number of biologically distinct internal states. Rather, the dominant interpretation was that "emotion" consisted of sympathetic nervous system arousal, and that further distinctions were biologically meaningless—a standpoint taken to its extreme by Schachter and Singer (1962).

From the 1970s on, however, theory and research on emotion-related appraisal, physiology, neural activity, and facial and social behavior have mostly addressed the characteristics of a few specific states (e.g., Buck, 1999; Davidson, Ekman, Saron, Senulis, & Friesen, 1990; Ekman et al., 1987; Izard, 1977; Keltner & Haidt, 1999; Lazarus, 1991; LeDoux, 1996; Levenson, Ekman, Heider, & Friesen, 1992; Panksepp, 1998; Scherer, 1997; Smith & Ellsworth, 1985; Sutton & Davidson, 1997). These lines of research recognize that emotion can be communicated in many ways— through facial displays (Ekman et al., 1987), exclamations (Hupka, Lenton, & Hutchison, 1999), descrip-

tions of elicitors (Hupka et al., 1999), social and instrumental behaviors (Hupka et al., 1999), vocal tone (Pittman & Scherer, 1993), and involuntary physiological responses (such as blushing and piloerection) as well as verbally.

Even psychologists conducting language-based research tended to emphasize similarities among states represented by different emotion words, using one of two approaches (Averill, 1997). The first is a categorical approach, in which a few emotion prototypes are derived from participants' use of a large number of emotion terms (e.g., Averill, 1997; Ortony, Clore, & Collins, 1988; Shaver, Schwartz, Kirson, & O'Connor, 1987). In these studies, groups of semantically and statistically related emotion words are thought to denote elicitor-, target-, or intensity-based variants (if not actual synonyms) of a few, core emotions. The second approach highlights the two orthogonal factors that emerge from participants' use of emotion words to describe themselves and other referents (e.g., Feldman, Barrett, & Russell, 1998; Watson, Clark, & Tellegen, 1988).

Even among researchers who emphasize a greater degree of differentiation, the number of categories finally discussed is generally under 15. The door is left open for subtleties of the emotion lexicon to reflect other aspects of the person, situation, or communication act. A thorough review of the literature suggests that emotion researchers are prepared to acknowledge 10 or 20 biologically meaningful emotion categories, at most. We agree, however, that errors of two types have been made fairly often by emotion researchers. The first, as Sabini & Silver (this issue) note, is when different words are presumed to indicate different emotion states. The other is when the absence of a word in some language is presumed to indicate the absence of the corresponding emotion state. We believe that a different implicit assumption, more pervasive and serious in linguistic research on emotion, is behind both of these errors. This is the assumption that, if emotion has a biological basis, then the social construction processes of meaning-making encoded into vocabulary must reflect that biological basis accurately and in all cultures. This is inconsistent with most of what we currently know about language, and has led to distracting and unnecessary conflict between emotion traditions that could easily work in tandem.

What Do Words Represent?

The relationship between language and experience has been debated by linguists and anthropologists for decades. If psychologists were to assume that each emotion word corresponds to a distinct experience, this would simply be a special case of the theory proposed by Edward Sapir (1921) and Benjamin Whorf (1956)—that vocabulary shapes experience, thought, and perception rather than the other way around. The implication for emotion would be that speakers of a given language do not experience emotions for which they have no word, and that there is a separate "mental state," if you will, for every emotion word they do have.

There is no empirical evidence for the general version of the Sapir–Whorf hypothesis, and plenty to the contrary. For example, a number of languages have far fewer color words than does English (Berlin & Kay, 1969; Witkowski & Brown, 1977). It is interesting to note that additional color words are added in a predictable sequence—the first two are black and white, the third is usually red, and so on (Berlin & Kay, 1969; Witkowski & Brown, 1977). However, the absence of the word "green" in a given language does not indicate that speakers of the language do not see green, do not have green-spectrum cones, or cannot distinguish green from blue (Ludwig, Goetz, Balgemann, & Roschke, 1972). Language does have some influence on the perceived boundaries between categories, which may affect fluency with some discrimination tasks, but it does not necessarily alter capacity for perception or experience (Özgen, 2004).

