

Cultural Variations in Emotions: A Review

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The psychological and anthropological literature on cultural variations in emotions is reviewed. The literature has been interpreted within the framework of a cognitive-process model of emotions. Both cross-cultural differences and similarities were identified in each phase of the emotion process; similarities in 1 phase do not necessarily imply similarities in other phases. Whether cross-cultural differences or similarities are found depends to an important degree on the level of description of the emotional phenomena. Cultural differences in emotions appear to be due to differences in event types or schemas, in culture-specific appraisal propensities, in behavior repertoires, or in regulation processes. Differences in taxonomies of emotion words sometimes reflect true emotion differences like those just mentioned, but they may also just result from differences in which emotion-process phase serves as the basis for categorization.

A recurrent issue in the study of emotion is the relation between biological and cultural determinants and, more fundamentally, to what extent the variety of emotions are universal or cultural in nature. As in other domains, there are opposing views of predominantly biological (e.g., Ekman, 1982) and predominantly cultural (e.g., Harré, 1986) interpretations. Both views can boast of data to support them. The data adduced by each tend to focus on different topics and not to overlap. Lutz and White (1986) have shown that the divergent views of the importance of culture in emotions have led to research on different aspects of emotion. Theories that view emotions as social constructions tend to emphasize aspects that are closely connected with the social environment: antecedent situations, overt behavior, and culturally specific ways of thinking and talking about emotions (e.g., Heelas, 1986; Lutz, 1982, 1986, 1988b; Rosaldo, 1980). Theories that suppose emotions to be essentially universal, on the other hand, have led to the study of individual emotion elements such as facial expression (e.g., Ekman, 1982; Ekman & Friesen, 1971).

The issue of the universal versus cultural nature of emotions does not allow satisfactory solution unless the findings from the different research traditions are integrated into an overall framework. Clarity can be obtained only when the different emotion aspects, their similarities as well as differences, are situated in relation to one another. The present review tries to do so by discussing the findings of cross-cultural emotions research in terms of a structural theory of emotions.

Translating the available data on cross-cultural emotion differences and similarities into the terms of the structural model facilitates the organization of the literature. Doing so, of course,

entails the problem that adequate translation of analyses that are phrased in terms of other models will often be uncertain and require the authors' best judgment.

We review the available psychological and nonpsychological (anthropological, sociological) literature on similarities as well as differences in the various aspects of emotional phenomena.¹ We do not systematically discuss the research on cultural similarities and differences in emotion taxonomies, in part because that would merit a separate article (see Russell, 1991b) and in part because of the unclear, and probably multiple, relationships between such taxonomies and emotional phenomena. We return to the issue in the Discussion and Conclusions section.

Theoretical Framework

The reported findings are compared and interpreted within the framework of a cognitive model of emotions. The model is derived from Arnold (1960), Lazarus (1966), Scherer (1984), and Ortony, Clore, and Collins (1988) and is more directly based on Frijda (1986). It is similar to the scheme used by Shweder (1991) to describe cultural similarities and differences but, containing more elements, allows more detailed comparisons. Elicitation and manifestation of emotions are considered to involve the following components:

¹ A computer search was executed involving the PsycINFO database and Sociological Abstracts. Keywords were crossed: *Cross-cultural factors* was combined with *emotions*, *emotional states*, *emotional responses*, and the diverse specific emotions words that were available. Literature from before 1976 was excluded from the search, but we included references from before this date that were found in other writings. We also drew in anthropological literature referred to in the psychological and sociological literature, as far as it had a clear theoretical contribution. Much of this anthropological literature consists of detailed descriptions of the (emotional) life of the people in a distant community. Furthermore, R. D'Andrade, S. Gordon, K. Heider, and Y. Poortinga made helpful suggestions, for which we wish to express our appreciation. Literature on emotional development, mental disorders, and emotional dysfunctioning has not been considered.

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1. *Antecedent events.* Emotions are elicited by antecedent events. Different individuals and groups may meet different kinds of events and be differently affected by particular kinds of events. The range of events an individual or group is emotionally sensitive to is an aspect of that individual's or group's characterization.

2. *Event coding.* By *event coding*, we mean categorizing the event in terms of event types that are recognized by the culture. The notion of *event types* is similar to that of *frame*, as used by Goffman (1974). Examples of event types might be humiliation, insult, just revenge, bereavement, departure for a long voyage, marital unfaithfulness, threat to a relationship or sexual property by a third party, and praise one is entitled to. Event coding implies the recognition of a particular, culturally shared meaning to events of that type. Event types correspond to usually culturally recognized issues of concern; their operation can be understood as that of schemata relating particular events to socially shared meanings. These event-type schemata, we assume, constitute one of the major pathways by which social perspectives and moral values enter the cognitive structure that elicits emotional appraisal.

Emotions are generally not elicited by events as such but by events as coded in terms of a particular event type; no sharp distinction can be made between antecedent events as such and those coded into event types. However, the process of coding merits separate consideration because it shows that given events may be variously categorized by a given individual or by different groups. Attention of a third party to one's spouse may be categorized as praise, a threat, or an insult. Also, the discrimination of various event types may differ from group to group and may be shared within a group. Identification of recognized and prominent event types constitutes a distinct source of information about the characteristics of the emotional process of a given individual or group.

3. *Appraisal.* Events, or events as coded, are appraised with respect to their implications for the subject's well-being and his or her possibilities for coping with the event. In conceiving it as a threat to one's relationship or property rights, interest of a third party in one's partner may be felt as potentially—and not actually—harmful, of uncertain outcome, and as something caused by a blameworthy other person. Appraisal processes, in the sense that they are meant here, can be conceived of as a series of checks with respect to a set of dimensions such as positive or negative valence, causation by someone else or the self, blameworthiness, outcome uncertainty, controllability, and modifiability. A series of such checks describes the emotional significance of an event (Frijda, 1986; Ortony et al., 1988; Roseman, 1984; Scherer, 1984). Different patterns of appraisal checks appear to correspond to different emotions (Frijda, Kuipers, & Terschure, 1989).

Antecedent events, event coding, and appraisal are closely linked: Events are often coded in a particular way, and particular codings often entail particular ways of appraisal. When an illness is coded as an outcome of witchcraft, it is necessarily understood as harmful, because of someone's agency, and difficult to control. Yet, the components of event, coding, and appraisal are subject to separate sources of individual and cultural variation.

4. *Physiological reaction patterns.* Emotions often involve a

pattern of physiological (autonomic) changes. Also, there are stereotyped representations of the changes accompanying different emotions (Rimé, Phillipot, & Cisamolo, 1990). Awareness and expectation of such changes contribute to emotional experience.

5. *Action readiness.* Emotional states involve changes in action readiness: action tendencies; impulses to establish, maintain, or disrupt one's relationship with an object; and more or less general states of enhanced or diminished action tendency or activation. Emotions differ with respect to the kind of action readiness involved; some emotion categories are characterized by particular kinds of action readiness. For instance, the impulse to protect oneself from a danger is a state that is usually called *fear*. Action tendencies are inferred from the meaning or intent of behaviors or sequences of behavior (approaching, self-protecting, help seeking, avoidant, aggressive, inhibited, exuberant, apathic, and so on) and from self-reported impulse and desire (major forms are distinguished in Frijda, 1986, and Frijda et al., 1989).

6. *Emotional behavior.* Action tendencies may result in overt behavior. Emotional behavior repertoires include unpremeditated, expressive behavior patterns, matching the different action tendencies (Frijda, 1986). They also include emotionally motivated instrumental behaviors. The process by means of which behaviors are selected from the subject's repertoire is referred to as *behavior generation*. Behavior generation is likely to be affected by the availability and expected effectiveness of the various behavior patterns.

7. *Regulation.* Emotions are subject to *regulation*, which refers to both inhibitory control and voluntary enhancement. Regulation can affect all emotion components mentioned: the coding of events in terms of a particular type (as, say, humiliation) and appraising the type in a particular way (e.g., as resulting from someone's intended action). Both may be avoided or emphasized; particular impulses and behavior patterns may be suppressed or, by contrast, expressed with full conviction. Regulation is determined by individual experiences and by sociocultural norms with respect to having and expressing the various emotions (Fischer, 1991; Folkman & Lazarus, 1988; Hochschild, 1983).

Emotional experience, in the conception above, reflects all of the components mentioned; differences and similarities in emotional experiences are best described as differences and similarities with respect to the patterns of these components. Findings relevant to cross-cultural similarities and differences in each component are discussed in turn.

Similarities and Differences in Antecedent Events

Antecedent events are considered cross-culturally similar if events of general occurrence give rise to similar emotions in different cultures. Cultural differences in antecedent events are manifested in differences in nature as well as frequency of particular emotion-eliciting events. These differences may result from differences in the natural rate of occurrence of certain events or from a culturally different sensitivity to particular events.

Antecedent events can be described at different levels of abstraction. There is no agreement on a meaningful representa-

tion of antecedent events. In this section, we follow the levels of description as used in the reviewed research reports.

Similarities in Antecedent Events

There exists some evidence that, by and large, certain kinds of events elicit emotions in widely different cultures and that they tend to elicit the same emotions in these different cultures. For instance, Boucher and Brandt (1981) asked American and Malaysian subjects to describe a situation in which one person caused another to feel anger, disgust, fear, joy, sadness, or surprise. Subjects were young male and young female adults; American subjects were university students, and Malaysian subjects were not. A random sample of reported events was selected from the large pool with the constraint that the number of events per emotion and per culture was equal. The resulting questionnaire consisted of 96 antecedent events. A separate group of American subjects, again all students, were asked to identify which of the situations mentioned by the Malaysian and American subjects had led to which of these six emotions. American subjects were no more accurate on the items mentioned by Americans than on those mentioned by the Malaysians; they identified the Malaysian and the American antecedents equally well. (Here, accuracy means correspondence with the intended meaning. Recognition rates were 69% and 66%, respectively; all percentages cited in this article are rounded to the nearest whole number.) Antecedents of happiness and fear were best recognized (in about 80% of the cases); antecedents of anger were least recognized (53%). There was no significant interaction between culture and emotion, meaning that the cultural origin of the antecedent description did not affect the recognition rate of the emotion.

In a later study with American, Korean, and Samoan subjects, Brandt and Boucher (1985) again asked subjects to describe a situation in which one person caused another to feel a given emotion; the same emotions were used. Each cultural group consisted of males and females; the Samoans were literate adolescents and adults, and the American and Korean subjects were students. A questionnaire consisting of a selection of antecedents of all six emotions, with equal numbers coming from subjects from each of the three cultures, was given to different groups of subjects from each culture. Again, situations generated by subjects from one of the other cultures were identified as eliciting a given emotion as accurately as were situations from one's own culture; this held for all three cultures. Accuracy of recognition was about 65% in all cultures. Subjects from the three cultures did not differ in overall recognition accuracy. Recognition of the Korean antecedents was significantly better (68%) than that of the American and Samoan antecedents (63% and 63%, respectively). In line with this, the Korean antecedents were most accurately recognized by each group, but in none of the cultural groups did the differences in accuracy reach significance. In all three cultures, joy situations were identified best (87% on the average), and surprise situations worst (45% on the average).

The above studies strongly suggest cross-cultural similarity of the antecedents of anger, disgust, fear, joy, sadness and surprise, as well as similarity in recognition rates (Boucher & Brandt, 1981; Brandt & Boucher, 1985). Unfortunately, no in-

formation was given with regard to the particular antecedent events that were cross-culturally most readily recognized.

Cross-cultural congruence in the particular antecedents of jealousy appears from a study by Buunk and Hupka (1987). Male and female students from seven countries—Hungary, Ireland, Mexico, The Netherlands, Soviet Union, the United States, and Yugoslavia—were asked to what extent various behaviors of their intimate partner would elicit their jealousy. Subjects rated their jealousy on 7-point scales; mean ratings higher than 4 were taken as indicators of jealousy. Sexual relationships with a third party and flirtation elicited jealousy in each of the countries included. Although flirtation was generally seen as jealousy eliciting (mean ratings cross-culturally higher than 4), the perceived intensity of the jealousy resulting from flirtation differed among the nations of study.

Cross-cultural similarity in antecedents has also been established in a series of questionnaire studies on sadness, anger, fear, and happiness (Scherer, Summerfield, & Wallbott, 1983; Scherer, Wallbott, Matsumoto, & Kudoh, 1988; Scherer, Wallbott, & Summerfield, 1986). In these studies, university students were asked to describe a situation or event that had caused them to feel each of these four emotions. The subjects came from five Western European countries in Scherer et al. (1983); seven Western European countries and Israel in Scherer et al. (1986); and Europe, the United States, and Japan in Scherer et al. (1988). The situations mentioned by the subjects were grouped into general categories, the most important of these being good and bad news, continuation of or problems with relationships (e.g., pleasure from contact with friends, feeling rejected, fear of quarrels), temporary meeting (e.g., meeting one's friend for dinner), separation (e.g., journey), permanent separation, birth and death, pleasure (e.g., sex, music), interaction with strangers, and success and failure in achievement situations. The categories were found to be applicable to the emotion antecedents from all cultures; no culture-specific antecedent categories were deemed necessary. The absence of culture-specific categories can be taken as an indication of cross-cultural similarity in the kinds of situations leading to the emotions concerned.

The frequency with which each of the antecedent categories was said to have occurred was also compared. The reported frequencies per emotion were again highly similar among European countries, as well as between the American and European groups and to some extent also between these groups and the Japanese. For American and European subjects, the most frequent antecedents of joy were classified as "relationships with friends" (mentioned by 24% of the American and by 29% of the European subjects), "temporary meetings with friends" (18% and 20%), and "achievement" (26% and 16%). The most frequent sadness categories were "relationships" (20% and 27%) and "death" (both 22%). The anger situations that were most frequent were "relationships" (58% and 39%) and "injustice" (both 21%). Several fear antecedents were reported, none of them very frequent; the antecedents mentioned most often were "interactions with strangers" (20% and 15%), "achievement" (19% and 12%), "risky situations" (15% and 11%), "novel situations" (13% and 15%), and "traffic" (12% and 20%). Consistently, the Japanese subjects reported "relationships with friends" most frequently as joy (33%) and sadness (36%) anteced-

ents; "relationships" frequently (though not most frequent) as anger antecedents (29%); and "achievement," "novel situations," and "traffic" as antecedents of fear (17%, 17%, and 14%, respectively). Some differences were found between the Japanese on the one hand and the Americans and European on the other, which is discussed in the next section.

Reports of events that elicit emotions in non-Western cultures sometimes suggest cross-cultural similarity, because such events may be known to lead to similar emotions in Western cultures. For instance, having to give a speech in a public meeting elicits what was labeled as mild fear by Tahitians (Levy, 1973), as it would do in many Western subjects (Endler, Hunt, & Rosenstein, 1962). Recovering from illness is one of the reasons for Tahitians to feel happiness (Levy, 1973), as again it would be in Western cultures. Anticipation of physical danger has been reported as an antecedent of anxiety or fear by non-Western cultures (Briggs, 1970; Gerber, 1985; Levy, 1973), as it has in Western ones (Scherer et al., 1986).

The data cited above suggest an important cross-cultural similarity in major emotionally significant events. Certain major events appear to be prominent as emotion antecedents in most or all cultures. However, the studies that investigated self-reports on emotion antecedents, so far, have done so only at a relatively abstract level of categorization of these antecedents: "threat to a relationship," "good news," and the like. No systematic analysis has been undertaken at a more concrete level, such as that of "death of a child," "loss in a marital rivalry situation," or "being slighted in public." Opposing predictions could be made at this level. On the one hand, one might expect strong cultural specificities; some observations are reviewed in the next subsection. At the same time, one would predict that particular events exist that are emotion arousing to human beings generally and perhaps even tend to evoke the same emotions everywhere. Such events might include loss of a close relative, rejection from the social group, having harmed a nonhostile group member, danger one cannot cope with, safety after danger. No information is as yet available to assess whether this latter prediction holds. In any case, generality of certain emotion-arousing events may be due to general human sensitivities for such events, to generality of particular learning contingencies, or to generality of particular learning contingencies and of human concerns on which they impinge.

Differences in Antecedent Events

Instances of culturally specific emotion antecedents are mentioned in anthropological descriptions (e.g., Chagnon, 1968; Rosaldo, 1980). Many of these instances are due to culture-specific living conditions. They are culture specific at one level and nonspecific at a slightly more general level of description. Among the Utku Eskimos, for example, "enjoyable experiences as diverse as . . . chasing lemmings or stoning ptarmigans, traveling under good conditions . . . [are] all described as 'making one feel happy'" (Briggs, 1970, pp. 327-328). On the one hand, chasing lemmings and stoning ptarmigans are not common enjoyable activities elsewhere; on the other hand, they can be considered forms of entertainment that, whatever their precise nature, cause happiness. Similarly, the Utku emotions *kappia* and *iqhi* are reported "both alike [to] apply to fear of

dangerous animals, evil spirits, natural hazards such as thin ice or a rough sea, angry people, and an angry God" (Briggs, 1970, p. 344). Thin ice and evil spirits are somewhat specific sources of fear (or *kappia* or *iqhi*), but risky conditions in general are not.

