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Cross-cultural (non)equivalence in emotions

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Publication date:
2004

Document Version
Publisher's PDF, also known as Version of record

[Link to publication in Tilburg University Research Portal](#)

Citation for published version (APA):
Breugelmans, S. M. (2004). *Cross-cultural (non)equivalence in emotions: Studies of shame and guilt*. Ridderprint.

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**Cross-Cultural (Non)Equivalence in Emotions
Studies of Shame and Guilt**

Seger Breugelmans



Cross-Cultural (Non)Equivalence in Emotions

Studies of Shame and Guilt

Proefschrift

ter verkrijging van de graad van doctor
aan de Universiteit van Tilburg
op gezag van de rector magnificus
prof.dr. F.A. van der Duyn Schouten

in het openbaar te verdedigen ten overstaan van een
door het college voor promoties aangewezen commissie
in de aula van de Universiteit
op vrijdag 7 mei 2004 om 14.15 uur

door Seger Martijn Breugelmans
geboren op 17 juli 1974 te Dongen

Promotores:

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Druk: Ridderprint Offsetdrukkerij B.V., Ridderkerk

ISBN 90-5335-026-8

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CHAPTER 1

Introduction

Issues of cross-cultural similarities and differences have been prominent in the psychology of emotions for more than a century. Theories and measures of culture and emotion tend to vary substantially from one study to another, making the assessment of cross-cultural variation often more a matter of paradigmatic presumptions than of empirical evidence. This is reflected in the dichotomy between universalism and cultural relativism of emotions that is still dominant in current discussions of culture and emotion.

Recently, developments in both cross-cultural psychology and in emotion psychology have opened possibilities of moving beyond this dichotomy. In cross-cultural psychology, methods have been developed that provide a basis for the assessment of cross-cultural similarities and differences on various levels of equivalence (i.e., cross-cultural comparability). In addition, in emotion psychology emerging conceptions of emotions as multicomponential phenomena have made it possible to study cross-cultural similarities and differences in various aspects of emotions. Together, these developments allow for a more refined assessment of where and how emotions are similar or different across cultures, without reverting to a universalism-relativism dichotomy.

This thesis attempts to contribute to our understanding of cultural variation in emotions through empirical, cross-cultural studies of various emotion components at different levels of equivalence. The present chapter addresses issues in cross-cultural psychology and emotion psychology that are relevant to these studies. In addition, the research strategy that was followed in this thesis is described. Finally, an overview is given of the empirical chapters presented in this thesis.

Cross-Cultural Psychology

Psychologists like to find significant differences. The identification of differences in psychological processes (e.g., cognitions or emotions) is the main conceptual tool that psychology uses to explain variation in human behavior. This is reflected in a preference for using experimental designs. In the light of this emphasis it is not surprising that psychologists doing cross-cultural studies

tend to focus primarily on cultural variations in behavior. More specifically, they like to find significant differences across cultures. However, there are several problems with the interpretation of differences in empirical cross-cultural data.

A first problem lies in the fact that experimental designs can hardly ever be followed in culture-comparative research. Cross-cultural research is quasi-experimental (Cook & Campbell, 1979) because respondents cannot be assigned at random to cultural conditions; every person is a member of a culture and cannot be assigned to another culture. In addition, cultures differ on many characteristics (e.g., GNP, level and type of education, acquiescence; see Van Hemert, 2003). It is usually unclear which specific cultural difference between samples lies behind differences in the data.

A second problem is the likelihood of bias in the data (Van de Vijver & Leung, 1997), which can lead to statistically significant differences even in the absence of differences on the psychological trait that is the target of analysis (Malpass & Poortinga, 1986). Bias can be found at different levels, ranging from the psychological constructs as a whole to individual items in an instrument (Van de Vijver & Tanzer, 1998).

A third complication arises from the absence of well-defined theories about where and how culture affects psychological processes. Culture is an ill-defined construct in psychology (see Soudijn, Hutschemaekers, & Van de Vijver, 1990), making clear theoretical predictions of cross-cultural differences in psychological processes difficult. In many cross-cultural studies, the invocation of culture to explain empirical differences is post hoc and unsubstantiated (Poortinga, 1992). In other cases, very broad distinctions between populations (e.g., individualism and collectivism; Hofstede, 1980; Triandis, 1988) are used to explain observed differences in such a wide range of variables that interpretations become unspecific and do not refer to well-defined psychological processes. Concepts of culture in psychology are often derived from ideas in social/cultural anthropology and ethnography. A problem is that in these sciences culture is seen as inherently interwoven with psychological processes, and that studies are meaning-centered and interpretative (see Jahoda, 1982). This is difficult to reconcile with an experimental cross-cultural psychology that treats culture as an independent variable explaining psychological differences (see Segall, 1984). As a consequence, some cultural psychologists have argued that empirical and comparative methods should be abandoned because they impose a Western view of psychological reality upon other cultures (e.g., Misra & Gergen, 1993), but most cross-cultural studies still use (quasi-)experimental designs.

The use of quasi-experimental designs, the possibility of bias, and the absence of precise theories of cultural differences together make that empirical differences between samples from different cultural backgrounds are relatively easy to find, but difficult to interpret (Berry, Poortinga, Segall, & Dasen, 2002). As a result, interpretation of data in terms of cultural differences in psychological processes often remains dependent upon the assumptions preferred by the researchers who conduct a study (see Eckensberger, 1979; Reese & Overton, 1970). Basic consensus about the criteria for interpreting cross-cultural data seems essential for the study of culture in psychology. Therefore, the main problem in cross-cultural psychology is not finding empirical differences, but rather establishing a basis for the interpretation of such differences.

The logic of testing for differences requires that a standard of comparison is shared between cultures, and hence that the psychological constructs under study are cross-culturally identical. Any meaningful comparison becomes impossible if such constructs are seen as essentially different (incommensurable) between cultures (e.g., Kvale, 1992). Van de Vijver and Leung (1997) have distinguished three levels of equivalence that identify to what extent psychological data are comparable across cultures. When the condition of construct or structural equivalence is satisfied, the same psychological construct is measured across cultures, but not necessarily on the same quantitative scale. With metric or measurement unit equivalence, the same construct is measured on a scale with identical metric, but not necessarily with the same scalar origin. Finally, with scalar or full-score equivalence, the same construct is measured on an identical ratio scale. The level of equivalence defines the basis of cross-cultural comparisons and as such qualifies the interpretation of cultural differences.