The point of this research, and the dominant conclusion drawn by cultural anthropologists and cultural psychologists, is that language does not map perfectly onto "reality" or our experience of it. Rather, vocabulary reflects the social construction of experiential prototypes about which a particular society finds it useful to talk (Hunt & Agnoli, 1991; Oatley, 1993; Pinker, 1999; Rosch & Lloyd, 1978; Shweder, 1993). For one society this means having dozens of words for acorns (Bright, 1957); for another it means dozens of ways to say "thank you," or dozens of words for emotions in interdependent or hierarchical relationships (e.g., Doi, 1973). Linguistic construction of meaning does not only take place at the level of vocabulary. The process of putting experiences into words, especially about an emotionally difficult topic, can allow us to access insights and create coherent ways of understanding stressful or traumatic situations that have concrete impact on well-being (Pennebaker & Francis, 1996; Pennebaker, Mayne, & Francis, 1997). Verbal articulation allows us to label and communicate categories, and relationships among categories, that together impose structure and purpose on an otherwise chaotic world.

The word-as-prototype perspective has been fruitful in emotion research. In one classic study, 135 English emotion words were sorted by participants into as many categories as they liked, and the resulting data were subjected to hierarchical cluster analysis (Shaver et al., 1987). A clear set of six clusters, with prototype labels, emerged from the analysis. The six prototype labels correspond to those mentioned most often when participants are asked to list emotion words (Fehr &

Russell, 1984), and they are the emotions children are earliest to name (Bretherton & Beeghly, 1982).

Other researchers have extended these initial findings, asking participants to describe experiences with particular emotion labels in order to define the prototypical characteristics of those emotions (e.g., Scherer, 1997; Scherer & Wallbott, 1994; Shaver & al, 1987; Smith & Ellsworth, 1985). The corresponding characteristics are generally not culture-specific; certain appraisal patterns and eliciting situations are identified across cultures with the experience of the nearest-translated emotion word, provided that prototype words are used. And some, although not all, of these prototype words also map onto distinct patterns of facial movement and central and autonomic nervous system activity (Ekman et al., 1987; LeDoux, 1996; Levenson et al., 1992; Panksepp, 1998). When participants are asked to freely label the emotion associated with a facial display of one of the prototype emotions, well over 50 percent offer emotion labels identified in other research as variants of the "core" prototype, and few use emotion words from another cluster (e.g., Izard, 1971; Russell, 1994).

Social Construction of Meaning in Emotion Language

As we can see, the word-as-prototype perspective has had a much greater influence on emotion research than has the Whorfian hypothesis (Oatley, 1993). This perspective also helps to explain much of the worldwide variability in emotion lexicons. Emotion is often elicited in social contexts, and has tremendous implications for social interaction (Goffman, 1959; Keltner & Kring, 1998; Shiota, Campos, Keltner, & Hertenstein, 2004). Thus, whether emotion is worthy of discussion, what emotions are worth talking about, and how finely differentiated emotion words in some category need to be depends upon the social structure of any given society (Abu-Lughod & Lutz, 1990; Hupka et al., 1999; Lutz, 1988; White, 1993).

Sabini and Silver make an excellent point on this issue—that emotion words can encode many features of an emotion episode other than internal experience, such as perspectives of the speaker and listener, facial display (Ekman et al., 1987), and social control of others' behavior (Hupka et al., 1999). To this list we would suggest adding eliciting situations (e.g., grief vs. disappointment), intensity (e.g., annoyance vs. fury), target (e.g., frustration vs. hate), duration (e.g., anxiety vs. alarm), and the relative status and familiarity of the individual experiencing the emotion. As an example, a high-status person might be hesitant to label certain emotions as "shame" or "gratitude," because these both imply loss of face. This might make a variant label necessary in a highly status-differentiated society.

Some emotions become "hyper-cognized" by adding details like these, so that the core prototype is elaborated and embellished, with variants and conditionals that are then reflected in a more differentiated emotion lexicon (Levy, 1984). By contrast, other emotions in any given society may be "hypocognized." Because they are of less social relevance, are less socially desirable, or are actually experienced less often because the social structure discourages events or appraisals that trigger such an emotion, such words receive less conceptual elaboration and thus fewer words in the lexicon (Levy, 1984). This is very different, however, from the statement that a society "does not have" a particular emotion.