The culture-specific living conditions may include social conditions. To explain the reported lack of emotions in the Chewong, Heelas (1984) assumes that Chewong interaction rarely gives occasion for these emotions, because they rarely thwart and frustrate one another (as Heelas supposes people in Western cultures do). The cultural emphasis on satisfying other people's needs would, according to Heelas, discourage such behavior and thus forestall subsequent emotions. Another example of culture-specific antecedent events (subculturally in this case) that is due to social conditions has been provided by Essed (1984). She interviewed about 20 Black Surinamese women, all living in The Netherlands. The majority of these women reported having been hurt by manifestations of discrimination; expectations of being discriminated were sufficiently aversive to elicit anticipatory avoidance behavior. Discrimination is not expected to be as important to autochthonous groups. Indeed, in our own research with Surinamese, Turkish, and Dutch subjects in The Netherlands, 10% of the Surinamese and Turkish subjects reported discrimination as an anger antecedent, whereas none of the Dutch did.

Furthermore, less self-evident culture-specific antecedents are mediated by culture-specific beliefs. These are discussed in the section on event coding.

Even when the various emotions are elicited by the same sorts of antecedent events in different cultures, these events may still differ importantly in frequency. In the Scherer et al. (1986) study, for instance, the most pronounced divergence from the overall pattern of antecedent frequencies was shown by the Israeli subjects and was clearly linked to specific conditions at that time. For the Israelis, the most frequent antecedent category of joy was "achievement" (25%) rather than "relationships," which was the most frequently cited antecedent category in European countries (38%). Only 18% of the Israeli joy antecedents concerned relationships.² The most frequent antecedent categories of sadness among Israelis were "death" (32%) and "bad news" (22%), rather than "death" and "relationships," which together represented the majority of the European sadness antecedents (27% and 36%, respectively). Only 8% of the Israeli antecedents of sadness concerned relationships, and only 10% of the European referred to bad news. The most frequent antecedent category of fear for the Israelis was "interaction with strangers" (which constituted 21% of the Israeli fear antecedents and 17% of the European), rather than "traffic" (12% of the Israeli antecedents and 24% of the European).³ The most frequent antecedents of anger for Israelis were "interaction with

² Although Israel was the only country in which the category "achievement" was greater than the category "relationships," the latter category was no more frequent in Belgium and Spain than it was in Israel.

³ Although Israel was the only country in which the category "interactions with strangers" was greater than the category "traffic," the former category was even more frequent in Great Britain (25%) than it was in Israel. This might also have a political background.

strangers" (30%) and "injustice" (31%), rather than "relationships" (which constituted 18% of the Israeli fear antecedents and 40% of the European). "Interaction with strangers" and "injustice" were less frequently reported in European countries (22% and 24%, respectively).⁴

In another study, Scherer et al. (1988) found that fear of strangers, the antecedent mentioned by about 20% of the American subjects and 15% of the European subjects, was very infrequently reported by the Japanese respondents (5%). Scherer et al. (1988) attributed this cultural difference to different rates of occurrence: "Given the relatively low incidence of crime and stranger aggression in Japanese society, it would seem reasonable to expect that this situation be less the cause of fear than in the United States or Europe" (p. 14). Furthermore, the Japanese subjects reported "interactions with strangers" very frequently in relation to anger (52%) much more often than European and American subjects did (20% and 15%, respectively). On the other hand, for American subjects, anger occurs much more often in the context of relationships (58%) than is the case for European and Japanese subjects (39% and 29% of the anger antecedents, respectively). All these differences are likely to be related to differences in social conditions.

Some of the observed differences suggest cross-cultural variations in sensitivity to certain events. If differences in the natural (rate of) occurrence of these events are unlikely, as is the case for bodily pleasures and pains, cultural differences in sensitivity may be assumed. Bodily pleasures and pain constituted a smaller proportion of the joy and sadness antecedents reported by Japanese subjects, by comparison with the European and American groups (Scherer et al., 1988). Body pleasures formed 13% of the European joy antecedents, 16% of the American, but only 3% of the Japanese; bodily pains or illnesses made up 10% of the American and European antecedents of sadness, but no more than 5% of the Japanese.

Similarities and Differences in Event Coding

Event coding can be understood as relating particular events to event types, that is, to socially shared meanings or schemata. To the extent that human concerns are universal, event types may be expected to be cross-culturally similar.

Event coding may be expected to make a strong contribution to cultural emotion specificity. Event types may differ in content, because they correspond to culturally different concerns. They may also differ with regard to the number of implications and properties specified. Culturally focal concerns supposedly draw attention to the events affecting them and are likely to yield cultural expertise on these events. This may lead to finer discriminations; more different features of events may be distinguished and available, and they may be represented in greater detail. Focal event types are, therefore, expected to be more structured than other event types.

Similarities in Event Coding

Anthropological accounts suggest that many cultures share distinction of a number of less tangible event types. Event types such as injustice (e.g., Abu-Lughod, 1986; Lutz, 1982), pleasant social encounters or entertainment (e.g., Briggs, 1970; Gerber,

1985; Scherer et al., 1986), and insult (e.g., Levy, 1973; Rosaldo, 1980) are used to explain the significance of emotional situations in quite varied cultures. Many culture-specific emotion elicitors bear on cross-culturally common issues and are subsumed under general event types. Well-known issues of concern in the West can be found in anthropological reports of very dissimilar cultures, like the Tahitian (e.g., Levy, 1973). Anticipation of physical danger leads to anxiety (cf. Scherer et al., 1986); being noticed while doing bad things is an antecedent of shame (cf. Borg, Staufienbiel, & Scherer, 1988). Bereavement appears to be a universal event category, as is to be expected (e.g., Rosenblatt, Walsh, & Jackson, 1976).

Cross-cultural similarity in factors, obtained in factor analyses of questionnaire data, can equally be considered as indications of similarity in event types. As mentioned in the preceding section, Hupka et al. (1985) asked students from seven countries to indicate the extent to which statements on jealousy and envy were true for them. Separate factor analyses were computed for each nation, and two factors emerged in all nations: Threat to an Exclusive Relationship and Self-Deprecation. Hupka et al. (1985) assumed that these factors identify "global issues of concern in romantic jealousy and envy situations" (p. 437). Coefficients of congruence were high (varying from .75 to .93). The specific situations that triggered these issues appeared to differ cross-culturally, however, because large cultural differences were found in the mean self-reported ratings of the specific items in each factors.

Differences in Event Coding

Events may be coded differently because cultures recognize different event types. The definition of *shameful events* among the Awlad 'Ali, a tribe of Bedouins living in the Egyptian side of the Western Desert, is highly specific, for instance. Shameful events are those that threaten or injure one's honor. Honor is of great concern in Bedouin society and is seen as conditional to one's autonomy. Events that reveal a person's lack of autonomy are, therefore, considered shameful; signs of dependence or weakness are among such signs. By coding events as shameful, these events are linked to the ideology of honor. The following provides an illustration. According to Abu-Lughod (1986), the Awlad 'Ali perceive encounters with more powerful people as shameful events, because such encounters reveal one's dependence on these people. As men are higher in hierarchy than women, women's honor is at stake whenever they are in the company of men. Avoidance of shame is called for. By veiling themselves in the presence of men, women are thought to protect their honor. Veiling is perceived of as a voluntary act of deference, which in turn is seen as an expression of autonomy, safeguarding the women from shame.

Behavior categorized as immodesty involves a culture-specific schema among the Japanese. The Japanese modesty code demands that the self remains "hidden, unexpressed, or un conspicuous" (Lebra, 1983, p. 197). Situations and behaviors that

⁴ Although less extreme, the pattern found in Great Britain (30% "interactions with strangers," 30% "injustice," and 23% "relationships") was similar to the one observed in Israel.

violate this code are perceived as immodest; exposure to other people is one such situation.

Culture-specific beliefs belong to the major determinants of which objects or situations have emotional meanings and of what those meanings are. Examples are found in beliefs concerning evil spirits and other supernatural beings or events. Evil spirits were among the determinants of *kappia* and *iqhi* emotions of the Utku, just mentioned. The Awlad 'Ali are afraid to meet spirits if they are alone (Abu-Lughod, 1986). The Tahitians believe that encounters with spirits cause "uncanny feelings" (Levy, 1973, p. 151). Surinamese people report to suffer from unpleasant feelings, bad luck, and illness because of other people's curses. These curses would activate black powers, which are responsible for the suffering (Wooding, 1981). Among the Dinka, the intention to harm someone is thought to be a sufficient condition to make that person suffer (Lienhardt, 1961).

Events may be coded differently because the schema that defines what falls under the emotion type differs cross-culturally. How an event is coded would, thus, depend on culturally formed expectations and situation definitions. Whether a given event is, for instance, felt to deprive a person of privileges that are due to being in a relationship depends on the cultural conceptions and expectations of relationships and their threats. Differences in event coding would appear to underlie the differences in jealousy antecedents found by Buunk and Hupka (1987). Kissing and dancing with a third party by one's partner were felt to be causes for jealousy in some countries, but not in others. (Situations for which the national means were higher than 4 on a 7-point scale were considered jealousy elicitors in these countries.) Dancing with and kissing a third party were probably coded as threats to unique privileges or to honor in the former countries and not in the latter.

The same kind of situation may be coded differently across cultures. Different cultures, for instance, perceive being alone in different ways. Among the Utku Eskimos, the circumstance of being alone, or being left alone, always represents serious social isolation and leads to sadness or, more precisely, loneliness (Briggs, 1970). The strong connection between being alone and sadness is evident in the emotion vocabulary. All sadness words collected by Briggs are associated with loneliness. *Hujujaq* is described among other things as "to be unhappy because of the absence of other people," *pai* as "to be or to feel left behind," and *tumak* as "to be silent and withdrawn in unhappiness especially because of the absence of other people" (Briggs, 1970, pp. 351-352). Briggs reports to not be familiar with a general Utku word for sadness. As mentioned above, Tahitians take a different perspective. Being alone is perceived as an opportunity for spirits to bother a person, causing uncanny feelings and sometimes also fear (Levy, 1973). The Pintupi aboriginals of Australia again have a different view. They consider it unusual that one could be happy sitting alone, because it means not to be among kin and not to show or be shown affection. Sitting alone is an indication that the relationships between the individual and those considered as kin do not run smoothly, which prevents one from experiencing happiness (Myers, 1979).

Focality of event types. Differences in event coding may also follow from the culture-specific focality of particular issues of

concern. Event types are called *focal* when they represent socially defined and shared concerns. We assume that focal event types are well structured, which means that clear norms exist in the given culture on how to interpret such events and how to respond to them.

Focal event types may also be expected to be highly available. This implies, first, that focal events never remain unnoticed to the individual or his or her environment. When they do occur, the individual can hardly escape being emotionally affected. It also implies that many events are recognized as instances of the focal event type. One may expect that even events that only remotely affect concern (such as possible future concerns) are recognized as instances of the event type.

For instance, as indicated above, the danger of losing one's dignity or honor is of great concern in many cultures. By consequence, situations bearing on one's dignity are focal: They draw attention, and emotions related to shame are very likely elicited by them. On Bali and Java, according to Keeler (1983), many different situations are interpreted as shame situations, that is, as threats to status. "A person fears that he will compromise that status by proving incapable of demonstrating it in his own gestures and more importantly, in the gestures of others" (Keeler, 1983, p. 163). Because, moreover, status is no steady feature, it has to be settled in encounters with other people. "If others' gestures and speech are rude and demeaning, the fact signals the inadequacy of one's own status to compel people's deference" (Keeler, 1983, p. 159). The resulting perceived inadequacy of status, or perceived danger of such inadequacy, gives rise to the emotion called *lek* on Bali and *isin* on Java.⁵

In a similar way, Japanese life appears to be permeated with *haji*, which is the emotion elicited by having shown behavior evaluated as immodest, which is similar to both shame and embarrassment (Lebra, 1983). The Awlad 'Ali, as we have seen, consistently interpret many different situations as threats to honor. The perceived threat gives rise to *hasham*, feelings of shame, and to the acts of deference that arise from these feelings (Abu-Lughod, 1986).

Notice that in Western culture, emotions such as *lek*, *isin*, *haji*, and *hasham* are also present. Other people's lack of respect, self-exposure, and encounters with more important people are elicitors of the similar emotions of shyness, shame, and embarrassment. However, the eliciting situations are not focal ones in Western culture. They are less well defined, and they are not consistently categorized as shame situations. Shame receives considerably less explicit attention and cultural recognition; it is, as Scheff (1988) calls it, a "low visibility" emotion (p. 400).

The high availability of focal event types does not necessarily affect their frequency. Occasionally, focal events are so aversive

⁵ Keeler (1983) challenges C. Geertz's (1973) interpretation of the emotion *lek* as *stage fright*, a fear of failing to sustain one's part in interactions (C. Geertz, 1973). *Lek* is aroused, according to Keeler, when a person fails to retain his or her status or is likely to do so. It does not bear on role acting. Keeler's description of *isin* corresponds to H. Geertz's (1959) definition of this Javanese emotion. She explains *isin* as "a complex anxiety reaction, involving not only fear but also lowered self-esteem, . . . having to do with social distance" (H. Geertz, 1959, p. 233).

that their anticipation arouses active avoidance behavior. Even mildly relevant situations may be recognized as instances of the focal event type and signal the possibility of the most central issues of concern, which may give rise to their avoidance.

According to Briggs (1970), the Utku Eskimos consider angry thoughts and acts as dangerous. It is felt that angry people are always likely to lose control; angry people might ultimately commit murder, and angry people thus are frightening to the Utku. Anger situations appear to be extremely focal in Utku culture, even though they are rare or absent. Whenever anger shows up in one person, the other Eskimos react with disapproval, shame, fear, or, paradoxically, with aggression. These focal situations are so feared that they are constantly avoided and thus do not get the opportunity to elicit emotions.

There may also exist more or less formalized cultural strategies to avoid focal event types. Shweder and Much (1987) have pointed to the cultural strategies that are available to Hindu Oriya Brahmins (a Hindu cast living on the east coast of India) to avoid moral transgressions. Among the Oriya Brahmins, dating and premarital sexual play are seen as moral transgressions: "It is argued. . . that so many people, including ancestral spirits, are affected by one's marriage choice that one cannot possibly leave it up to one young person, driven by sex, passion, and infatuation, to make such an important decision" (Shweder & Much, 1987, p. 200). Therefore, dating and premarital sexual play are forbidden, and marriages are arranged. These social rules and practices serve to protect the moral code; their application avoids events with supposedly negative consequences. A menstruating woman entering the kitchen or cooking is also interpreted as a moral transgression by the Oriya Brahmins. The body of a menstruating woman is conceived of as impure. It is associated with sin, because "to be born as a woman is an indication of prior sin" (Shweder & Much, 1987, p. 200). The assumption is that ancestral spirits will not accept the food from an impure woman. A menstruating woman is, therefore, not allowed to enter the kitchen or cook. This rule is another cultural strategy to avoid the occurrence of moral transgressions; events with negative (emotional) impact are avoided.

A different example is reported by Abu-Lughod (1986). The entire organization of the Awlad 'Ali community is geared to the avoidance of situations that might damage anyone's honor.

Similarities and Differences in Emotional Appraisals

Appraisal, in this article, is conceived as the evaluation of events in terms of their relevance for the person's well-being and coping possibilities. Such appraisal, as was suggested above, can be considered to consist of a set of appraisal dimensions. Cross-cultural similarity in appraisal would imply that these are universally shared.

Cultural differences may exist in the propensity of different groups to appraise emotionally relevant situations in a particular way. Certain groups may also avoid a particular mode of appraisal, say, that of attribution of blame. Cultural differences in appraisal propensity can be understood as resulting from differential availability of the appraisal dimensions concerned. Such differences in appraisal propensity would lead to differences in the kind of events that elicit particular emotions: Anger might be elicited by events that look innocuous, or just

disturbing, to members of a different group. It would also lead to different frequencies of occurrence of those emotions, assuming that different appraisal patterns are closely associated with emotion concepts. Cultural differences in appraisal may also be due to regulation processes that suppress undesirable appraisals.

Similarities in Appraisal

Several studies found the same patterns of appraisal dimensions to be present in similar emotions in different cultures. By implication, the same appraisal dimensions appear to be relevant for distinguishing emotions in these different cultures. Matsumoto, Kudoh, Scherer, and Wallbott (1988) asked Japanese and American subjects to report on their appraisal of emotional situations they had provided as having elicited the emotions of joy, fear, anger, sadness, disgust, shame, and guilt. Appraisals were reported in terms of ratings on a given set of appraisal dimensions. The dimensions were the following: (a) the pleasantness or unpleasantness of the situation, (b) its degree of expectedness or unexpectedness, (c) the extent to which the situation was considered unfair, (d) the extent to which the emotion-eliciting behavior was considered immoral or improper, (e) the degree to which the situation was conducive or obstructive to the person's goals, (f) whether the situation increased or diminished the individual's self-esteem or self-confidence, (g) the significance of the situation for one's relationship with other people, (h) to whom or what responsibility for the situation was attributed, (i) how the person evaluated his or her possibilities to cope with the situation.