According to Van de Vijver and Leung (1997), equivalence is not an intrinsic property of a measurement, but rather dependent on the type of interpretation of the scores and on the cultural groups examined. This implies that equivalence of measures used for cross-cultural comparisons should be empirically established rather than presumed. This thesis deals with the empirical assessment of such cross-cultural (in)equivalence in the domain of emotions.

Culture and Emotions

In the domain of emotion psychology, the issues in cross-cultural comparisons that have been discussed in the previous section are particularly important. This

is because claims of cultural variation in emotions range from extreme universalism to extreme cultural relativism, and because emotions are complex psychological constructs for which cross-cultural identity of indicators is not agreed upon.

Although culture-comparative studies of emotion date back at least as far as Darwin's (1872/1998) seminal treatise on the expression of emotions in man and animals, the field today still seems to be dominated by the dichotomy between universalism and relativism (Manstead & Fischer, 2002). This is surprising because the existence of both cross-cultural similarities and differences seems to be acknowledged by scholars advocating more universalist positions (e.g., Eibl-Eibesfeldt, 1980; Ekman, 1992; Scherer & Wallbott, 1994) as well as by scholars supporting more relativist positions (e.g., Averill, 1980; Mesquita & Walker, 2002; Levy, 1984). In addition, reviews (Mesquita & Frijda, 1992; Mesquita, Frijda, & Scherer, 1997), meta-analyses (Van Hemert, Poortinga, & Van de Vijver, 2003), and extensive empirical studies (Scherer & Wallbott, 1994) of emotions all report evidence for both similarities and differences. However, in the interpretation of their results many researchers tend to fall back to one side, either emphasizing the similarities as evidence that emotions are basically universal or emphasizing the observed differences as evidence that emotions are culturally constructed (Ellsworth, 1994). This tendency causes discussions about emotion and culture to be dominated by strong claims that distinct emotions are either products of phylogenetic development (Ekman, 1992) and have arisen as specialized adaptive programs in the human species (Tooby & Cosmides, 1990), or that they are socially and culturally constituted phenomena (Kitayama & Markus, 1994) that are anything but natural (Lutz, 1988). In view of the empirical evidence, this polarized discussion on cultural variation in emotions appears to be counterproductive (Manstead & Fischer, 2002).

Mesquita and Frijda (1992) have argued that the most important question in cross-cultural studies of emotion is not the existence of cross-cultural differences in emotions, but instead to what extent and on what level such differences can be found. In terms of the distinction between levels of equivalence that was mentioned before, these can be seen as two separate questions. Emotion constructs can be the same on a structural level (e.g., in their relations to facial expressions, Matsumoto, 2001), but this does not exclude substantial quantitative differences across cultures (e.g., in the frequency with which the emotions are experienced; Markus & Kitayama, 2001). However, in many empirical studies quantitative differences in scores are interpreted as indicative of qualitative differences

Paradoxically, claims of extensive cultural differences in emotions come both from scholars who deny that there is any valid basis for cross-cultural comparisons (e.g., Lutz & White, 1986), and from scholars who assume full-score equivalence by interpreting differences in scores directly in terms of cultural differences. For example, Mesquita (2001) interpreted statistically significant differences in mean ratings of emotion components between a Dutch sample on the one hand, and Surinamese-Dutch and Turkish-Dutch migrant samples on the other, in terms of fundamental (i.e., qualitative) differences in emotional experiences between individualists and collectivists. Conversely, findings of structural equivalence of basic emotions in terms of associated facial expressions (e.g., Ekman, 1992, 1994) do not necessarily imply universality in a quantitative sense. Strong claims of encompassing universalism of basic emotions often elicit resistance in more relativist scholars (e.g., Averill, 1994; Harré, 1986).

The influence of non-emotion related sources of variance in quasi-experimental designs makes that exclusive testing for significant differences is likely to lead to an overestimation of cross-cultural differences. Therefore, it has been proposed that relative effect sizes are more informative about the extent of cross-cultural variation than statistical levels of significance (Matsumoto, Grissom, & Dinnel, 2001; Scherer & Wallbott, 1994). Effect sizes can be seen as indicators of the generalizability of cross-cultural differences (see Van de Vijver & Poortinga, 1982), but do not contribute to resolving problems of bias.

Several sources of bias in cross-cultural emotions research have been identified, providing plausible alternative interpretations of observed differences. Most obvious is item bias due to imprecise translation of emotion words (e.g., translating joy with “happiness” in one sample and with “elation” in another sample), which may lead to cross-cultural differences in intensity ratings that are not due to cultural differences in the target emotion. This is an illustration of how bias can augment observed differences.

Some relativist scholars have argued that bias can also lead to an overestimation of cross-cultural similarities in emotions (e.g., Lutz & White, 1986). Most criticism of culture-comparative studies pertains to method bias, including factors such as sampling and measurement method. Many studies of emotion use student samples, which is argued to have led to an overestimation of cross-cultural similarities because such samples share similar, Western notions and habits (Hupka, Zaleski, Otto, Reidl, & Tarabrina, 1996). Reviews (e.g., Russell, 1994) and meta-analyses (e.g., Van Hemert et al., 2003) indicate that studies of emotions with nonstudent samples from nonwestern societies indeed show more cross-cultural variation. However, it is a matter of debate whether bias has led to an overestimation of similarities with student samples or

to an overestimation of differences with other samples. Another point of debate concerns the measures that are used to compare emotions in cross-cultural studies. For example, there has been a discussion on the way in which the forced-choice method used in facial recognition studies may have led to an overestimation of the universality of emotions (see Ekman, 1994; Russell, 1994).

Underlying such discussions are different notions about the nature of emotion processes and about the measures that are most suited to study cross-cultural differences. If emotions are seen as being reflected primarily by facial expressions (e.g., Tomkins, 1980), then cross-cultural similarities in facial expressions can easily lead to claims that emotions are cross-culturally similar (e.g., Ekman, 1992). If the essence of emotions is seen to reside in their symbolic meaning, then culture-specific connotations of emotion words can easily lead to claims of incomparability across cultures (e.g., Shweder & Haidt, 2000). This would imply that it is impossible to find standards for cross-cultural comparisons of emotions. To resolve such issues, researchers conducting culture-comparative studies need to provide evidence showing the equivalence of their data, and the appropriateness of their measures of emotion.

