Psychological Bulletin
1991, Vol. 110, No. 3, 426-450

0033-2909/91/$3.00

Culture and the Categorization of Emotions

James A. Russell
University of British Columbia
Vancouver, British Columbia, Canada

Some writers assume—and others deny—that all human beings distinguish emotions from nonemotions and divide the emotions into happiness, anger, fear, and so on. A review of ethnographic and cross-cultural studies on (a) emotion lexicons, (b) the emotions inferred from facial expressions, and (c) dimensions implicit in comparative judgments of emotions indicated both similarities and differences in how the emotions are categorized in different languages and cultures. Five hypotheses are reviewed: (a) Basic categories of emotion are pancultural, subordinate categories culture specific; (b) emotional focal points are pancultural, boundaries culture specific; (c) emotion categories evolved from a single primitive category of physiological arousal; (d) most emotion categories are culture specific but can be defined by pancultural semantic primitives; and (e) an emotion category is a script with both culture-specific and pancultural components.

Human beings divide the world into categories. We speakers of English divide the colors into red, green, blue, and so on; the plants into trees, shrubs, grasses, and so on; and our kin into aunts, uncles, cousins, and so on. People of other cultures speaking other languages divide colors, plants, and kin into categories that are in some ways similar to and in some ways different from what is done in English (Tyler, 1969). The topic of the present article is the categories into which people of different languages and cultures divide the emotions—not what emotions exist or what outsiders observe, but what the insiders see among themselves.

There are hints of unmistakable similarity in the categories of emotion even across great differences in language and culture. The following passage might have been taken from a modern textbook in psychology but is actually from the *Li Chi,* a Chinese encyclopedia compiled during the first century B.C. from various documents of earlier periods:

> What are the feelings of men? They are joy, anger, sadness, fear, love, disliking, and liking. These seven feelings belong to men without their learning them. (Chai & Chai, 1885/1967, p. 379)

There are also hints that different languages provide different categories for the emotions. Here is a passage from Milan Kundera's (1979/1980) *Book of Laughter and Forgetting:*

> *Litost* is a Czech word with no exact translation into any other language. It designates a feeling as infinite as an open accordion, a feeling that is the synthesis of many others: grief, sympathy, remorse, and an indefinable longing. . . . Under certain circumstances, however, it can have a very narrow meaning, a meaning as definite, precise, and sharp as a well-honed cutting edge. I have never found an equivalent in other languages for this sense of the word either, though I do not see how anyone can understand the human soul without it. . . . *Litost* is a state of torment caused by a sudden insight into one's own miserable self. . . . *Litost* works like a two-stroke motor. First comes a feeling of torment, then the desire for revenge. (pp. 121-122)

I have been told of other emotion words in other languages for which no word exists in English. An example from German is the word *Schadenfreude,* which refers to pleasure derived from another's displeasure. Another is *Angst:* Walter Lowrie (1944) translated Kierkegaard's *Der Begriff Angst* under the title *The Concept of Dread* but said "the very title of this book reveals a serious lack in our language: we have no word which adequately translates *Angst*" (p. ix). An example from Japanese is *itoshii,* which refers to longing for an absent loved one. Another is *ijirashii,* which refers to a feeling associated with seeing someone praiseworthy overcoming an obstacle. An example from Bengali is *obhiman,* which refers to sorrow caused by the insensitivity of a loved one. I was told by an Arab woman of her delight on learning the English word *frustration,* because her native language provided no word for that feeling. I read that Homer's characters in the *Iliad* and the *Odyssey* had no concept of *guilt* (Dodds, 1951). I also read of *accidie,* an emotion named in English but said to be extinct since the Middle Ages (Harré & Finlay-Jones, 1986).

These examples raise the possibility that different languages recognize different emotions. They carve up the domain of emotion differently. Claims of this kind raise fundamental questions for the psychology of emotion: Is it possible that the emotions are categorized differently in different languages? If so, how large and widespread are the differences? What emotions might exist but go nameless in English? Might the concept expressed by our word *emotion* be culture bound? What would such differences reveal about the nature of emotion categories or about where those categories come from in the first place? What would such differences reveal about the emotions themselves? What would be the implications for scientific theories of

This study was funded by a grant from the Social Sciences and Humanities Research Council of Canada.

I thank Dare Baldwin, Peter Denny, Paul Ekman, Wally Friesen, Paul Heelas, Carroll Izard, Batja Mesquita, Robert Levy, Catherine Lutz, and Jane Wellenkamp for their comments on an earlier version of this article. I thank Mita Banerjee, Lara Weick, Lisa Wong, and Janet Wu for their bibliographic work.

Correspondence concerning this article should be addressed to James A. Russell, Department of Psychology, University of British Columbia, Vancouver, British Columbia, Canada V6T 1Z4. Electronic mail may be sent to userjaru at mtsg.ubc.ca.

emotion stated in English? Would we be justified in using in other cultures our English words for emotions? On the other hand, is there good evidence of cultural differences; or are the examples cited above isolated curiosities, or perhaps even mistranslated, romantic fantasies? Do lexical differences indicate any real differences in how people think? What about evidence familiar to all psychologists that recognition of facial expressions of emotion is universal, what does that evidence say about the role of culture in how emotions are categorized?

The relevant evidence—spread as it is across the literatures of psychology, linguistics, and anthropology—has not been brought together, and these questions have not been given the attention they deserve. With this article, I attempt a step in that direction by examining evidence and hypotheses on how emotions are categorized in different languages and cultures. I first examine the ethnographic record accumulated over the last century on how emotions are labeled in different languages. I next turn to cross-cultural studies on categorization of emotion by facial expression and then to cross-cultural studies on concepts implicit in comparative judgments of emotion. Finally, I review five hypotheses that attempt to account for the cross-cultural evidence.

Scope, Perspective, and Rationale

My topic is words, categories, and concepts for emotions, rather than emotions themselves.[1] I draw no inferences about emotions from people's words for the emotions, although such inferences have been drawn by writers on both sides of the nature–nurture question. Harré (1986) wrote, "Historians and anthropologists have established conclusively that there are historically and culturally diverse emotion vocabularies. I claim that it follows that there are culturally diverse emotions" (p. 10). In contrast, Plutchik (1980) wrote, "The appearance in all languages of words like *angry, afraid,* and *happy* suggests that these words represent universal experiences" (p. 102).

Obviously we must get our lexical facts straight: Such is one purpose of this review. But the inferences one draws depend on one's theoretical assumptions as well as the facts. For example, one important theoretical idea in the psychology of emotion is that a person's emotional experience depends on how that person labels his or her own bodily state (Schachter & Singer, 1962). Imagine for a moment that this idea is correct. Imagine as well that words for the emotions vary from one culture to the next, at least to some extent. It would follow that emotional experience, rather than being universal, would to that same extent vary with culture. More generally, those writers who emphasize the role of culture in shaping emotion (e.g., Averill, 1980; Harré, 1986; Heelas & Lock, 1981; Hochschild, 1983; Lutz, 1980; Shott, 1979; Solomon, 1976) anticipate differences in the emotion lexicons of different cultures.

I assume that emotion words are of interest because labeling of an emotion might play a role in subsequent cognitive processes. For example, if emotion words vary with culture, then persons from different cultures might encode, respond to, and remember emotions in correspondingly different ways. This specific possibility has not been subjected to empirical test and must today be viewed cautiously, because it is a version of linguistic relativity, a hypothesis with a controversial empirical record (Brown, 1986; Kay & Kempton, 1984; Lucy & Shweder, 1979). An important study by Hoffman, Lau, and Johnson (1986) underscores the possibility, however. Whereas most previous studies of linguistic relativity had examined words in a perceptual domain—color—Hoffman et al. turned to words in a social domain. The Chinese language provides labels for certain personality types (i.e., for certain clusters of personality characteristics) not labeled in English and vice versa. Hoffman et al. studied Chinese–English bilinguals to examine whether these language differences influence other cognitive processes. Subjects were randomly assigned to have the experiment conducted in Chinese or in English. The result was an impressive display of linguistic relativity: Subjects' impression of and memory for the same target's personality were found to vary with what language they used during the experiment.

I assume that categories are closely related to people's words for the emotions. Neisser (1987, p. vii) argued that "language plays a key role in establishing categories, both developmentally and culturally." For example, the adult lexicon helps shape the categories formed by the child (Mervis, 1987). Words like *anger* designate not single events, but categories of events. Because there are no Munsell chips for the emotions, one must examine categorization of emotion indirectly, and much of the evidence necessarily involves words. Words express concepts by means of which people categorize a part of their personal and social reality. There has been a recent interest in emotion categories specifically (Johnson-Laird & Oatley, 1986, 1989; Ortony, Clore, & Collins, 1988; Russell, 1991), and awareness of language differences may help in evaluating these hypotheses formulated on the basis of the English lexicon. The present topic is thus part of the broad examination of the impact of culture and language on human cognition, an examination undertaken across the human sciences (Holland & Quinn, 1987). It is also an example of a shift seen in most areas of psychology, a shift from the study of a few convenient categories to the study of naturally occurring ones.

Different traditions predict that categories into which people divide the emotions would be found to be universal. One tradition stems from Darwin's (1872/1965) argument that the communication of emotion, both its expression and its recognition, is part of our biological heritage. The theory that recognition is innate presupposes that the categories by which recognition proceeds are innate. A second tradition is the argument stemming from rationalist philosophy that most of our concepts are innate (Fodor, 1981). A third is the idea, proposed by Boucher (1979) and recently articulated by Johnson-Laird and Oatley (1986, 1989), that words like *fear* and *anger* are undefinable semantic primitives. Cultural differences in basic categories of emotion would present difficulties for all these theories.

Obviously, the topic of this article is also relevant to the psychology of emotion. Consider the assessment of emotion. Words for emotion play a central role in ratings, judgment

[1] Italics are used to emphasize the distinction between—on the one hand—words, categories, and concepts (e.g., *emotion*) and—on the other—the events they are about (emotion).

scales, and questionnaires. I take it for granted that psychologists are interested in the emotions of all people, not just those who speak English. We must therefore understand the vocabularies of all people.

Perhaps the most far-reaching reason that the topic of this article is of interest stems from the role that English words play in psychologists' theories of emotion. *Anger, anxiety, sorrow, guilt, fear, happiness,* and other English words for emotions have provided a ready-made means by which scientists classify emotions. The questions asked, the hypotheses formulated, and the conclusions drawn in research on human emotion are built with these words. Listen to what one linguist, Wierzbicka (1986), had to say about the reason for studying words for the emotions from different languages and cultures:

> One of the most interesting and provocative ideas that have been put forward in the relevant literature is the possibility of identifying a set of fundamental human emotions, universal, discrete, and presumably innate; and that in fact a set of this kind has already been identified. According to Izard and Buechler (1980, p. 168), the fundamental emotions are (1) interest, (2) joy, (3) surprise, (4) sadness, (5) anger, (6) disgust, (7) contempt, (8) fear, (9) shame/shyness, and (10) guilt.
>
> I experience a certain unease when reading claims of this kind. If lists such as the one above are supposed to enumerate universal human emotions, how is it that these emotions are all so neatly identified by means of English words? For example, Polish does not have a word corresponding exactly to the English word *disgust.* What if the psychologists working on the "fundamental human emotions" happened to be native speakers of Polish rather than English? Would it still have occurred to them to include "disgust" on their list? And Australian Aboriginal language Gidjingali does not seem to distinguish lexically "fear" from "shame," subsuming feelings kindred to those identified by the English words *fear* and *shame* under one lexical item (Hiatt, 1978, p. 185). If the researchers happened to be native speakers of Gidjingali rather than English, would it still have occurred to them to claim that fear and shame are both fundamental human emotions, discrete and clearly separated from each other? (p. 584)

Both Wierzbicka (1986) and the psychologists whom she questions make the further assumption that the English word *emotion* specifies the proper limits of the domain. That assumption too must be examined in light of culture and language.

The Ethnographic Record: Some Background Issues

Emotions Themselves

Although my topic is words and concepts, the reader should understand something of ethnographers' view of the subject matter so conceptualized. Ethnographers have generally shown only moderate interest in emotions (less in words or concepts for emotions). Mesquita and Frijda (in press) and Lutz and White (1986) provided detailed reviews of the evidence on cultural variations in the emotions themselves.

Overwhelmingly, the ethnographies I have read on peoples of the world describe an emotional life easily understood in our terms (Carstairs, 1967; Crapanzano, 1980; Eggan, 1970; Fortes, 1970; Hallowell, 1955; Hollan, 1988; Kracke, 1981; Lindholm, 1982; Potter, 1988; Swartz, 1988; Turnbull, 1961, 1972; Turner, 1967). Commonly, especially in the past, the ethnographer simply assumed the universality of emotion. For example, Turnbull's (1961) ethnography of the BaMbuti Pygmies of the Congo is filled with descriptions of emotional life: "The Pygmy is not the least self-conscious about showing his emotions; he likes to laugh until tears come to his eyes and he is too weak to stand" (p. 56), "with his chest puffed up with pride" (p. 61), "she was very much in love with her husband" (pp. 132–133), "the girl is an object of suspicion, scorn, repulsion, and anger" (p. 186), "Saniwake was almost beside himself with grief" (p. 230). Nowhere does Turnbull hesitate to attribute particular emotions to the BaMbuti, to use English words to describe those emotions, or to translate BaMbuti emotion words into English. Occasionally, and generally more recently, ethnographers have made this assumption explicit. For example, Shostak (1983) wrote, "My hundreds of interviews with the !Kung had shown me that much of human emotional life was universal" (p. 7).

Differences have also been observed concerning the frequency of, the causes of, the expression of, the importance of, attitudes toward, beliefs about, and the regulation of emotion. In other words, it is assumed that what varies with culture are events that surround the emotion. Emotion itself is universal. Although some writers do not share this point of view (Harré, 1986; Lutz, 1982; Solomon, 1976), it is so widespread it can be termed *the standard view.* Two points need to be made regarding the standard view. First, the view cannot be stated in a precise form because it is often unclear exactly what is assumed to be the invariant universal emotion, once causes, consequences, expressions, and so on are removed. Second, the outsiders interpret a people's emotional life in this way does not necessarily imply that the insiders share this interpretation.

The Number of Words and Folk Theories of Emotion

Languages differ in the number of words they provide to categorize emotions. The ethnographic record does not give us enough information to make even an approximate count (which might, as we shall see, be impossible in any case) for each society to be reviewed here, but I can cite several attempts. At one extreme, Wallace and Carson (1973) found over 2,000 words for categories of emotion in the English language, although fewer than one tenth of them are in most people's working vocabulary. Hoekstra (1986) found 1,501 words in Dutch for categories of emotion. Boucher (1979) found 750 words in Taiwanese Chinese and 230 words in Malay for categories of emotion. Lutz (1980) found 58 words in Ifalukian that were temporary internal states, although some of these would not be prototypical emotion words in English. At the other extreme, Howell (1981) could find but 7 words in Chewong that could be translated as categories of emotion.

How many and what kind of categories for emotion are labeled in a language are related to a broader set of issues. No sharp line divides one's mental lexicon from one's mental encyclopedia. That is, one's taxonomy for emotion cannot be completely disentangled from one's cognitive model for the emotions so taxonomized. By cognitive model, I mean one's structure of beliefs concerning what brings each emotion about, what its mechanisms are, what to do about it, how to evaluate its occurrence, and so on. Levy's (1983, 1984) ethnographic studies of the Tahitians and of the Newars of Nepal led him to conclude

that different societies possess different cognitive models of emotion. Levy described as *hypercognized* an emotion for which a society possesses an elaborate cognitive structure. One index of hypercognition is a large number of lexical entries for that emotion. That anger (*riri*) is hypercognized in Tahitian includes the fact that Tahitian has 46 separate terms for types of anger, just as English has *annoyance, rage, fury, irritation,* and the like.

Levy (1984) described as *hypocognized* an emotion for which a society possesses little knowledge. One index of hypocognition is having few or no lexical entries. That sadness is hypocognized in Tahitian includes the fact that there is no concept of sadness in Tahitian. People whom Levy would describe as *sad* would be described in Tahitian by means of more general terms such as *peà peà,* a generic word for feeling ill, troubled, or fatigued. Levy (1973, p. 303) describes a man separated from his wife and child. Interpreting the man's reaction as the emotion of sadness, Levy saw the separation as its cause. Interpreting his own reaction as *peà peà,* the man did not.

The Ethnographic Record: Lexicons of Emotion

Concept of Emotion

By including the word *emotion,* the very title of this article presupposes that the domain of interest has already been delineated. The word *emotion* provides the English-speaking psychologist with a predefined field of inquiry. The concept of *emotion* is typically presupposed by already being embedded in the questions asked: What is an emotion, what causes emotion, and so on. One function of taking a cross-cultural perspective is to raise the question of whether other peoples speaking other languages draw the same boundary implied by the word *emotion.* Unfortunately, ethnographers have only recently raised the question whether emotion is a recognized domain in the culture they described.