The two cultural groups differed only in how certain emotions were rated with respect to the dimensions of self-esteem, responsibility, and coping. With respect to all other dimensions, the ratings of American and Japanese subjects of the six emotions were highly similar. Cultural differences on the dimensions of self-esteem and responsibility were small. A significant main effect for culture was established with respect to self-esteem, indicating that emotion-eliciting events generally had a more positive effect on self-esteem in American subjects than in Japanese subjects; no interaction effect of culture and emotion was found. Cultural differences in the (internal or external) attribution of responsibility were only found for sadness. American subjects tended to attribute the responsibility for sadness-eliciting events to others, whereas Japanese subjects tended to make internal attributions.

Wallbott and Scherer (1988) report a similar study with students from 27 countries from all five continents. Emotions, appraisal dimensions, and method were similar to the ones used by Matsumoto et al. (1988). On all the appraisal dimensions, the effects that were due to emotion were much larger than the effects that were due to country, which would imply "relatively stable effects largely independent of cultural differences" (Matsumoto et al., 1988, p. 52). Again, there is evidence of strong similarities. In most appraisal components, there was hardly any variance that was due to culture; only *expectancy*, *immorality*, and *unfairness* appeared to some degree to be cross-culturally variant (η^2 s associated with the effect of culture were .15, .22, and .18, respectively). However, the cross-cultural con-

sistency was much greater for these components (η s associated with the effect of emotion were .27, .45, and .50, respectively).

Both studies just reviewed (Matsumoto et al., 1988; Wallbott & Scherer, 1988) suggest cross-cultural similarity in the appraisal characteristics of particular emotion types. Stated differently, they show that particular appraisals are cross-culturally characteristic of some, but not all, emotion types: (a) Joy antecedents were rated as most pleasant in both studies, followed by the antecedents of shame and guilt. Sadness, anger, and disgust antecedents were in both studies rated as relatively unpleasant. (b) In both studies, joy antecedents were rated highest in expectedness. Antecedents of guilt were also relatively highly expected, although in one study (Wallbott & Scherer, 1988) not to the same extent as joy. (c) In both studies, anger antecedents were rated as the most unfair and joy antecedents as the least unfair. (d) Anger, disgust, and guilt antecedents were seen as the most immoral or improper ones, in both studies. One study (Wallbott & Scherer, 1988) suggests a further distinction. Disgust antecedents were considered even more immoral than anger events; antecedents of anger were reported to be more immoral than those of guilt. (e) Goal achievement was said to be most facilitated by joyful events and most obstructed by anger-eliciting events. (f) More than any of the other emotions, joy antecedents were reported as being positive for self-esteem (in Wallbott & Scherer, 1988, 2.9 on a 3-point scale; Matsumoto et al., 1988, do not report the means on appraisal dimensions). (g) Joyful events were also considered the ones that are most significant to relationships with other people. (h) Internal attributions were made most frequently for shame, guilt, and joy; external attributions (blaming either fate or other people) were made more often for anger, disgust, and fear.

Conclusions about the coping characteristics of different emotions are difficult to draw, because there appear to be considerable cultural differences in coping. All other dimensions, however, appear to contribute in a highly cross-culturally similar way to differences among emotions.

Frijda et al. (1989) studied emotion reports in Dutch students in a somewhat similar manner. Appraisal dimensions identified were largely similar to those found by Wallbott and Scherer (1988). The same applies to Smith and Ellsworth (1985), who did an appraisal study with American students.

A recent study provides impressive evidence, both of generality of appraisal dimensions and of the similarity in meaning of several emotion words. Mauro, Sato, and Tucker (1992) presented students from the United States, Japan, China, and Hong Kong ($n = 267, 296, 162, \text{ and } 248$, respectively) with a task similar to the one used by Smith and Ellsworth (1985) and Matsumoto et al. (1988). The subjects were asked to recall an instance of particular emotions. The following 14 emotions were included: sadness, contempt, anger, disgust, fear, boredom, frustration, shame, surprise, regret, guilt, hope, happiness, and pride. The recalled emotion events were rated on twenty-eight 9-point scales meant to tap 10 appraisal dimensions, which included those proposed by Wallbott and Scherer (1988) and two additional ones, anticipated effort and attentional activity, taken from Smith and Ellsworth (1985). The Japanese and Chinese questionnaires were translated from the English original. The Hong Kong version was adapted from the Chinese one. An Emotion \times Country multivariate analysis of

variance yielded significant emotion differences on all appraisal dimensions. The authors concluded that most of the dimensions present in the appraisal questionnaire contributed equally strongly to emotion differentiation in all groups. Strong intercultural agreement was found in the appraisal patterns for the various words with regard to the more primitive dimensions: pleasantness, attentional activity, certainty, coping ability, and goal-need conduciveness. Little divergence existed also with the more complex dimensions of legitimacy, and norm/self compatibility. More difference existed with regard to the complex dimensions responsibility (multivariate $p = .002$) and anticipated effort (multivariate $p = .003$; the distinction between more primitive and more complex dimensions was made by Mauro et al., 1991).

The agreement in appraisal patterns for various emotions is not surprising, because emotion words are translated on the basis of, in part at least, such agreement. Less self-evident is the finding that a common set of appraisal dimensions provides a satisfactory descriptive framework for the emotions in different languages. The agreement can probably be explained by the generality in environmental contingencies such as harmfulness and uncertainty, in exigencies of social structures, and in cognitive properties such as causal attribution.

Differences in Appraisal

Some of the cultural differences in the events that elicit emotions can be understood as consequences of differences in *appraisal propensities*. For instance, a propensity might exist in a given culture to interpret unpleasant situations as because of other people's harmful intent, with resultant readiness for anger; in a different culture, attributions of blame may be less readily available, or suppressed. Or, for another example, a given group may have a propensity to view unfamiliar situations as sources of danger or threat, leading to prominence of apprehension and suspicion.

A few studies actually indicated such cultural differences in appraisal propensities. Borke and Su (1972) asked 282 American and 135 Chinese children to describe "1. the kinds of situations that generally made them feel happy, sad, afraid, or angry; 2. the things their parents did to them that resulted in their feeling happy, sad, afraid, or angry; 3. the things other children did to them that resulted in their feeling happy, sad, afraid or angry" (p. 310). In both groups, the proportion of situations mentioned that made them happy was the largest (35% and 32%, respectively). The American children, however, mentioned more situations (28%) that would make them feel sad than did the Chinese children (18%), whereas the Chinese children came up with more situations that would make them feel angry (27%) than did the American children (20%). The Chinese children also mentioned fearful situations more frequently than did the American children (24% and 18%, respectively).

One possible interpretation of this result is that Chinese and American children are inclined to different appraisals. Different interpretations are possible, though. The results could be due to the fact that American children encounter more sad events and Chinese children meet more fearful and frustrating, anger-provoking events; they could also be due to different standards of social desirability. However, a different group of 87

Chinese and 96 American children were asked to match one of four facial expressions (happy, angry, afraid, and sad) to nine ambiguous situations provided by children from both countries in the earlier part of the study; situations were called ambiguous if they had been mentioned by the Chinese and American children as evoking both angry and sad reactions. On the average, sad responses to these situations were given by 59% of the American children and by 38% of the Chinese children; angry responses were given by 37% of the American children and by 57% of the Chinese children. Of the nine ambiguous stories, six showed significant differences between the two groups. For five of these six stories, the American children gave more sad responses, and the Chinese children gave more angry responses. The two groups tended to associate the same situations with different emotions, which supports the idea of cultural differences in appraisal propensities.

The same children were also asked to identify eight situations of happiness, six situations of fear, seven situations of sadness, and eight situations of anger by selecting one of the four facial expressions; the situations were again derived from those reported in the earlier part of the study. The majority of both Chinese and American children (about 90%, on the average) recognized the happiness and fear stories as they were intended. There were, however, significant differences between the Chinese and the American children in their responses to five of the seven sad stories. The American children consistently gave a higher proportion of sad responses to these stories than the Chinese children (recognition rates on these items differed by 44% on the average); the majority of the Chinese children failed to recognize three of the five sadness stories (recognition rates: 49%, 15%, and 27%; the American children recognized the same items by 88%, 89%, and 92%, respectively). The Chinese children gave significantly more anger responses to stories that involved being frustrated by adults than did the American children (recognition rates on these items differed by 19% on the average); four of the five angry stories involving peers were recognized equally well by American and Chinese children. Overall, "the Chinese children viewed other children [figuring in the antecedent stories] more frequently as angry than the American children, whereas the American children showed a greater tendency to perceive other youngsters as sad" (Burke & Su, 1972, p. 313). This may be taken as evidence for cultural differences in the appraisal propensity.

Matsumoto et al. (1988) found cultural differences with respect to the numbers of subjects who were unwilling to attribute the responsibility for joy, fear, anger, disgust, shame, and guilt antecedents either to themselves or to other people. For all emotions, significantly more Japanese than American subjects responded "not applicable" to the question about responsibility for the emotional event (percentages were not provided). Consistently, Scherer et al. (1988) found that compared with the American and European groups, Japanese subjects reported relatively few instances of injustice as anger antecedents (21% of the American and European anger antecedents, but only 4% of the Japanese). These findings agree with those of Mauro et al. (1991) on significant cross-cultural differences in the use of the appraisal dimension of responsibility, mentioned in the preceding section.

A highly suggestive, perhaps related, difference in appraisal

was brought forward in the recent discussion by Markus and Kitayama (1991) of divergent views of the self. Western and non-Western cultures differ in predominantly adhering to an independent and an interdependent view of the self. In the independent view, the individual appears as focused on his or her independence and self-actualization. In the interdependent view, the individual is focused predominantly on his or her relationship with in-group members or with the in-group as a whole. As a consequence, people and events are, in the one view, appraised primarily in terms of their individual achievements and properties and, in the other view, appraised primarily in terms of the group the person belongs to or as affecting the interpersonal relationships. This difference in appraisal is reflected, the authors argue, in the fact that cultures with an interdependent view of the self (at least, Japanese culture) have more emotion categories defined by appraisals having to do with the relationships with others (e.g., *amae*, defined as hopeful expectation of someone's indulgence and favor, or *fuzeai*, feeling of connection with someone; Markus & Kitayama, 1991, p. 239).

The conspicuous presence or absence of a given type of emotion in a given group may be due to a particular enhanced or diminished appraisal propensity in that group. For instance, Solomon (1978) linked the low incidence of anger among the Utku to a reluctance to blame another person for a negative event. He argued that

anger violates the Utku "rational" worldview, and includes judgments and structures which are unjustifiable. . . . Anger adds blame to frustration and annoyance. It includes a quasi-moral "ought"-type claim. . . . The Utku, much more than any of us, are used to extreme hardship and discomfort. Their philosophy, therefore, is that such things must be tolerated, not flailed against. . . . Aggression only makes things more unpleasant and does no good, so the rational attitude under the circumstances is simple resignation and acceptance. (Solomon, 1978, p. 193-194)

Among the Semai of Malaysia, too, the tendency to blame appears to be weak or absent. Instead of anger, frustration elicits *pehunan*, a state of fear and the perception of grave danger (Robarchek, 1977). Such interpretations of differences in anger occurrence, of course, differ from interpretations assuming that anger was actually evoked by acts from actors appraised as blameworthy, but the expression of it was subsequently suppressed (the interpretation apparently favored by Briggs, 1970; her perspective is found in the Behavior Regulation section).

The high frequency of guilt among the Japanese has, similarly, been linked to a strong tendency to blame themselves for negative events (DeVos, 1960; Lebra, 1983). Among the Japanese, the awareness to be responsible for an unpleasant event not only is elicited by one's own wrongdoings but also is elicited by taking the responsibility for another person's faults. In this vein, for instance, "the husband's infidelity should be taken as a sign of the wife's character defect" (Lebra, 1983, p. 203).

The Tahitians tend to appraise inherently negative events as modifiable, controllable, and not really affecting their personal concerns:

There are certain themes which seem to reduce the meaning of events as frustrations. . . . [There] is an emphasis on the substitutability of goals and desired objects, which are assumed to be in

adequate supply. If you lose one woman, you will get another. (Levy, 1973, p. 288)

In this way, Levy explains the Tahitian's relative absence of anger.

Effects of regulation. Some cultural differences in appraisal may be due to regulatory modifications or reappraisal. Events sometimes are not appraised in the way that would follow from the nature of those events; they are reappraised so as to be less painful or more acceptable to the person. Reappraisal is a plausible supposition when there is evidence of an original appraisal that is discrepant with the manifestly avowed one. Such discrepancies are found when the relationship of the emotional reaction with the event that evidently elicited it is unrecognized or denied. According to Levy (1973), reappraisal is involved when Tahitians label the emotion resulting from suffering personal loss as a *feeling of being troubled*, unconnected to the loss. To quote Levy (1984): "But, of course, in some sense the individual must 'know' that he has undergone a loss. This, the result of an initial appraisal of an eliciting situation, is what generates the emotional feeling in the first place" (p. 224). The reappraisal thus has changed the original appraisal of irretrievable loss, which would have led to sadness, into one of unconnected mental upset.

The Samoan emotion of *musu* has also been interpreted as the denial of some aspect of the eliciting situation:

Musu . . . expresses a person's reluctance to do what is required of him or her. (Gerber, 1985, pp. 128-129)

Musu is reported to follow unreasonable demands made by one's parents. Anger towards one's parents would be unacceptable, and *musu* is likely to have replaced anger.

One's *musu* is a sufficient explanation; it is never questioned by others or justified by the person who experiences it. The self-attribution of *musu* serves, then, as a mechanism by which a person can avoid a burdensome situation while at the same time not having to admit to the existence of unacceptable feelings. . . . The term seems to function as much to conceal the nature of a particular inner experience as it serves to express it. (Gerber, p. 129)

A semantic similarity test confirms a close association between the term *musu* and feelings of anger.

Reappraisal does not necessarily involve denial. It may involve emphasizing an aspect of the situation and neglecting another. The reaction of the Awlad 'Ali to loss provides an illustration. The Bedouins tend to react to the death of a beloved one with anger and indignation (Abu-Lughod, 1986). The anger appears to be the consequence of an emphasis on how unfair the situation is and that someone else is responsible for it. This emphasis would seem to be promoted by the culturally prevalent idea that weak emotions like sadness tend to harm one's honor (see Differences in Event Coding, above). In fact, Abu-Lughod reports that the Awlad 'Ali do admit the sad aspects of their loss when there is no need to fear for their honor (see the Emotional Behavior section).

Similarities and Differences in Physiological Reactions and Awareness of Them

Self-reports of physiological reactions tend to be cross-culturally similar. Cross-cultural differences in frequency of re-

ported symptoms have also been found. Few cross-cultural studies exist with respect to actual physiological changes.

Similarities in Physiology

Several questionnaire studies found evidence of considerable cross-cultural similarity in self-reports of physiological responses accompanying particular emotions. Scherer et al. (1986) asked students from different European countries and Israel to indicate which bodily reactions had accompanied their experiences of anger, happiness, sadness, and fear that they had just described; the question was open ended. Overall, subjects mentioned 1.33 physiological responses per emotion, with joy episodes having the least physiological symptoms mentioned and fear having the most (means of 0.72 and 2.14 symptoms per subject, respectively). The reported physiological reactions were classified. Comparing the results from Northern European countries with those from Southern European countries showed that the two groups agreed with respect to nearly all classes of physiological reactions for all but one of the emotions. Differences were found only for sadness. Averaging the responses, a different pattern of reported physiological reactions was found for each emotion. In Northern and Southern European countries, pleasant rest, pleasant arousal, warm temperature, and an increase in blood pressure were reported for joy by at least 5% of the subjects (overall, these symptoms were mentioned, respectively, in 17%, 11%, 7%, and 9% of the joy episodes); stomach sensations, unpleasant rest, and muscular symptoms were reported for sadness by at least 5% of the subjects (in 13%, 12%, and 17% of the sadness episodes, respectively); unpleasant arousal, cold temperature, an increase in blood pressure, stomach sensations, perspiration, and muscular symptoms were reported for fear (in 12%, 9%, 18%, 17%, 6%, and 35% of the fear episodes, respectively); and unpleasant arousal, warm temperature, an increase in blood pressure, stomach sensations, and muscular symptoms were reported for anger (in 12%, 9%, 6%, 9%, and 18% of the anger episodes, respectively). Chest and breathing problems appeared not to be important in any of the four emotions.

In a subsequent study, Scherer et al. (1988) administered the same questionnaire to American and Japanese students. American reports of physiological reactions corresponded almost completely to the previously obtained European results. The Japanese data were appreciably different, however. We return to them in the next section.

In a further study, Wallbott and Scherer (1988) asked students from 27 countries to report on the physiological symptoms accompanying experiences of anger, fear, joy, sadness, disgust, shame, and guilt. Ten fixed-response alternatives were provided. The fixed-response alternatives in this study did not fully match the categories used in the previous studies (Scherer, Wallbott, Matsumoto, & Kudoh, 1988; Scherer, Wallbott, & Summerfield, 1986). Some previously used categories were absent, for example, pleasant and unpleasant *rest* and *arousal*. Other categories were subdivided; the original category of *warm temperature* was split into *feeling hot* and *feeling warm*, and that of *muscular symptoms* was divided into *muscles tense* and *muscles relaxed*. Still other categories were added, for example, *breathing* and *lump in throat*. Furthermore, an increase in

blood pressure was now labeled *heartbeat*. Finally, *feeling cold*, *stomach sensations*, and *perspiring* were borrowed from previous studies.