The most straightforward measures of emotions are emotion terms. Words are often used in cross-cultural studies both as stimuli and as responses, but there is no perfect mapping of emotion words among languages (see Russell, 1991; Wierzbicka, 1992). Some relativist scholars see differences in the emotion lexicon as indicators of cultural differences in emotional experiences (e.g., Heelas, 1986; Wierzbicka, 1998), but many culture-comparative scholars do not endorse this view, arguing instead that the relationship between emotion processes and verbal labels is imperfect (e.g., Ekman, 1994; Scherer & Wallbott, 1994). In either case, emotion words cannot serve as a cross-culturally shared standard for the comparison of emotion processes.

Frijda, Markam, Sato, and Wiers (1995) have suggested that, instead of emotion words, emotion components can be used for cross-cultural studies. These components are derived from emotion theories in which multiple determinacy of emotions is stressed (e.g., Frijda, 1986; Scherer, 1984). Emotions are argued to consist of several processes of human psychological functioning (i.e., components), which are relatively independent of each other. The componential view holds that there is no single valid indicator of the emotion process. In cross-cultural studies of emotions, some components have been used frequently (e.g., appraisals; Mauro, Sato, & Tucker, 1992; Roseman, Dhawan, Rettke, Naidu, & Thapa, 1995; Scherer, 1997), while others have remained relatively underexplored (e.g., action tendencies; Redford, 1999). In a review of the emotion literature, Mesquita, Frijda, and Scherer (1997) reported

evidence for cross-cultural similarities and differences in each of various emotion components. The componential approach allows that some emotion components may be cross-culturally similar and some different, enabling a more balanced assessment of the extent of cultural differences.

Research Strategy

In this thesis, four cross-cultural studies are presented that use emotion components as multiple indicators of emotion experiences. These studies are aimed at the assessment of equivalence and at finding standards for further cross-cultural comparisons. This goal is pursued by using designs that allow for the emergence of both cross-cultural similarities and differences, and that seek to avoid Western impositions. Important features of such designs are the selection of samples from a broad range of cultural and educational backgrounds, and the construction of instruments with emotional situations collected in each of the separate cultural populations (see Fontaine, Poortinga, Setiadi, & Markam, 2002).

Any culture-comparative study assumes at least minimal identity (commensurability) of psychological processes solicited by the procedures and instruments that are employed. In this thesis the working assumption is that emotional experiences can be compared cross-culturally, but cross-cultural equivalence of the relevant data is treated as an empirical question. If no structural equivalence is found, this means that there is no identity of emotions across cultures and that any further comparisons are meaningless. However, if structural equivalence is found, even in studies with a high a priori probability of finding cultural differences, then this indicates a basic cross-cultural identity of emotions that can be used as a background for further comparative analysis.

This thesis departs from a perspective of psychological universalism (Berry et al., 2002; Poortinga & Soudijn, 2002), which means that basic emotion processes are expected to be found across cultures, but that there can be differences in the cultural manifestations. Differences may be found at structural level (e.g., in the association of an emotion with specific emotion components) or at other levels of equivalence (e.g., in the experienced intensity of emotions). This form of universalism does not imply that emotion processes are identical across cultures, but a basic similarity in emotions (i.e., a core of associated emotion components) is expected in so far as they reflect important psychological processes underlying human behavior. Therefore, it is expected that even in studies minimizing the imposition of Western emotion conceptions, structural equivalence will be found.

Shame and Guilt

Three of the four studies presented in this thesis focus on differences between the emotions shame and guilt. These emotions were chosen because they belong to the category of social emotions that cannot be identified on the basis of a clear facial expression like the basic emotions (see Izard, 1977). Hence, indicators of these emotions in cross-cultural research have to rely on self-reported experiences, complicating the assessment of cross-cultural equivalence. Moreover, in view of their social nature (see Tangney & Fischer, 1995) shame and guilt have been argued to be especially prone to cultural variation (Kitayama & Markus, 1994). Thus, these emotions provide a strict test for psychological universalism.

In current emotion psychology, the distinction between shame and guilt has become an important topic (e.g., Tangney, 1995, 1996). Though much of the literature focuses on individual differences in shame-proneness and guilt-proneness as personality characteristics (for an overview see Tangney & Dearing, 2002), several studies have addressed distinct characteristics of shame and guilt as emotion processes (e.g., Frijda, Kuipers, & Ter Schure, 1989; Keltner & Buswell, 1996; Manstead & Tetlock, 1989; Roseman, Antoniou, & Jose, 1996; Tangney, Miller, Flicker, & Barlow, 1996). There are different theoretical perspectives on shame and guilt. One conception focuses on the locus of sanction (e.g., Parsons & Shils, 1952), which originates in the public exposure of one's failures in shame and in a private disapproval of failing to live up to one's moral standards in guilt. Another conception focuses on the locus of negative affect (Lewis, 1971), which pertains to the whole self in shame and to a specific behavior or act in guilt.

The empirical evidence for distinct emotion characteristics is generally compatible with both conceptions, and recent studies have suggested that morality and exposure, as well as different self-experiences are important in distinguishing shame and guilt (e.g., Fontaine et al., 2003; Smith, Webster, Parrott, & Eyre, 2002). In this thesis, an empirical approach is taken to the distinction between shame and guilt (see Wallbott & Scherer, 1995); the various emotion components that have been reported in the emotion literature are used as multiple indicators of these emotions in the culture-comparative studies.

Reports of cultural differences in shame and guilt have a long and fragmented history. Perhaps most widely known is the distinction between shame cultures and guilt cultures by Ruth Benedict (1946). She used these terms to describe what she saw as important differences between Japan (shame culture) and the USA (guilt culture) in the social regulation of moral behavior (Creighton, 1990). The distinction was interpreted by other scholars in terms of

categorical differences in emotional experiences, implying that in a shame culture there is emotion of guilt (e.g., Mead, 1964). However, such interpretations were disputed (Ausubel, 1955; Piers & Singer, 1971), and more moderate views have become dominant in which cultural differences are argued to reside in the degree or emphasis on either shame or guilt (Grinder & McMichael, 1963; McMichael & Grinder, 1966; Sabini & Silver, 1997).

Related to the notion of shame-cultures and guilt-cultures is the currently popular distinction between individualist and collectivist cultures (Triandis, 1988). However, predictions from this theory about cultural differences in shame and guilt have been contradictory. Triandis (1995) has argued that collectivists experience more shame, whereas Eid and Diener (2001) have argued that collectivists focus more on guilt. Wallbott and Scherer (1995) found that shame and guilt were more distinct emotions in samples from collectivist societies than from individualist societies. This finding concurs with reports that the two emotions are confounded in Western culture (Scheff, 1995), and more clearly defined in Asian cultures (e.g., Marsella, Murray, & Golden, 1974; Retzinger, 1995).