There is some evidence that the concept *emotion* is widespread, if not universal. Brandt and Boucher (1986) assembled a cross-cultural research team that included members of six non-English-speaking societies. The languages studied were Indonesian, Japanese, Korean, Malay, Spanish, and Sinhalese. Collaborating researchers, who were fluent in English and their native language, assured the authors that each language to be studied contained a term conceptually equivalent to the English word *emotion.* The criterion for conceptual equivalence was not stated and is unclear. For example, Japanese was one of the languages said to have a word for *emotion,* but there is reason to question this assertion. Matsuyama, Hama, Kawamura, and Mine (1978) presented an analysis of emotional words from the Japanese language. The word translated as emotion, *jodo,* certainly included states that would be considered typical emotions—*angry, happy, sad,* and *ashamed*—but *jodo* also included what might not—*considerate, motivated, lucky,* and *calculating.*

There is also evidence that the concept of *emotion* is not universal. Neither the Tahitians (Levy, 1973, p. 271), the Bimin-Kuskusmin of Papua New Guinea (Poole, 1985), the Gidjingali aborigines of Australia (Hiatt, 1978), the Ifalukians of Micronesia (Lutz, 1980, 1983), the Chewong of Malaysia (Howell, 1981), nor the Samoans (Gerber, 1975, p. 187) have a word for *emotion.*

Of course, in cultures lacking a word for *emotion,* the concept might be implicit. For example, although the Tahitians have no word for *emotion* or *feeling,* Levy (1984) argued that *emotion* is an implicit class in Tahitian thinking, noting that the various emotions have a set of features in common: They are thought to arise in the intestines, they involve the whole person rather than merely a part, they can lead to action, and they invoke the relationship between the person undergoing the emotion to the external social or physical environment. What is not clear is whether this grouping is made by the Tahitians or by Levy.[2]

Some languages contain words similar to *emotion,* although emotions are grouped with words English speakers would not consider emotions. For example, the Samoans have no word for *emotion* but do have a word, *lagona,* that groups together feelings and sensations (Gerber, 1975). Gerber found that the closest she could come to defining *emotion* for the Samoans was to talk about the *loto,* which is the bodily location of *lagona,* much as the heart is the bodily location of emotion for speakers of English. Yet, some of the most commonly used concepts for feelings of the *loto* are not prototypical emotions in English—for example, *lotomaualuga* and *lotomaualalo,* which are feelings of arrogance and submissiveness, respectively. Gerber tried to delimit a set of words in Samoan that corresponded to the domain of emotion. It is not clear how well she succeeded or if the set achieved corresponded to anything the Samoans recognize as a class.

The Ifaluk lack a word that translates as *emotion* (Lutz, 1982). Instead, the Ifaluk distinguish *nunuwan* from *tip,* subsuming both under the category *niferash,* which Lutz (1980) translated as "our insides" (p. 97). The distinction between *nunuwan* and *tip* is between socially standard processes and individual, idiosyncratic ones.

The Chewong implicitly group together feelings and thoughts by placing them both in the liver: The liver "is the seat of both of what we call 'thoughts' and 'feelings,' and [the Chewong] do not make any conceptual distinction between the two" (Howell, 1981, p. 139). The Temiar of Malaysia also implicitly group together feelings and thought by placing them both in the heart.

---

[2] In a personal communication in 1989, Levy replied: "You note that it is not clear whether the grouping is made by the Tahitians or me for the 'implicit' category of emotion. I made the grouping in the sense that it is my putting together of what I take to be, by analysis, a covert but real aspect of their psychocultural organization—this is the way one makes judgments about any 'covert' cultural form. Whether the Tahitians would themselves recognize the category as being 'true' or possible or interesting albeit un-named, I don't know—I didn't try to find out—although that would interest me now that you call my attention to it. But even if they didn't do any of those things it wouldn't necessarily mean they didn't 'have' the 'implicit category' in some sense. Actually of course the problem of what we might mean by ascribing to someone an unnamed implicit category is an interesting one. Perhaps the most I should have stated is that among the phenomena that I took to be feelings there are a group which shared several features which did not characterize the others, and that this group was equivalent to what we (whoever we may be) take to be the 'social emotions.' "

The head is the location for language and expression (Roseman, 1988): "Temiar distinctions differ from the traditional Western dichotomy between thought and feeling, and turn rather on the distinction between inner experience [heart] and vocalized expression [head]" (pp. 11–12).

The possibility that *emotion* is not a recognized domain in all cultures is perhaps the most important issue about *emotion* raised by the ethnographic record. At the same time, that possibility creates difficulties that must not be ignored for the interpretation of evidence to which I turn shortly. In a culture that lacks the concept of *emotion,* it is difficult to know whether a given word in the language of that culture should be thought of as referring to an emotion. To give an example, Riesman (1977, p. 129) analyzed the central African Fulani's concept of *semteende,* which is commonly translated as *shame* or *embarrassment.* Closer analysis showed that *semteende* depends more on the objective situation than on a person's inner feelings. Someone is in a state of *semteende* if the situation is appropriate to *semteende,* whatever the person may or may not feel. If so, *semteende* may not refer to an emotion at all. Perhaps the comparable situation would exist in English if *guilt* referred exclusively to legal guilt. Riesman didn't mention asking the Fulani whether *semteende* is an emotion, and it would not have been possible if the Fulani lack the concept of *emotion.*

Categories of Emotion

This section lists those claims in the ethnographic record concerning differences between languages in labeled categories of emotion. The focus is limited to the semantics rather than pragmatics of emotion words and on ordinary—as opposed to artificial, technical, or scientific—words. Of necessity, not preference, English is taken as the standard of comparison. Excluded are claims made by ethnographers without firsthand experience with the particular language and cultural group studied, or what appeared to be mere speculation. Entries in glossaries and dictionaries are also excluded unless supplemented with adequate explanation. Likewise excluded are implicit claims; for example, with one exception indicated specifically, I do not cite a language as lacking a specific word when the only evidence would be that the ethnographer failed to mention that word. The claims can be divided into two classes, as described in the next two sections.

Some English emotion words have no equivalent in some other language. For example, English distinguishes such words as *terror, horror, dread, apprehension,* and *timidity* presumably as types or degrees of fear. In Gidjingali, an Australian aboriginal language, one word, *gurakadj,* suffices (Hiatt, 1978). Of course, with over 2,000 emotion-denoting words in English, it is not surprising that some are unique, and words for subdivisions within basic emotions may have little significance. But even some of the more important English words have no equivalent in some languages.

Some languages do not distinguish clearly what English treats as separate basic-level emotion categories. Leff (1973, p. 301) pointed out that in some African languages the same word covers what we would distinguish as *anger* and *sadness.* Other evidence supports his claim. Orley (1970) observed the following about Luganda, which is spoken by the Buganda of Uganda, Africa:

> The difference between anger and sorrow is not stressed to the same extent as in English, and it is not uncommon to hear an interpreter using *okusunguwala* (to get angry) as a translation of *to get sad,* nor would he really feel he had made a mistake even when "corrected." If one wishes to speak specifically about the grief of mourning or of a friend's departure, then the verb *okusaalirwa* is used, but even then I have heard of men mourning at a funeral being said to be *basunguwadde* (angry). (p. 3)

Davitz (1969, chapter 6) asked Bugandan and American adolescents to describe an incident in their lives involving anger. The Bugandans were bilingual in English and Luganda. About a third of the Bugandans mentioned that they cried during the incident, whereas none of the Americans had. This difference occurred whether the Bugandans gave their report in English or in Luganda.

Some blurring between anger and sadness can also be seen among the Ilongot, a head-hunting group living in the Philippines. Central to their culture is *liget,* to which I return, which is commonly translated as *anger. Liget* covers not only what *anger* covers, however, but a range of emotions including grief. In fact, according to the Ilongot, bereavement leads to such intense *liget* that head-hunting is the natural form of release (R. I. Rosaldo, 1984).

Similarly, the Ifalukian word *song* covers what in English would be described as *anger* and sometimes *sadness.* Lutz (1980) translated *song* as justifiable anger, and the facial cues, situations, and tendency to violence with *song* support that view. But *song* also indicates a state in which the person cries, pouts, and inflicts harm on himself or herself, including suicide.

Various claims touch on the English word *shame.* The English distinction between *shame* and *fear* is not made by the Gidjingali aborigines of Australia (Hiatt, 1978). Both are covered by the same word, *gurakadj.* The English distinction between *shame* and *embarrassment* is not made by the Japanese (Lebra, 1983, p. 194), by the Tahitians (Levy, 1973, chapter 10), by the Ifalukians (Lutz, 1980, p. 209), by Indonesians (Keeler, 1983, p. 153), or by the Newars of Nepal (Levy, 1983). Indeed, Levy (1983) claimed that shame and embarrassment "seem to be a lexically unified cluster in many or perhaps most parts of the non-Western world" (p. 131). The Ilongot (M. Z. Rosaldo, 1983, p. 141) use one word, *betang,* to cover *shame, timidity, embarrassment, awe, obedience,* and *respect.* The Javanese use *isin* to cover *shame, guilt, shyness,* and *embarrassment* (Geertz, 1959, p. 233). And the Pintupi use one word, *kunta,* to cover *shame, embarrassment, shyness,* and *respect* (Myers, 1979, p. 361). Other ethnographers have simply pointed to a problem in translating *shame* into other languages. In an ethnography of the Fulani of Central Africa, Riesman (1974/1977) studied the word *semteende,* previously translated *shame,* but concluded "this translation is not adequate" (p. 1347). Langness (1965) made a similar observation about the word usually translated as *shame* in the language of the Bena Bena of New Guinea. In an ethnography of the Balinese, C. Geertz (1966) studied *lek,* previously translated as *shame* or *guilt,* but also concluded the translation was inappropriate. The studies cited so far took the En-

glish word *shame* as the reference point; Epstein (1984) examined various Melanesian words translated as *shame* and found that they differ from one another.

Several similar claims are noted by single ethnographers. Samoans use one word for *hate* and *disgust* and one word, *alofa*, for *love, sympathy, pity,* and *liking* (Gerber, 1975, p. 3). Briggs (1970, p. 326) detailed how the Utku, an Inuit band in Canada, do not distinguish between feelings of kindness and gratitude and instead have one word, *hatuq*, to designate both.

There are also claims of important English words missing altogether in another language. The two that have been noticed the most frequently were ones needed for psychiatric classification.[3] Marsella (1981) reviewed various studies and concluded that there is no word for *depression* among many non-Western cultural groups. Collaboration comes from observations of the Yoruba of Nigeria (Leighton et al., 1963), from various North American Indian languages (Termansen & Ryan, 1970), from Malay (Resner & Hartog, 1970), from Chinese (Chan, 1990; Tseng & Hsu, 1969), from Eskimo (Leff, 1973), from Fulani in Africa (Riesman, 1977, p. 156), from the Kaluli of Papua New Guinea (Schieffelin, 1985), and from the Xhosa of Southern Africa (Cheetham & Cheetham, 1976).

Apparently no word equals *anxiety* among the Eskimos and Yorubas, either (Leff, 1973, p. 304). Cheng (1977, p. 151) found no exact translation in Chinese for *anxiety*, although two words (perhaps better translated as *tension* and *worry*) come very close. Johnson, Johnson, and Baksh (1986) found no word for *worry* among the Machiguenga of Peru.

Levy (1973) observed that the Tahitians have "no word which signifies anything like a sense of guilt" (p. 342). A word for *guilt* is missing from the Sinhala language of Sri Lanka (Obeyesekere, 1981, p. 79), from the Ilongot language of the Philippines (M. Z. Rosaldo, 1983, pp. 139–140), from the Pintupi language of aboriginal Australians (Morice, 1978, p. 93), and from the Samoan language (Gerber, 1975). Guilt is subsumed under *metagu* (fear or anxiety) for the Ifalukians (Lutz, 1980, p. 223). Indeed, Gerber (1975, p. 3) wrote that there is a "notorious absence of a term equivalent to *guilt* in many Asian and Pacific languages."

The Quichua of Ecuador lack a word for *remorse* (Tousignant, 1984). The Ifaluk lack a word for *surprise*, which has been considered a basic discrete emotion by English-speaking emotion theorists (P. Ekman, 1972, Izard, 1977). The Nyinba of Nepal lack a word for *love* (Levine, 1988). No word covers both parental and sexual love. Parental love and similar feelings toward the weak and dependent are assimilated to concepts that are close to *compassion*. Sexual love is assimilated to concepts that are close to *greed* or *desire*.

Because sadness has been listed as a basic emotion, let me repeat Levy's (1973) observation, mentioned earlier, that the Tahitians lack a word for *sadness*. The Tahitians use more generic words for *sadness*, treating *sadness, fatigue, longing, loneliness, depression* and the like not as emotion but as something closer to physical illness (Levy, 1973).

Unless an observer is specifically looking for the indigenous equivalent of a particular English word (as when needed for psychiatric diagnosis, for example), its absence may go unnoticed. Absence of a word from a glossary was not adequate evidence for inclusion in this section, but there is one report that merits special attention. Howell (1981, 1984) studied the Chewong, a small hunter–gatherer group in the rain forest of Malaysia. Howell (1981) made "special efforts to record as large a vocabulary as possible" (p. 133) in the realm of emotions and other inner states. Table 1 sets out all the words Howell managed to obtain that pertain to inner states. Of these, I classed seven as among the emotions. Think of all the emotional states coded in English, subtract these seven, and you have an extraordinary number of emotions not coded in Chewong.

Some languages have words without an equivalent in English. German distinguishes *Schadenfreude* from other types of pleasure. In English, *disgust* refers to the feelings associated with decaying matter as well as the feelings associated with moral indignation. Ifalukian distinguish these cases, using *niyabut* for the former, *song* for the latter (Lutz, 1980, pp. 183–184). The Tahitians distinguish fear caused by a ghost from other sorts of fear; they also have separate words for emotional states in which an inner feeling differs from the outer expression (Levy, 1973, pp. 96–98). Indonesian, which does not distinguish shame from embarrassment, does distinguish shame/embarrassment brought on by one's own deeds, *malu*, from shame/embarrassment brought on by someone else's deeds, *dipermalukan* (Keeler, 1983, p. 153). Similarly, English distinguishes *annoyance, fury, rage,* and *irritation*, presumably as types or degrees of anger. Malay distinguishes types of anger, *marah*, but the types do not correspond to the English distinctions (Boucher, 1979, p. 171).

Briggs's (1970) study of the Utku yielded no exact equivalent for *love* because *naklik* (which is love for those who need protection, such as babies, puppies, or the sick) is distinguished from *niviuq* (which is love for those who are charming or admired). Ifaluk does not have a term that corresponds to *surprise* because pleasant surprise, *ker*, is distinguished from unpleasant surprise, *rus* (Lutz, 1980). Ifaluk does not have a general word for *fear* but distinguishes fear of future events, *metagu*, from the panic, surprise, and fear that is due to confrontation with a present event, *rus* (Lutz, 1980, p. 188). Similarly, Utku contains no exact equivalent of *fear* because fear of physical injury, *iqhi*, is distinguished from fear of social injury, *ilira*. Moreover, *ilira* also includes what in English might be termed *respect*. Morice (1978) found no Pintupi word for *fear* but lists 15 words referring to kinds of fear or its concomitants. The divisions in Pintupi do not correspond to those in English: *Ngulu* is fear of another seeking revenge; *nginyiwarrarringu* is a sudden fear that causes the person to stand up to see what caused it; *wurrkulinu* is worry over land or relatives. In contemplating these particu-

[3] Also, numerous descriptions of pathological states, labeled by the culture, have no equivalent English term (Gobeil, 1973; D. Johnson & Johnson, 1965; Kiev, 1968; Langness, 1965; Rubel, 1964; Westermeyer, 1972). For example, *amok* is a term found mainly in the Malay archipelago. It refers to an intense state characterized by delusions and violent assaults directed against friend and foe alike, followed by amnesia and deep sleep (Carr & Tan, 1976). We are not inclined to include such states as amok among the emotions, but perhaps this is simply because *amok* is not an emotion term in English. For good overviews of this area, see Kirmayer (1989) and Simons and Hughes (1985).

Table 1
Chewong Lexicon for Inner States

Chewong word	English translation
Emotion words	
Chan	Angry
Hanrodn	Proud
Hentugn	Fearful, frightened
Lidya	Ashamed, shy
Meseg	Jealous
Punmen	Like
Osayagn (sayang)[a]	Fond of
Other states	
Abud	Hot (body)
Bohi	Full (stomach)
Gadd	Thirsty
Greno	Sexually aroused
Haratn	Know, understand
Hengkong	Hungry
Imeh	Want
Kenjed	Mean, stingy
Ion	Want very much
Mund	Miss, remember
Opriya	Lie
Pesedd	Pain
Sedeig	Cool (body)
Tokad	Cold (body)
Aga (agak)[a]	Guess
Brani (berani)[a]	Brave
Duga (duga)[a]	Esoteric knowledge
Malas (malas)[a]	Lazy
Moda (mudah)[a]	Generous
Olupa (lupa)[a]	Forget
Rayitn (rajin)[a]	Energetic

Note. From "Rules Not Words" (pp. 133–143) by S. Howell, 1981, in P. Heelas & A. Lock, *Indigenous Psychologies: The Anthropology of the Self,* San Diego, CA: Academic Press. Copyright 1981 by Academic Press. Adapted by permission.
[a] Malay (or derivative of Malay) words.

lar distinctions, one must not assume that the Ifaluk think of *metagu* and *rus* as types of fear or of *ker* and *rus* as types of surprise, or assume that the Utku think of *naklik* and *niviu* as types of love or *iqhi* and *ilira* as types of fear, or assume that the Pintupi think of *nginyiwarrarringu* and *wurrkulinu* as types of fear, just because that is how we speakers of English would classify these various states.