Analyses of variance for each of the reported physiological symptoms showed that the degree of variance due to the kind of emotion was larger than the variance due to country. Wallbott and Scherer (1988) concluded that the physiological reaction patterns for different emotions are largely universal. This conclusion can be refined, however. Cross-cultural similarity is suggested more strongly for some than for other physiological reactions. *Feeling warm* appeared to be universal. It was exclusively reported for joy, and hardly varied across cultures (emotion $\eta = .72$, culture $\eta = .06$). Equally little cultural variation was found with respect to *relaxed muscles*, which were regularly reported for joy, occasionally for sadness, and hardly at all for any other emotion. The variation that was due to emotion was much lower for relaxed muscles than was the case for warm feelings (emotion $\eta = .36$, culture $\eta = .09$). For the other physiological symptoms mentioned in the questionnaire, the variation that was due to culture was not very large, but neither was the variation that was due to emotion. With the exception of feeling cold and feeling hot, the variance in these physiological symptoms because of culture amounted to half or more of the variance because of emotion. It may be argued, therefore, that of the total variance explained, a substantial part was due to culture.

Comparison is possible across studies only to the extent that the symptom categories can be matched. Fixed-response alternatives as adopted by Wallbott and Scherer (1988) may be assumed to yield higher frequencies of physiological symptoms than the open-ended questions used by Scherer et al. (1986). Comparing frequencies reported in these studies is therefore not possible. However, we can compare the most frequent physiological reactions within each emotion, as well as the physiological symptoms that appear to be exclusive to particular types of emotion.

Consistent with previous results, feeling warm and heartbeat were the symptoms most frequently reported as joy reactions (reported in 65% and 40% of the cases); feeling cold, heartbeat, stomach sensations, perspiration, and muscles tense were the most frequently reported symptoms of fear (in 35%, 67%, 37%, and 51% of the fear episodes, respectively); feeling hot, heartbeat, and tense muscles were among the most frequently reported symptoms for anger (for 31%, 49%, and 43% of the anger episodes, respectively); and tense muscles were one of the most frequently reported physiological reactions of sadness (in 28% of the sadness episodes). In addition, Wallbott and Scherer (1988) found that the newly added physiological symptoms were frequently reported. A lump in the throat was present in 53% of the sad experiences, probably related to the occurrence of crying; breathing was reported in 46% of the fear episodes and 36% of the anger ones.

Three additional emotions were studied by Wallbott and Scherer (1988). The most frequently reported symptoms in disgust were tense muscles (26%) and heartbeat (24%); those most frequent in shame were heartbeat and feeling hot (both 37%); and those most frequent in guilt feelings were heartbeat and a lump in the throat (28% and 27%).

Some physiological responses are characteristic of particular

emotions; their frequency of occurrence is much higher for some than for other emotions. Distinctive physiological symptoms were found for joy (feeling warm, muscles relaxed), fear (feeling cold, muscles tense, perspiring), anger (muscles tense, feeling hot), sadness (lump in throat), and shame (heartbeat and feeling hot).

Self-reports of physiological reactions in emotions probably do not usually reflect actual physiological reactions (Pennebaker, 1982), but rather stereotyped schemas of response patterns presumably characteristic for different emotions (Rimé et al., 1990). However, the considerable cross-cultural similarity in these schemas suggests a basis in actual symptoms and experience. Rimé et al. advanced the plausible hypothesis that the stereotyped schemas stem from actual experiences under intense, prototypical emotions, in which universal response patterns might indeed have been present.⁶ Systematic comparisons of actual physiological reactions during specified emotional conditions in different cultural groups are, however, nearly nonexistent.

Differences in Physiology

Cultural differences have been observed in the number of physiological response components that are mentioned in emotion self-reports. The Japanese subjects in the study of Scherer et al. (1988) differed from the American and European subjects in that they reported many fewer physiological symptoms. From the 20 symptoms that were reported by more than 5% of the European and American subjects, only 3 were mentioned by more than 5% of the Japanese; one each for sadness, fear, and anger and none for joy. The Japanese do not appear to be unique in this. Gerber (1985) and Lutz (1987) report that spontaneous emotion descriptions of the Samoans and the Ifaluk contain no reference to bodily sensations, either. These findings also suggest cultural differences in the number of physiological responses reported as belonging to particular emotions; however, we cannot rule out the possibility that the latter results are due to the small number of informants in the studies of Gerber and Lutz.

The differences can be explained in various ways. First, they might reflect differences in the actual physiological reactions in emotions. Second, there may be different styles of reporting (the explanation given by Wallbott & Scherer, 1988). Third, physiological symptoms may not be noticed everywhere to the same extent. Differences in the conceptualization of emotions might lead to different degrees of attention to physiological symptoms, as, for instance, Heelas (1984) proposes. Cultural emotion models that include physiological symptoms are more likely to draw attention to these symptoms than do cultural models that do not refer to them.

There indeed appear to be differences in the degree to which emotion models refer to physiological changes. The Ifaluk and the Samoans, for example, appear to define emotions as stereotyped and necessary relationships between eliciting situations and appropriate responses; internal sensations are disregarded

⁶ Rimé, Phillipot, and Cisamolo (1990) offer some further explanations for the similarity in reported physiological patterns.

(Gerber, 1985; Lutz, 1987). American students, by contrast, strongly associate their emotions with physiological symptoms (Davitz, 1969), and some Western theories (e.g., William James's) have even identified them.

Certain cultures represent emotions as exclusively physical, for example as conditions of particular organs. The Ilongot describe emotions as motions of the heart (Rosaldo, 1980). Although somatized definitions of emotions draw attention to the physical part of emotions, it is unclear to what extent they derive from the perception of physical responses in emotions. Somatic descriptions of emotions may be metaphorical. Furthermore, some cultures do not strictly distinguish the mental from the physical and appear to psychologize organs (D'Andrade, 1987; Heelas, 1986).

Whatever its explanation, there is evidence for group differences in attention to physiological concomitants of emotions. A relevant observation comes from Gerber (1985). Surprised to discover that Samoans failed to mention physiological phenomena pertaining to their emotions, she started to ask them explicitly "if there was 'any special feeling in the body' that was associated with the emotion under discussion" (p. 137). "In all but a few instances, the informants denied that there was" (Gerber, 1985, p. 138). But because the few informants who did report bodily feelings were not otherwise atypical in their emotions, Gerber (1985) concluded that they "had a greater sensitivity to, or articulateness about, the subjective aspect of emotional experience" (p. 138). Thus, according to Gerber (1985), "granting that Samoan bodies are essentially like those of informants who report somatic changes in emotion, we may conclude that Samoan unawareness of physiological activation in emotion is a matter of relative attention" (p. 138).

The possibility that attention plays a role in the cultural differences discussed above is enhanced by Shields's (1984) finding that women report a larger number of body symptoms in emotions than men, which she indeed interprets as a result of relative attention.

As was just mentioned, systematic cross-cultural comparisons of actual physiological changes during emotions have not been made. It is simply unknown whether actual cultural differences in physiological responding during emotions exist. They very well may, because in a few instances, subcultural differences have been observed. Harburg et al. (1973), for instance, found socioculturally deprived Negroes in Detroit to respond to frustrations with a stronger increase in blood pressure than Caucasians. In all likelihood, there were parallel sociocultural differences in the emotional meaning of the frustrations, for instance, their perceived uncontrollability.

Similarities and Differences in Action Readiness

There may exist cultural similarities or differences in the available modes of action readiness, and in the changes in action readiness, that occur with the same emotions (that is, in response to events with similar meaning or that are appraised in similar fashion).

No systematic comparisons have been made of forms of action readiness. A few pertinent self-report questions figured, however, in Wallbott and Scherer's (1988) 27-country study. Wallbott and Scherer asked their subjects to check on a list of

reactions which of those they had felt during the various reported emotion instances. Analyses of variance showed a greater effect of the factor Emotion than of the factor Country, thereby suggesting cross-cultural similarity in patterns of non-verbal behaviors or action tendencies. Certain general movement tendencies appeared emotion specific across cultures, in addition to the patterns of laughter and crying. Tendencies categorized as "moving toward" corresponded to joy, "moving against" corresponded to anger, and "withdrawing" corresponded to all negative emotions. Universality of laughing as a characteristic of joy was strongly suggested in that there was hardly any cultural variation (emotion $\eta = .75$, culture $\eta = .05$). The other nonverbal behaviors showed more cultural variation and were less emotion specific (crying: emotion $\eta = .40$, culture $\eta = .10$; moving toward: emotion $\eta = .34$, culture $\eta = .13$; moving against: emotion $\eta = .30$, culture $\eta = .15$; withdrawing: emotion $\eta = .23$, culture $\eta = .12$).

Rimé, Boulanger, Laubin, Richir, and Stroobants (1985) conducted an interesting study, yielding results consistent with these last findings. They filmed two abstract, moving objects. These kinetic structures were meant to induce the perception of emotion. Five such kinetic structures were shown to subjects from Belgium, the United States, and Zaire. After presentation of each structure, subjects indicated to what extent 12 pairs of words were applicable to it. Factor analysis on these 12 pairs yielded five factors, each referring to an interpersonal emotion. The three cultures agreed on the emotional interpretation of three of the five kinetic structures. One of these kinetic structures was, in all three cultures, most often perceived as representing kindness. It showed the first object moving toward the second, then both objects remaining together without moving, and finally both objects jointly moving away. Distrust was in all three cultures the emotion most attributed to a structure in which the objects alternately remained at a distance and avoided each other. A third structure was most often recognized as kindness by the American subjects and as averseness by the Belgium and Zairian subjects. The structure showed two objects, jointly moving at first and stopping together. Then, it showed one of the objects moving away and being followed and reached by the other object and the first object moving away a second time, again being followed by the second, and again being reached. Finally, it showed the second object moving away from the first.

There appears to be cross-cultural similarity in the recognition of particular movements as emotional, though only with respect to three of the five kinetic structures tested. Cross-cultural differences were found with respect to the most frequently given interpretation of one of these structures, despite the statistical concordance established. Similarity, furthermore, may have been overestimated by Rimé et al. (1985). As the authors acknowledge (p. 259), subjects rated the kinetic structures on scales that consisted of emotional concepts only. Inclusion of nonemotional (neutral) terms might have decreased the recognition rates.

So far, there are no more solid data from which to conclude whether the major forms of emotional action readiness occur in some, most, or all cultural groups, and whether those forms that do occur occur with the same emotions.

Some evidence, though, suggests that the major forms of ac-

tion readiness are general and occur in most or all cultural groups. For instance, angry (that is, impulsively hurtful) behavior has been observed in the majority of groups whose emotions have been investigated; it was described even among the Utku, albeit almost uniquely (though not quite) in relation to their dogs (Briggs, 1970). In those cultures in which it was described, it was observed to occur under frustration, social slighting, or when confronted with norm transgression. Exuberance, or joyful behavior, as manifest in vivacious moving, singing, or shouting, has been described as occurring even in generally subdued cultures such as the Tahitians (Levy, 1973) or the Ifaluk; the latter are reported to take care to suppress it in their children (Lutz, 1982). It generally occurs during play, after successful achievement, or on festive social occasions. Various forms of submission behavior and tendencies towards "hiding" behavior ("shame," Scheff, 1988) have likewise been mentioned in connection with perpetrated or imputed own norm transgression in a number of cultures (e.g., Abu-Lughod, 1986). Systematic analysis of available descriptions of self-reported or inferred action tendencies, however, appears to be a notable omission in the literature. Only the facial expressions corresponding to the various forms of action readiness are well documented; they are discussed in the next section.

Because systematic analysis is lacking, not much can be said about cultural differences. Differences in frequency of particular impulses or behavior patterns have been noted in some instances; the absence of angry feelings and impulses among the Utku Eskimos has been remarked on (Briggs, 1970). Variation in frequency is taken up in the Differences in Behavior Regulation section, below.

Similarities and Differences in Emotional Behavior: Facial Expression

Most of the studies on cultural similarities and differences in facial expressions are recognition studies. In the recognition paradigm, subjects are asked to associate a picture of a face showing a given expression with one or more emotion words.⁷ In some recent studies, subjects also had to give intensity ratings for each emotion word. Only a few studies have taken recourse to observed facial expressions. There are also some self-report data on facial expression.

The various recognition studies are considered to have provided evidence for the existence of universal facial expressions: Certain expressed emotions are cross-culturally recognized, recognition rates tend to be equally high in different cultures, the intensity of emotions was recognized in a cross-culturally similar way, and facial expressions produced to show a given emotion were recognized correctly in other cultures. Cultural differences in facial expression have been established by certain differences in the recognition rate of expressed emotions, in attributed intensity levels, and in the amount of self-reported facial expressions associated with each emotion. A few culture-specific expressive patterns have been described.

The evidence for cross-cultural universality provided by recognition studies is indirect. It is based on the assumption that correct recognition of an expression in several cultures implies that the expression naturally occurs within those cultures. The assumption is not necessarily correct; recognition may be

based on learning the code of a given culture, for instance, through mass media. Yet, the assumption is a plausible one, and a learning explanation is unlikely in several instances, and so we decided to include the recognition evidence in our review.

Similarities in Facial Expression

Certain facial expressions of emotion appear to be universal across cultures. Ekman, Friesen, and Ellsworth (1982) have reviewed the relevant studies. The evidence, primarily from the studies by Ekman and Friesen (1971) and Izard (1977), shows that subjects from various literate cultures associate the same facial expression patterns with *happiness*, *fear*, *surprise*, *anger*, *disgust*, and *sadness*, or equivalent emotion words in their own language (Ekman, 1973). "The same emotions were judged for the same facial behaviors by observers from different cultures in experiments that had many different stimuli of many different stimulus persons and many different groups of observers from 14 cultures or nations" (Ekman et al., 1982, p. 141).

Similar results were obtained with isolated, preliterate subjects by a method that avoided the use of emotion words (Ekman & Friesen, 1971). Members of the Fore language group from New Guinea were given a short story of an emotion antecedent of happiness, fear, surprise, anger, sadness, or disgust. After each story, they had to choose one out of three (Caucasian) facial expression photographs. Their recognition scores were almost as high as obtained with Western subjects by traditional methods. Apart from a confusion between fear and surprise, all facial expressions were categorized as intended.

In a recent study, Ekman et al. (1987) elaborated the original facial expression paradigm. Expressions of happiness, sadness, surprise, disgust, fear, and anger were judged; the stimulus photographs showed Caucasian faces. As in other studies, subjects were first asked to judge facial expressions by selecting an emotion label. Eighteen photographs, three expressions for each of the six emotions, were presented to them. Subjects selected one out of seven emotion words; *contempt* was added as an extra response alternative. The same facial expressions were then shown a second time; subjects had to check whether each of the seven emotions was present or absent in each photograph. The subjects also indicated the intensity of the emotions that they had judged as being present. Subjects were students from 10 countries, distributed over Asia, Europe, and America. Cross-cultural agreement in the judgment of facial expression was established not only in the first single-choice task but also in the second multiple-emotion judgment. In the single-choice task, the emotions chosen by the majority of subjects were, in every culture, the ones predicted; this was even the case for virtually every individual expression. The average recognition rates varied from 73% for anger and disgust to 90% for happiness and surprise. There was some cultural variation in the extent of agreement. Yet kappa coefficients that were obtained for each country separately showed that the emotion judgments

⁷ The emotion words used are usually thought to represent basic emotions. The latter point is open to criticism, in that the prominent emotion words from any given language cannot be equated with basic emotions (e.g., Frijda, 1986; Wierzbicka, 1986). This, however, does not affect the conclusions with respect to expression research.

were as predicted in all cultures ($p < .001$). The results of the multiple-emotion judgment were fully consistent with the first task; kappa coefficients were again highly significant in all cultures ($p < .001$). In 98% of the cases, the emotional expression rated as the strongest in each culture was the predicted emotion.

In the second task, there was also high agreement across cultures regarding the second strongest emotion expressed. To be counted as the second strongest, an emotion had to have a mean of at least 1.5 on a scale ranging from *absent* (0) to *strong* (8); moreover, at least half of the subjects in a culture had to contribute to this mean score. Furthermore, a sufficient number of cultures had to meet the first two criteria. None of the happiness faces met the criteria, and the surprise and sadness photographs met the criteria too infrequently. Second strongest emotions were found, however, for the disgust, fear, and anger expressions. All 10 cultures agreed on contempt as the secondary emotion signaled by the disgust expressions and on surprise as the secondary emotion signaled by the fear expressions. The anger expressions all met the criteria of intensity difference in nearly every culture (the criteria were met in 25 of the 30 cases); the secondary emotion perceived was different for the three anger expressions. In one anger expression, the secondary emotion perceived was disgust; in another, it was surprise; and there was no cultural agreement on the secondary emotion of the third.