Cultural differences in the frequency, intensity, or distinctness of shame and guilt do not imply that these emotions are structurally different across cultures. Cross-cultural similarities have been reported in ratings of shame and guilt across situations (Hashimoto & Shimizu, 1988; Johnson et al., 1987), as well as in characteristic experiences across various emotion components (Fontaine et al., 2003; Hong & Chiu, 1992). All in all, these findings suggest that structural equivalence of shame and guilt across cultures can be expected.

Overview of the Chapters¹

Chapter 2 addresses cross-cultural similarities and differences in the association of body sensations with emotions. Findings of cross-cultural similarities in this area have been disputed by scholars who argue that studies with non-student samples from widely different cultural backgrounds show larger cross-cultural

¹ The studies reported in each chapter were conducted in collaboration with various colleagues (Zara Ambadar, Roxana Espinoza, Johnny Fontaine, Patrick Luyten, Pierre Philippot, Ype H. Poortinga, Bernadette Setiadi, Jesús Vaca, Priyo Widiyanto). The text of the chapters is in part based on the manuscripts that were written about these studies.

Chapter 2 was based on: Breugelmans, S. M., Poortinga, Y. H., Ambadar, Z., Setiadi, B., Vaca, J. B., Widiyanto, P., & Philippot, P. (2004). *Body Sensations Associated with Emotions in Rarámuri Indians, rural Javanese, and Three Student Samples*. Manuscript submitted for publication. All the other chapters were based on manuscripts in preparation.

differences. In this chapter a study is presented of the association of twelve body sensations with seven emotions in samples of Rarámuri Indians from northern Mexico and of rural Javanese from Indonesia with low exposure to Western, industrialized culture, in addition to three student samples. Both parametric and non-parametric analyses were used to assess general cultural variation, and to identify specific cultural differences in cross-culturally shared profiles.

In Chapter 3 two studies are presented that assess cross-cultural similarities and differences in the emotions shame and guilt at different levels of equivalence. In Study 1, a large set of situations was rated by Indonesian and Dutch students on the extent to which these would elicit shame and guilt. In Study 2, strong shame eliciting or guilt eliciting situations were selected from Study 1, and rated on 47 emotion characteristics (appraisals, self-experiences, action tendencies, body sensations, rumination, social sharing, and emotion words) by students from Belgium, Indonesia, Mexico, and the Netherlands. In both studies, cross-cultural variation in shame, guilt, and associated emotion components was assessed both on structural and on quantitative levels of equivalence.

In Chapter 4 the assessment of structural equivalence of shame and guilt is extended to Rarámuri Indians, who lack an emotion term for guilt, and to rural Javanese from Indonesia. Two studies addressed the question to what extent findings obtained with student samples (Chapter 3) could be generalized to non-student samples and to samples lacking a lexical distinction between shame and guilt. In Study 1, a range of situations eliciting shame were collected from the Rarámuri and the Javanese, and situations eliciting guilt were collected from the Javanese only. These situations were rated by Dutch and Indonesian students on the extent to which these would elicit shame and guilt. In Study 2, strong shame-eliciting and guilt-eliciting situations were selected from Study 1 and rated on 31 emotion characteristics (appraisals, self-experiences, action tendencies, body sensations, rumination, social sharing, and emotion words) by Rarámuri and Javanese. The structure of shame and guilt characteristics of both rural samples was compared with the structure obtained with students (Chapter 3).

In Chapter 5 cross-cultural similarities and differences in experiences of shame and of guilt were studied in samples from Indonesia, Mexico, and the Netherlands. It was tested whether the findings obtained with ratings of preselected situations in previous studies (Chapter 3) could be replicated using ratings of self-reported situations on 41 emotion characteristics (appraisals, self-experiences, action tendencies, body sensations, rumination, social sharing, and emotion words). Both the extent of cross-cultural variation in the emotion

ratings and the distinct association of emotion components with either shame or guilt were assessed.

Finally, Chapter 6 summarizes the most important findings and discusses their implications for psychological universality in shame and guilt.

CHAPTER 2

Body sensations associated with emotions in Rarámuri Indians, rural Javanese, and three student samples

People are said to be red with anger and to have weak knees during fear. Bodily metaphors are so common to emotion talk (see Kövecses, 2000) that many people will find it difficult to imagine emotions without any bodily sensation at all. Early scholars in psychology posited the experience of body sensations to be the defining component of emotional experience (e.g., James, 1884), but challenges to the physiological differentiation of emotions (Schachter & Singer, 1962; Valins, 1972) and the physiological origin of experienced body sensations (Rimé, Philippot, & Cisamolo, 1990) have led to a diminished importance of this component in contemporary emotion theory. Both the general importance (e.g., Averill, 1974) and the specific characteristics (e.g., Ameka, 2002) of bodily metaphors of emotions have been argued to be culturally variable constructions, rather than reflecting intrinsic physiological changes. So, in some cultures people may be said to feel their intestines boiling with anger (Kövecses, 2000) and their liver jumping with fright (Lutz, 1988).

In the emotion literature, physiological activation and experienced body sensations are often taken as a single component (see Mesquita & Frijda, 1992), but the empirical evidence for emotion differentiation in each of these two domains is markedly divergent. With respect to physiological activation, some researchers (e.g., Levenson, Ekman, & Friesen 1990) have claimed unique profiles of autonomic nervous system activation for several of the basic emotions defined by Ekman (1992), while others have concluded there is no empirical evidence for such claims (Boiten, 1996; Zajonc & McIntosh, 1992). In contrast, with experienced body sensations findings have consistently pointed to differentiation between emotions, across individuals and methods (for a review see Rimé et al., 1990). Proponents of a psychobiological interpretation (e.g., Scherer, 1992) see these body sensations as a reflection of underlying physiological changes “signing” the emotion. The contrast between the two domains may be due to difficulties in studying physiological concomitants of emotions (see Cacioppo & Tassinary, 1990; Stemmler, Heldmann, Pauls, & Scherer, 2001), but an alternative explanation is that there is no direct link between physiological events and body sensations.