In the cases above, English equivalents might be formed as disjunctions of the foreign words. In other cases, this is not so. Doi (1973) concentrated years of study on a single Japanese word, *amae,* for which no word exists in English. *Amae* is a pleasant feeling of dependence on someone: the feeling Catholics have toward Mary, the mother of Jesus, or an infant has sucking the sweet milk of its mother. Doi (pp. 20–21) remarked that the closest he has come to hearing this idea expressed in Western thought was the psychoanalytic notion of passive object love, with an emphasis on passive.

In her study of the Javanese, H. Geertz (1959) wrote: "*Wedi* and *isin,* although complex, are close enough to American ideas to be translated as 'fear' and 'shame' or 'guilt,' but *sungkan,* a feeling state associated with respect, is something peculiarly Javanese" (p. 233). H. Geertz gave several other Javanese words that appeared to lack exact English equivalents. A commonly used word, *bingung,* refers to being upset, confused, and lacking a sense of direction. *Kagèt* refers to being startled by something that happens outside oneself, so that one becomes *bingung. Iklas* refers to a state of pleasant, or at least indifferent, frustration.

According to Wikan (1989), the Balinese word *tekajut,* initially translated as *fright,* appears on closer scrutiny to be unique. Unlike *fright, tekajut* is sharply distinguished from *fear. Tekajut* is the unpleasant and upsetting response to the unexpected. Unlike *startle,* however, *tekajut* need not require suddenness. *Tekajut* is considered beyond choice or personal responsibility, whereas the Balinese equivalents of *fear, anger,* and *jealousy* involve considerable responsibility.

Gerber (1975) analyzed 44 commonly used Samoan words that come as close as possible to being categories of emotion. Gerber's translations did not always even sound like emotions, even though her Samoan informants assured her that these were feelings in the *loto: lotomalie* (agreeableness), *matamau* (generosity), *ònosa'i* (patience), *fàalotolotolua* (indecision). Perhaps the clearest example is *lotomaualalo,* which refers to a pleasant feeling—an absence of malice, anger, or resentment in situations of potential conflict in which these feelings might be expected to arise.

Fajans (1983) described *awumbuk* as a "peculiarly Baining sentiment" (p. 177); the Baining are a people of Papua New Guinea. *Awumbuk* is a sadness, lassitude, tiredness, and boredom caused by the departure of visitors, friends, or relatives.

The !Kung have a word, *kua,* for the combination of awe, respect, and fear (Shostak, 1983) associated with the formally and ceremonially recognized milestones in one's life, but it can also occur in response to danger, such as encountering a lion or walking alone at night.

Levy (1973, p. 307) examined the Tahitian word *riàrià,* commonly translated as *fear,* but concluded that it could not be an exact translation. He found that although *riàrià* covers many instances labeled as *fear* in English, it does not include fear about possible future events, which is central to the English notion of fear. Tahitian includes a separate term, *mata'u,* for fear of the future. On the other hand, *riàrià* does include the feeling of being mildly repulsed, as, for example, in response to food.

In her study of the Ifaluk, a people of Micronesia, Lutz (1985) studied the word *nguch,* which captures what in English must be said metaphorically as "sick and tired" or "fed up." *Nguch* also includes feelings of boredom and lethargy that are due, for example, to extreme heat, weariness, or illness.

The most thorough analysis of a single emotion word may be M. Z. Rosaldo's (1980) study of the Ilongot *liget,* which is commonly translated *anger:* "I began to see in a term that I had understood initially to mean no more than 'anger' a set of principles and connections with elaborate ramifications for Ilongot social life" (M. Z. Rosaldo, 1980, p. 45). Like anger, *liget* can be caused by insult or injury. But *liget* can also be aroused by a communal, all-night song fest; pride of accomplishment; or the death of a loved one. *Liget* can be manifested in irritability or violence, but it also can be manifested in the sweat of hard

work. *Liget* is shown when a man hunts with courage and concentration or when a woman prepares a good meal. *Liget* is a highly valued force, vital to social and personal life.

Some of the examples so far suggest that emotions named in other languages can be described in an English phrase. Lutz (1980) provided the clearest counterexample, however, in her analysis of a single emotion word, *fago,* which is in daily use among the Ifaluk. Her observations on how *fago* is used in daily life, interviews about experiences of *fago,* and requests for explicit definitions of *fago* leave little doubt that it is difficult to translate into English. *Fago* is felt when someone dies, is needy, is ill, or goes on a voyage, but *fago* is also felt when in the presence of someone admirable or when given a gift. *Fago* is used in some situations in which English speakers would use *love, empathy, pity, sadness,* and *compassion*—but not in all such situations.

Prevalence

How widespread are differences in the lexicon of the emotions? Ideally, I would tell you how many languages categorize emotions differently than does English and, for each language, how many differences. Aside from the problem of counting emotion words, it is difficult even to estimate the number of equivalences, because ethnographers may tend to report differences more than similarities. Similarities may be less noticeable. Or because of the doctrine of the psychic unity of humankind, especially when emotion is the topic, ethnographers may sometimes take similarities for granted and not bother with them. Thus when mentioned at all, similarities tend to be mentioned in passing, often to contrast with differences. Before describing in great detail differences in certain emotion words, Lutz (1985) mentioned that "relatively adequate American English glosses can be found for many Ifalukian emotion words" (p. 43). Although they could find no Machinguengan word for *worry,* A. Johnson et al. (1986) did find what they considered exact translations for *fear, happiness, anger,* and *sadness.* Many ethnographers have assumed that all words for categories of emotion in the language of the culture being studied could be translated into English. All this suggests that there is a great number of equivalences or at least similarities.

To obtain preliminary information on the question of prevalence required some means of sampling the entire ethnographic record. I therefore turned to the Human Relations Area Files (HRAF) at the University of British Columbia. The HRAF contain ethnographic reports on 324 different societies, with the reports annotated for content. The HRAF were searched for every report that fit the following criteria: (a) the report concerned a non-Western society and (b) at least four pages of material in the report had been annotated as concerned with emotion.

This search yielded 114 records, which were read for information about the way in which that society spoke about the emotions. The idea was to record the number of ethnographic reports that claimed some difference in that society's emotion lexicon and then to count the number of such differences. The result is easy to describe: Not a single example was obtained. That is, in every case, the ethnographer assumed that the way in which emotion is described in English suited that society and assumed that native words could be accurately translated into English.

Translation Equivalence

None of the HRAF reports just reviewed attempted to establish the actual equivalence of words in different languages. Reports cited here earlier sometimes pointed out that what was once taken as a translation equivalent turned out, on closer inspection, not to be so (Davitz, 1969; Levy, 1973; M. Z. Rosaldo, 1980; Wikan, 1989). This work raises a fundamental question: Even where translation equivalents initially appear to exist, are they really equivalent?

Five studies have taken up the question of translation equivalence for emotion words. Tanaka-Matsumi and Marsella (1976) first used the standard procedures of translation, back translation, and consultation of bilingual dictionaries to obtain the best Japanese translation for the English word *depression.* The result was *yuutsu.* They then compared the free associations given by English speakers to the word *depression* with those given by Japanese speakers to *yuutsu.* The associations were quite different. Tanaka-Matsumi and Marsella (1977) then asked subjects to rate *depression* and *yuutsu* on semantic differential scales. Separate analyses for the terms yielded different factor structures—a damning piece of evidence if, as Osgood (1969) argued, the semantic differential measures affective meaning. Independent studies by Imada (1989) and Imada, Araki, and Kujime (1991) came to a similar conclusion regarding *yuutsu/depression* as well as two other common translations: *kyofu/fear* and *fuan/anxiety.* These six words were empirically defined in terms of Davitz's (1969) empirically obtained list of 556 statements. The overlap of defining statements was 48.4% for *yuutsu/depression,* 42.0% for *kyofu/fear,* and only 9.8% for *fuan/anxiety.* Furthermore, semantic differential ratings showed significant differences between *fuan* and *anxiety.* Finally, Chan (1990) obtained free associations for *you-yu,* the closest translation of *depression* in Chinese and a relative of the Japanese *yuutsu.* Although no comparison group speaking another language was included, Chan concluded that *you-yu* and *depression* appeared to be quite different.

Of course, free associations, semantic differential ratings, and Davitz's (1969) list may not be definitive assessments of meaning. No more definitive tests have been offered, and the lead of these pioneering studies has not been followed. Nevertheless, the cautious researcher will no longer assumes that emotion words in different languages can be translated one-to-one. If so, a methodological mainstay of cross-cultural research, translation and back translation by bilinguals, may be problematic. The back-translation criterion of success is insufficient because it can only achieve the best translation, which might not be an exact equivalent.[4]

[4] Levy (1973, p. 303) observed that some Tahitians bilingual in Tahitian and French incorrectly used the French word *triste* (*sad*) as synonymous with *fatigued* and the like. The Tahitian language does not include a word for *sad* but includes sad feelings within a broader category with fatigue, loneliness, and lacking enthusiasm. Davitz (1969) ob-

Discussion

I have just discussed claims that English words often assumed to denote natural basic categories of emotion—words such as *love, anger, sadness, fear,* and of course *emotion* itself—have no equivalents in some other languages. And other languages provide commonly used emotion words with no equivalent in English. Although such differences do not appear to be prevalent, even the possibility is important. Furthermore, words now taken to be equivalent might not be, and this possibility further opens the door, perhaps to widespread differences. The ethnographic record reviewed here generally implied that something more than lexical differences were at stake, that differences in concepts were revealed. Yet, before drawing any conclusions, I must ask how strong is the evidence for the claim of lexical differences.

One difficulty is that the evidence available focuses on those categories coded into single words. Languages can express many more ideas than are coded in single words. Even if a language lacks a word for, say, guilt, there remains the possibility that guilt may be expressed in a phrase, or metaphorically, or even nonverbally. My topic was the lexicon; other aspects of language also convey emotional meaning (Besnier, 1990), although the concepts of emotion implicit in other aspects of language have not been articulated. Any discussion of this evidence must also point out that it concerns current practices in a culture, not capacities. There is no reason to believe that one's language or culture limits one's ability to comprehend or learn other practices.

Another difficulty is that all claims rely on the ethnographic method. I presented claims only in cases in which I believed the support was good, in which the ethnographer had sufficient familiarity with the language and people, and in which the claim was supported by anecdotes, quotations, responses to questions or incidents, and the like. There is no standard means of supporting such a claim; therefore, it would be cumbersome to include in this article supporting information in each case. At the same time, a word of caution is in order. Until these observations are confirmed through other methods, it remains difficult to say how much credence they deserve. I say this for a number of reasons.

There is today no adequate means by which an ethnographer can state the meaning of an emotion word found in another language. For example, Hiatt (1978) said that the Gidjingali word *gurakadj* includes what is included in the two English words *shame* and *fear.* But Hiatt may not have been asserting that the boundaries of *gurakadj* coincide exactly with a boundary around *shame* and *fear.* Hiatt attempted to show that *gurakadj* is used for *fear* as well as for *shame,* but he did not attempt to show that *gurakadj* is used in all and only those cases. Lutz presented the Ifalukian word *fago* as one without an equivalent in English. Gerber (1975) presented the Samoan word *alofa* as meaning *love, sympathy, pity,* and *liking.* But it is also conceivable that *alofa* and *fago* are similar or equivalent in meaning. That is, *fago* might be rendered approximately as *love, sympathy, pity,* and *liking;* or, alternatively, *alofa* might have no precise equivalent in English. Another example might be the !Kung concept *kua* (Shostak, 1983), presented as without a simple translation. *Kua* may be like the words found in various societies that combine *shame, respect, awe,* and *embarrassment.*

In short, the precise claim in the ethnographic record may depend on the style of reporting used by the ethnographer. The emotion lexicon of the culture being studied is often described in relation to the English lexicon for emotion. But English may not provide an adequate means by which to convey the meaning of words in all other languages. Put another way, we lack a precise criterion on what constitutes equivalence and what constitutes nonequivalence. Wierzbicka (1986) has most clearly articulated this problem and calls for the creation of a metalanguage in terms of which any emotion word in any language can be defined. A corollary to the lack of a criterion of equivalence is that no mechanism exists to resolve disputes. Wierzbicka claimed that the Polish word *tesknic* has no exact equivalent in English. Kolenda (1987) claimed that it does: *longing.*

One could also question the interjudge reliability of ethnographic reports. The claims reviewed here vary in how much information was given in support. Unsupported assertions were indicated as such, but for others, anecdotes, quotations, and responses to questions in varying amounts were offered. The claims also varied in how many writers made that observation. For example, differences surrounding *shame* were widely reported, but for most claims, the modal number of ethnographers was one. That this is a problem can be seen by looking at instances in which different ethnographers examined the same or similar cultures. Hiatt (1978) claimed that the Gidjingali aborigines of Australia use a single word for *fear* and *shame,* lacking any terms for differences within this broad class. Hiatt also speculated that other Australian aboriginal languages did the same (I ignored speculations of this sort in the review above). In contrast, Morice (1978, 1979) described the Pintupi aborigines of Australia as lacking a generic word for *fear* but distinguishing 15 kinds of fear. Morice (1979) also claimed that Pintupi distinguishes various kinds of anger. But Myers (1988) wrote: "On the basis of my own ethnographic observation, I am not as confident as Morice is about the differentiation in types of anger" (p. 608). In fact, Meyers refers to Morice's definitions as "misleadingly overspecific" (p. 607).

For another example, recall Lutz's (1980) ethnography of the Ifalukians, which provided a number of the claims reported above. Burrows and Spiro (1953/1957) had written an earlier ethnography of the Ifalukians. Although Burrows and Spiro did not focus on words or on emotions, they did not entirely neglect the topic, either. They described the Ifalukians as undergoing various emotions and unhesitatingly used English words to describe the Ifalukians' emotions and to translate Ifalukian emotion words. To be specific, Lutz (1980) emphasized that Ifalukian emotion words are defined not by introspection of internal states, but by reference to external circumstances. She also said that the English word *sadness* maps onto two distinct Ifalukian

served a similar phenomenon when bilingual Bugandan subjects reported crying during anger; Luganda, the Bugandan language, does not sharply differentiate anger and sadness. Bilinguals may therefore be influenced by their first language in assigning meaning to words in their second. If so, this influence would constitute another bias in the translation/back-translation procedure.

words, *song* (justified anger) and *fago* (love, compassion, sadness). Contrast these claims with a sentence from Burrows and Spiro, (1953/1957): "The Ifalukian word for 'happiness' is *e ratr tipei,* which literally means 'my belly is good'; and the word for 'sadness' is *e ngau tipei,* which literally means 'my belly is bad' " (p. 317).

To summarize, I am not saying that some other method is superior to or should replace ethnography; I believe that no single method can ever be relied on completely. The ethnographers whose work was reviewed here often had other purposes in mind. I am proposing that for present purposes ethnography be complemented by as many other methods as researchers can devise. The claims from the ethnographic method can be accepted only tentatively, until verified by other methods.

Categorization of Emotion Expressed in the Face

The idea of differences in how cultures categorize the emotions could be viewed with skepticism by psychologists who have read that recognition of facial expressions of emotion is pancultural (Izard, 1980). It is therefore important to understand the implications of research on facial expression for the topic of this article.

In contrast to an ethnographic study, a cross-cultural study attempts to compare directly different cultures, typically by including more than one society within the same study. In a series of cross-cultural studies, people from different societies have been asked to assign smiles, frowns, scowls, sneers, and other facial expressions to emotion categories. The purpose of these studies was to investigate the nature and origin of facial expressions and their association with emotion. I do not address those issues here. Indeed, for this article, I assume that under the conditions of the experiment the same emotional state is manifested in the same facial changes in all human beings. With this assumption, I can then ask how peoples of different cultures categorize the emotional states so manifested.

The results of these studies are well-known. Much the same meaning is found in facial expressions by people of different cultures and languages. Seven, plus or minus two, different facial expressions can be matched to different categories of emotion. Initially, this evidence would appear to say that at least that same number of categories for the classification of emotion is universal. I believe that a closer scrutiny of these studies supports a slightly different conclusion: There is great similarity, but not always identity, across cultures in the way in which emotions communicable by facial expression are categorized. There is also, surprisingly, evidence for differences as well.

Literate Societies

In most of the studies of literate societies, a similar procedure was followed. Still photographs of facial expressions thought to represent the basic emotions were obtained. The association between expression and emotion was first established with norms from English speakers, who were asked to select for each expression one emotion label from a short, prespecified list. The photographs were then shown to subjects from another culture to test the prediction that the new subjects would assign each photograph to the same emotion category (i.e., its translation equivalent) as had the English speakers.

The first matter to note is that the forced-choice method used in these studies means that they cannot show precise equivalence of the emotion *concepts* in the different cultures. This is so even if 100% of the choices agreed with prediction. To illustrate, imagine you are a subject in one of the studies. You are shown a photograph of a young woman with a bright smile. You are asked to describe how she feels by selecting one word from the following list: *sad, angry, disgusted, afraid, surprised, happy.* Most likely, you'd select *happy.* But now suppose that *happy* had been replaced on the list with *elated.* Given the alternatives, you'd have little choice but to select *elated.* If *happy* were successively replaced with *serene, satisfied, excited, grateful,* and *triumphant,* you'd again probably select each of these words in turn. Indeed, substitute for *happy* any clearly positive word (or perhaps any subcategory of *happy*) from *contented* to *ecstatic,* and the conclusion remains the same. If so, the judgment task used in these studies is insensitive to the precise meaning of the terms involved. Cross-cultural evidence gathered with this judgment task could show at best that people from different cultures give *similar* interpretations to facial expressions.