Cross-cultural agreement also existed with respect to the relative intensity of different expressions of the same emotion. Two expressions of the same emotion were judged as different if their mean intensity differed by at least 1 point and in at least two cultures. In that case, the direction of the difference in intensity was determined for those two cultures and for all other cultures, including those with mean intensity ratings that did not differ as much as 1 full point. Two faces were considered expressions of equally intense emotions whenever the criteria of intensity differences were not met. The 10 cultures agreed about which was the most intense expression in more than 90% of the cases, which was highly significant.

There is some evidence of a pancultural facial expression of contempt (Ekman & Friesen, 1986). The same subjects who participated in the study just reviewed also judged three Caucasian faces supposedly expressing contempt. Subjects judged the faces by selecting one of the seven emotion words that were listed. Although analyses of variance yielded a main effect for culture and an interaction effect for Culture \times Type of Contempt Expression, the amount of variance accounted for by each was very small. In contrast, the type of expression accounted for much more of the variance. Across cultures, one expression was judged much more often as contempt than the other two (recognition rates: 75% vs. 36% and 10%). The expression in which the lip corner was raised and unilaterally tightened appeared to be judged most frequently as contempt. Pairwise comparison of cultures yielded no cultural differences in the recognition of this facial expression, suggesting its cross-cultural similarity. However, some doubt is cast on the extent of cross-cultural consistency by the findings reported by Ricci-Bitti, Brighitti, Garotti, and Boggi-Cavello (1989). In their study, using the same pictures as those used by Ekman et al.

(1987), Italian students were found to identify a different expression most frequently as contempt.

Production of facial expression of emotions has been examined in a few studies. Ekman et al. (1982) asked Fore subjects "to show how their face would appear if they were the person described in one of the emotion stories used in the judgement task" (p. 136). American students recognized four out of the six emotional expressions produced by the New Guinean subjects when presented on video. Happiness, anger, disgust, and sadness were correctly recognized, be it to a lesser degree than is usually found with Western emotional expressions. As compared with the American recognition rates found by Ekman et al. (1987), the accuracy of recognition was diminished by 20–25%.

Spontaneous expressions were studied in a well-known experiment by Friesen (described by Ekman, 1973), in which American and Japanese students watched a stress-producing movie. Subjects were led to believe that they were alone. Facial expressions were recorded with a concealed camera. Three minutes of each subject's facial reactions during the stress-producing movie were analyzed (with the facial affect scoring technique [FAST]; Ekman & Friesen, 1978). While they watched the movie, the two samples' facial expressions were not found to differ. The correlations between the facial behaviors shown by the Japanese and those shown by the American subjects ranged from .72 to .96, depending on whether a particular facial area was compared or the movement of the entire face. This result strongly suggests cultural similarities in the spontaneously produced expressions of emotions, although it could be argued that the study did not investigate whether the observed facial expressions were associated with the same subjective states. The conclusion on the universality of certain facial expression patterns, of course, finds anecdotal support (as well as its origin) in the observation reports requested by Darwin (1872/1965) from missionaries and officials in about 40 cultures throughout the world. It may be remarked in passing that a demonstration of universality of expression does not necessarily imply genetic endowment; as with the universality of certain emotional stimuli, it might be due to universality of environmental and social contingencies (Fridlund, 1991).

Differences in Facial Expression

Ekman et al. (1987) conclude from reviewing the cross-cultural research on facial expression and expression recognition that "the evidence now for universality is overwhelming, whereas that for cultural differences is sparse" (p. 717). Still, there are a few indications of cross-cultural differences, particularly in rates of recognition and in the frequencies with which emotional expressions are mentioned in self-reports.

Izard (1971) found a lower mean recognition accuracy of Caucasian faces among African and Japanese subjects than among Europeans and Americans. Subjects judged pictures by selecting one of a list of emotion words. The list consisted of the eight emotions considered basic by Tomkins (1962): interest–excitement, enjoyment–joy, surprise–startle, distress–anguish, disgust–contempt, anger–rage, shame–humiliation, fear–terror. The Japanese had lower recognition rates mainly for

disgust (56%), anger (57%), shame (41%), and fear (58%). For these emotions, the accuracy of recognition was 10–20% lower than that of American and European subjects in the same study. African subjects had overall lower recognition rates, 50% on the average, varying from 32% (distress) to 68% (joy). Ekman (1973) argues that the lower accuracy among Japanese and African subjects was due to various methodological problems. The Japanese translations of the emotion words were problematic; and the African subjects were tested in French, which was not their native language. Ekman and Friesen (described by Ekman, 1973) asked subjects from five different countries, including Japan, to judge emotional expressions of happiness, disgust, surprise, sadness, anger, and fear. Recognition rates did not differ between the Japanese and the other cultural groups. However, later studies do suggest that there are cultural differences in recognition rates. Chan (1985) replicated Izard's (1977) study of emotion recognition with Chinese subjects. Subjects were 124 college students, the large majority of whom were men ($n = 114$). The overall recognition rate equaled the one that was found among Japanese by Izard (1977). The Chinese differed from the Japanese in recognition rates for the individual emotions, however. Interest–excitement was less well recognized than in the Japanese group (36% versus 71%), whereas anger was judged much more accurately in the Chinese group (96% versus 57%). Ducci, Arcuri, Georgis, and Sineshaw (1982) observed a considerable difference in accuracy, with Caucasian faces, between two groups of Ethiopian subjects who supposedly differed in the degree of familiarity with Western culture. One group consisted of high school students from schools in an urban area, who were supposedly continually exposed to Western influences; the other group consisted of high school students from an isolated rural area. The latter group performed more poorly on the recognition task. Significant differences in recognition rate were obtained for happiness, sadness, and anger; the recognition rate for each of these emotions was about 10% higher among the Westernized Ethiopians. But even the Westernized Ethiopian subjects were considerably less accurate than the Western subjects from other studies. Happiness was recognized better than any of the other emotions (Westernized group: 92%). Anger and contempt were least recognized (Westernized group: 44% and 39%, respectively). In summary, the recognition rate of facial expression has been found to be lower among the African and Asian subjects studied; the differences appear to be larger for some facial expressions than for other (Chan, 1985; Ducci et al., 1982).

Several explanations for the findings on cross-cultural differences in expression recognition rate can be advanced. The differences may, first of all, be due to translation problems. The Japanese, Chinese, and Amharic (i.e., Ethiopian) translations of the English emotion words may very well convey somewhat different meanings; such differences exist even between words from the relatively closely related Western European languages (Van Goozen & Frijda, in press). In the studies cited, either checks on the precision of translations were absent (e.g., Chan, 1985), or the translations were shown to have been of poor quality (e.g., Ducci et al., 1982). Unspecific differences in task difficulty, through unfamiliarity with testing procedures, may also be to blame. Furthermore, one may suppose that different

rates of recognition result from the use of Caucasian faces as stimulus materials in most or all studies with non-Western samples.

There is some evidence that the lower recognition rates among Asians are not due to the culture of the stimulus face. Matsumoto and Ekman (1989) asked American and Japanese students to rate the facial expressions of Caucasian and Japanese posers on a set of pictures. The observers had to judge the intensities of each of seven emotions, similar to the ones used by Ekman et al. (1987), on a 9-point scale. American subjects were more likely than their Japanese counterparts to give the highest intensity rating to the emotion being posed; recognition accuracy differed by 15% on the average. The Japanese had a considerably lower accuracy of recognition for all emotions except happiness. Recognition rates were calculated separately for each emotion expression. Both American and Japanese subjects perceived the intended emotion in all photographs, but in those of fear, "at a degree comparable to that usually found in previous judgment studies" (Matsumoto & Ekman, 1989, p. 148). Recognition rates of the Japanese and the Caucasian faces were not reported separately, but in the absence of such information, we infer that recognition accuracy did not vary as a function of the culture of the stimulus face.

Cultural differences have also been found in the absolute intensity levels of the emotions attributed to the facial expressions (Ekman et al., 1987). Ratings of intensity of three of the emotions varied significantly across cultures; the emotions were happiness, surprise, and fear. Asian subjects gave lower intensity ratings than non-Asian subjects; differences were small (varying from 0.4 to 1 scale point on a 7-point scale), but significant.

Again, it is conceivable that the lower intensity scores of Asian subjects arise from using Caucasian faces as stimulus materials. In the study described earlier, Matsumoto and Ekman (1989) found no support for this hypothesis, however. Japanese judges did not give Japanese faces higher ratings than Caucasian faces (neither were Caucasian faces judged as more intense by the American subjects).

Matsumoto (1989) has suggested that differences in "decoding rules" might account for the differences in intensity ratings. He correlated the ratings of seven countries on cultural value dimensions, as had been measured by a questionnaire on job-related values (Hofstede, 1980), with the emotional intensity ratings of these countries, as obtained by Ekman et al. (1987). The cultural variation questionnaire measured four dimensions. Significant correlations were established between two of these dimensions, Power Distance and Individualism, and the intensity ratings of anger, fear, and sadness expressions. The Power Distance dimension reflects the way in which personal relationships form and develop when power differences are perceived. The Individualism dimension refers to the degree of group dependence and the extent to which goals are collective. Low intensity ratings were found in cultures high in power distance and low in individualism, which are cultures that supposedly stress hierarchy and group cohesion. Matsumoto suggests that negative emotions are threatening to hierarchy and group cohesion and that decoding rules would prevent people in those

cultures from producing and perceiving intense negative emotions.

The explanation of decoding rules is unsatisfactory, however, because it does not account for cultural differences in intensity ratings of positive emotions. In the study by Ekman et al. (1987), two of the three emotions that attracted different intensity ratings were positive. To address this problem, Matsumoto and Ekman (1989) have suggested that "the Japanese display and decoding rules may have to do with undue expression and perception of any emotion, not just negative emotion" (p. 155). Although this may be true, to our knowledge there is no evidence for it.

The existence of Japanese display rules for negative emotions is suggested, however. Friesen also recorded the facial expressions of Japanese and American students as they watched stress film material in the presence of someone else (reported by Ekman, 1973; see previous section). The subjects were interviewed about their feelings by a member of their own culture while they watched the movie. Facial expressions were measured with the FAST. Whereas cultural differences in facial expression did not occur when the subjects were alone (see previous section), there were large cultural differences in facial behavior during the subsequent interview. The Japanese subjects exhibited more positive expressions when they were asked how they experienced the movie, supposedly to mask the original expression; by contrast, the American subjects showed signs of negative affect.

Finally, differences across countries exist in the frequency with which facial expressions are mentioned in self-reports. The seven European countries studied by Scherer et al. (1986) differed somewhat with respect to the total number of spontaneous mentions of facial expressions. Averaged across the emotions of fear, anger, sadness, and joy, the fewest facial reactions were reported by Spanish subjects (28%) and the most by British subjects (44%). In the study by Scherer et al. (1988), Japanese, American, and European students differed in the frequency with which sad and happy facial expressions were spontaneously mentioned. Americans reported more facial expressions of sadness than European subjects, who in turn mentioned more sad expressions than did the Japanese (55%, 44%, and 35%, respectively, of the reported instances of sadness). Europeans gave fewer reports of facial expressions in joy than did both the Americans and the Japanese (48%, 62%, and 60%, respectively).

Cross-cultural difference in the frequency of reported facial expressions was also found by Wallbott and Scherer (1988). Subjects in their 27-country study were asked to fill out whether facial expressions had accompanied their emotions. Analyses of variance yielded an almost equal amount of variance that was due to country ($\eta = .17$) and to emotion ($\eta = .19$); frequencies of facial expressions, thus, differed for the various countries.

Certain differences in facial expressions have been described in observational reports or are inferred from the fictional literature. For instance, Klineberg (1940) reported eye widening as an expression of anger in the Chinese. Apart from the notion of display rules, such differences are integrated with the universality view by the distinction between true emotional expressions and *emblems* (Ekman & Friesen, 1969). Emblems are volun-

tarily produced expressive movements, shown to accentuate conversation or to intentionally communicate attitudes and feelings. The distinction is based on neurological and other evidence (Ekman, 1984; Rinn, 1984). The distinction has recently been contested, however (Fridlund, 1991). One recent study reports a facial expression in one culture, not found in other cultures, of which the status as spontaneous expression or emblem is unclear. Shweder (1991) describes an expression of surprise/embarrassment/fear in Oryia women in Bhubaneswar, India, "in which the tongue extends out and downward and is bitten between the teeth, the eyebrows rise, and the eyes widen, bulge, and cross" (Shweder, 1991, p. 246).

Similarities and Differences in Emotional Behavior: Vocal Expression

Similarity in voice intonation corresponding to major emotions is suggested by similarity in recognition rates. Differences in such rates have also been found, as well as differences in amount of self-reported vocal changes accompanying different emotions.

Similarities in Vocal Expression

A universal component in vocal expressions has been suggested on various grounds:

Vocal elements indicate such features of the relation of the speaker to his utterance as irony, direct quotation, doubt, reference to the uncanny . . . , and insincerity, as well as the more properly emotional relations—angry, anxious, seductive, depressed, enthusiastic, and so on. . . . In fact, once a Westerner has painfully learned the arbitrary coded semantics and syntax of a non-European language, he has (in my experience) little trouble to understand the relational aspects of the language. (Levy, 1984, p. 231)

Universal components of vocal expression are also suggested by systematic studies. Van Bezooijen (1984) compared the characteristics of vocal expression found in her own research in The Netherlands with those found in other studies done elsewhere. Features studied included pitch level, pitch range, loudness, and tempo. The features for the emotions included were similar in the different countries in which research had been done. As Van Bezooijen states, the exact implication of this finding is unclear, because all studies used Western European subjects and the relations between objective features of vocal expression and their subjective perception are obscure.

Cross-cultural similarity in vocal expressions has also been studied by recognition tasks resembling those used with facial expressions. Van Bezooijen, Otto, and Heenan (1983) asked Dutch subjects to pronounce the phrase "twee maanden zwanger" (Dutch for "2 months pregnant") either in a neutral way or as expressing one out of nine emotions (fear, anger, joy, sadness, disgust, surprise, interest, contempt, and shame). Japanese, Taiwanese, and another group of Dutch subjects listened to these sentences and then assigned 1 of 10 labels to each expression (*neutral* and each of the nine emotions). The subjects from all three countries recognized all but one of the expressions better than chance. There were, however, clear cultural differences in recognition accuracy.

A comparable recognition experiment was conducted earlier

by Albas, McCluskey, and Albas (1976). Caucasian and Indian Canadians listened to the vocal expressions of four emotions, as pronounced by other Canadians, both Caucasian and Indian. The Indians were speaking Cree. The expressions were content filtered. Listeners had to name each utterance by choosing one out of four emotions words. The words were *happiness*, *sadness*, *love*, and *anger* or the equivalents in Cree. Overall recognition in both groups was far above chance. Recognition rates per emotion were not provided.

In a still earlier experiment reported by Davitz (1969), recognition of vocal expression was unrelated to the match between the cultural background of speaker and listener. The subjects were all living in the United States but originated from the United States, Japan, and Israel. Japanese and Israeli subjects had been living in the United States for 6 to 8 months. Subjects from each group were asked to successively express each of six emotions while pronouncing the alphabet of their own language. Other subjects, again originating from the three countries, then listened to the utterances of speakers from each country. Subjects recognized vocal emotion expressions in their own language no better than those in the other two languages. The emotions recognized best were almost the same for the three groups involved. Japanese and American subjects recognized anger best, then sadness, pride, love, nervousness, and jealousy, in that order. The Israeli subjects deviated only by recognizing the sad tone of voice better than the angry one. The recognition rates were not given for different emotions separately.

Current research by Scherer suggests that cross-cultural agreement on the recognition of the more common emotion by voice intonation may be almost as high as that of facial expressions. Nonsense sentences composed from phonemes of several European languages were pronounced with five different emotional intentions (joy, anger, fear, sadness, surprise). Recognition scores were around 80%, except for joy, in samples in each of several Western European countries (K. R. Scherer, personal communication, 1991).

Differences in Vocal Expression

Wallbott and Scherer (1988) asked the subjects in their 27-country study whether they had noticed voice changes during the emotion instances that they had reported. Analyses of variance showed that the influence of country on reported voice changes was about as large as the influence of kind of emotion ($\eta_s = .14$ and $.17$, respectively). Other studies by Scherer give more detail on differences found. Swiss subjects most often reported vocal reactions (34%); British least often reported vocal reactions (20%; Scherer et al., 1986). Japanese subjects reported fewer voice reactions as accompanying anger and fear than did Europeans and Americans (Scherer et al., 1988).

Two out of the three recognition studies mentioned in the preceding subsection found a better identification of vocal emotional expressions in the subject's own language. In the study by Van Bezooijen et al. (1983), the Dutch subjects recognized these vocal expression more often than did the Japanese and Taiwanese. The latter groups did not differ significantly in accuracy.

In the Albas et al. (1976) study, an interaction was found

between the cultural background of the speaker and that of the listener. The Caucasian Canadians recognized utterances of Caucasian speakers better, whereas the Indian group performed better with the vocal expressions of Indian Canadians.