This analysis clears up many points of confusion in the emotion literature. For example, some researchers have presumed, from the absence of a word for *amae* in English, that Americans do not experience *amae.* This conclusion was never intended by the researcher who originally described the state (Doi, 1973). Doi believed that *amae* is universal, but that it has a word in Japanese because interdependence and reliance on intimates are explicit and fundamental parts of the Japanese social structure. Doi also contended that Americans do not have a word for *amae* because they deny their need for and experience of this crucial emotion, rather than making a place for its healthy expression. This, he says, gets us into trouble in intimate social interaction.

Integrating Linguistic and Bio-Behavioral Evidence

If the absence of an emotion word need not imply absence of the corresponding emotional experience, and the presence of two emotion words need not imply two biologically different emotional experiences, then the emotion lexicon and its application should not be the only basis for defining biologically meaningful emotion constructs. Words should not be our sole point of departure for studying emotion. We may have access to a whole Crayola box of color words, but we still have only three kinds of color-encoding structures in our retinas, responding to three ranges of wavelengths. Language-based research should not be ignored, and has made important contributions. Researchers who seek to identify emotion constructs with some biological foundation, however, must integrate linguistic findings with other kinds of data.

The authors of the target article basically uphold this point about the need for caution in drawing conclusions from the emotion lexicon. At the same time, they seem to ignore the social, biological, and behavioral evidence about specific states they discuss. For example, Sabini and Silver (this issue) take issue with an appraisal-based distinction between shame and embarrassment offered in earlier literature, and go on to argue that the two terms re-

fer to the same mental state. The reporting of Keltner and Buswell's (1997) summary was correct, however only in the context of a wide body of narrative and behavioral data regarding other situational and behavioral differences. For example, embarrassment is associated with a larger and less intimate audience (Tangney, Miller, Flicker, & Barlow, 1996), unexpected social attention (Hashimoto & Shimizu, 1988; Keltner & Buswell, 1997), and a display that includes smiling and gaze aversion, head turns, and face touches that "hide" the self (Keltner, 1995; Keltner & Buswell, 1997). By contrast, shame does not require a large audience (Tangney et al., 1996), involves personal responsibility for the target event based upon a stable, core aspect of the self (Babcock & Sabini, 1990; Tangney, 1992; Tangney et al., 1996), and is displayed with a smile-free expression (Keltner, 1995; Miller & Tangney, 1994). A distinction taking all of the available evidence into consideration might be that embarrassment involves awareness of unwanted and distancing social attention, resulting from one's own non-normative behavior, motivating one to re-integrate with the social group, whereas shame involves a awareness of one's own inherent moral failings, motivating one to withdraw entirely.

We have similar concerns about joy and pride. Sabini and Silver (this issue) suggest that these are the same internal state, differing only in eliciting situation. Certainly the English term "joy" is very vague, and used to refer to a wide range of positive feelings (Shiota, Keltner, & John, 2004). Behavioral data suggest that pride and the reward-focused positive emotion one might experience after winning the lottery are quite different, however (Shiota et al., 2004; Tracy & Robins, 2004). A strong Duchenne smile, in which the muscles around the eyes contract and the mouth corners lift, is characteristic of joy or happiness (Ekman et al., 1987). Recent findings from independent laboratories suggest that pride displays involve a slight, non- Duchenne smile with compressed lips, head tilted back, and expanded posture with upright torso and shoulders pulled back to expose the chest (Shiota, Campos, & Keltner, 2003; Tracy & Robins, 2004). This display is typically associated with the communication of social status, highly appropriate for the experience and likely function of pride (Seidner, Stipek, & Feshbach, 1988; Tiedens, Ellsworth, & Mesquita, 2000).