Problems with forced-choice method are not limited to subcategories of *happiness,* or to shades of meaning within a category. The results obtained also depend on the exact composition of the prespecified list. For example, if the word most applicable to the facial expression is omitted, a consensus can nevertheless appear on the next most applicable word. In one study, the same facial expression was rated as *angry* by one group, *sad* by another group, and *upset* by a third, depending on which alternatives were available on the list (Russell, 1989). Because cross-cultural studies almost always begin with a list of emotion categories specified by English words and then obtain translations for them, we have no guarantee that the list of choices presented to subjects in another culture contains the word that those subjects would find most applicable.

This methodological concern is reinforced by the findings from two studies (Boucher & Carlson, 1980; Izard, 1971) in which subjects were allowed to choose their own label for each facial expression. Subjects generated a much greater number of labels than allowed in the forced-choice method. Furthermore, even with a generous criterion for agreement whereby any label from a set was counted as agreement, agreement was less than that obtained with the forced-choice method. Free labeling is thus the more interesting task, for present purposes. Unfortunately, the few data gathered with this method were analyzed by scoring subjects' responses as correct or incorrect against a standard defined by English language categories. The free classification of facial expressions has yet to be exploited for what it reveals about how peoples of different cultures categorize emotion.

I now return to the studies using the forced-choice method. Even though these studies may exaggerate the amount of agreement, they did not, in fact, yield 100% agreement with prediction. It is also known that cultures vary in a systematic and reliable way in the amount of agreement with prediction (Matsumoto, 1989). Thus, the amount of disagreement may yield

clues as to whether the emotion categories involved might vary with language. To get a rough idea of the influence of linguistic similarity on the results, I examined the results separately for Indo-European and non-Indo-European languages. Table 2 summarizes the results from the available studies (i.e., those that followed the procedure described above and that included the relevant comparison groups).[5] Because different studies used slightly different methods, stimuli, and response formats, the second column gives the results from the normative English-speaking group or groups as a standard of comparison.

In the third column are results for groups speaking another Indo-European language. The proportion of these subjects who agreed with prediction was higher in two cases and lower in eight than that obtained with the normative English-speaking sample. The median difference was 2.2 percentage points. So whether subjects speak English or another Indo-European language influences the results minimally.

In the fourth column are results for groups speaking a non-Indo-European language. These subjects produced a lower proportion of agreement than the English comparison group nine out of nine times ($p < .05$ by a two-tailed sign test). The median difference was 10.4 percentage points with a range of 3.8 to 33.7. So, although those speaking a non-Indo-European language agreed with prediction to a high degree, there was a cultural/language difference not accounted for.

Moreover, the lower proportion of agreement seen with non-Indo-European languages may be an average between nearly equal agreement on some categories of emotion and lower agreement on others. Consider Japanese, the only non-Indo-European language included in more than one study. In Izard's (1971) study, the Japanese sample gave results similar to the American normative sample for all emotion categories save *disgust, anger,* and *shame.* Izard (1971, p. 258) also mentioned another unpublished study of seven facial expressions, four of which were categorized as *contempt* and three as *disgust* by American students. Japanese students disagreed, reversing the classification for three of the seven. In the P. Ekman (1972) study, the only two failures to predict the modal response occurred when Japanese labeled as (what was translated) *disgust* what the normative group said was another emotion. In the P. Ekman et al. (1987) study, the Japanese sample yielded similar results for all emotion categories save *fear, anger,* and *disgust.* In short, one or more of the Japanese words translated as *fear, anger, disgust, shame,* or *contempt* may differ enough from their English counterparts to influence the results of recognition studies. One possibility consistent with these results would be that the Japanese categories are broader, admitting of a greater range of referents, than their English counterparts.

Serendipitously, a test of this hypothesis is available. Matsumoto and Ekman (1989) asked Japanese and American college students to judge the emotion expressed in 48 photographs of facial expressions. Half of the photographs were of Japanese, half of Americans; all had been preselected by P. Ekman and Friesen's (1976) criterion as prototypical expressions of basic emotions. The proportion correct obtained for each emotion is shown in Table 3 (along with the results from the P. Ekman et al., 1987, study). The new results replicated P. Ekman et al. (1987): Japanese and American performance was similar on *happiness, surprise,* and *sadness* (Japanese range = .77 to .98) but not on *anger, disgust,* and *fear* (Japanese range = .31 to .70). Moreover, an analysis of variance on quantitative ratings showed a significant Emotion × Language/Culture interaction.

Of course, the reliability of concept-specific differences must be tested further, and there are various other possible explanations for the lower agreement that must be examined. In the studies listed in Table 2, all the faces judged were Caucasian, and Vinacke (1949) and Vinacke and Fong (1955) reported evidence that Caucasians and Orientals do slightly better when judging facial expressions of their own race (see also Wolfgang & Cohen, 1988; but see Boucher & Carlson, 1980; P. Ekman & Heider, 1988; and Matsumoto & Ekman, 1989, for contrary results). Another possibility concerns familiarity with Western culture. Among Amharic-speaking students, those living in closer contact with Westerners showed higher degrees of agreement with prediction (Ducci, Arcuri, W/Georgis, & Sineshaw, 1982). Neither of these alternatives would explain why the problems arose with certain emotion categories and not others. The available evidence thus provides no definitive answer but encourages further research on the idea that some emotion categories in non-Indo-European languages differ enough from their assumed translation equivalent in English to influence the categorization of facial expressions.

Preliterate Societies

I now turn to studies of preliterate societies. P. Ekman, Sorenson, and Friesen (1969) used the method described in the previous section to obtain data on two preliterate groups with little contact with Western culture, the Fore of New Guinea and the Sadong of Borneo. Once again, communication by facial expression across cultural boundaries far exceeded chance. But the results were much weaker than those of studies of literate cultures. For example, the number of facial expressions for which 70% or more of the observers agreed with one another was 23 out of 24 for English speakers, 6 out of 24 for the Fore, and 6 out of 23 for the Sadong.

A later expedition to two preliterate societies, the Fore again and the Dani of Papua New Guinea, obtained results apparently more consistent with prediction, but with a change in method: The subject picked one of three (or for children, one of two) faces for the protagonist of a story told by the experimenter (P. Ekman, 1972; P. Ekman & Friesen, 1971). This method was designed for the original authors' purposes but is ambiguous for present purposes. Some stories omitted the emotion word altogether. The surprise story was, "He is just now looking at something new and unexpected" (Ekman & Friesen, 1971, p. 126). Results with this story may show subjects' knowledge of facial responses to novel events but cannot show how subjects classify

[5] Other studies, not included in Table 2, also show the similarity across cultures; see Cüceloglu (1970), Dickey and Knower (1941), Ducci, Arcuri, W/Georgis, and Sineshaw (1982), P. Ekman and Heider (1988), Graham, Ricci Bitti, and Argyle (1975), Mandal, Saha, and Palchoudhury (1986), McAndrew (1986), Shimoda, Argyle, and Ricci Bitti (1978), Triandis and Lambert (1958), Winkelmayer, Exline, Gottheil, and Paredes (1978), and Wolfgang and Cohen (1988).

Table 2
Percentage of Judgments Agreeing With Prediction

Study	English[a]		Other Indo-European		Non-Indo-European	
	Language	%	Language	%	Language	%
Izard (1971)	American, British	80.7	Swedish	83.4	Japanese	65.4
			French	82.2		
			German	80.6		
			Swiss[b]	79.6		
			Greek	75.1		
P. Ekman (1972)[c]	American	85.8	Spanish	83.4	Japanese	78.4
			Portuguese	83.3		
Boucher & Carlson (1980)	American	76.6			Malaysian	64.4
Kilbride & Yarczower (1980)	American	94.1			Chi-Nyanja	60.4
P. Ekman et al. (1987)	Scottish, American	87.6	Italian	85.5	Estonian	83.2
			Greek	82.0	Cantonese	82.7
			German	80.2	Turkish	80.3
					Japanese	77.2
					Minangabau	74.7

[a] For English, when more than one English-speaking group was included in the sample, an average across groups listed is given. [b] Language was not specified but presumably was French, German, Italian, or Rhae-Romance. [c] Means were first calculated for each emotion category. Then a mean of those means was calculated. For the Spanish language entry, a mean was taken for results from Chile and Argentina.

emotions. Other stories gave both an event and a name for the emotion. The happy story was, "His friends have come, and he is happy" (Ekman & Friesen, 1971, p. 126). Results with this story cannot show whether subjects know the facial response used in greeting friends or the facial expression of happiness.

Sorenson (1976) described additional data from the expedition to the Fore. One hundred Fore were asked to label the Ekman pictures in their own language. Many of the responses fit the predicted pattern, but others did not. Sorenson wrote, "The most striking result was that the Fore saw anger more often than did Westernized subjects" (p. 142). In fact, among the Fore with least contact with Westerners, *anger* (or more precisely, the Fore word translated as *anger*) was the modal response for expressions of (what are labeled in English) anger, contempt, and sadness. Thus, the Fore word assumed to be equivalent to *anger* might have expressed a broader concept. (Recall the claims in the ethnographic record of concepts subsuming *anger* and *sadness*.)

Another interesting observation was that both Fore and Dani languages lack an exact equivalent of the English word *surprise* but distinguish pleasant surprise from unpleasant surprise (Ekman, personal communication, 1980). Moreover, both groups "confused" surprise with fear when asked to pick a face for the surprise story. Boucher and Carlson (1980) later reported a similar finding for the Malay: They lack an exact equivalent for *surprise* and confused surprise with fear expressions.

Conclusion

Smiles, frowns, and other facial expressions are given similar meaning in all cultures studied (as are vocal expressions, Matsumoto & Kishimoto, 1983; van Bezooijen, Otto, & Heenan, 1983). There is a core of emotional communication that has to do with being human rather than with being a member of a particular culture. Beyond saying this, the available evidence admits a range of interpretations. Writers in psychology tend to

Table 3
Percentage of Judgments Agreeing With Prediction

Concept		P. Ekman et al. (1987)		Matsumoto and Ekman (1989)	
English	Japanese	English[a]	Japanese	English	Japanese
Happiness	Shiawase	96	90	98	98
Surprise	Odoroki	90	94	94	88
Sadness	Kanashimi	89	87	95	77
Anger	Ikari	82	67	87	70
Disgust	Iyake	82	60	78	68
Fear	Osore	85	65	71	31

[a] Average between Scotland and United States.

emphasize the great similarity seen; I have emphasized what room remains for the influence of culture or language on categorization.

Labeling a facial expression is of course not the same as conceptualizing emotion. Less than a dozen emotions are associated with recognizable facial expressions. Perhaps these are the emotions most likely to be classified similarly across cultures. Even so, and even with an overly generous forced-choice method, less than perfect agreement in labeling facial expressions has been found in cultures speaking languages not of Indo-European origin. Results with preliterate societies, which speak languages perhaps least similar to English, showed even more latitude for the influence of language or culture on categorization. The Fore, Dani, and Malay languages also lack a word for surprise, which has been claimed to be one of the basic emotions communicated by facial expression.

It is time to go beyond the either–or question of whether communication of emotion by facial expression is universal versus culture specific. I see no need for further studies that seek to establish above-chance communication. It is time to seek the precise nature of the universal core of communication and the precise role played by culture. Future research could then focus on specific hypotheses. Studies would be useful that do not presuppose the universality of such concepts as *surprise, anger,* and the rest. Also useful would be studies that select societies on something other than an ad hoc basis. Some hypotheses could be inspired by ethnographers' reports of culture-specific emotion categories. How, for example, would the Gidjingali, who lexically do not distinguish fear and shame, categorize those facial expressions identified by English speakers as prototypical of fear and of shame?

Important research could be inspired by the general literature on cross-cultural psychology. For example, collectivist cultures have been found to differ from individualist cultures in various basic psychological processes (Kagitcibasi & Berry, 1989), including the accuracy with which they identify particular emotions (Matsumoto, 1989). Jeffery and Patterson (1987) showed that accuracy in identifying emotions from facial expression is related to field dependency, which, in turn, is known to vary with culture (Kagitcibasi & Berry, 1989). Hofstede (1980) has identified other broad dimensions of cultural variation, and Matsumoto (1989) has begun the study of how these dimensions relate to the categorization of emotion.

Dimensions of Judgment

A separate research enterprise has sought the basic dimensions of emotion. The evidence gathered has often been interpreted as concerning the structure of subjective experience. Here I examine that evidence from another point of view, namely what it says about concepts of emotion. The dimensions of emotion obtained are taken here as concepts implicit in human understanding of emotion.

The semantic differential technique has played a key role in this search. When *fear, anger,* and the like are rated on semantic differential scales (which are pairs of opposites such as *good–bad*), three bipolar dimensions appear to underlie the ratings (e.g., Averill, 1975; Block, 1957; Russell & Mehrabian, 1975). Variously named, the three are (a) evaluation, valence, pleasure, or positivity, (b) activity, arousal, or activation, and (c) potency, power, control, or dominance. I use names for the three dimensions that capture their affective interpretation: pleasure, arousal, and dominance, respectively. This evidence is important for two reasons. First, it suggests (not proves) the hypothesis that the three dimensions are somehow part of the meaning of emotion words. On one hypothesis, the features defining *excitement* would be pleasure, high arousal, and dominance; the features defining *calm* would be pleasure, low arousal, and dominance; the features defining *nervousness* would be displeasure, high arousal, submissiveness; and the features defining *anger* would be displeasure, arousal, and dominance (Russell & Mehrabian, 1974, 1977). (On this hypothesis, the Japanese word *amae* would be defined as pleasure, low arousal, and submissiveness.)

The second reason is that these same three dimensions appear to be pancultural. Osgood, May, and Miron (1975) showed that the same three dimensions emerge whatever language is studied. Osgood (1969) interpreted this evidence to mean that human beings universally respond to the objects and events in their world in terms of three basic bipolar affective dimensions. For example, pleasure and dominance have appeared as pancultural dimensions in the conceptualization of interpersonal behavior (White, 1980), a domain closely linked to emotion (Kiesler, Horner, Larus, & Chapman, 1987). Pleasure and arousal have appeared as pancultural dimensions of aesthetic judgments, another related domain (Berlyne, 1975; Berlyne, Robbins, & Thompson, 1974).

One worry, of course, is that these three dimensions are somehow dependent on method: words rated with the semantic differential technique. Fortunately, it is now known that the same dimensions emerge with other methods, the most important of which is multidimensional scaling. Multidimensional scaling relies on simple judgments of similarity provided by subjects and thus imposes no concepts on them whatsoever. Multidimensional scaling of English language emotion terms generally yields the pleasure, arousal, and dominance dimensions (Bush, 1973; Daly, Lancee, & Polivy, 1983; Neufeld, 1975, 1976; Russell, 1978, 1980; Storm & Storm, 1987), although not always all three in the same study. Nor is this finding somehow limited to emotion terms: Multidimensional scaling of still photographs of facial expressions of emotions yields the same three dimensions, although again not always all three in the same study (Abelson & Sermat, 1962; Fillenbaum & Rapoport, 1971; Russell & Bullock, 1985, 1986). In other words, asked to judge the similarities and differences among emotions, whether expressed in words or faces, subjects made their judgments in terms of degree of pleasure, arousal, and dominance expressed. Moreover, at least the pleasure and arousal dimensions have been demonstrated to be the same dimensions as those obtained in semantic differential studies (Russell, 1978).

All the studies cited in the preceding paragraph were conducted with English-speaking subjects. Studies in other languages have produced the same three dimensions, although again not always all three in the same study. When Block's (1957) study was repeated in Norwegian, the same two dimensions, pleasure and arousal, were found. Herrmann and Ray-

beck (1981) studied samples of subjects in Spain, Vietnam, Hong Kong, Haiti, and Greece as well as in the United States. Multidimensional scaling of similarity judgments for 15 emotion terms yielded the same two dimensions, although only the first, pleasure–displeasure, was easy to interpret. When Russell's (1980) study was replicated in Chinese, Croation, Estonian, Greek, Gujarati, Japanese, and Polish, the same two dimensions, pleasure and arousal, were found (Russell, 1983; Russell, Lewicka, & Niit, 1989). Because the words scaled were not a representative sample of emotion-related words in each language, the salience of these two dimensions remains to be established. Nevertheless, this evidence does show that at least these two dimensions exist and are the means by which similarity is judged within some set of emotion-related words in every language studied to date.

Nor are emotion-related words needed to obtain this result. Two multidimensional-scaling studies of the feelings conveyed by facial expressions both yielded the same pleasure and arousal dimensions in different languages: Osaka (1986) studied Japanese- and English-speaking subjects; Russell et al. (1989) studied Greek-, Chinese-, and English-speaking subjects. The panhuman nature of dimensions of facial expression can also be seen in replications of Schlosberg's (1952) work in Greek by Triandis and Lambert (1958) and in Dutch by Frijda (1953).