There are several explanations for the poorer recognition of vocal expressions from a different culture. First, emotional expression might be composed of both universal and culture-specific components (Davitz, 1964). Second, the general tone of a given language may suggest expressive content to a foreigner that overshadows the expressive content of the individual utterances. Third, the emotion words considered as equivalents in different languages again may very well differ in important respects, such as implied activation level. Activation level is shown to be one of the major aspects conveyed by voice intonations (Van Bezooijen, 1984). Harkness and Super (1985) illustrate nicely how implied activation level might influence the findings. They asked American subjects and members of the Kipsigis community which of several lines belonged to happiness. Americans chose a line with big loops; part of the Kipsigis selected a flat line. To the Kipsigis, happiness occurs "when nothing is bothering you"; their word for happiness may thus well have referred to quiet, rather than buoyant, happiness.

Another type of cultural difference appeared in the study by Van Bezooijen et al. (1983). They found that in each country, the vocal expressions of some emotions were better recognized than those of other emotions, but which emotions were recognized most accurately was different for each culture. Taiwanese subjects recognized sadness and surprise best (both 53% correct) and contempt least well (but still above chance). Japanese subjects had the best recognition of sadness (70%), and the least recognition of shame. Happiness was the expression best recognized by the Dutch subjects (76%), and the vocal expression of contempt was the least recognized (48%; chance level was 11%). The explanation is unclear; the second of the explanations of differences above may apply.

Similarities and Differences in Other Emotional Behaviors

Emotional behavior repertoires include expressive behaviors other than facial and vocal expressions and emotionally motivated instrumental behaviors. Such instrumental behaviors and other expressive behaviors have hardly been cross-culturally compared. Two studies suggest that behavior generation processes and repertoires might be similar to some extent. Cultures may also differ in the behaviors that occur with particular emotions. Such differences can be due to different behavior repertoires, to differential availability of identical items in those repertoires, to differences in the degree to which the social environment provokes or prescribes particular behaviors, and to differential regulation of available behaviors. Cultural traditions add socially acquired behaviors to the set of universal expressions; presence of models and culturally coded values or prescriptions influence availability and regulation.

Similarities in Other Emotional Behaviors

There is some evidence for cross-cultural similarities in non-verbal emotional behaviors other than vocal and facial expres-

sions. Among European and Israeli students, the nonverbal reactions described as having accompanied their experiences of fear, anger, sadness, and joy were highly similar (Scherer et al., 1986). Cross-culturally, joy was characterized by smiling, laughing, expansiveness, and approach behavior; sadness was characterized by crying and absence of expressive hand movements, which did occur in all other emotions; and anger was characterized by changed movement and changed speech quality. A similar pattern of nonverbal reactions for each emotion was found among Japanese and American students (Scherer et al., 1988). In the section on variants of action readiness, Wallbott and Scherer's (1988) 27-country study mentioned cross-cultural agreement in self-report on certain movement patterns.

Sogon and Masutani (1989) compared American and Japanese subjects' judgments of emotional cues in filmed body movements. The body movements were portrayed by two Japanese actors and two Japanese actresses, who were filmed from the rear to exclude facial information. The body movements were meant to express joy, surprise, fear, sadness, disgust, anger, and contempt and the affective-cognitive structures of affection, anticipation, and acceptance. The actors moved according to instructions about the kinds of movement required, such as "openly ignoring another person" (for contempt) or "indicating one's disbelief" (for surprise). After viewing each filmed scene, subjects had to select the emotion word that was best expressed by a given scene.

The percentages of correct identification per emotion of the two groups did not differ. Overall recognition was 52% for the American subjects and 57% for the Japanese. There were differences in the recognition rates of some movements, but other gestures were recognized equally well by both groups. Both identified active kinetic movements as belonging to fear or anger, which corresponds to the self-reports of abrupt body movements in anger and fear found by Scherer et al. (1988). Both groups considered bowing the head, slumping the shoulders, and slowly sitting down as expressive of sadness. Jumping was interpreted as a movement of surprise, and dancing movements, clapping gestures, and making V-signs were recognized as movements of joy, which corresponds to Scherer et al.'s (1988) category of expansiveness self-reports.

The latter studies again concern recognition data. Little research has been devoted to actual behavior. The few existing data provide evidence on the universality of weeping in grief. In an analysis of the Yale Human Area Files, 72 of the 73 cultural groups studied reported weeping during funeral rituals; Bali was the only exception (Rosenblatt et al., 1976).

Differences in Other Emotional Behaviors

Differences in behavior generation. There may be cultural differences in behavior generation resulting from differences in availability. Universal expressive patterns may be available to different extents, leading to cross-cultural differences in the prevalence of certain behaviors. Cultural differences in availability may underlie the differences in reported behaviors, established by Scherer, Wallbott, and Summerfield (1986) and Scherer, Wallbott, Matsumoto, and Kudoh (1988). In these studies, Japanese subjects mentioned many fewer hand and arm

gestures and whole body activities than did Europeans and Americans. The American subjects mentioned somewhat more movements of body parts (gesturing) than did the European subjects. Considerable subcultural differences also exist in these regards, as for instance (at least at the time) between ethnic minority groups in the United States (Efron, 1941/1972). In the Scherer et al. (1988) study, the cultures did not differ with respect to the reported degrees of control of fearful, happy, and sad nonverbal behaviors. And Japanese did not differ from Americans in anger control; Europeans reported less control of angry reactions than did both Americans and Japanese. The lower frequency of nonverbal behaviors among Japanese may thus be considered a result of different behavior generation, as may the higher expression of Americans.

Cultural differences in behavior generation may also result from culture-specific *behavior repertoires*; there may be culture-specific behavior modes. These modes may be derived from culture-specific models and from culturally based expectations regarding behavior that is appropriate under particular circumstances.

The culture-specific modes include extensions of universal expressive patterns, such as weeping for prescribed durations under prescribed conditions (see Granet's, 1922, description of the codified weeping at funerals in traditional China). Universal expressions or action tendencies may be modeled in culture-specific ways; the conditions under which they occur may thus vary across cultures, as well as their actual form.

The Balinese reaction to frightening events can be understood as a culture-specific extension of a universal action tendency. According to Bateson and Mead (1942), the Balinese often react to unfamiliar or frightening events by falling asleep. Falling asleep fits the action tendency of avoidance, which has been posited as a universal characteristic of fear. At the same time, sleeping under stressful conditions appears to be socially approved:

The child who is frightened by the tantrum of his child nurse falls asleep as she shrieks out her unrestrained rage right beside his closed ear. The older child who has lost or broken some valuable thing will be found when his parents return, not run away, not waiting to confess, but in a deep sleep. Scenes of birth are fearful occasions because newborn babies attract witches. Children learn to be afraid of birth, and if they find themselves in the house . . . with a birth, they fall into a deep sleep. . . . The thief whose case is being tried falls asleep. The sleep is a perfectly natural one; it is possible to arouse people from it as easily as from any deep sleep and they show no special symptoms of catalepsy or rigidity. (Bateson & Mead, 1942, p. 39)

Bateson and Mead reported the Balinese to be overly concerned with the avoidance of emotional eruptions. Active display of fear seems to be prevented by falling asleep. Yet, the goal pursued by avoidance, one's own inaccessibility (Frijda, 1986), is subjectively attained by sleep. Sleeping might be understood as a culturally provided way to simultaneously express and conceal fear.

Abu-Lughod's (1986) description of jealousy expression in Awiad 'Ali Bedouin women forms another instance of a culture-specific variation on a universal theme. For several reasons not discussed here, the honor of these Bedouin women is linked to their denial of sexual interests. Jealous behavior is affected by

this ideology. The Bedouins consider a woman's resentment of a co-wife with whom the husband spends more time "an indication of excessive desire or interest in the husband. . . . To maintain reputation, most women couch objections to co-wives or dissatisfaction with polygynous husbands in material terms, complaining about inequalities in the distribution of material rather than emotional favors" (Abu-Lughod, 1986, p. 155). By this behavior, then, jealousy appears to be expressed and cloaked at the same time.

Universal expressive behaviors may also underly the culture-specific patterns of aggressive behaviors. Absence of violence appears to characterize the everyday life of the Utku Eskimos (Briggs, 1970) and the Tahitians (Levy, 1973). Although nearly absent and strongly disapproved of, acts of hostility do occur among the Utku as well as among the Tahitians. In both cultures this hostility is couched in small acts, such as gossip, teasing, or coolness (Levy, 1973) or sulking, being silent, and withdrawal (Briggs, 1970). Real aggression is restricted to rare circumstances. The presence of an audience that might intervene is required among the Tahitians (Levy, 1973). In the Utku, anger expression is limited to aggression toward their dogs only (Briggs, 1970). Modes of strong anger display are current, and evidently normal, among the Kaluli. "When a man has suffered wrong or loss . . . , he may stamp furiously up and down the outside yard or inside hall of the longhouse yelling the particulars of his injury for everyone to hear" (Schieffelin, 1983, p. 186). These behaviors appear to be not only usual but also rewarding. Among the Kaluli, as Schieffelin writes, an angry person is always considered to have suffered a loss of some kind, and he is entitled to compensation. Stamping and yelling is expected "to arouse [everyone's] sympathetic attention and inspire their backing for redress" (ibid., 186). Therefore, aggressive behaviors appear to be modeled in culturally different ways.

Culture-specific behavior modes also include more complex and instrumental patterns, which may be referred to as *rituals* or *ritual acts*. Tearing one's clothes and heaping ashes on one's head are examples. Rituals consist of prescribed behavior modes that remove the need to expose one's individual feelings. Yet, at the same time, they form opportunities to vent one's emotions in a socially acceptable manner. By supplying the person with models of behavior, rituals facilitate the expression, or even experience, of the emotion (e.g., Mauss, 1921; Rosaldo, 1980). "On the whole the feeling is not excluded, but entailed by the descriptions of facts and juridical ritual themes" (Mauss, 1921, p. 433).⁸ Granet (1922), Mauss (1921), White (1990), and Abu-Lughod (1986) present examples of rituals in which emotions are embedded and by which they are directed and mastered. Thus, the formal appearance of behavior does not necessarily indicate suppression of the emotion (see White, 1990, for another example of the ritualization of emotional behavior).

The Philippine Ilongots used to realize their *liget* in the ritual of head-hunting; the concept of *liget* stands for our notions of passion, energy, and anger simultaneously (Rosaldo, 1980). When one or more Ilongot men had heavy feelings of *liget*, they went out with a group of others to kill. The preparations for the killing lead one's *liget* to a climax and to focus it on some specific goal. After the beheading, the Ilongot men returned

home, purged of violence. Men and women celebrated the overcoming of *liget* by singing. Ilongot head-hunting may be seen as a socially provided and effective way of anger, or *liget*, expression. The Ilongot believe that *liget*, focused in this manner, is productive, whereas unfocused *liget* causes chaos and disturbs social life. The Ilongot are probably right about the usefulness of head-hunting. By carefully shifting the direction of aggression to far outside the group and creating a community spirit, the ritual manages to master and take advantage of the individual's *liget*.

Among the Awlad 'Ali, the expression of "weak" emotions, such as love, sadness, and despair, is restricted to occasions in which one is in the company of intimates who are one's equals (Abu-Lughod, 1986). But even then, the mode of expression is a formalized one. Weak emotions are shown by means of *ghinnawas*, little poems of which the themes, metaphors, and format are more or less fixed. The *ghinnawa*, like other poetry, is valued; this makes it a suitable means to convey weak emotions.

Much like the Bedouin *ghinnawa*, the Surinamese *odo* is a brief, formalized expression (Agerkop, 1986). The *odo* was developed at a time when the Black population in Surinam could not freely express their opinions and needed an indirect way of communication. But the *odo* still is used, particularly in emotional situations. The *odo* has been reported to treat conflicts, to challenge and tease competing co-wives, and to express frustrations: "The art to point out a mood or a situation by using an *odo* is highly valued in the creole society" (Agerkop, 1986, p. 9).

Certain culture-specific behavior modes appear to result from the presence of models for, or tolerance for, behaviors that may occur more generally under pathological circumstances. Cultural models of these pathological behaviors may lead to better recognition and a higher rate of occurrence. Similar symptoms may be encountered in cultures lacking such models, but then they appear more rarely.

Amok and the *wild-pig syndrome* (Averill, 1982) would appear to belong to this group of pathological behaviors. These aggressive syndromes have been assumed to offer an emotional outlet to individuals in otherwise repressive cultures. Wild-pig behavior is observed among the New Guinea highlanders. It involves a variety of aggressive acts, but usually the wild pig (or wild man) does not seriously injure other people. The New Guineans themselves believe that being a wild pig is caused by the bite of a ghost of a recently deceased person. This bite would set more primitive impulses free. After a few days of wild-pig behavior, the person disappears in the forest. He usually returns in a normal condition, neither remembering anything of his previous condition nor being reminded by his villagers. Averill assumes that being a wild pig is a culturally provided way to give expression to the difficulties experienced in meeting one's social obligations. By wild-pig behavior, one calls attention to these difficulties and to some degree effectively escapes from them.

Amok is another such aggressive syndrome, occurring in South East Asia and Indonesia, characterized by an unsatisfiable urge to kill (Averill, 1982). *Amok* appears to follow occur-

⁸ "En somme le sentiment n'est pas exclu, mais la description des faits et des thèmes rituels juridiques l'emportent."

rence of particularly shameful events. *Amok* is most often fatal because the subject's aggression either turns into self-destructiveness or is answered by the community. Averill conceives of *amok* as a release process patterned on a behavior model made available by the culture, even though it seems not very helpful.

Differences in behavior regulation. Cross-cultural differences in emotional behavior may be due not to differential cultural learning of those behaviors, but to differential inhibitory regulation of universal repertoires.

Inhibitory control of behavior is, in general, suggested by discrepancies between normal behavior and behavior under disinhibiting conditions such as alcohol and strong excitement. In certain cultures, low-frequency behaviors are shown more frequently under such circumstances. Levy (1973), for instance, reports that Tahitians do not fight unless they are drunk. Rosaldo (1984) gives a similar account of fighting among the Ilongots. In-group fighting, writes Rosaldo, hardly occurs. Yet, it was reported that a drunk man, frustrated by his brother, fought with him. Sober again, he showed regret. Briggs (1970), as mentioned, reports that the Utku, who are *Never in Anger*, may act aggressively toward their dogs. The absence of aggressive behavior in other contexts may be explained as resulting from inhibition, but alternative explanations have been discussed earlier (see appraisal section).

The Hare Indians from Colville Lake hardly display emotions like jealousy, happiness, and anger, except in drunkenness. Unlike what happens in the cultures just described, emotional display during drunkenness is not disapproved of by the Hare. Drunken people are expected to display their emotions and are allowed to do so. Others are even said to be eager to observe these vicarious emotions (Savishinsky, 1982).

Culture-specific inhibitory regulation is also suggested when a community disapproves of behaviors that are common in most other cultures. Abu-Lughod (1986) reports the story of a Bedouin who showed his dependence on the woman with whom he was in love, despite the strong disapproval of his social environment. On two occasions, the expression of in-group anger has been observed by Briggs (1970). Relatives appeared to feel extremely uncomfortable about this behavior, because they did not want to talk about it afterwards.

Inhibition can be sometimes inferred from explicit *display rules* (Ekman et al., 1982), or suppression rules. As mentioned before, Lutz (1987) reports that she was informed about the Ifaluk display rule restricting expressions of happiness when she was reprimanded for smiling at an Ifaluk girl who did display her happiness. The Ifaluk condemn the expression of happiness because it is thought that this emotion may lead to neglect of duties. Briggs learned of the display rule for crying when she observed Utku Eskimos teaching their children not to cry. One Utku parent, for example, warned a child: "Your pants are all wet with tears. You mustn't cry, you'll make your pants wet and then you'll freeze" (Briggs, 1970, p. 172).

Inhibition rules rather distinctly appear to play a significant and general role in the life and culture of the Chewong (Heelas, 1984). Each Chewong rule is shaped as a link between some kind of antisocial behavior and a punishment that necessarily follows. There is, for example, a rule that someone who behaves in a stingy manner will suffer dizziness. Chewong life is reported to be characterized by a lack of emotional display

among adults. Heelas (1984) explains the lack of emotional display among the Chewong in two ways. On the one hand, he assumes that natural emotion tendencies are suppressed because the rules focus attention away from these inner perturbations and direct it to avoidance of the punishment when one would obey one's behavior tendencies. In addition, he argues that Chewong emotional display may be rare because of a lack of cultural emotion representations and words. This lack prevents them from acknowledging their emotions and consequently from elaborating them into emotional behavior (Heelas 1984). In terms of our emotion model, this latter explanation may be understood either as an absence of event-coding schemas and appraisal categories or as a lack of behavior models that might influence the selection of emotional behavior. A lack of emotional display, therefore, is not necessarily due to inhibition of responses.

Discussion and Conclusions

Differences and Similarities

Cross-cultural similarities as well as differences have been identified in each phase of the emotion process. The analysis shows that differences in one phase do not necessarily imply differences in other phases and that differences in some aspect of a given phase do not necessarily imply differences in other aspects. Conversely, cross-cultural similarity in one respect does not guarantee similarity in other respects.