In a constructivist view (e.g., Averill, 1974; Hupka, Zaleski, Otto, Reidl, & Tarabrina, 1996) body sensations come about because they are expected to occur as part of emotion processes; they are part of cognitive schemata about physiological events associated with emotions (Philippot & Rimé, 1997). Rimé et al. (1990) found that schematic stereotypes about bodily concomitants of emotions closely matched the sensations typically reported to be felt during emotional episodes. Combining this with empirical evidence to the effect that performances of untrained people fluctuate around chance level when trying to detect physiological changes in their bodies (see Katkin, 1985; Pennebaker, 1982), Rimé et al. argued that a link between body sensations and such changes is unlikely. In addition, reports of cultural variation in emotions and body concomitants (see Mesquita & Frijda, 1992; Russell, 1991) as well as anthropological accounts of culture-specific constellations of emotional experiences (e.g., Lutz, 1988) support the notion of body sensations as a culturally constructed emotion component. In this view, body sensations experienced with emotions are not generalizable across cultures because this component is not intrinsic to emotion processes (Averill, 1974).

Results from extensive culture-comparative studies, however, are incompatible with the notion that relationships between body sensations and emotions are only a matter of cultural construction. The differentiation of body sensations across emotions was found to show strong similarities across cultures (e.g., Scherer, Summerfield, & Wallbott, 1983; Scherer & Wallbott, 1994; Scherer, Wallbott, & Summerfield, 1986), contrary to what would be expected if body sensations were culturally constructed phenomena. Although cross-cultural similarity does not provide direct evidence of links between body sensations and physiological events, it does suggest that body sensations are a universal and distinct emotion component. This means that the range of cultural variation in the conceptualization of body sensations with emotions is constrained by universal characteristics of the emotion process (see Kövecses, 2000; Poortinga, 1992).

In response, some constructivist scholars (e.g., Hupka et al., 1996; Rimé et al., 1990) have argued that previous cross-cultural studies may have underestimated cultural variation due to a number of methodological limitations. Philippot and Rimé (1997) suggested that differences may have been curtailed due to (a) the use of open answer questionnaires, leading to restrictions in the number of body sensations thought of by participants, (b) the limitation of studies to mainly Western-European countries or student samples, and (c) the aggregation of body sensation items into broad categories. Philippot and Rimé argued that “before drawing any definite conclusion in this domain, non-college students, and rural populations should be compared in markedly

different cultures” (p. 184). In the light of cultural variation in the use and meaning of emotion concepts (e.g., Ameka, 2002; Lutz, 1988; Russell, 1991), it is expected from a constructivist view that the range of cultural variation in body sensations as concomitants of emotion processes is much larger than previous studies have suggested.

The different expectations regarding cultural variation in body sensations relate to the broader debate of cultural variation in emotions. This debate has been characterized by opposing claims of pan-human universality (e.g., Ekman, 1992) and cultural relativity (e.g., Lutz, 1988) of emotions, and disagreement in the interpretation of empirical data in favor of either position (see Ekman, 1994; Russell, 1994). The tendency to capitalize either on cross-cultural similarities or on cultural differences in the interpretation of empirical data has led to conceptualizations of emotions as either universal or culture relative phenomena (see Manstead & Fischer, 2002). In attempts to go beyond this apparent dichotomy, researchers have proposed to see universality-culture relativity as a continuum, indicating the degree to which psychological phenomena can be generalized across cultures (Van de Vijver & Poortinga, 1982). Empirical assessments of the extent of variation in the emotion domain (e.g., Scherer & Wallbott, 1994; Van Hemert, Poortinga & Van de Vijver, 2003) suggest that there exists some valid (i.e., not caused by measurement bias) cultural variation in emotions. Several emotion components seem to have at least a core of features that can be generalized across cultures (see Mesquita & Frijda, 1992). If strong cross-cultural similarities are replicated in studies meeting the methodological improvements mentioned by Philippot and Rimé (1997), then this would suggest that body sensations are an intrinsic component of emotions with high generalizability across cultures.

The present study addresses the range of cultural variation in body sensations with emotions across Rarámuri Indians, rural Javanese, and student samples from Belgium, Indonesia, and Mexico. Closed answer questionnaires were used, including seven emotions and twelve body sensations, including sensations used in previous studies (Scherer & Wallbott, 1994) as well as new sensations suggested by pretest in the different cultures considered, and extending the range of cultural variation to populations with very limited exposure to Western, industrialized life-style. These methodological extensions should increase the probability of finding larger cultural variation in experienced body sensations with emotions, allowing for better estimation of the generalizability of the findings from previous studies on this topic.

Estimates of the extent of cultural variation are complicated by the quasi-experimental design of culture-comparative studies and the possibility of bias (Poortinga & Malpass, 1986; Van de Vijver & Leung, 1997). This makes the

interpretation of statistically significant differences as reflecting substantial cultural differences debatable (see Matsumoto, Grissom, & Dinnel, 2001). Some scholars in cross-cultural studies of emotion (e.g., Scherer & Wallbott, 1994; Wallbott & Scherer, 1988) primarily look at estimates of effect size. This does not resolve any problems of bias, but avoids capitalizing on relatively unimportant effects. For the mapping of the relationship between body sensations and emotions in various cultures, analyses at an ordinal level (e.g., Rimé & Giovanni; 1986; Rimé et al., 1990) can be insightful because possible biases related to general score levels (e.g., response styles or differences in emotion intensity) are avoided. In the present study, analyses at both interval and ordinal levels of measurement were performed. Culture-specific findings are discussed against the background of cross-culturally similar associations between body sensations and emotions.

In summary, the present study (i) examines the extent of cross-cultural variations in body sensations associated with emotions among samples from highly divergent cultures, (ii) maps differences between emotions in characteristic body sensation profiles, (iii) identifies cultural deviations from common profiles.

Method

Participants

Five samples were included in this study: urban student samples from universities in Belgium, Indonesia and Mexico, and rural samples with little or no formal education from villages in Central Java (Indonesia) and Northern Mexico. Of the 450 participants in the study, seven with more than 2.5% missing values were excluded from further analysis. For the other participants, missing values (in total 0.09% of the scores) were replaced by the item mean of the sample. In total, 443 participants were included in the analyses.