Other multivariate studies of emotion words have included but one language, but a consistent pattern is seen. All the studies have corroborated the pancultural nature of the pleasure dimension. In some studies, pleasure was the only dimension found. Fillenbaum and Rapoport (1971) multidimensionally scaled 15 Hebrew words denoting emotions, but only a single dimension was interpretable: pleasure. A multidimensional scaling of 35 Japanese words yielded pleasure as a first dimension, but no further dimension analogous to anything found in studies of English (Yoshida, Kinase, Kurokawa, & Yashiro, 1970). Cheng (1977) interviewed Chinese residents of Hong Kong, one group in English and another in Chinese. Subjects were asked to describe various emotional experiences, to label the emotion, and to rate it on various verbal scales. These verbal scales were specifically aimed at seven dimensions derived from studies carried out in English. The results were as follows:

> The pleasant–unpleasant dimension . . . was the only dimension of the entire seven dimensions that the author believed as definitely present in the subjects' construction of emotion. None of the subjects of the entire sample has difficulty in understanding it and in indicating that their emotions were pleasant or unpleasant. (p. 192)

Two further studies found pleasure and arousal. G. Ekman (1955) used multidimensional scaling with 23 Swedish emotion-denoting words. These data have been analyzed in various ways, often with slightly different results (G. Ekman, 1955; Fillenbaum & Rapoport, 1971; Lundberg & Devine, 1975; Micko, 1970; Shepard, 1962; Stone, 1971; Stone & Coles, 1970). Nevertheless, one bipolar dimension closely related to pleasure emerged in most of the analyses, and a clear arousal dimension emerged in at least one (Micko, 1970). Abele-Brehm & Brehm (1986) reported a factor analysis of German emotion-related terms that found pleasure and arousal.

Two further studies found pleasure and dominance. Gehm and Scherer (1988) multidimensionally scaled 235 German words related to feelings. Lutz (1982) multidimensionally scaled 31 words commonly used on Ifaluk to describe emotions. Lutz (1982) specifically noted the absence of anything like the dimension of arousal seen in studies of English emotion words.

Finally, Corraliza (1987) reported a factor analysis of Spanish emotion-related terms and found all three factors: Pleasure, Arousal, and Dominance.

That some studies found arousal whereas other studies found dominance seems to suggest that languages differ in the dimensions of emotion beyond pleasure. Such also is the suggestion of Gerber's (1975) and Lutz's (1980) ethnographic work in the South Pacific. More research would be required before deciding that arousal or dominance is lacking from *any* language, however. No single study has found a difference associated with different languages. Those studies that suggest differences included but one language and differed from the others in the sample of words scaled, data-analytic procedure, and theoretical stance of the investigator. In all studies in which these factors were held constant and only language varied (Block, 1957; Herrmann & Raybeck, 1981; Osaka, 1986; Russell, 1983; Russell et al, 1989), the same dimensions emerged. More telling, Abele-Brehm and Brehm (1986) and Gehm and Scherer (1988) both conducted their studies in German, but pleasure and arousal emerged in the former, and pleasure and dominance emerged in the latter. A similar point is made by studies conducted in English.

Why arousal emerged in some studies and dominance emerged in others is unknown. My guess would be that the sample of words scaled is the major factor. Perhaps dominance–submissiveness emerges as the second dimension when the sample of words emphasizes interpersonal contexts. And perhaps arousal–sleepiness emerges as the second dimension when the sample of words emphasizes noninterpersonal contexts. Recall that dominance was the second dimension in White's (1980) work, which was specifically focused on interpersonal behavior. Dominance (strength vs. weakness) was the second dimension in Lutz's (1982) multidimensional scaling of Ifaluk emotion words; recall that the domain of emotion in Ifaluk emphasizes interpersonal emotions and de-emphasizes intrapersonal states. Dominance was the second dimension in Gehm and Scherer's (1988) study. The set of terms they scaled included such interpersonal conditions as (I give English translations) *affectionate, compassionate, disdainful, respectful,* and *vengeful.* In contrast, arousal may emerge as the second dimension in noninterpersonal contexts. Recall that arousal (activity) was the second pancultural dimension in Berlyne's studies of aesthetic judgments. Arousal was the second dimension in studies of emotional facial expressions (Abelson & Sermat, 1962; Russell & Bullock, 1985, 1986; Russell et al., 1989). Arousal was the second dimension in Russell's (1980, 1983) multidimensional scaling of emotion-related words, which included intrapersonal terms: *tired, aroused, excited, tense.* And arousal was the second dimension in Abele-Brehm and Brehm's (1986) factor analysis, which included such items as (I give English translations) *active, full of energy, relaxed,* and *quiet.*

Of course, it takes more than two or three dimensions to define words for the various emotions. When the pleasure dimension is held constant, further dimensions can be obtained through multidimensional scaling of emotion-related words (Russell, 1978). Using different methods, investigators have offered evidence for a score of dimensions beyond pleasure–displeasure. These dimensions seem to be aspects of the cognitive appraisal of the circumstances leading up to the emotion (I. J. Roseman, 1984; Scherer, 1984; Smith & Ellsworth, 1985) or aspects of the behaviors and motives pursuant to the emotion (Frijda, 1987). Although Frijda (1987) carried out his work in Dutch, Scherer (1984) in German, and Smith and Ellsworth (1985) and I. J. Roseman (1984) in English, no cross-language comparisons have been reported.

In short, studies on what is similar in how emotions are understood across cultures point principally to bipolar dimensions: pleasure–displeasure surely, arousal–sleepiness and dominance–submissiveness probably. No one has yet shown any influence of language or culture on the nature of the dimensions found in these studies. Researchers are just beginning to go beyond these few dimensions. Including different languages and cultures in their research should provide much important information, including evidence on some of the differences hypothesized in the ethnographic record.

Hypotheses on the Nature of Emotion Categories

Words that people use to categorize the emotions do not appear to be equivalent in all languages, although there is good reason to believe they are often similar. Dimensions that people use to conceptualize the emotions may be universal, but only a few have been studied. How can there be both similarities and differences in words, and how can categories and dimensions be integrated? The available evidence is sparse, and what there is does not force us to a single conclusion. Any number of hypotheses could be proposed to account for this evidence. I first present the available hypotheses briefly but then focus my attention on one additional possibility, that of a script, not advanced in this context before.

Boucher

Boucher (1979) is among those writers in the field of emotion (Buck, 1988; P. Ekman, 1972; Izard, 1977; Leventhal, 1974; Plutchik, 1980; Tomkins, 1984) drawn to the idea that there are a few discrete, universal—basic—emotions. Indeed writers throughout history have compiled lists of the basic emotions (Gardiner, Metcalf, & Beebe-Center, 1937). Today, 7 ± 2 basic emotions are most often listed: anger, fear, happiness, sadness, and disgust, with surprise, contempt, interest, or shame sometimes added. These theoretically represent universal categories of subjective emotional experience (Izard, 1977) and universal, possibly innate, categories used in the recognition of emotional signals (Buck, 1988, based on Darwin, 1872/1965).

At first glance, this idea does not square with our English lexicon with more than 7 ± 2 words for categories of emotion. Moreover, the ethnographic record indicates cultural variation in the language of emotion. Boucher's (1979) hypothesis reconciles language facts with the theory of basic emotions.

Boucher (1979) defines the domain of emotion as a vertical class-inclusion hierarchy, as can be done for the domain of objects. *Fruit, orange,* and *navel orange* illustrate such an arrangement, in which each succeeding category is included within, and hence less abstract than, the former category. English words for emotions appear to fit this pattern: *emotion, love, romantic love.* In Boucher's version, *emotion* is the superordinate, most inclusive, category. At the next lower (basic) level, *emotion* is divided into the 7 ± 2 basic emotions, that is, *anger, fear,* and the like. Each of these, in turn, is subdivided, forming a subordinate, least inclusive level. Most emotion words therefore label subordinate categories of emotion: as when *annoyance, rage,* and *fury* are subtypes of *anger.* Boucher's hypothesis is that the domain of emotion takes this hierarchical form in all languages, that the top two levels are universal, and that the lowest level is culture specific. More recently, other writers have proposed similar ideas (Agnoli, Kirson, Wu, & Shaver, 1989; Johnson-Laird & Oatley, 1986, 1989; Shaver, Schwartz, Kirson, & O'Connor, 1987). Johnson-Laird and Oatley (1986, 1989) proposed five universal semantic primitives—happiness, fear, anger, disgust, and sadness—in terms of which all other emotion words can be defined.

Boucher's (1979) hypothesis is reinforced by research on categorization in other domains. Rosch (1977) observed that one level in category hierarchies is *basic,* in the sense that various signs point to its being psychologically salient. Although the same object could be called an *object,* a *fruit,* an *orange,* or a *navel orange,* most people feel that one name, *orange,* seems to say what that object really is. The basic-level names are learned first by children and emerge first in historical development of a language. Berlin's (1978) work on folk taxonomies for plants and animals shows further that the basic level, which Berlin termed the *generic level,* is most likely to be similar in different cultures. Categories subordinate to the basic level are formed for cultural utility (Brown, 1986, p. 479) and hence show cultural variability.

Boucher's (1979) hypothesis also accounts nicely for some of the observations found in the ethnographic record. It easily accounts for the Gidjingali having one word for *fear,* but no subtypes, or for Malay distinguishing among types of *anger* in a way not done in English.

On the other hand, some claims in the ethnographic record are not accounted for. Those languages lacking a specific superordinate equivalent to *emotion* is one problem. Another is that *anger, fear,* and other basic-level categories may not be universal; see Table 4. Boucher's hypothesis might be reconciled with this evidence, but it is puzzling why a language would fail to provide a single word for an important, salient, discrete, and possibly innate category of experience—if such exists.

Boucher (1979) used cluster analysis to represent the Malay lexicon for emotion and found results supportive of his hypothesis, but other cluster analyses are less encouraging. Boucher assembled a cross-cultural research team representing eight societies, two of which speak English. Cluster analysis of similarity judgments within each language did not yield a universal category structure. For example, in four societies, a separate

Table 4
Possible Problems for the Universality of Hypothesized Basic-Level Emotion Categories

Basic-level term	Problem
Happiness	Missing in Chewong (Howell, 1981)
Surprise	Missing in Fore, Dani (P. Ekman, personal communication, 1980), Malay (Boucher & Carlson, 1980), and Ifaluk (Lutz, 1982)
Anger	Overlaps with sadness or grief in Luganda (Davitz, 1969; Leff, 1973; Orley, 1970), Illongot (R. I. Rosaldo, 1984), and Ifaluk (Lutz, 1980)
Fear	Missing in Ifaluk (Lutz, 1980), Utku (Briggs, 1970), Pintupi (Morice, 1978); not distinguished from shame in Gidjingali (Hiatt, 1978)
Sadness	Missing in Tahitian (Levy, 1973) and Chewong (Howell, 1981); not sharply distinguished from anger in Luganda (Davitz, 1969; Leff, 1973; Orley, 1970)
Disgust	Missing in Polish (Wierzbicka, 1986), Ifalukian (Lutz, 1980), and Chewong (Howell, 1981); not distinguished from hate in Samoan (Gerber, 1975)

Note. See text for fuller explanation. For example, *fear* is said here to be missing in Utku (Briggs, 1970); *fear* per se is missing, but Utku do have separate words for fear of physical injury and fear of social injury.

basic-level cluster representing depression emerged, but in the other four societies, no depression cluster emerged (Brandt & Boucher, 1986). Other researchers have obtained from 2 to 18 basic clusters (Agnoli et al, 1989; Dietze, 1963; Fillenbaum & Rapoport, 1971; Gerber, 1975; Hoekstra, 1986; Lutz, 1980; Niit & Valsiner, 1977; Shaver et al., 1987; Storm & Storm, 1987; Stringer, 1967). The clusters do not necessarily correspond to what Boucher would list as basic emotions. For example, *disgust* and *anger* were in the same cluster, and *irritation* was in a different cluster, in Fillenbaum and Rapoport's (1971) reanalysis of G. Ekman's (1955) data on Swedish words for emotions. On the other hand, hierarchical cluster analysis does not provide a good test of Boucher's hypothesis. Clusters from a cluster analysis need not correspond to cognitive categories in the minds of the subjects. In none of these studies has the researcher ruled out the null hypothesis that two data sets are samples from the same population.

Although Boucher (1979) does not take this tack, writers in this tradition often use another way of accounting for words other than the core 7 ± 2: Some terms might label blends of the basic emotions. For example, Plutchik (1980) suggested that *pride* is the blend of *joy* and *anger*. The notion of blend might be inconsistent with Boucher's hierarchy, because in a true hierarchy, categories at the same level are mutually exclusive: Anything that is joy is not anger.

So, there remain several problems with Boucher's (1979) account. It is therefore more a promise than a worked out theory. One would have to see a specific analysis of different lexicons before knowing how well this sort of theory can be made to fit the evidence. There is also no consensus on which terms in English label basic emotions, which blends, and which subtypes. The lack of consensus suggests that the concepts of *basic category, blend,* and *subtype* are not sufficiently specified in the domain of emotion to allow a resolution of this issue. In addition, although not contradicted by it, Boucher's hypothesis fails to account for the evidence of universal bipolar dimensions.

Finally, in evaluating Boucher's (1979) hypothesis, one must recognize that the existence of basic emotions does not entail nor is entailed by the existence of universal categories for understanding emotion. There is no guarantee that human beings have got the matter right. Those who believe in basic emotions thus have a choice whether to assume a separate and further hypothesis that the English words like *anger* and *fear* denote those basic emotions, and a still further choice whether to assume that the concepts expressed by these words are pancultural.

Levy

Levy's (1984) account resembles and complements Boucher's (1979). He too presupposed some number of universal basic emotions, although approaching them from a psychodynamic perspective. Levy also relied on the idea of a vertical hierarchy and the idea that languages differ in which and what number of subtypes are recognized. Already mentioned was Levy's (1984) view that a culture develops a cognitive model for each emotion. Where the model is elaborate, many subtypes of the emotion are recognized. Where the model is poorly developed, few or no subtypes may be recognized. The culture need not even recognize a basic emotion as an emotion, as when the Tahitians have no concept of *sadness.*

To account for cultural differences, Levy (1984) proposed an account that is based on the notion of a focal point. Reminiscent of work such as Berlin and Kay's (1969) on a universal pattern within cultural differences in color vocabulary, Levy (1973, pp. 16–17) proposed that there may be cross-cultural universals in the focal points, or best examples, of particular emotions. Where languages differ is in the category boundaries. The Ilongot word *liget* illustrates Levy's (1984) account. Even though *liget* seems to include a broader range of states than does *anger,* they might have the same focal point, perhaps a prototypical furious reaction. Where one language subdivides a category can be seen easily from Levy's (1984) spatial metaphor as adding a boundary. Levy's account would have an easier time than Boucher's with evidence summarized in Table 4.

Levy's (1984) account is phrased metaphorically in terms of points and boundaries. In the same metaphor, we would have to ask about nature of the space in which the points are placed and

the boundaries drawn. Or, put another way, along what dimensions do we define best, intermediate, and borderline examples of an emotion category? One possibility would be to combine Levy's account with Osgood's (1966) idea of a pancultural three-dimensional space defined by the factors of the semantic differential. According to Osgood (1966) different discrete emotions correspond to different regions of the space.

Leff

Leff (1973, 1977, 1981) provided an account that emphasizes historical changes in the meaning of emotion words. At an earlier historical stage, one word denoted the state of unpleasant somatic arousal. Slowly the meaning of that word came to include, and then to focus on, the psychological experience accompanying the somatic state. Such experience was initially undifferentiated, and hence the single word was broad in meaning. Later this root word split into a number of variants to differentiate distinct psychological experiences. As a result, "we find that emotions we consider as distinct, namely, anger, fear (anxiety) and sadness, at one stage in the development of English were all represented by words which derived from the same hypothetical Indo-Germanic root *Angh*" (p. 300). As a consequence, languages differ today by including more or fewer distinctions among emotional states. And indeed, at least those examples cited above from ethnographer's reports that were described as just such combinations of or distinctions within English categories fit Leff's notion of differentiation. As with Boucher and Levy, a hierarchy is envisioned, although without the suggestion of a basic level of 7 ± 2 basic emotions.

Leff's is less than a fully detailed account. For example, consider the original, undifferentiated emotion category. Leff suggested that the root word referred to any state of unpleasant somatic arousal. But it is unclear on this account what to say about pleasant (joy) or even neutral (surprise) emotions. Furthermore, some emotions (sadness) are felt to involve low arousal (Russell & Mehrabian, 1977). Finally, Leff did not specify how differentiation between emotions takes place.

Leff's focus on an undifferentiated state of somatic arousal suggests joining Leff's account with Schachter and Singer's (1962) theory of emotion. On the revised account, the initial state is arousal, which can be pleasant or unpleasant. Further differentiation between emotions is based on the social situation in which the emotion takes place. Leff's account, or this modified version of it, thus allows considerable room for culture-specific emotion concepts.

Wierzbicka

Wierzbicka (1986) argued that an emotion word in one language often has no exact equivalent in another. But each emotion word can be defined in terms of universal semantic primitives, hypothesized to be concepts such as *want, think, good,* and *bad.* To illustrate, here is Wierzbicka's definition of *fear:*

> X was afraid = X felt as one does
> [*a*] when one thinks that something bad can happen to one
> [*b*] when one wants to do something to cause it not to happen
> and [*c*] when one thinks that one cannot cause it not to happen. (p. 592)

Her style of definition therefore provides a universal (etic) framework in which (emic) words from different languages can be compared.

Some psychologists have misunderstood Wierzbicka (1986) as offering a classical definition in which Conditions a through c are each necessary (see Russell, 1991). Let me therefore emphasize the crucial word *as* in the quotation above. If Conditions a through c were necessary conditions, there would be obvious counterexamples in which one of the alleged necessary conditions is missing. Wierzbicka's conditions are not meant to specify the necessary circumstances of fear, but the prototypical circumstances.