The major conclusion of our review is that global statements about cross-cultural universality of emotion, or about their cultural determination, are inappropriate. Rather, any evaluation of biological or cultural determinants should start from an analytical approach of the emotion process, distinguishing the determinants for different components. Within each component, moreover, differences in level of analysis of the phenomena also appear to be decisive for the kind of conclusions drawn.

Generalizing from the data reviewed, we may conclude that suggestions exist for universality of several aspects of emotions. First, there appears to exist a universally human set of emotional reaction modes, both at the central level (modes of action readiness) and at that of specific responses (facial expressions, voice intonations, more encompassing behavior modes such as attack and flight, activation patterns, and physiological response modes). Included in the universal response modes is that of response inhibition, or the existence of some measure of emotion and expression control. Second, there appear to be universal issues of emotional concern. Third, there may well exist event types, linked to such issues of concern, that universally arouse emotions. Loss of a person with whom affective bonds exist, rejection from the social group, and rivalry threats are among the candidates. Fourth, there is some evidence for similarity in appraisal dimensions. Across cultures, the same appraisal dimensions appear to distinguish the different types of emotions.

As regards cultural differences, a first major source, it appears, consists of regulation processes—both restrictive and prescriptive ones. Regulation processes probably are the most widely recognized source of historical as well as cultural variation in emotional phenomena (e.g., Briggs, 1970; Elias, 1969;

Gordon, 1981; Hochschild, 1983; C. Z. Stearns & Stearns, 1986; P. N. Stearns & Stearns, 1985). Cultures differ in display rules and feeling rules, and these rules may apply to emotional spontaneity and expressive display in general, as well as to the feeling and displaying of emotions in particular situations or with respect to particular types of emotion. Thus, cultural differences appear in seeking or avoiding particular kinds of events that could arouse emotions, because of the values attached to these events and to their focality in the culture. Also, particular appraisals may be suppressed because they are depreciated by the culture and may be replaced by more acceptable ones. What is considered socially desirable and undesirable behavior may differ, as do the anticipated consequences of one's behavior and expression, with concomitant consequences for impulse and expression control.

Cultural differences in event types form a second major source of cross-cultural emotion differences, independently of, and in addition to, the differences that are due to variations in regulation. Differences in recognized event types lead to differences in event coding and, by consequence, in the appraisal of given events. Furthermore, considerable differences appear to exist in the focality of particular event types and, thus, in the prominence of the emotions aroused by events categorized into such types; there are also differences in emotional behaviors such as inhibition and avoidance, because of the differential avoidance of events of given types. Differences in event types may lead to differences in emotional behavior. If, for example, a serious illness is understood as possession by an evil spirit, expulsion of this spirit is required, and if a malediction is understood as a god's curse, withdrawal from the group and abstinence from food may be the only available response (Cannon, 1942).

Third, cultural differences exist in appraisal propensities such as the tendency to perceive events in terms of blame-worthy agency by others or in terms of moral value. The differences appear to derive from the availability of such modes of appraisal, due to their frequency of occurrence in the social environment, or their embeddedness in, or conflict with, prevailing ideology.

Fourth, and finally, cultural differences exist in behavior generation. Cultural differences in the prevalence of certain behaviors may be attributed to differential availability of universal behavior modes. Although there are universal patterns of expressive behavior, there also are culture-specific behavior modes, deriving from culture-specific models and from culturally based expectations regarding behavior that is appropriate under particular circumstances. The culture-specific modes include extensions of universal expressive patterns as well as more complex and instrumental patterns of behavior. Some culture-specific behavior modes may best be conceived of as pathological symptoms. Cultural models for certain pathological behaviors may lead to a higher rate of occurrence of those behaviors than would otherwise be the case.

Levels of Description

Emotional phenomena can be described at different levels. Which level of description is chosen has important implications for the question of cross-cultural differences and similari-

ties. Differences found at one level may disappear when viewed at a higher one. The problem recurs in various forms.

The same emotional phenomena can be described in objective terms or in terms of their meanings. Whereas the specific, objective phenomena may be different, the underlying meanings may not be. More generally, phenomena described at a detailed level may turn out to be similar at a higher level of abstraction:

1. The actual antecedents of particular emotions may differ between cultures, whereas in terms of appraisals these antecedents are the same. For instance, the appraisal of self-blame can be said to constitute the general antecedent of guilt emotions. The actual antecedents leading to self-blame may, however, be highly specific. One's husband's infidelity is a reason for self-blame among Japanese women and not, or less so, elsewhere. Or, in another example, the antecedents of the Balinese emotion *lek* and the Javanese emotion *isin* are described as situations in which the person worries that he or she is not able to maintain status (Keeler, 1983). They may also be described as situations of risk of failing in one's achievements. Risks of failing in one's achievements, however, appear to be among the generally occurring elicitors of fear (Scherer, Wallbott, Matsumoto, & Kudoh, 1988; Scherer, Wallbott, & Summerfield, 1986).

2. The antecedents of emotions as coded may be cross-culturally similar, whereas the actual events are not. As we saw, perceived threats to one's exclusive relationship are antecedents of jealousy in various cultures; the actual events coded as threats, however, tend to differ.

3. Action tendencies may cross-culturally tend to emerge under similar appraisal conditions, whereas the actual behaviors that these tendencies generate differ. Withdrawal tendency may be posited as a universal component of fear, but a Balinese way to attain withdrawal—to fall asleep—appears to be culture specific.

It is a complex issue to decide which level of description is interesting and in what respect. When emotion antecedents are reduced to general categories such as threats to achievement, much of the precise meaning of particular antecedents slips out; cultural-specific coloring and implications get lost. Describing emotion antecedents at a concrete and detailed level, however, entails the risk of claiming differences in emotion antecedents that are, in fact, irrelevant to the emergence of the emotions concerned or to the understanding of the nature of the emotions generally. Utku amusement and happiness are in essential ways just like amusement and happiness elsewhere, in being elicited by entertainment, even if the Utku find things entertaining that others do not or do not have available. Boucher and Brandt (Boucher & Brandt, 1981; Brandt & Boucher, 1985; see section on similarities in antecedent events) have approached the problem of representation in a promising way. They borrowed antecedent descriptions from their subjects; these descriptions may be considered to represent the basic, or prototypical (Rosch, 1975), level of categorization. This basic level of categorization is informative with respect to emotions, because other subjects were to a reasonable degree able to recognize the emotions from the antecedent descriptions. It could be an effective strategy to pay more attention to

natural descriptions of emotion antecedents for the selection of an appropriate level of description.

Of course, cultural differences that are not so relevant from the point of view of the analysis of emotions may be highly relevant from other points of view. That the Utku's enjoy stinging ptarmigans, the Spanish enjoy bullfights, and the Balinese enjoy cockfights, whereas many other peoples do not like such things, may reveal something about the various cultural value systems. They are not very informative with respect to the nature of joy.

Absence of Standards of Comparison

Problems of translation equivalence. The validity of conclusions on the cross-cultural variation of emotions may very often be challenged because the field suffers from a lack of standards of comparison. One of the major deficits concerns the absence of criteria to judge the equivalence of the emotion words that serve precisely as the basis for comparing equivalence or non-equivalence in the emotional phenomena themselves.

Many cultural differences and similarities in emotions are assessed by comparing descriptions associated to presumably equivalent emotion words from different languages. Such words in different languages are seldom truly equivalent, however. Words that are equivalent in one way are often nonequivalent in other ways (e.g., Agnoli, Kirson, Wu, & Shaver, 1989; Mesquita & Fischer, 1989). For instance, emotion words that are close in semantic meaning have often been found to differ with respect to their modal intensity, range of meaning, or frequency of usage (e.g., Mesquita & Fischer, 1989; Rosaldo, 1980; Van Goozen & Frijda, in press).

In many cases, it is far from clear which emotion words should be meaningfully compared. To illustrate the issue, we cite the discussion of possible differences in the experience of physiological changes during emotions. In the Japanese, the emotions reported to the translation of *joy* were accompanied by fewer physiological symptoms than *joy* in the European and American subjects (Scherer et al., 1988). The only symptom mentioned by the Japanese as well as the Europeans and Americans was that of feeling warm. The Japanese did not check the categories of pleasant rest, pleasant arousal, stomach troubles, increased blood pressure, and muscle symptoms, which were frequently checked by the European and American subjects. One might conclude that there are cultural differences in the occurrence of these joy symptoms or that the Japanese pay less attention to their bodily emotion symptoms. One may also suppose, however, that an inequivalent Japanese word had been selected. The Japanese word that is equivalent in frequency of usage differs in modal intensity or reference to bodily activation. There might exist some other Japanese joy word than the word used that is more similar to the English *joy*, with respect to the bodily symptoms, but that is less commonly used in joy situations. If that were the case, one would not be justified in assuming that the Japanese experience of joy differs from that of the English, and one might have to maintain that vivacious joy, with its concomitant physiological responses, is a universal emotional response pattern. That latter pattern might or might not occur less frequently in the Japanese than it does in Western

people; frequencies of word use are not compelling evidence in that matter because common contexts might modify these kinds of connotations. Another example concerns the conclusion by Scherer et al. (1988) that personal loss is the major antecedent of sadness in all countries included in their study, except Japan. However, the word that the Japanese would use in case of such loss, *kanashii*, is not the most common translation of *sad*, and, in addition, changes meaning when used as a noun (M. Toda, personal communication, 1992).

Standards of comparison are conspicuously lacking in the anthropological accounts on, for instance, *isin*, *lek*, and *hasham* (see the section on differences in event coding). No analysis is presented that allows us to assess to what degree the appraisals, subjective feelings, behaviors (expressions included), and physiological symptoms of *isin*, *lek*, and *hasham* resemble those of emotions labeled, in English, as *shame*, *embarrassment*, *shyness*, *social anxiety*, *achievement anxiety*, or *self-awareness*. The antecedents of *isin*, *lek*, and *hasham* overlap with those of all these English emotion categories. Which cultural differences in antecedents are established depends on the English, or Western, emotion category that is taken as the point of comparison.

It might even be that *isin*, *lek*, and *hasham* each have a broader range than any of the English emotion words mentioned and cover several of them. Comparing each with several English words simultaneously might be more appropriate than comparing them with only one. Taking several words together as the point of comparison might affect conclusions on the presumed prevalence of *isin*, *lek*, and *hasham*, when compared with *shame* in Western society. Compared with the combined occurrence of the several English emotions, that prevalence might no longer appear exceptional.

Which standards of comparison are used (if any) is seldom specified in the literature. In our review, we had to rely on translations provided by the various authors. Differences or inconsistencies in the standards of comparison chosen may therefore have affected the cultural differences observed. As a matter of fact, evidence of cultural similarity is generally more convincing than that of differences, because it showed up despite the problems of translation and comparison.

The evaluation and integration of results from different studies would be greatly facilitated if standards of comparison or translation would be made explicit. This could be done if the implications of the emotion words used were more fully spelled out or if the words were rated with respect to intensity, appraisal patterns, and action readiness modes, as is done in studies within a given culture by Smith and Ellsworth (1985) and Frijda et al. (1989). If it then turns out, for instance, that emotions denoted by words from different languages or cultures that had close translations on the basis of the implied appraisals differed in action readiness or physiological response pattern, that would be truly illuminating.

Other absent standards of comparison. Cross-cultural research is, of course, beset by more problems of comparison. Samples of subjects and situations are rarely equivalent. In many studies, use is made of university students, but obviously the social position and provenance of students may be quite different in different cultures. In fact, subcultural differences within a given culture may be as large as between subcultures from different cultures. All this is not specific to emotions re-

search, but here, as elsewhere, these issues need to be spelled out more explicitly than is done in many of the research reports.

Emotion Taxonomies

The present article does not review the work on cultural differences in emotion taxonomies (e.g., Gerber, 1985; Lutz, 1982, 1986; for a review, see Russell, 1992) because of the unclear and multiple relationships between taxonomies and emotional phenomena. We assume that emotion words refer to structures of attributes corresponding to the components mentioned in this article (and which attributes are organized probabilistically in relation to the words, as happens generally with categories; Rosch, 1978; Russell, 1991). If this is so, emotion taxonomies may be expected to differ for several reasons. One is that different languages happen to cut up these attribute structures in somewhat different ways. English, for instance, has a word for pleasant emotional states generally (*happiness*) and for emotions of suffering generally (*distress*) that many other European languages have to translate with their various terms that specify aspects of appraisal or action readiness. Another reason might be that given languages tend to categorize over different components than others. Some languages may tend to categorize by event types (e.g., *nguch*, in Ifaluk, appears to signify the response to any unpleasant situation of moderate seriousness; Lutz, 1982, 1988b), whereas others may tend to categorize by forms of appraisal (*hope*) or action readiness (our Western so-called *basic emotions*), with words referring to event types (*jealousy*) in only a secondary place. Again, particular components may be subdivided differently in different cultures or emphasizing a particular subtype, such as a given event type. A third reason for differences in emotion taxonomies is that the notion of emotion itself may have different connotations. Cultural models affect the way emotions are defined (Heelas, 1986; Lutz, 1988a):

To translate and understand the meaning of emotion terms in another language first requires an understanding of the more general models of the person which defines emotion in a particular way as, for example a polluting private event, or a biological imperative, or an aspect of social relations, or spirit inflicted suffering for violation of taboos, or a marker of disruptions in the social fabric. (Lutz, 1988a, p. 403)

Emotion taxonomies may thus be represented as primarily physical, biological, moral, psychosocial, spiritual, or relational. Models of emotions are likely to determine the evaluation of emotions in general and of certain emotions in particular (see, e.g., Fischer, 1991).

There are several points to these remarks. First, differences in taxonomies may (and also may not) reflect differences in focal event types, appraisal propensities, scripts for behavior patterns, and the like. Second, taxonomic differences do not necessarily imply differences in the underlying repertoire of appraisal dimensions, action readiness modes, and behavior patterns from which the various emotion concepts are constructed. Differences in structures of particular emotions and similarities in the elements that compose their structure go hand in hand. The fact that the meanings of emotion words in foreign languages can be explained, even when the words have no equivalents in some other language, attests to the correspon-

dence of structural elements (Oatley, 1991; Wierzbicka, 1986). Third, emotion taxonomies may affect the interpretation of experiences. Emotion concepts refer to cultural representations of the emotional event, of experience, and of the expected emotional behaviors; furthermore, they generally involve cultural evaluations. Labeling emotions would imply relating them to culturally shared concepts or meanings; the process is assumed to be similar to that of event coding. Recognizing an experience as an instance of some emotion concept may determine the degree to which the experience is viewed as manageable, and it may prescribe particular behaviors or elicit expectations about forthcoming behavior. Attribution of some emotion concept may also lead to regulation if, for instance, the emotion recognized is not favorable or socially desirable.

Future Focuses

Several other relevant issues were not touched on in the foregoing discussion. First, little attention was devoted to the role of the actual social environment on the course of an individual's emotions. That role probably is considerable and an important source of cultural differences in emotional phenomena. This subject deserves more attention in the future.

A second omission regards the issue of the range or generality of actually occurring cross-cultural emotion variations. Hardly any information has been provided on the frequency or prominence of the culture-specific phenomena discussed. The reason for this omission is that most researchers do not focus on the generality of their findings. Frequencies and prominence are seldom reported (a similar point has been made by Thoits, 1989). There are some exceptions. In self-report studies, frequencies of emotion antecedents and emotional reactions in different cultures are usually mentioned (e.g., Scherer, Wallbott, Matsumoto, & Kudoh, 1988; Scherer, Wallbott, & Summerfield, 1986; Wallbott & Scherer, 1988). The prominence of certain emotions, situations, and behaviors is often suggested in anthropological studies like those mentioned in the sections on event coding and behavior generation. Which facial expressions were occurring under certain natural conditions was reported by Ekman and Friesen (in Ekman et al., 1982). However, although informative, these studies are not conclusive on the scope of the described phenomena. In the self-report studies, the emotions were selected in advance; the relative significance of these emotions in daily life was not assessed. The anthropological studies focused on prominent culture-specific emotions and failed to report the proportion of pancultural emotions occurring under normal circumstances. The facial expressions, in Ekman and Friesen's study, were recorded during a movie, which represents only a small fraction of emotion-eliciting conditions.

The scope of cross-cultural emotion variations and the relation between cultural variation and cultural consistency in emotions thus are as yet almost unexplored topics for research.