The Belgian student sample consisted of 75 undergraduate students (41 female, 34 male) from the University of Louvain in Louvain-la-Neuve, with a mean age of 20.31 years ($SD = 1.93$). All were native French speakers. The Indonesian student sample consisted of 85 undergraduate students (60 female, 25 male) from Universitas Indonesia in Jakarta, with a mean age of 20.29 years ($SD = 3.50$). All students were fluent speakers of 'Bahasa Indonesia,' Indonesia's national language. The Mexican student sample consisted of 123 undergraduate students (83 female, 40 male) from the Escuela Libre de Psicología A.C. in Chihuahua, with a mean age of 24.46 years ($SD = 8.20$). All were native Spanish speakers.

The Mexican rural sample consisted of 61 Rarámuri (Tarahumara) Indians (24 female, 37 male) with a mean age of 51.70 years ($SD = 14.57$), as indicated by the participants themselves. All were native speakers of (at least one of) the Rarámuri variants and had received little or no formal education. All participants resided in or traveled around the community of Guachochi in the central highlands of the Sierra Tarahumara. The Rarámuri are a native Indian group of Uto-Nahua or Uto-Aztec decent, living in the Sierra Madre mountains in the Mexican state of Chihuahua. They form the largest indigenous group in Northern Mexico with an estimated population of between 60,000 and 80,000. Traditionally, individual families live dispersed over the available land and no substantial agglomerations of indigenous households are found. Subsistence is mainly through small-scale agriculture, with cultivation of crops such as maize and beans. Historically, the Rarámuri are known for their strong resistance to Spanish and later Mexican cultural influences (see Levi, 1998). Western media have been brought to Rarámuri territory, but most of the population still has very little contact with these. For purposes of this study, participants were selected who spoke little or no Spanish to minimize influences by Mestizo cultural diffusion.

The Indonesian rural sample consisted of 99 Javanese farmers (49 male, 50 female) with a mean age of 46.18 years ($SD = 14.63$). All were native speakers of Javanese, living in various small farming communities in the central south region of Java. Although the tropical climate and fertile volcanic soil may yield three or even four harvests of rice each year, most farmers are poor due to low crop prices and limited land ownership. For this study, traditional communities were selected where manual agricultural labor was the most common source of income, buildings were constructed mainly of wood and bamboo, and a sewerage system, tap water, and sometimes even electricity were absent. Because of the relative isolation of these communities and the low level of education (87% of the participants had not finished primary school), exposure to Western media was very limited.

Instrument

The instrument consisted of seven emotion vignettes (joy, anger, fear, sadness, disgust, surprise, and shame) each accompanied by a list of twelve body sensations (lump in the throat, breathing changes, stomach sensations, feeling hot, feeling warm, feeling cold, heart beats faster, sweating, goose-flesh, blushing, feeling weak in the knees, and feeling hot in the eye). An emotion was identified both by an emotion word (e.g., *joy*) and by a vignette, giving an example of a situation in which the emotion may typically be experienced (e.g., "What do you feel in your body when you experience joy, for example when a

good friend has come to visit you?”). The example was added to reduce effects of possible semantic differences in emotion words. With the two Mexican samples, vignettes were composed of the example used in the other groups plus an additional one (e.g., “What do you feel in your body when you experience joy, for example when a good friend has come to visit you or when you are at a very nice party?”). This was done for purposes of additional clarification to reduce possible translation bias into Rarámuri.

The list of body sensations was based on a list originally developed by Wallbott and Scherer (1988) and adapted by Philippot (1991). A sensation reported in a pilot study with Indonesian participants, namely *hot in the eye*, and a sensation spontaneously reported in both Belgium and Indonesia, namely *goose-flesh* were added to Philippot's questionnaire. The item *tense muscles* was removed because no translation into Rarámuri could be found without a major connotation of physical illness. Each item had a 6-point Likert scale ranging from *I do not feel this body sensation at all* (0) to *I feel this body sensation very strongly* (5). Scores indicate the intensity with which participants reported experiencing a body sensation with an emotion.

For each of the translations into Bahasa Indonesia, Spanish, and Javanese several local bilinguals were involved using a committee approach (Van de Vijver & Leung, 1997). Translation into Rarámuri was done by two bilinguals, using a back-translation method. Cross-checking was done in field-interviews.

Procedure

Participants were requested to take part in a study concerning sensations that people feel in their body during emotions. Belgian students were approached in different libraries on the university campus and asked to complete the questionnaire under supervision of the researcher. Indonesian and Mexican students completed the questionnaire during a lecture period. All students participated voluntarily and were not paid.

Rural Javanese and Rarámuri were approached in their communities by trained local interviewers. The Indonesian interviewers were undergraduate students from Sanata Dharma University in Yogyakarta experienced with interviewing. The interviewers were fluent in Javanese and originated from the area where the interviews were administered. After an initial training, trial interviews were held, followed by evaluation by the researchers. Participants were interviewed individually in their homes or on the farmlands. Participation was voluntary and each participant was paid 12,500 Indonesian rupiah (by local standards a generous reward for the time spent). The Rarámuri interviewer originated from the Guachochi area and was fluent in the local variations of the Rarámuri language. He had experience interviewing local inhabitants for several

governmental institutions and was trained and tested in several trial interviews for the present study. Participants were interviewed in their homes, on their lands, or on the road while traveling. They cooperated voluntarily and were not paid individually since this was not appropriate by local standards. Instead, maize was bought and given to the local community for a celebration.

Results

Extent Of Cross-Cultural Variation

The extent of cross-cultural variation in the data was examined using a multivariate variance components analysis, with the factors culture (5), emotion (7), body sensation (12), and their interactions, in addition to the factor individual (443). The model explained 47% of the variance, with individuals (11%) and the emotion x body sensation interaction (12%) explaining more than the emotion x culture interaction (2%), or the culture x emotion x body sensation interaction (5%). Thus, individual consistency and differentiation of body sensations across emotions were more important in explaining the variance in the data than interaction components involving emotion and culture. This suggests limited cultural variation in the differentiation of body sensations between emotions. The remaining effects were relatively small as well. Overall differences in general intensity level were as follows: between cultures (2%), emotions (2%) and body sensations (7%). The body sensation x culture interaction (4%) suggested limited differences between cultures in the average intensity of body sensations across emotions.