Acceptance of Wierzbicka's (1986) definition requires acceptance of her theory as to what constitute universal semantic primitives. In addition, the psychologist is inclined to ask about the psychological reality of the proposed definitions. To return to *fear,* are Conditions a, b, and c what someone knows who knows the meaning of *fear?* The answer would appear to be no for neonates, who have been said to recognize fear (and therefore have the concept of *fear*), presumably before they can reasonably be said to possess Wierzbicka's universal semantic components constituting *fear.*

The Hypothesis of Scripts

A script is a knowledge structure for a type of event whereby the event is thought of as a sequence of subevents. Although we often speak of an emotion as a thing, a sequence of subevents is a more apt description. For example, Table 5 gives a script for anger.

The sequence given might rarely occur in just that way, but for each emotion concept, we know some such prototype sequence. Fear, we know, is typically caused by a danger and typically leads to some sort of running away. For some concepts, the story is simple. In happiness, you desire something, get it, feel pleasure, smile, and, perhaps feel kind toward others. For other concepts, the story is more complicated. Jealousy might include anger, but *jealousy* implies a surrounding situation, a social relationship involving three people, specific motives, behaviors, and consequences. These implications must be understood to know what the word *jealousy* means.

In short, according to the script hypothesis, categories of emotion are defined by features. The features describe not hidden essences but knowable subevents: the causes, beliefs, feelings, physiological changes, desires, overt actions, and vocal and facial expressions. These features are ordered in a causal sequence, in much the same way that actions are ordered in a playwright's script. To know the meaning of a term like *happiness, fear,* or *jealousy* is to know a script for that emotion. In other words, the script hypothesis is that the meaning of each such word, the concept it expresses, is a script. No emotional essence is added to the features, just as biologists found no vital essence needed to spark chemical constituents to life.

Unfortunately, the word *script* means different things to different writers. For example, I am treating emotion scripts some-

Table 5
An Anger Script

Step	Subevent
1	The person is offended. The offense is intentional and harmful. The person is innocent. An injustice has been done.
2	The person glares and scowls at the offender.
3	The person feels internal tension and agitation, as if heat and pressure were rapidly mounting inside. He feels his heart pounding and his muscles tightening.
4	The person desires retribution.
5	The person loses control and strikes out, harming the offender.

Note. This anger script is partly based on Lakoff's (1987) analysis of *anger*.

what differently than did Abelson (1981) when he first proposed them. Abelson thought of emotion scripts as involved both in understanding (a knowledge schema) and in behavior (a response program); I am restricting my treatment to the former. Abelson thought of the emotion as one of the features within an emotion script: Someone interferes, you become angry, you hit. In contrast, I am using the notion of script to define the emotion concept.

Other authors have proposed thinking of emotion concepts as something like a script (Abelson, 1981; de Sousa, 1980; Fehr & Russell, 1984; Lakoff, 1987; Sabini & Silver, 1982; Shaver et al., 1987; Tomkins, 1979). The current hypothesis presented here illustrates this line of thinking; I would not like to be taken as attempting to differentiate within this family of ideas. Just how abstract or concrete are the features that constitute the script remains an empirical question. Some people may understand emotion in terms of more abstract scripts, others in terms of more concrete exemplars (Kahneman & Miller, 1986). Moreover, different people, even within the same culture, might possess slightly different scripts for the same emotion. There may be more agreement for *fear* and *anger* than for *disdain* and *melancholy*.

The present script hypothesis is closely tied to the principle that the meaning of any concept is related to the network of concepts within which it is embedded. Meaning wholism, or the theory-laden quality of meaning, is somewhat of an orthodoxy in philosophy (Searle, 1983) and has been emphasized in psychology by Medin (1989).

The script hypothesis is also tied to Rosch's (e.g., 1973, 1975, 1977) prototype theory of natural language categories of objects. A script is to an event what a prototype is to an object. Elsewhere my colleagues and I have pointed to aspects of the emotion domain clarified by Rosch's theory (Bullock & Russell, 1984, 1985; Fehr & Russell, 1984, 1991; Fehr, Russell, & Ward, 1982; Russell, 1991; Russell & Bullock, 1986). Rather than properly defined, *happiness, sadness, fear, anger,* and other natural language categories of emotion are fuzzy: (a) Borders between categories are vague, rather than clear-cut. Although some actual events are clear cases of, for example, anger and other actual events are clearly not anger, some events straddle the fence and are difficult to decide one way or the other. (b) Membership within a category is a matter of degree rather than all or none. Actual cases of anger vary in how well they exemplify the concept. (c) Different categories tend to overlap one another rather than to be mutually exclusive. Actual events tend to be categorizable into more than one category; the same case can be anger, fear, disgust, and sadness. Some overlap each other almost completely, others to a high degree, others to a minimal degree, and some not at all.

The script hypothesis offers a simple and straightforward account of cross-cultural similarities and differences. Those languages with fewer emotion categories would have more general scripts: Each script would have fewer features and cover a broader range of phenomena. Languages with many emotion categories have more specific scripts: Each script would have more features and cover a narrower range of phenomena. Moreover, some features are culture specific, and others are pancultural. Or, better, *culture specific* and *pancultural* define two ends of a continuum. Some features may be limited to few cultures; others found in all or almost all.

Consider first the similarities: Those bipolar dimensions of affective meaning found universally are choice candidates for pancultural features of emotion scripts. These dimensions describe universal aspects of feeling, or mood change (Russell & Snodgrass, 1987). Other universal or near universal features are also likely to be found, describing universal aspects of antecedents (Boucher & Brandt, 1981), motives, desires, or action tendencies (Frijda, 1987), facial or vocal expressions (P. Ekman, 1972), and physiological changes (P. Ekman, Levenson, & Friesen, 1983). Such features would quite likely be noticed and incorporated into the mental representation of the emotion, the script. Whether any such feature is actually universal is naturally an empirical question. Even if universal, a particular feature may be emphasized, deemphasized, or ignored. For example, even though arousal feelings appear to be a good candidate for a universal dimension, the Ifaluk pay them little attention (Lutz, 1982).

Moreover, these features form natural patterns. That is, not all combinations of the features are equally likely to occur. As Rosch (1973, 1975, 1977) emphasized, features in the world are correlated: Creatures with beaks and wings are likely to have feathers. In the emotion world, frustration of a goal is likely to lead to feelings of displeasure and arousal, which often leads to some effort to change the situation; this sequence is more likely accompanied by a frown than a smile and by physiological arousal. On the other hand, getting what you want often leads to pleasure, which often leads to no action or merely maintaining the current situation, to smiles, and lowered physiological

arousal. Such patterns might not be absolutely universal, but the more widespread the patterns the more likely they will result in cross-cultural similarity of human concepts of emotions.

Now consider what might be culture specific about emotion concepts. One possibility seems to concern what has been called the *cause* of the emotion. Causal antecedents appear to be involved in emotion terms in English: *Fear* implies that a danger has appeared, whereas *anxiety* implies that the cause is vague or unknown. *Guilt* implies that you yourself are the causal agent of a bad outcome, whereas *anger* implies that another has caused some harm. Weiner (1982) has provided evidence and a conceptual analysis of the role of causal thinking in English language emotion concepts. Note that this is not to say that a particular cause is a necessary feature, just a prototypical feature.

The same is true in other languages. *Litost* is caused by a sudden insight into one's own miserable self. *Schadenfreude* is caused by another's displeasure. *Ijirashii* is caused by seeing someone praiseworthy overcoming an obstacle. Culture can emphasize one cause or another. People can react emotionally to different things in different cultures. Different causes can thus be incorporated into the meaning of emotion-descriptive terms. Anthropologists have described how people of certain cultures attribute emotions to such things as the soul leaving the body, a curse from an enemy, bewitchment, demonic possession, disfavor of the gods, and visitations of ghosts. For example, the Tahitian word *mehameha* refers to fear caused by a ghost (Levy, 1973). In short, I propose that causal antecedent can be an aspect of the meaning of an emotion term and that this aspect of meaning can be part of what varies with culture.

Another sort of culture-specific aspect of emotion concerns what has traditionally been called *consequences. Litost* leads to a desire for revenge. The Pintupi distinguish various forms of distress by their consequences: *Watjilpa* is worry that leads to physical illness (Morice, 1978, p. 92). More commonly, the consequences are behavioral, such as emotionally expressive gestures. For example, Levy (1973, p. 96–98) found 26 terms in Tahitian in which the inner feeling differs from what is outwardly displayed. Similarly, the Samoan word *ɔ̀ɔna* refers to anger that is not expressed (Gerber, 1975). According to P. Ekman (1972, 1980), different cultures establish different norms about the control of emotional expressions. These *display rules* might dictate that at a funeral, for example, grief should be inhibited, displayed, or exaggerated. Peoples of different cultures thus expect different behavioral consequences of specific emotions. Again, I propose that these expectations are incorporated into the meaning of terms and that this aspect of meaning can vary with culture.

Conclusion

Studies of different lexicons, of judgments of emotion from facial expressions, and of the dimensions implicit in comparative judgments of emotion cannot tell us directly how people categorize emotions. Nevertheless, considering these three sources of evidence, I tentatively conclude that people of different cultures and speaking different languages categorize the emotions somewhat differently. The boundaries around the domain appear to vary, as do divisions within the domain. Thus, neither the word *emotion* nor words for even alleged basic emotions, such as *anger* and *sadness* are universal. Different lines of evidence converge on this conclusion: Intensive ethnographic studies of specific emotion words, the large number of reports by ethnographers of noticeable differences in emotion words, the large variation across languages in the number of emotion words, the experimental evidence of differences in what were previously taken to be translation equivalents, and the small difference between Indo-European and non-Indo-European languages in categorization of facial expressions.

According to some accounts of emotion, this conclusion implies that emotions themselves, the events referred to by the word *emotion*, are culture specific. On this point, I would like to avoid misunderstanding. This article did not address the question of what about emotion itself is panhuman and what is culture bound. It addressed the question of what in the categorization of the emotions is universal and what is culture bound. From a logical point of view, answers to these two separate questions may coincide, but they need not. Peoples of different cultures could impose their own categorization on a universal emotion reality. Conversely, people could impose universal categories on a culture-bound reality.

Differences in emotion categories do, nevertheless, support one inference regarding the emotions themselves. Some writers assume that emotions have to be classified as we do in English —in terms of *anger, fear, anxiety, depression,* and so on. If English language categories regarding emotion are not universal, then we have no guarantee that *emotion, anger, fear,* and so on are labels for universal, biologically fixed categories of nature. Rather, they are hypotheses formulated by our linguistic ancestors.

I also tentatively conclude that there is great similarity in emotion categories across different cultures and languages. Different lines of evidence converge on this conclusion: the widespread assumption in the ethnographic record that emotion and emotion categories are everywhere the same (as evidenced, for example, in the HRAF), the acknowledgment by many ethnographers who found differences in emotion lexicons that many words mean the same or something similar, the apparent universality of dimensions in judgments of emotion, and the high similarity across cultures in perception of facial expressions of emotion.

As banal as the conclusion of great similarity may sound, I mean it to imply that I found no evidence for claims of a radical kind. For example, in various publications, Solomon (e.g., 1976) claimed that whole groups of emotions go nameless and do not exist within particular cultures. Calhoun and Solomon (1984) wrote the following about the Utku:

> It is not just that they do not express anger, they do not feel angry, either. Indeed, they do not even have a word for anger in their vocabulary (the closest word to it, significantly, means "childish"). (p. 34)

I believe this statement is based on a misinterpretation of Briggs's (1970) ethnography of the Utku, in which there are both incidents of and words for anger.

Another example would be Lutz's (e.g., 1982) claim about the referent of emotion words:

> Internal feeling states have commonly been assumed to be the primary referents of emotion words in Western thought, both social-scientific and lay. . . . Examination of the use of emotion words among several Oceanic peoples . . . reveals an alternative view of emotion. In these societies, emotion words are seen as statements about the relationship between a person and an event (particularly those involving another person), rather than as statements about introspection on one's internal states. (Lutz, 1982, p. 113)

I take this assertion to mean, for example, that the Ifalukian word *song,* commonly translated as *anger,* refers not to the angry person's internal state, but to something external. There is first the question of whether Lutz's claim is consistent with her own ethnographic evidence. Lutz (1980) had earlier indicated that *song* refers to *niferash,* which she translated as "our insides." Second, there is the conceptual issue of how a word in any language that does not refer to an internal state could be said to be an emotion word. If *song* were a member of a class of words that, like *marriage* or *kinship,* referred to a relationship, then the reason for calling *song* an emotion word is unclear.

Lutz may be conflating sense and reference. The sense of *song* can involve anger-inducing events and external relationships, although the reference of *song* is still an internal state. Consider the sentence, "My grandmother lives in Los Angeles." The word *grandmother* here refers to a particular person, my maternal grandmother, Besse. But the sense of *grandmother* involves other people, relationships, and events. Thus, the determination that Besse is a grandmother is made not by inspection of Besse, but by the existence of other people (my mother and me) and certain events (her daughter's having given birth, etc.). The word *grandmother* does not refer to me or to my mother or to anyone's birth. It refers to Besse. So, the proper thing to say appears to be that *song* refers to an internal state created when certain external circumstances occur.

In this regard, Ifaluk emotion words are more like than unlike English emotion words. Evidence of the kind reviewed in this article highlights the role of situational antecedents in defining emotion concepts. This conclusion was explicit or implicit in all five hypotheses regarding the nature of emotion concepts. Even Boucher (1979), who believes in basic emotions, was led to a similar analysis for those emotion concepts beyond names for the 7± 2 basic emotions. Research on the psychological representation of emotion provides strong complementary evidence that emotion concepts in English are differentiated by their situational antecedents (Conway & Bekerian, 1987; Doré & Kirouac, 1986; Harrison, 1986). Thus, *jealousy* refers to an internal state created when certain circumstances occur. If so, English and Ifalukian follow a remarkably similar way of defining an emotion.

More generally, emotion concepts are embedded in a system of beliefs about psychological and social processes. This system has been called a *cognitive model, folk theory of mind, ethnopsychology,* or *indigenous psychology* (Heelas & Lock, 1981). Similarities and differences in emotion concepts may be but the tip of the iceberg, where the iceberg would be similarities and differences in the folk theory of mind, of self, of society, of nature, and so forth (Holland & Quinn, 1987). Moreover, understanding the folk model may be necessary to understanding concepts. In the same way that the meaning of a scientific construct derives from its role in a scientific theory (Cronbach & Meehl, 1955), the meaning of a folk concept of emotion derives from its role in the folk theory of emotion. A further step would be to examine the consequences of categorizing one way rather than another and of believing in one such folk theory as opposed to another. These consequences remain largely unknown, but exciting work has begun to explore this question (C. Geertz, 1966; Heelas & Lock, 1981; Lutz, 1988; M. Z. Rosaldo, 1980, 1983).

The most glaring difficulty with the evidence reviewed here is that different conclusions are associated with different methods of gathering evidence. We need further evidence of all kinds, but we especially need new methods. Conclusions drawn from current methods need to be subjected to empirical tests that are based on other methods. Several exciting examples of cross-fertilization therefore bear emphasis. Lutz (1982) included the psychometric techniques of multidimensional scaling and cluster analysis in her ethnography of the Ifaluk. P. Ekman and Heider (1988) used psychometric methods in a culture chosen on ethnographic grounds. Scherer and his associates have begun a large-scale collaborative project comparing various cultures on common instruments (Scherer, 1988; Scherer, Wallbott, & Summerfield, 1986). Perhaps further research and the development of new methods is best stimulated by the contrast of specific hypotheses. For this reason, the accounts developed by Boucher (1979), Leff (1977), Levy (1984), and Wierzbicka (1986) and the script hypothesis may come to play an important role in guiding future research. My conclusion of both similarities and differences across cultures in the categories of emotion is only as good as the available evidence. The conclusions drawn here are thus hypotheses, which must be tested empirically and which may serve to stimulate nonbelievers into marshalling evidence or arguments against them.

References

Abele-Brehm, A., & Brehm, W. (1986). Zur Konzeptualisierung und Messung von Befindlichkeit [On the conceptualization and measurement of mood]. *Diagnostica, 32,* 209–228.

Abelson, R. P. (1981). Psychological status of the script concept. *American Psychologist, 36,* 715–729.

Abelson, R. P., & Sermat, V. (1962). Multidimensional scaling of facial expressions. *Journal of Experimental Psychology, 63,* 546–554.

Abu-Lughod, L. (1986). *Veiled sentiments: Honor and poetry in a Bedouin society.* Berkeley: University of California Press.

Agnoli, F., Kirson, D., Wu, S., & Shaver, P. R. (1989). *Hierarchical analysis of the emotion lexicon in English, Italian and Chinese.* Paper delivered at a meeting of the International Society for Research on Emotion, Paris.

Averill, J. R. (1975). A semantic atlas of emotional concepts. *JSAS: Catalog of Selected Documents in Psychology, 5,* 330. (Ms. No. 421).

Averill, J. R. (1980). A constructivist view of emotion. In R. Plutchik & H. Kellerman (Eds.), *Theories of emotion* (Vol. 1, pp. 305–340). San Diego, CA: Academic Press.

Berlin, B. (1978). Ethnobiological classification. In E. Rosch & B. B. Lloyd (Eds.), *Cognition and categorization* (pp. 9–26). New York: Wiley.

Berlin, B., & Kay, P. (1969). *Basic color terms: Their universality and evolution.* Berkeley: University of California Press.

Berlyne, D. E. (1975). Extension to Indian subjects of a study of explor-

atory and verbal responses to visual patterns. *Journal of Cross-Cultural Psychology, 6,* 316–330.