References

- Abu-Lughod, L. (1986). *Veiled sentiments*. Berkeley: University of California Press.
- Agerkop, T. (1986, January). *Odo: The art of indirect reference in Surina-*

- mese creole song*. Paper presented at the seminar at the Calypso University of the West Indies.
- Agnoli, A., Kirson, D., Wu, S., & Shaver, P. R. (1989, April). *Hierarchical analysis of the emotion lexicon in English, Italian, and Chinese*. Paper presented at the 1989 meeting of the International Society for Research of Emotion, Paris.
- Albas, D., McCluskey, K. W., & Albas, C. A. (1976). Perception of the emotional content of speech: A comparison of two Canadian groups. *Journal of Cross-Cultural Psychology*, 7, 481-489.
- Arnold, M. B. (1960). *Emotion and personality* (Vols. 1 & 2). New York: Columbia University Press.
- Averill, J. R. (1982). *Anger and aggression: An essay on emotion*. New York: Springer-Verlag.
- Bateson, G., & Mead, M. (1942). *Balinese character*. New York: Academy of Sciences.
- Borg, I., Staufenbiel, T., & Scherer, K. R. (1988). On the symbolic basis of shame. In K. R. Scherer (Ed.), *Facets of emotions* (pp. 79-98). Hillsdale, NJ: Erlbaum.
- Borke, H., & Su, S. (1972). Perception of emotional responses to social interactions by Chinese and American children. *Journal of Cross-Cultural Psychology*, 3, 309-314.
- Boucher, J. D., & Brandt, M. E. (1981). Judgement of emotion: American and Malay antecedents. *Journal of Cross-Cultural Psychology*, 12, 272-283.
- Brandt, M. E., & Boucher, J. D. (1985). Judgments of emotions from the antecedent situations in three cultures. In I. R. Lagunes & Y. H. Poortinga (Eds.), *From a different perspective: Studies of behavior across cultures* (pp. 348-362). Lisse, The Netherlands: Swets & Zeitlinger.
- Briggs, J. L. (1970). *Never in anger: Portrait of an Eskimo family*. Cambridge, MA: Harvard University Press.
- Buunk, B., & Hupka, R. B. (1987). Cross-cultural differences in the elicitation of sexual jealousy. *Journal of Sex Research*, 23, 12-22.
- Cannon, W. B. (1942). "Voodoo" death. *American Anthropologist*, 44, 169-181.
- Chagnon, N. (1968). *Yanomano: The fierce people*. New York: Holt, Rinehart & Winston.
- Chan, D. W. (1985). Perception and judgement of facial expressions among the Chinese. *International Journal of Psychology*, 20, 681-692.
- D'Andrade, R. (1987). A folk model of the mind. In D. Holland & N. Quinn (Eds.), *Cultural models in language and thought* (pp. 112-149). Cambridge, England: Cambridge University Press.
- Darwin, C. (1965). *The expression of emotions in man and animals*. Chicago: University of Chicago Press. (Original work published 1872)
- Davitz, J. R. (1964). Minor studies and some hypotheses. In J. R. Davitz (Ed.), *The communication of emotional meaning* (pp. 143-156). New York: McGraw-Hill.
- Davitz, J. R. (1969). *The language of emotion*. San Diego, CA: Academic Press.
- DeVos, G. (1960). The relation of guilt toward parents to achievement and arranged marriage among the Japanese. *Psychiatry*, 23, 287-301.
- Ducci, L., Arcuri, L., Georgis, T. W., & Sineshaw, T. (1982). Emotion recognition in Ethiopia: The effect of familiarity with Western culture on accuracy of recognition. *Journal of Cross-Cultural Psychology*, 13, 340-351.
- Efron, D. (1972). *Gesture, race and culture*. The Hague, The Netherlands: Mouton. (Original work published 1941)
- Ekman, P. (1973). Cross-cultural studies of facial expression. In P. Ekman (Ed.), *Darwin and facial expression* (pp. 169-222). San Diego, CA: Academic Press.
- Ekman, P. (Ed.). (1982). *Emotion in the human face*. Cambridge, England: Cambridge University Press.
- Ekman, P. (1984). Expression and the nature of emotion. In K. Scherer & P. Ekman (Eds.), *Approaches to emotion* (pp. 319-344). Hillsdale, NJ: Erlbaum.
- Ekman, P., & Friesen, W. V. (1969). The repertoire of nonverbal behavior: Categories, origins, usage and coding. *Semiotica*, 1, 49-98.
- 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. (1978). *The facial action coding system*. Palo Alto, CA: Consulting Psychologists Press.
- Ekman, P., & Friesen, W. V. (1986). A new pan-cultural facial expression of emotion. *Motivation and Emotion*, 10, 159-168.
- Ekman, P., Friesen, W. V., & Ellsworth, P. (1982). What are the similarities and differences in facial behavior across cultures? In P. Ekman (Ed.), *Emotion in the human face* (pp. 128-146). Cambridge, England: Cambridge University Press.
- Ekman, P., Friesen, W. V., O'Sullivan, M., Diacoayanni-Tarlatzis, I., Krause, R., Pitcairn, T., Scherer, K., Chan, A., Heider, K., Ayan LeCompte, W., Ricci-Bitti, P. E., & Tomita, M. (1987). Universals and cultural differences in the judgements of facial expressions of emotion. *Journal of Personality and Social Psychology*, 53, 712-717.
- Elias, N. (1969). *The civilizing process*. New York: Urizen Books.
- Endler, N. S., Hunt, J. McV., & Rosenstein, A. J. (1962). An S-R inventory of anxiousness. *Psychological Monographs*, 76(17, Serial No. 536).
- Essed, P. (1984). *Alledaags racismisme* [Everyday racism]. Amsterdam: Feministische Uitgeverij Sara.
- Fischer, A. H. (1991). *Emotion scripts. A study of the social and cognitive facets of emotions*. Leiden, The Netherlands: DSWO-Press.
- Folkman, S., & Lazarus, R. S. (1988). Coping as a mediator of emotion. *Journal of Personality and Social Psychology*, 54, 466-475.
- Fridlund, A. J. (1991). Evolution and facial action in reflex, social motive, and paralanguage. *Biological Psychology*, 32, 3-100.
- Frijda, N. H. (1986). *The emotions*. Cambridge, England: Cambridge University Press.
- Frijda, N. H., Kuipers, P., & Terschure, E. (1989). Relations between emotion, appraisal, and emotional action readiness. *Journal of Personality and Social Psychology*, 57, 212-228.
- Geertz, C. (1973). Person, time and conduct in Bali. In C. Geertz (Ed.), *The interpretation of cultures* (pp. 360-411). New York: Basic Books.
- Geertz, H. (1959). The vocabulary of emotion: A study of Javanese socialization process. *Psychiatry*, 22, 225-237.
- Gerber, E. R. (1985). Rage and obligation: Samoan emotion in conflict. In G. M. White & J. Kirkpatrick (Eds.), *Person, self and experience: Exploring Pacific ethnopsychologies* (pp. 121-167). Berkeley: University of California Press.
- Goffman, E. (1974). *Frame analysis*. New York: Harper.
- Gordon, S. L. (1981). The sociology of sentiments and emotions. In M. Rosenberg & R. H. Turner (Eds.), *Social psychology: Sociological perspectives* (pp. 261-278). New York: Basic Books.
- Granet, M. (1922). Le langage de la douleur en Chine [The language of mourning in China]. *Journal de Psychologie*, 19, 97-118.
- Harburg, E., Erfurt, J. C., Hauenstein, L. S., Chape, C., Schull, W. J., & Schork, M. A. (1973). Socio-ecological stress, suppressed hostility, skin-color and Black-White male blood pressure: Detroit. *Psychosomatic Medicine*, 35, 276-296.
- Harkness, S., & Super, C. M. (1985). Child-environment interactions in the socialization of affect. In M. Lewis & C. Saarni (Eds.), *The socialization of emotions* (pp. 21-53). New York: Plenum Press.
- Harré, R. M. (Ed.). (1986). *The social construction of emotions*. Oxford, England: Basil Blackwell.

- Heelas, P. (1984). Emotions across cultures: Objectivity and cultural divergence. In S. Brown (Ed.), *Objectivity and cultural divergence* (pp. 21–42). Cambridge, England: Cambridge University Press.
- Heelas, P. (1986). Emotion talk across cultures. In R. M. Harré (Ed.), *The social construction of emotions* (pp. 234–266). Oxford, England: Basil Blackwell.
- Hochschild, A. R. (1983). *The managed heart*. Berkeley: University of California Press.
- Hofstede, G. (1980). *Cultural consequences*. Beverly Hills, CA: Sage.
- Hupka, R. B., Buunk, B., Falus, G., Fulgosi, A., Ortega, E., Swain, R., & Tarabrina, N. V. (1985). Romantic jealousy and romantic envy: A seven-nation study. *Journal of Cross-Cultural Psychology*, 16, 423–446.
- Izard, C. E. (1971). *The face of emotion*. New York: Appleton-Century-Crofts.
- Izard, C. E. (1977). *Human emotions*. New York: Plenum Press.
- Keeler, W. (1983). Shame and stage fright in Java. *Ethos*, 11, 152–165.
- Klineberg, O. (1940). *Social psychology*. New York: Holt, Rinehart & Winston.
- Lazarus, R. S. (1966). *Psychological stress and the coping process*. New York: McGraw-Hill.
- Lebra, T. S. (1983). Shame and guilt: A psychocultural view of the Japanese self. *Ethos*, 11, 192–209.
- Levy, R. I. (1973). *Tahitians: Mind and experience in the Society Islands*. Chicago: University of Chicago Press.
- Levy, R. I. (1984). Emotion, knowing, and culture. In R. A. Schweder & R. A. LeVine (Eds.), *Culture theory: Issues on mind, self, and emotion* (pp. 214–237). Cambridge, England: Cambridge University Press.
- Lienhardt, G. (1961). *Divinity and experience*. London: Oxford University Press.
- Lutz, C. (1982). The domain of emotion words on Ifaluk. *American Ethnologist*, 9, 113–128.
- Lutz, C. (1986). The domain of emotion words on Ifaluk. In R. M. Harré (Ed.), *The social construction of emotions* (pp. 267–288). Oxford, England: Basil Blackwell.
- Lutz, C. (1987). Goals, events and understanding in Ifaluk emotion theory. In N. Quinn & D. Holland (Eds.), *Cultural models in language and thought* (pp. 290–312). Cambridge, England: Cambridge University Press.
- Lutz, C. (1988a). 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. (1988b). *Unnatural emotions: Everyday sentiments on a Micronesian atoll and their challenge to Western theory*. Chicago: University of Chicago Press.
- Lutz, C., & White, G. M. L. (1986). The anthropology of emotions. *Annual Review of Anthropology*, 15, 405–436.
- Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, 98, 224–253.
- 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., Kudoh, T., Scherer, K., & Wallbott, H. (1988). Antecedents of and reactions to emotions in the United States and Japan. *Journal of Cross-Cultural Psychology*, 19, 267–286.
- Mauro, R., Sato, K., & Tucker, J. (1992). The role of appraisal in human emotions: A cross-cultural study. *Journal of Personality and Social Psychology*, 62, 301–317.
- Mauss, M. (1921). L'expression obligatoire des émotions [The obligatory expression of emotions]. *Journal de Psychologie*, 18, 425–434.
- Mesquita, B., & Fischer, A. (1989). Gevoelens verwoord [Feelings verbalized]. *Interdisciplinair Tijdschrift voor Taal- en Tekstwetenschap*, 9, 97–111.
- Myers, F. (1979). Emotions and the self. *Ethos*, 7, 343–370.
- Oatley, K. (1991). Living together: A review of “Unnatural Emotions: Everyday Sentiments on a Micronesian Atoll and Their Challenge to Western Theory.” *Cognition and Emotion*, 5, 65–79.
- Ortony, A., Clore, G., & Collins, A. (1988). *The cognitive structure of emotions*. Cambridge, England: Cambridge University Press.
- Pennebaker, J. W. (1982). *The psychology of physiological symptoms*. New York: Springer.
- Ricci-Bitti, P., Brighitti, G., Garotti, P. L., & Boggi-Cavello, P. (1989). Is contempt expressed by pan-cultural facial movements? In J. P. Forgas & J. M. Innes (Eds.), *Recent advances in social psychology: An international perspective* (pp. 329–339). New York: Elsevier Science.
- Rimé, B., Boulanger, B., Laubin, P., Richir, M., & Stroobants, K. (1985). The perception of interpersonal emotions originated by patterns of movement. *Motivation and Emotion*, 9, 241–260.
- Rimé, B., Phillipot, P., & Cisamolo, D. (1990). Social schemata of peripheral changes in emotion. *Journal of Personality and Social Psychology*, 59, 38–49.
- Rinn, W. E. (1984). The neurophysiology of facial expression: A review of the neurological and psychological mechanisms for producing facial expressions. *Psychological Bulletin*, 95, 52–77.
- Robarchek, C. (1977). Frustration, aggression, and the nonviolent Semai. *American Ethnologist*, 4, 762–779.
- Rosaldo, M. Z. (1980). *Knowledge and passion: Ilongot notions of self and social life*. Cambridge, England: Cambridge University Press.
- Rosaldo, M. Z. (1984). Toward an anthropology of self and feeling. In R. A. Schweder, & R. A. LeVine (Eds.), *Culture theory: Issues on mind, self, and emotion* (pp. 137–157). Cambridge, England: Cambridge University Press.
- Rosch, E. (1975). Cognitive representations of semantic categories. *Journal of Experimental Psychology: General*, 104, 192–233.
- Rosch, E. (1978). Principles of categorization. In E. Rosch & B. L. Lloyd (Eds.), *Cognition and categorization* (pp. 27–71). Hillsdale, NJ: Erlbaum.
- 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.
- Rosenblatt, P. C., Walsh, R. P., & Jackson, D. A. (1976). *Grief and mourning in cross-cultural perspective*. New Haven: Yale University, Human Area Files Press.
- Russell, J. A. (1991a). In defense of a prototype approach to emotion concepts. *Journal of Personality and Social Psychology*, 60, 37–47.
- Russell, J. A. (1991b). Culture and the categorization of emotions. *Psychological Bulletin*, 110, 426–450.
- Savishinsky, J. S. (1982). Vicarious emotions and cultural restraint. *Journal of Psychoanalytic Anthropology*, 5, 115–135.
- Scheff, T. J. (1988). Shame and conformity: The deference-emotion system. *American Sociological Review*, 53, 395–406.
- Scherer, K. R. (1984). Emotion as a multicomponent process: A model and some cross-cultural data. In P. Shaver (Ed.), *Review of personality and social psychology* (Vol. 5, pp. 37–63). Beverly Hills, CA: Sage.
- Scherer, K. R., Summerfield, A. B., & Wallbott, H. G. (1983). Cross-national research on antecedents and components of emotion: A progress report. *Social Science Information*, 22, 355–385.
- Scherer, K. R., Wallbott, H. G., Matsumoto, D., & Kudoh, T. (1988). Emotional experience in cultural context: A comparison between Europe, Japan, and the United States. In K. R. Scherer (Ed.), *Facets of emotions* (pp. 5–30). 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. D. (1983). Anger and shame in the tropical forest: An affect as a cultural system in Papua New Guinea. *Ethos*, *11*, 181–191.
- Shweder, R. A. (1991). *Thinking through cultures*. Cambridge, MA: Harvard University Press.
- Shweder, R. A., & Much, N. C. (1987). Determinations of meaning: Discourse and moral socialization. In W. Kurtjus & J. Gewirtz (Eds.), *Social interaction and socio-moral development* (pp. 197–244). New York: Wiley.
- Shields, S. A. (1984). Reports of bodily change in anxiety, sadness and anger. *Motivation and Emotion*, *8*, 1–21.
- Smith, C. A., & Ellsworth, P. C. (1985). Patterns of cognitive appraisal in emotion. *Journal of Personality and Social Psychology*, *48*, 813–838.
- Sogon, S., & Masutani, M. (1989). Identification of emotion from the body movements: A cross-cultural study of Americans and Japanese. *Psychological Reports*, *65*, 35–46.
- Solomon, R. S. (1978). Emotions and anthropology: The logic of emotional world views. *Inquiry*, *21*, 181–199.
- Stearns, C. Z., & Stearns, P. N. (1986). *Anger: The struggle for emotional control in America's history*. Chicago: University of Chicago Press.
- Stearns, P. N., & Stearns, C. Z. (1985). Emotionology: Clarifying the history of emotions and emotional standards. *American Historical Review*, *90*, 813–836.
- Thoits, P. A. (1989). The sociology of emotions. *Annual Review of Sociology*, *15*, 317–342.
- Tomkins, S. S. (1962). *Affect: Imagery and consciousness: Vol. 1. The positive affects*. New York: Springer.
- Van Bezooijen, R. (1984). *Characteristics and recognizability of vocal expressions of emotion*. Dordrecht, The Netherlands: Floris.
- 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.
- Van Goozen, S., & Frijda, N. H. (in press). Emotion words used in six European countries. *European Journal of Social Psychology*.
- Wallbott, H. G., & Scherer, K. R. (1988). How universal and specific is emotional experience? Evidence from 27 countries. In K. R. Scherer (Ed.), *Facets of emotions* (31–56). Hillsdale NJ: Erlbaum.
- White, G. M. (1990). Moral discourse and the rhetoric of emotions. In C. A. Lutz & L. Abu-Lughod (Eds.), *Language and the politics of emotion* (pp. 46–68). Cambridge, England: Cambridge University Press.
- Wierzbicka, A. (1986). Human emotions: Universal or culture-specific? *American Anthropologist*, *88*, 584–594.
- Wooding, C. (1981). Een Afrosurinaamse case-study [An Afrosurinam case study]. *Maandblad voor Geestelijke Volksgezondheid*, *36*, 668–681.

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