There are similarities between reward-related positive emotion and pride, just as there are similarities between embarrassment and shame. For example, dispositional pride and reward-related positive emotion are correlated in rather similar ways with the Big Five personality dimensions, with life satisfaction, and with adult attachment style (Shiota et al., 2004). But similarities in one domain must be evaluated together with evidence from other domains when trying to establish emotion constructs useful in further research. If anything, positive emotion has been considered a single category of experience for too long, with psychologists overlooking evidence of multiple distinct states (Shiota et al., 2004).

Summary

Words and emotions (as the term is meant by psychologists who presume a biological and evolutionary foundation for the latter) are very different entities. Words reflect ways in which cultures group categories of experience, into units that are meaningful to talk about, in the context of a particular way of life (Shweder, 1993). The domain covered by a word can be meaningful, and the events within that domain may have "real" properties of their own, without the word necessarily mapping onto all of those properties. Words emphasize properties of some event a culture wants to talk about; they may not reflect the "right" or "best" categorization scheme as defined by scientists for other purposes.

Thus, emotion words can convey information about internal states, attitudes, beliefs, social contexts, elicitors, motivations, values, behaviors, and many other referents. Sabini and Silver (this issue) ask: "might there be fewer emotional states than there are emotion words in the language?" Of course there are. But to move on from this point requires willingness to use research from a wide range of methodologies to determine the biological foundations of human emotion, and to also understand how those foundations are expressed in the context of a given social structure.

This brings up a last issue, one that has caused considerable and unnecessary acrimony in the literature on emotion. The "social constructivist" perspective and the "discrete" or "evolutionary" perspective have often been treated by psychologists as mutually exclusive. This has become so extreme that at a recent conference on culture, some participants were asking others "which are you?" (cultural vs. evolutionary psychologist) and other absurd questions to that effect. As we hope we have demonstrated, this is a false dichotomy. Just as with color, there may be an underlying, biological foundation for emotion that is imperfectly reflected in the vocabulary we use to discuss emotional experience in the social world. Both the biological foundation of and cultural influences on emotion have significant implications for human experience and behavior, and are worthy of intensive study. They should be considered complementary, not competing, approaches to a fascinating and complex topic.

Note

Michelle N. Shiota, Institute for Personality and Social Research, 4138 Tolman Hall, University of California, Berkeley, Berkeley, CA 94720–5050. E-mail: lshiota@socrates.berkeley.edu

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With No One-to-One Linguistic Mapping, How Do We Decide What Is, or Is Not, a Distinct Emotional State?

Craig A. Smith
Department of Psychology & Human Development
Vanderbilt University

Leslie D. Kirby
Department of Psychology
Vanderbilt University

I don't have any solution, but I certainly admire the problem. (Ashleigh Brilliant, 1975)

At the outset, we should note that we embrace the major conclusions of Sabini and Silver's contribution: We agree that there is not a neat one-to-one pairing between emotion terms in the English language (or, probably, any language) and distinct emotional states. Sabini and Silver (this issue) note three ways in which such a mapping breaks down, the second of which is their primary focus. First, there are apparent emotional states that are not cleanly marked in a given language. In addition to the examples listed by Sabini and Silver, we would note that a state that we believe to be a fundamental emotional state is not well marked in the English language, and perhaps as a consequence, is absent from most theories of emotion. This state, which we have awkwardly referred to as "challenge/determination" (e.g., Smith, 1991; Smith & Kirby, 2001; Smith & Lazarus, 1990), arises in the face of obstacles per-

ceived as surmountable, and motivates perseverance, mastery, and gain, and thus, arguably, is of central importance to the survival of both the individual and the human species. Although we are sure that this state is not well-marked in English, we do not know if it is more clearly marked in other languages.

Second, and more central to Sabini and Silver's (this issue) analysis, there are emotional states in which multiple terms largely serve as synonyms for the same affective state (e.g., happiness and joy, sadness and sorrow, etc.). In their analysis Sabini and Silver argue that terms that many emotion theorists and scholars might consider to be distinct emotional states (e.g., envy vs. righteous indignation or anger, shame vs. embarrassment) actually refer to the same underlying affective state or experience, but indicate something distinctive about the context in which that state arises. Although we are not sure that we agree with the specific analyses that Sabini and Silver provide to argue this point (see later in this article), we do agree that it is