Separate Repeated Measures Analyses (see Table A1 in the Appendix) per body sensation, with culture (5) as a between-subjects factor and emotion (7) as a within-subjects factor also showed limited cultural variation for each separate body sensation. Table 1 displays the estimated effect sizes (partial η^2) of the main effects and interactions for each body sensation. Multivariate main effects and the interactions were significant in all instances, but the mean effect size of the interactions across body sensations ($M [\eta^2] = .14$, $SD [\eta^2] = .04$) was markedly lower than the mean size of the main effects of emotion ($M [\eta^2] = .56$, $SD [\eta^2] = .12$). The largest cultural differences in differentiation of body sensations across emotions were found in *weak in the knees* and *feeling cold*, but even for these the main effects of emotion ($\eta^2 = .54$ and $\eta^2 = .46$, respectively) were much larger than the interactions ($\eta^2 = .22$ and $\eta^2 = .19$).

Table 1

Effect sizes (partial η^2) for Repeated Measures Analyses per Body Sensation With Culture (5) as Between-Subjects Factor, and Emotion (7) as a Repeated Measures Within-Subjects Factor

Effect	Body Sensation													
	Lump in the Throat	Breathing Changes	Stomach Sensations	Feeling Cold	Feeling Warm	Feeling Hot	Heart Beats Faster	Sweating	Goose-flesh	Blushing	Weak in the Knees	Hot in the eye		
Culture (C)	.34	.22	.38	.13	.13	.21	.20	.11	.24	.24	.12	.14		
Emotion (E)	.58	.49	.52	.46	.76	.68	.77	.56	.45	.68	.54	.43		
C * E	.13	.12	.10	.19	.11	.12	.17	.12	.16	.15	.22	.11		

Note. All effects were significant at the .001 level.

These results are similar to those obtained by Scherer and Wallbott (1994) who analyzed aggregated body sensations of student samples from 37 countries. They concluded that such results indicated pronounced differentiation of body sensations between emotions and only limited cross-cultural variation. In this context, main effects for culture are difficult to interpret since they may signify differences between cultures in the general intensity with which body sensations are experienced across emotions, but may also reflect differences in scale use, for example due to response tendencies (Van de Vijver & Leung, 1997; Van Herk, 2000).

Body Sensation Profiles Across Emotions

Emotion-specific profiles of body sensations were explored by examining the rank order of mean intensity ratings of body sensations for each emotion in each culture (see Rimé et al., 1990). Examination at ordinal level facilitates the search for emotion-specificity of body sensations across cultures because possible biases related to general score level (e.g., response styles) and emotions (e.g., differences in overall intensity between emotion words) are avoided. The rank orders of body sensations in Table 2 were computed by averaging the emotion-specific rank orders of all five samples (see Table A2 in the Appendix). Unfortunately, there are no clear criteria given in the literature when to consider a body sensation “typical” for an emotion. Somewhat arbitrarily the top 25% (i.e., an average rank order ≤ 3) of body sensations was taken to be primarily associated with each emotion, while the others are deemed less typical. Table 2 also includes in superscripts the most salient cultural deviations from the average rank order. The most salient “positive” deviations are given in superscript with a *plus* sign, indicating that a non-primary body sensation belonged to the top 25% (i.e., with a cultural rank order ≤ 3) in a particular culture. The most salient “negative” deviations are given in superscript with a *minus* sign, indicating that one of the primary body sensations belonged to the bottom 50% (i.e., with a cultural rank order > 6) in a particular culture. These deviations give a first impression of emotion-specific association of body sensations, and of possible influences of culture.

Table 2
Average Rank Order Profiles of Body Sensations Associated with Emotions

Emotion						
Joy	Anger	Fear	Sadness	Disgust	Surprise	Shame
Feeling Warm	Heart Beats Faster	Heart Beats Faster	Lump in the Throat ⁴	Stomach Sensations	Heart Beats Faster	Heart Beats Faster
Heart Beats Faster	Breathing Changes	Breathing Changes	Feeling Cold	Breathing Changes	Breathing Changes	Feeling Hot
Breathing Changes	Feeling Hot	Weak in the Knees	Breathing Changes	Goose-flesh ⁴	Feeling Hot ⁵	Blushing ⁴
Feeling Hot ^{2,3}	Lump in the Throat ¹	Feeling Cold ^{4,5}	Heart beats Faster ^{4,5}	Feeling Cold ^{2,3}	Sweating	Sweating
Blushing	Blushing	Sweating	Weak in the Knees ^{1,5}	Heart Beats Faster ⁴	Weak in the Knees ⁴	Feeling Cold ⁵
Sweating	Sweating	Stomach Sensations ^{2,3}	Hot in the Eye ³	Lump in the Throat ⁵	Blushing	Weak in the Knees ⁴
Stomach Sensations	Stomach Sensations ³	Goose-flesh ⁵	Stomach Sensations ^{2,3}	Weak in the Knees	Feeling Warm ¹	Breathing Changes
Weak in the Knees ⁴	Hot in the Eye	Lump in the Throat	Sweating	Sweating	Stomach Sensations ³	Lump in the Throat
Feeling Cold	Weak in the Knees ⁴	Feeling Hot	Feeling Hot ⁴	Hot in the Eye	Lump in the Throat	Stomach Sensations
Lump in the Throat	Feeling Cold	Hot in the Eye	Goose-flesh	Feeling Hot	Feeling Cold	Hot in the Eye
Hot in the Eye	Goose-flesh	Blushing	Blushing	Blushing	Goose-Flesh ⁵	Goose-flesh
Goose-flesh	Feeling Warm	Feeling Warm	Feeling Warm	Feeling Warm	Hot in the Eye	Feeling Warm

¹ rank order > 6 in one particular group 1 = Indonesian students, 2 = Belgian students, 3 = Mexican students, 4 = Rarámuri, 5 = rural Javanese.

⁴ rank order ≤ 3 in one particular group 1 = Indonesian students, 2 = Belgian students, 3 = Mexican students, 4 = Rarámuri, 5 = rural Javanese.

The profiles in Table 2 suggest that emotions are associated with different body sensations. Every emotion except *anger* and *surprise* is associated with at least one sensation that is not primarily associated with other emotions. On the other hand, some body sensations are highly associated with several emotions (e.g., *heart beats faster*, and *breathing changes*). In order to estimate the degree of distinctness of body sensation profiles for the various emotions, rank order correlations (Spearman's ρ) between body sensation profiles were calculated. These showed that, generally, correlations between emotions were low (median $\rho = .36$). The profile of *surprise* (median $\rho = .56$, ranging from $-.07$ to $.81$) was least distinct from that of other emotions and the profile of *disgust* (median $\rho = .04$, ranging from $-.30$ to $.69$) most. The fact that the profiles of some emotions are related should not be surprising given the documented similarities between emotions on other dimensions of affect (see Russell, Lewicka, & Niit, 1989). However, for the purpose of this study, the profiles seem sufficiently distinct to consider each of the seven emotions as separate.