Berlyne, D. E., Robbins, M. C., & Thompson, R. (1974). A cross-cultural study of exploratory and verbal responses to visual patterns varying in complexity. In D. E. Berlyne (Ed.), *Studies in the new experimental aesthetics: Steps toward an objective psychology of aesthetic appreciation* (pp. 259–278). Washington, DC: Hemisphere.

Besnier, N. (1990). Language and affect. *Annual Review of Anthropology, 19,* 419–451.

Birdwhistell, R. L. (1970). *Kinesics and context.* Philadelphia: University of Pennsylvania Press.

Block, J. (1957). Studies in the phenomenology of emotions. *Journal of Abnormal and Social Psychology, 54,* 358–363.

Boucher, J. D. (1979). Culture and emotion. In A. J. Marsella, R. G. Tharp, & T. V. Ciborowski (Eds.), *Perspectives on cross-cultural psychology* (pp. 159–178). San Diego, CA: Academic Press.

Boucher, J. D., & Brandt, M. E. (1981). Judgment of emotion: American and Malay antecedents. *Journal of Cross-Cultural Psychology, 12,* 272–283.

Boucher, J. D., & Carlson, G. E. (1980). Recognition of facial expression in three cultures. *Journal of Cross-Cultural Psychology, 11,* 263–280.

Brandt, M. E., & Boucher, J. D. (1986). Concepts of depression in emotion lexicons of eight cultures. *International Journal of Intercultural Relations, 10,* 321–346.

Briggs, J. L. (1970). *Never in anger: Portrait of an Eskimo family.* Cambridge, MA: Harvard University Press.

Brown, R. (1986). Linguistic relativity. In S. H. Hulse & B. F. Green, Jr. (Eds.), *One hundred years of psychological research in America: G. Stanley Hall and the Johns Hopkins tradition* (pp. 241–276). Baltimore: Johns Hopkins University Press.

Buck, R. (1988). *Human motivation and emotion.* New York: Wiley.

Bullock, M., & Russell, J. A. (1984). Preschool children's interpretation of facial expressions of emotion. *International Journal of Behavioral Development, 7,* 193–214.

Bullock, M., & Russell, J. A. (1985). Further evidence on preschoolers' interpretations of facial expressions of emotion. *International Journal of Behavioral Development, 8,* 15–38.

Burrows, E. G., & Spiro, M. E. (1957). *An atoll culture: Ethnography of Ifaluk in the Central Carolines.* New Haven, CT: Human Relations Area Files. (Original work published 1953).

Bush, L. E., II. (1973). Individual differences in multidimensional scaling of adjectives denoting feelings. *Journal of Personality and Social Psychology, 25,* 50–57.

Calhoun, C., & Solomon, R. C. (1984). What is an emotion? *Classic readings in philosophical psychology.* New York: Oxford University Press.

Carr, J. E., & Tan, E. K. (1976). In search of true amok: Amok as viewed within the Maly. *American Journal of Psychiatry, 133,* 1295–1299.

Carstairs, G. M. (1967). *The twice-born: A study of a community of high-caste Hindus.* Bloomington: Indiana University Press.

Chai, C., & Chai, W. (Eds.). (1967). *Li Chi: Book of rites* (Vol. 1, J. Legge, Trans.). New Hyde Park, England: University Books. (Original work published, 1885)

Chan, D. W. (1990). The meaning of depression: Chinese word associations. *Psychologia, 33,* 191–196.

Cheetham, W. S., & Cheetham, R. J. (1976). Concepts of mental illness amongst the Xhosa people in South Africa. *Australian and New Zealand Journal of Psychiatry, 10,* 39–45.

Cheng, T. (1977). *A phenomenological study of emotional experience: A search for cultural differences and similarities in the construction of emotion by a Hong Kong Chinese sample.* Unpublished master's thesis, University of Hong Kong.

Conway, M. A., & Bekerian, D. A. (1987). Situational knowledge and emotions. *Cognition and Emotion, 1,* 145–191.

Corraliza, J. A. (1987). *La experiencia del ambiente* [The experience of the environment]. Madrid, Spain: Tecnos.

Crapanzano, V. (1980). *Tuhami: Portrait of a Moroccan.* Chicago: University of Chicago Press.

Cronbach, L. J., & Meehl, P. E. (1955). Construct validity in psychological tests. *Psychological Bulletin, 52,* 281–302.

Cüceloglu, D. M. (1970). Perception of facial expressions in three cultures. *Ergonomics, 13,* 93–100.

Daly, E. M., Lancee, J. W., & Polivy, J. (1983). A conical model for the taxonomy of emotional experience. *Journal of Personality and Social Psychology, 45,* 701–711.

Darwin, C. (1965). *The expression of the emotions in man and animals.* Chicago: University of Chicago Press. (Original work published 1872)

Davitz, J. R. (1969). *The language of emotion.* San Diego, CA: Academic Press.

de Sousa, R. (1980). The rationality of emotions. In A. O. Rorty (Ed.), *Explaining emotion* (pp. 127–151). Berkeley: University of California Press.

Dickey, E. C., & Knower, F. H. (1941). A note on some ethnological differences in recognition of simulated expressions of emotions. *American Journal of Sociology, 47,* 190–193.

Dietze, A. G. (1963). Types of emotions or dimensions of emotion? A comparison of typal analysis with factor analysis. *Journal of Psychology, 56,* 143–159.

Dodds, E. R. (1951). *The Greeks and the irrational.* Berkeley: University of California Press.

Doi, T. (1973). *The anatomy of dependence.* Tokyo: Kodansha.

Doré F. Y., & Kirouac, G. (1986). Reliability of accuracy and intensity judgments of eliciting situations of emotions. *Canadian Journal of Behavioral Science, 18,* 92–103.

Ducci, L., Arcuri, L., W/Georgis, T., & Sineshaw, T. (1982). Emotion recognition in Ethiopia. *Journal of Cross-Cultural Psychology, 13,* 340–351.

Eggan, D. (1970). Instruction and affect in Hopi cultural community. In J. Middleton (Ed.), *From child to adult* (pp. 109–133). Garden City, NJ: The Natural History Press.

Ekman, G. (1955). Dimensions of emotion. *Acta Psychologica, 11,* 279–288.

Ekman, P. (1972). Universal and cultural differences in facial expressions of emotions. In J. K. Cole (Ed.), *Nebraska symposium on motivation, 1971* (pp. 207–283). Lincoln: University of Nebraska Press.

Ekman, P. (1980). *The face of man: Expressions of universal emotions in a New Guinea village.* New York: Garland STPM Press.

Ekman, P., & Friesen, W. V. (1971). Constants across cultures in the face and emotion. *Journal of Personality and Social Psychology, 17,* 124–129.

Ekman, P., & Friesen, W. V. (1976). *Pictures of facial affect.* Palo Alto, CA: Consulting Psychologists Press.

Ekman, P., Friesen, W. V., O'Sullivan, M., Chan, A., Diacoyanni-Tarlatzis, I., Heider, K., Krause, R., Le Compte, W. A., Pitcairn, T., Ricci-Bitti, P. E., Scherer, K., Tomita, M., & Tzavaras, A. (1987). Universals and cultural differences in the judgments of facial expressions of emotion. *Journal of Personality and Social Psychology, 53,* 712–717.

Ekman, P., & Heider, K. G. (1988). The universality of a contempt expression: A replication. *Motivation and emotion, 12,* 303–308.

Ekman, P., Levenson, R. W., & Friesen, W. V. (1983). Autonomic nervous system activity distinguishes among emotions. *Science, 221,* 1208–1210.

Ekman, P., Sorenson, E. R., & Friesen, W. V. (1969). Pan-cultural elements in the facial displays of emotions. *Science, 164,* 86–88.

Epstein, A. L. (1984). *The experience of shame in Melanesia.* London: Royal Anthropological Institute.

Fajans, J. (1983). Shame, social action, and the person among the Baining. *Ethos, 11,* 166–178.

Fehr, B., & Russell, J. A. (1984). Concept of emotion viewed from a prototype perspective. *Journal of Experimental Psychology: General, 113,* 464–486.

Fehr, B., & Russell, J. A. (1991). The concept of love viewed from a prototype perspective. *Journal of Personality and Social Psychology, 60,* 425–438.

Fehr, B., Russell, J. A., & Ward, L. M. (1982). Prototypicality of emotions: A reaction time study. *Bulletin of the Psychonomic Society, 20, 253–254.*

Fillenbaum, S., & Rapoport, A. (1971). *Structures in the subjective lexicon.* San Diego, CA: Academic Press.

Fodor, J. A. (1981). *RePresentations.* Cambridge, MA: MIT Press.

Fortes, M. (1970). Social and psychological aspects of education in Taleland. In J. Middleton (Ed.), *From child to adult* (pp. 14–74). Garden City, NJ: The Natural History Press.

Frijda, N. H. (1953). The understanding of facial expression of emotion. *Acta Psychologica, 9,* 294–362.

Frijda, N. H. (1987). Emotion, cognitive structure, and action tendency. *Cognition and Emotion, 1,* 115–143.

Gardiner, H. M., Metcalf, R. C., & Beebe-Center, J. G. (1937). *Feeling and emotion: A history of theories.* New York: American Book Co.

Geertz, C. (1966). *Person, time, and conduct in Bali: An essay in cultural analysis.* New Haven, CT: Yale University Southeast Asia Studies.

Geertz, H. (1959). The vocabulary of emotion: A study of Javanese socialization processes. *Psychiatry, 22,* 225–237.

Gehm, T. L., & Scherer, K. R. (1988). Factors determining the dimensions of subjunctive emotional space. In K. R. Scherer (Ed.), *Facets of emotion: Recent research* (pp. 99–113). Hillsdale, NJ: Erlbaum.

Gerber, E. (1975). *The cultural patterning of emotions in Samoa.* Unpublished doctoral dissertation, University of California, San Diego.

Gobeil, O. (1973). El susto: A descriptive analysis. *International Journal of Social Psychiatry, 19,* 38–44.

Graham, J. A., Ricci Bitti, P., & Argyle, M. (1975). A cross-cultural study of the communication of emotion by facial & gestural cues. *Journal of Human Movement Studies, 1,* 68–77.

Hallowell, A. I. (1955). *Culture and experience.* Philadelphia: University of Pennsylvania Press.

Harré, R. (1986). An outline of the social constructionist viewpoint. In R. Harré (Ed.), *The social construction of emotions* (pp. 2–14). Oxford, England: Basil Blackwell.

Harré, R., & Finlay-Jones, R. (1986). Emotion talk across time. In R. Harré (Ed.), *The social construction of emotions* (pp. 220–233). Oxford, England: Basil Blackwell.

Harrison, R. H. (1986). The grouping of affect terms according to the situations that elicit them: A test of a cognitive theory of emotion. *Journal of Research in Personality, 20,* 252–266.

Heelas, P., & Lock, A. (Eds.). (1981). *Indigenous psychologies: The anthropology of the self.* San Diego, CA: Academic Press.

Herrmann, D. J., & Raybeck, D. (1981). Similarities and differences in meaning in six cultures. *Journal of Cross-Cultural Psychology, 12,* 194–206.

Hiatt, L. R. (1978). Classification of the emotions. In L. R. Hiatt (Ed.), *Australian aboriginal concepts* (pp. 182–187). Princeton, NJ: Humanities Press.

Hochschild, A. R. (1983). *The managed heart.* Berkeley: University of California Press.

Hoekstra, H. A. (1986). *Cognition and affect in the appraisal of events.* Groningen, The Netherlands: Rijksuniversteit te Groningen.

Hoffman, C., Lau, I., & Johnson, D. R. (1986). The linguistic relativity of person cognition. An English–Chinese comparison. *Journal of personality and Social Psychology, 51,* 1097–1105.

Hofstede, G. (1980). *Culture's consequences.* Beverly Hills, CA: Sage.

Hollan, D. (1988). Staying "cool" in Toraja. *Ethos, 16,* 53–72.

Holland, D., & Quinn, N. (1987). *Cultural models in language and thought.* Cambridge, England: Cambridge University Press.

Howell, S. (1981). Rules not words. In P. Heelas & A. Lock (Eds.), *Indigenous psychologies: The anthropology of the self* (pp. 133–143). San Diego, CA: Academic Press.

Howell, S. (1984). *Society and cosmos: Chewong of peninsular Malaysia.* London: Oxford University Press.

Imada, H. (1989). Cross-language comparisons of emotional terms with special reference to the concept of anxiety. *Japanese Psychological Research, 31,* 10–19.

Imada, H., Araki, M., & Kujime, Y. (1991). *Comparisons of concepts of anxiety, fear, and depression in English and Japanese languages.* Manuscript in preparation, Kwansei Gakuin University, Department of Psychology, Hyogo, Japan.

Izard, C. E. (1971). The face of emotion. New York: Appleton-Century-Crofts.

Izard, C. E. (1977). *Human emotions.* New York: Plenum Press.

Izard, C. E. (1980). Cross-cultural perspectives on emotion and emotion communication. In H. C. Triandis & W. Lonner (Eds.), *Handbook of cross-cultural psychology* (pp. 185–221). Boston: Allyn & Bacon.

Izard, C. E., & Buechler, S. (1980). Aspects of consciousness and personality in terms of differential emotions theory. In R. Plutchik & H. Kellerman (Eds.), *Emotion: Theory, research, and experience* (Vol. 1, pp. 105–187). San Diego, CA: Academic Press.

Jeffery, G. H., & Patterson, D. L. (1987). Field dependence and sensitivity to facial affect cues. *Semiotica, 64,* 335–341.

Johnson, A., Johnson, O., & Baksh, M. (1986). The colours of emotions in Machiguenga. *American Anthropologist, 88,* 674–681.

Johnson, D., & Johnson, C. A. (1965). Totally discouraged: A depressive syndrome of the Dakota Sioux. *Transcultural Psychiatric Research Review, 2,* 141–143.

Johnson-Laird, P. N., & Oatley, K. (1986). *The meaning of emotions: A cognitive theory and a semantic analysis.* Unpublished manuscript, Cambridge University, Applied Psychology Unit, Cambridge, England.

Johnson-Laird, P. N., & Oatley, K. (1989). The language of emotions: An analysis of a semantic field. *Cognition and Emotion, 3,* 81–123.

Kagitcibasi, C., & Berry, J. W. (1989). Cross-cultural psychology: Current research and trends. *Annual Review of Psychology, 40,* 493–531.

Kahneman, D., & Miller, D. T. (1986). Norm theory: Comparing reality to its alternatives. *Psychological Review, 93,* 136–153.

Kay, P., & Kempton, W. (1984). What is the Sapir-Whorf hypothesis? *American Anthropologist, 86,* 65–79.

Keeler, W. (1983). Shame and stage fright in Java. *Ethos, 11,* 152–165.

Kiesler, D. J., Horner, M. S., Larus, J. P., & Chapman, R. C. (1987). *Measurement of evoked emotion in interpersonal transactions.* Unpublished manuscript, Department of Psychology, Virginia Commonwealth University.

Kiev, A. (1968). *Curanderismo: Mexican-American folk psychiatry.* New York: Free Press.

Kilbride, J. E., & Yarczower, M. (1980). Recognition and imitation of facial expressions: A cross-cultural comparison between Zambia and the United States. *Journal of Cross-Cultural Psychology, 11,* 281–296.

Kirmayer, L. J. (1989). Cultural variations in the response to psychiatric disorders and emotional distress. *Social Science and Medicine, 29,* 327–339.

Kolenda, K. (1987). On human emotions. *American Anthropologist, 89,* 946–947.

Kracke, W. H. (1981). Kagwahiv Mourning I: Dreams of a bereaved father. *Ethos, 9,* 258–275.

Kundera, M. (1980). *The book of laughter and forgetting* (M. H. Heim, Trans.) New York: Knopf. (Original work published 1979).

Lakoff, G. (1987). *Women, fire and dangerous things: What categories reveal about the mind.* Chicago: University of Chicago Press.

Langness, L. L. (1965). Hysterical psychosis in the New Guinea Highlands: A Bena Bena example. *Psychiatry, 28,* 258–277.

Lebra, T. S. (1983). Shame and guilt: A psychocultural view of the Japanese self. *Ethos, 11,* 192–231.

Leff, J. (1973). Culture and the differentiation of emotional states. *British Journal of Psychiatry, 123,* 299–306.

Leff, J. (1977). The cross-cultural study of emotions. *Culture, Medicine, and Psychiatry, 1,* 317–350.

Leff, J. (1981). *Psychiatry around the globe: A transcultural view.* New York: Marcel Dekker.

Leighton, A. H., Lambo, T. A., Hughes, C. C., Leighton, D. C., Murphy, J. M., & Macklin, D. B. (1963). *Psychiatric disorder among the Yoruba.* Ithaca, NY: Cornell University Press.

Leventhal, H. (1974). Emotions: A basic problem for social psychology. In C. Nemeth (Ed.), *Social psychology* (pp. 1–51). Chicago: Rand McNally.

Levine, N. E. (1988). *The dynamics of polyandry: Kinship, domesticity, and population on the Tibetan border.* Chicago: University of Chicago Press.

Levy, R. I. (1973). *Tahitians.* Chicago: University of Chicago Press.

Levy, R. I. (1983). Introduction: Self and emotion. *Ethos, 11,* 128–134.

Levy, R. I. (1984). The emotions in comparative perspective. In K. R. Scherer & P. Ekman (Eds.), *Approaches to emotion* (pp. 397–412). Hillsdale, NJ: Erlbaum.

Lindholm, C. (1982). *Generosity and jealousy: The Swat Pukhtun of Northern Pakistan.* New York: Columbia University Press.

Lowrie, W. (1944). Translator's preface. In S. Kierkegaard & W. Lowrie (Trans.), *The concept of dread.* London: Oxford University Press.

Lucy, J. A., & Shweder, R. A. (1979). Whorf and his critics: Linguistic and nonlinguistic influences on color memory. *American Anthropologist, 81,* 581–615.

Lundberg, U., & Devine, B. (1975). Negative similarities. *Educational and Psychological Measurement, 35,* 797–807.

Lutz, C. (1980). *Emotion words and emotional development on Ifaluk Atoll.* Unpublished doctoral dissertation, Harvard University.

Lutz, C. (1982). The domain of emotion words in Ifaluk. *American Ethnologist, 9,* 113–128.

Lutz, C. (1983). Parental goals, ethnopsychology, and the development of emotional meaning. *Ethos, 11,* 246–262.

Lutz, C. (1985). Ethnopsychology compared to what? Explaining behaviour and consciousness among the Ifaluk. In G. M. White & J. Kirkpatrick (Eds.), *Person, self, and experience: Exploring Pacific ethnopsychologies* (pp. 35–79). Berkeley: University of California Press.

Lutz, C. (1988). Ethnographic perspectives on the emotion lexicon. In V. Hamilton, G. H. Bower, & N. H. Frijda (Eds.), *Cognitive perspectives on emotion and motivation* (pp. 399–419). Norwell, MA: Kluwer Academic.

Lutz, C., & White, G. M. (1986). The anthropology of emotions. *Annual Review of Anthropology, 15,* 405–436.

Mandal, M. K., Saha, G. B., & Palchoudhury, S. (1986). A cross-cultural study on facial affect. *Journal of Psychological Researches, 30,* 140–143.

Marsella, A. J. (1981). Depressive experience and disorder across cultures. In H. Triandis & J. Draguns (Eds.), *Handbook of cross-cultural psychology* (pp. 237–289). Boston: Allyn & Bacon.

Matsumoto, D. (1989). Cultural influences on the perception of emotion. *Journal of Cross-Cultural Psychology, 20,* 92–105.

Matsumoto, D., & Ekman, P. (1989). American-Japanese cultural differences in intensity ratings of facial expressions of emotion. *Motivation and Emotion, 13,* 143–157.

Matsumoto, D., & Kishimoto, H. (1983). Developmental characteristics in judgments of emotion from nonverbal vocal cues. *International Journal of Intercultural Relations, 7,* 415–424.

Matsuyama, Y., Hama, H., Kawamura, Y., & Mine, H. (1978). An analysis of emotional words. *The Japanese Journal of Psychology, 49,* 229–232.

McAndrew, F. T. (1986). A cross-cultural study of recognition thresholds for facial expressions of emotion. *Journal of Cross-Cultural Psychology, 17,* 211–224.

Medin, D. L. (1989). Concepts and conceptual structure. *American Psychologist, 44,* 1469–1481.

Mervis, C. B. (1987). Child-basic object categories and early lexical development. In U. Neisser (Ed.), *Concepts and conceptual development: Ecological and intellectual factors in categorization* (pp. 201–233). Cambridge, England: Cambridge University Press.

Mesquita, B., & Frijda, N. (in press). Cultural variations in emotions. *Psychological Bulletin.*

Micko, H. C. (1970). A "halo"-model for multidimensional ratio scaling. *Psychometrika, 35,* 199–227.

Morice, R. (1978). Psychiatric diagnosis in a transcultural setting: The importance of lexical categories. *British Journal of Psychiatry, 132,* 87–95.

Morice, R. (1979). Personality disorder in transcultural perspective. *Australian and New Zealand Journal of Psychiatry, 13,* 293–300.

Myers, F. R. (1979). Emotions and the self: A theory of personhood and political order among Pintupi aborigines. *Ethos, 7,* 343–370.

Myers, F. R. (1988). The logic and meaning of anger among Pintupi aborigines. *Man, 23,* 589–610.

Neisser, U. (1987). *Concepts and conceptual development: Ecological and intellectual factors in categorization.* Cambridge, England: Cambridge University Press.

Neufeld, R. W. J. (1975). A multidimensional scaling analysis of schizophrenics' and normals' perceptions of verbal similarity. *Journal of Abnormal Psychology, 84,* 498–507.

Neufeld, R. W. J. (1976). Simultaneous processing of multiple stimulus dimensions among paranoid and nonparanoid schizophrenics. *Multivariate Behavioral Research, 11,* 425–441.

Niit, T., & Valsiner, J. (1977). Recognition of facial expressions: An experimental investigation of Ekman's model. *Acta et Commentationes Universitatis Tarvensis, 429,* 85–107.

Obeyesekere, G. (1981). *Medusa's hair: An essay on personal symbols and religious experience.* Chicago: University of Chicago Press.

Orley, J. H. (1970). *Culture and mental illness.* Nairobi, Kenya: East Africa.

Ortony, A., Clore, G. L., & Collins, A. (1988). *The cognitive structure of emotions.* Cambridge, England: Cambridge University Press.

Osaka, N. (1986). Cross-cultural differences in the perception of facial expressions of ambiguous Noh faces. *Bulletin of the Psychonomic Society, 24,* 427–430.

Osgood, C. E. (1966). Dimensionality of the semantic space for communication via facial expressions. *Scandinavian Journal of Psychology, 7,* 1–30.

Osgood, C. E. (1969). On the whys and wherefores of E, P, and A. *Journal of Personality and Social Psychology, 12,* 194–199.

Osgood, C. E., May, W. H., & Miron, M. S. (1975). *Cross-cultural universals of affective meaning.* Urbana: University of Illinois Press.

Plutchik, R. (1980). *Emotion: A psychoevolutionary synthesis.* New York: Harper & Row.

Poole, F. J. P. (1985). Coming into social being: Cultural images of infants in Bimin-Kuskusmin folk psychology. In G. M. White & J. Kirkpatrick (Eds.), *Person, self, and experience: Exploring Pacific ethnopsychologies* (pp. 183–242). Berkeley: University of California Press.

Potter, S. H. (1988). The cultural construction of emotion in rural Chinese social life. *Ethos, 16,* 181–208.

Resner, G., & Hartog, J. (1970). Concepts and terminology of mental disorder among Malays. *Journal of Cross-Cultural Psychology, 1,* 369–381.

Riesman, P. (1977). *Freedom in Fulani social life: An introspective ethnography* (M. Fuller, Trans.). Chicago: University of Chicago Press. (Original work published 1974).

Rosaldo, M. Z. (1980). *Knowledge and passion: Ilongot notions of self and social life.* Cambridge, Cambridge University Press.

Rosaldo, M. Z. (1983). The shame of headhunters and the autonomy of self. *Ethos, 11,* 135–151.

Rosaldo, R. I. (1984). Grief and a headhunter's rage: On the cultural force of emotions. In S. Plattner & E. M. Bruner (Eds.), *Text, play, and story: The construction and reconstruction of self and society* (pp. 178–195). Washington, DC: American Ethnological Society.

Rosch, E. (1973). On the internal structure of perceptual and semantic categories. In T. E. Moore (Ed.), *Cognitive development and acquisition of language* (pp. 111–144). San Diego, CA: Academic Press.

Rosch, E. (1975). Cognitive representations of semantic categories. *Journal of Experimental Psychology: General, 104,* 192–233.

Rosch, E. (1977). Human categorization. In N. Warren (Ed.), *Studies in cross-cultural psychology* (Vol. 1, pp. 1–49). San Diego, CA: Academic Press.

Roseman, I. J. (1984). Cognitive determinants of emotion: A structural theory. In P. Shaver (Ed.), *Review of personality and social psychology* (Vol. 5, pp. 11–36). Beverly Hills, CA: Sage.

Roseman, M. (1988). *Head, heart, odor and shadow: The structure of the self and the emotional world.* Unpublished manuscript, Tufts University, Department of Anthropology, Medford, MA.

Rubel, A. (1964). The epidemiology of a folk illness: *Susto* in Hispanic America. *Ethnology, 3,* 268–283.

Russell, J. A. (1978). Evidence of convergent validity on the dimensions of affect. *Journal of Personality and Social Psychology, 36,* 1152–1168.

Russell, J. A. (1980). A circumplex model of affect. *Journal of Personality and Social Psychology, 39,* 1161–1178.

Russell, J. A. (1983). Pancultural aspects of human conceptual organization of emotions. *Journal of Personality and Social Psychology, 45,* 1281–1288.

Russell, J. A. (1989). Measures of emotion. In R. Plutchik & H. Kellerman (Eds.), *Emotion: Theory, research, and experience* (Vol. 4, pp. 83–111) San Diego, CA: Academic Press.

Russell, J. A. (1991). In defense of a prototype approach to emotion concepts. *Journal of Personality and Social Psychology, 60,* 37–47.

Russell, J. A., & Bullock, M. (1985). Multidimensional scaling of emotional facial expressions: Similarities from preschoolers to adults. *Journal of Personality and Social Psychology, 48,* 1290–1298.

Russell, J. A., & Bullock, M. (1986). On the meaning preschoolers attribute to facial expressions of emotion. *Developmental Psychology, 22,* 97–102.

Russell, J. A., Lewicka, M., & Niit, T. (1989). A cross-cultural study of a circumplex model of affect. *Journal of Personality and Social Psychology, 57,* 848–856.

Russell, J. A., & Mehrabian, A. (1974). Distinguishing anger and anxiety in terms of emotional response factors. *Journal of Consulting and Clinical Psychology, 42,* 79–83.

Russell, J. A., & Mehrabian, A. (1975). The mediating role of emotions in alcohol use. *Journal of Studies on Alcohol, 36,* 1508–1536.

Russell, J. A., & Mehrabian, A. (1977). Evidence for a three-factor theory of emotions. *Journal of Research in Personality, 11,* 273–294.

Russell, J. A., & Snodgrass, J. (1987). Emotion and the environment. In D. Stokols & I. Altman (Eds.), *Handbook of environmental psychology* (pp. 245–280). New York: Wiley.

Sabini, J., & Silver, M. (1982). *Moralities of everyday life.* Oxford, England: Oxford University Press.

Schachter, S., & Singer, J. E. (1962). Cognitive, social, and physiological determinants of emotional state. *Psychological Review, 69,* 379–399.

Scherer, K. R. (1984). On the nature and function of emotion: A component process approach. In K. R. Scherer & P. Ekman (Eds.), *Approaches to emotion* (pp. 293–317). Hillsdale, NJ: Erlbaum.

Scherer, K. R. (1988). *Facets of emotion.* Hillsdale, NJ: Erlbaum.

Scherer, K. R., Wallbott, H. G., & Summerfield, A. B. (Eds.). (1986). *Experiencing emotion: A cross-cultural study.* Cambridge, England: Cambridge University Press.

Schieffelin, E. L. (1985). The cultural analysis of depressive affect: An example from New Guinea. In K. Kleinman & B. Good (Eds.), *Culture and depression: Studies in anthropology and psychiatry of affect and disorder* (pp. 101–133). Berkeley: University of California Press.

Schlosberg, H. (1952). The description of facial expressions in terms of two dimensions. *Journal of Experimental Psychology, 44,* 229–237.

Searle, J. R. (1983). *Intentionality: An essay in the philosophy of mind.* Cambridge, England: Cambridge University Press.

Shaver, P., Schwartz, J., Kirson, D., & O'Connor, C. (1987). Emotion knowledge: Further exploration of a prototype approach. *Journal of Personality and Social Psychology, 52,* 1061–1086.

Shepard, R. N. (1962). The analysis of proximities: Multidimensional scaling with an unknown distance function. *Psychometrika, 27,* 125–139, 219–246.

Shimoda, K., Argyle, M., & Ricci Bitti, P. (1978). The intercultural recognition of emotional expressions by three national racial groups: English, Italian, and Japanese. *European Journal of Social Psychology, 8,* 169–179.

Shostak, M. (1983). *Nisa: The life and words of a !Kung woman.* New York: Vintage.

Shott, S. (1979). Emotion and social life: A symbolic interactionist analysis. *American Journal of Sociology, 84,* 1317–1334.

Simons, R. C., & Hughes, C. C. (Eds.). (1985). *The culture-bound syndromes: Folk illnesses of psychiatric and anthropological interest.* Boston: Reidel.

Smith, C. A., & Ellsworth, P. C. (1985). Patterns of cognitive appraisal in emotion. *Journal of Personality and Social Psychology, 48,* 813–838.

Solomon, R. C. (1976). *The passions.* Garden City, NJ: Anchor Press.

Sorenson, E. R. (1976). *The edge of the forest.* Washington, DC: Smithsonian Institution Press.

Stone, L. A. (1971). Congruent multidimensional scaling results obtained using the halo-model and the Stone-Coles method model. *Perceptual and Motor Skills, 33,* 524–526.

Stone, L. A., & Coles, G. J. (1970). Correlational similarity: The basis for a new revised method of similarity analysis. *Studia Psychologica (Bratislava), 12,* 258–265.

Storm, C., & Storm, T. (1987). A taxonomic study of the vocabulary of emotions. *Journal of Personality and Social Psychology, 53,* 805–816.

Stringer, P. (1967). Cluster analysis of non-verbal judgments of facial expressions. *British Journal of Mathematical and Statistical Psychology, 20,* 71–79.

Swartz, M. J. (1988). Shame, culture, and status among the Swahili of Mombasa. *Ethos, 16,* 21–51.

Tanaka-Matsumi, J., & Marsella, A. J. (1976). Cross-cultural variations in the phenomenological experience of depression: I. Word association studies. *Journal of Cross-Cultural Psychology, 7,* 379–396.

Tanaka-Matsumi, J., & Marsella, A. J. (1977). *Ethnocultural variations in the subjective experience of depression: Semantic differential.* Unpublished manuscript, University of Hawaii, Department of Psychology, Honolulu.

Termansen, P. E., & Ryan, J. (1970). Health and disease in a British Columbian Indian community. *Canadian Psychiatric Association Journal, 15,* 121–127.

Tomkins, S. S. (1979). Script theory: Differential magnification of affects. In H. E. Howe & R. A. Dienstbier (Eds.), *Nebraska symposium on motivation, 1978* (pp. 201–236). Lincoln: University of Nebraska Press.

Tomkins, S. S. (1984). Affect theory. In K. R. Scherer & P. Ekman (Eds.), *Approaches to emotion.* Hillsdale, NJ: Erlbaum.

Tousignant, M. (1984). *Pena* in the Ecuadorian Sierra: A psychoanthropological analysis of sadness. *Culture, Medicine and Psychiatry, 8,* 381–398.

Triandis, H. C., & Lambert, W. W. (1958). A restatement and test of Schlosberg's theory of emotion with two kinds of subjects from Greece. *Journal of Abnormal and Social Psychology, 56,* 321–328.

Tseng, W-S., & Hsu, J. (1969). Chinese culture, personality formation and mental illness. *International Journal of Social Psychiatry, 16,* 5–14.

Turnbull, C. M. (1961). *The forest people.* New York: Simon & Schuster.

Turnbull, C. M. (1972). *The mountain people.* New York: Simon & Schuster.

Turner, V. (1967). *The forest of symbols: Aspects of Ndembu ritual.* Ithaca, NY: Cornell University Press.

Tyler, S. A. (1969). *Cognitive anthropology.* New York: Holt, Rinehart & Winston.

van Bezooijen, R., Otto, S. A., & Heenan, T. A. (1983). Recognition of vocal expressions of emotion: A three-nation study to identify universal characteristics. *Journal of Cross-Cultural Psychology, 14,* 387–406.

Vinacke, W. E. (1949). The judgment of facial expressions by three national-racial groups in Hawaii: I. Caucasian faces. *Journal of Personality, 17,* 407–429.

Vinacke, W. E., & Fong, R. W. (1955). The judgment of facial expressions by three national-racial groups in Hawaii: II. Oriental faces. *Journal of Social Psychology, 41,* 184–195.

Wallace, A. F. C., & Carson, M. T. (1973). Sharing and diversity in emotion terminology. *Ethos, 1,* 1–29.

Weiner, B. (1982). The emotional consequences of causal attributions. In M. S. Clark & S. T. Fiske (Eds.), *Affect and cognition* (pp. 185–209). Hillsdale, NJ: Erlbaum.

Westermeyer, J. (1972). A comparison of amok and other homicides in Laos. *American Journal of Psychiatry, 6,* 703–709.

White, G. M. (1980). Conceptual universals in interpersonal language. *American Anthropologist, 82,* 759–781.

Wierzbicka, A. (1986). Human emotions: Universal or culture-specific? *American Anthropologist, 88,* 584–594.

Wikan, U. (1989). Illness from fright or soul loss: A North Balinese culture-bound syndrome? *Culture, Medicine and Psychiatry, 13,* 25–50.

Winkelmayer, R., Exline, R. V., Gottheil, E., & Paredes, A. (1978). The relative accuracy of U.S., British, and Mexican raters in judging the emotional displays of schizophrenic and normal U.S. women. *Journal of Clinical Psychology, 34,* 600–608.

Wolfgang, A., & Cohen, M. (1988). Sensitivity of Canadians, Latin Americans, Ethiopians, and Israelis to interracial facial expressions of emotion. *International Journal of Intercultural Relations, 12,* 139–151.

Yoshida, M., Kinase, R., Kurokawa, J., & Yashiro, S. (1970). Multidimensional scaling of emotion. *Japanese Psychological Research, 12,* 45–61.

Received September 15, 1989
Revision received April 2, 1991
Accepted April 17, 1991 ■