Cultural Deviations

For the generalizability of the findings, and the interpretation of cultural deviations of the study it is important to know to what extent they are similar to Scherer and Wallbott's (1994) study with students from 37 countries. For a comparison rank orders were calculated per emotion on the percentages of body sensations reported in Scherer and Wallbott (Table 8, p. 321). Only the body sensations and emotions shared by both studies were included (i.e., *lump in the throat*, *breathing changes*, *stomach sensations*, *feeling cold*, *feeling warm*, *feeling hot*, *heart beats faster*, *sweating*, and *joy*, *anger*, *fear*, *sadness*, *disgust*, *shame*). The resulting rank order correlations were all very high and significant ($N = 8$; $p < .05$), ranging from $.99$ in *anger*, $.95$ in *fear*, $.91$ in *sadness*, $.90$ in *joy*, $.83$ in *shame*, to $.74$ in *disgust*. Correlations of the average rank orders of only the rural samples with Scherer and Wallbott's results were lower, but still significant ($N = 8$; $p < .05$), ranging from $.92$ in *anger*, $.83$ in *fear* and in *joy*, $.81$ in *sadness*, $.60$ in *disgust*, to $.59$ in *shame*. This strongly suggests that the common emotion profiles found in this study show high generalizability across studies and samples, providing a firm basis for the identification of cultural deviations.

The unequal distribution of salient deviations in Table 2 suggested that some emotions show more cross-cultural variation, and that some samples are less similar to the average patterns than others. Rank order correlations were calculated per emotion for each culture with the average association pattern. Table 3 confirms the impression that the convergence between cultures across emotions is substantial; the correlations were generally high. Three exceptions

were the lower congruence of the Rarámuri for *anger* ($\rho = .55$) and *sadness* ($\rho = .57$), and of the Javanese for *surprise* ($\rho = .37$). These two samples also showed a slightly lower mean congruence across emotions. This suggests that Philippot and Rimé's (1997) assertion is valid that the inclusion of non-Western, non-student samples increases cultural variation. However, considering the likelihood of bias effects (e.g., in translation, test administration, interviewers, etc.) the similarities remain notable. The mean correlations in Table 3 can be seen as indices of the generalizability of the body sensation profiles that are displayed in Table 2. This means that, based on the samples in this study, the pattern of *fear* (mean $\rho = .90$) tends to be more culturally stable than that of, for example, *surprise* (mean $\rho = .68$).

The design of the study did not allow for clear tests as to whether the specific deviations in body sensation profiles in Table 2 should be seen as bias (i.e., method artifacts) or as valid culture-specific patterns, hence any interpretation requires caution. Inspection of the culture-specific rank orders of body sensations (see Table A2) suggested some salient deviations across emotions, while others are emotion specific. This has implications for the interpretation, as can be illustrated with the following examples of highly deviant items¹. First, the positive deviation of *weak in the knees* with the Rarámuri in *joy*, *anger*, *surprise*, and *shame* seemed to be the result of a general emphasis or prominence of this body sensation across emotions. Cultural salience of *weak in the knees* is plausible given the traditional life context and cultural focus on the condition of the legs in Rarámuri culture. Running and long-distance stamina are traditionally highly valued among the Rarámuri, who are renowned for their ability in long-distance racing (sometimes more than 100 km cross-country; e.g., Bennett & Zingg, 1935; Kennedy, 1978).

Second, the negative deviation of *lump in the throat* with the Rarámuri in *sadness* is much more difficult to interpret in cultural terms. Inspection of the culture-specific rank order of this body sensation showed *lump in the throat* to score low on all emotions, even on those where other cultures scored higher (e.g., *sadness*, *disgust*). This may mean that the body sensation is absent or at least not elaborated upon in Rarámuri culture (cultural hypocognizing; Levy, 1984), but it is also possible that the translation of the item into Rarámuri was not equivalent.

¹ Highly deviant items were identified by the difference (absolute) between the culture-specific rank and the average rank, averaged across emotions. *Weak in the knees* with the Rarámuri was the most deviant body sensation across cultures (mean deviation = 4.03), *lump in the throat* with the Rarámuri was the second most deviant (mean deviation = 3.33), and *goose-flesh* with the Javanese was the fifth most deviant (mean deviation = 1.97).

Table 3

Correlations (Spearman's ρ) per Emotion of Cultural Rank Orders of Body Sensations With the Average Rank Order in Table 2

Emotions	Samples					Mean ρ
	Students			Non-students		
	Indonesian	Belgian	Mexican	Rarámuri	Javanese	
	Body Sensations ($N = 12$)					
Joy	.79**	.95**	.87**	.67*	.87**	.83
Anger	.86**	.98**	.93**	.55	.96**	.86
Fear	.98**	.90**	.94**	.82**	.86**	.90
Sadness	.92**	.76**	.71**	.57	.82**	.76
Disgust	.94**	.92**	.89**	.60*	.92**	.85
Surprise	.67*	.91**	.70*	.74**	.37	.68
Shame	.94**	.86**	.85**	.80**	.84**	.86
Mean ρ	.87	.90	.84	.68	.81	

* $p < .05$. ** $p < .01$.

Third, the positive deviation of *goose-flesh* with the rural Javanese in *fear* and *surprise* is likely to be the result of a culture-specific association. Translation inequivalence or other method artifacts are an unlikely explanation; the rural Javanese use of *goose-flesh* with other emotions, and the use of other body sensations with *fear* and *surprise* corresponded to the association patterns found for the other samples. The typical experience of *goose-flesh* (*merinding*) in traditional Javanese culture when seeing a ghost or spirit, an experience also strongly associated with fear and startle, can provide a plausible account.

Discussion

The main aim of the present study was to examine the extent of cross-cultural variation in body sensations associated with emotions when non-Western, non-student samples are included in culture comparative research. Contrary to what would be expected if body sensations were a socially constructed emotion component, both parametric and non-parametric analyses pointed to limited cultural variation in the data. Replication of the results of Scherer and Walbott's (1994) study with two rural samples from opposite sides of the globe suggests cross-cultural generalizability of body sensation profiles with emotions.

Rural samples contributed more to cultural variation than the student samples, although this effect was limited (see also Van Hemert et al., 2002).

This supports the need for the inclusion of such samples in order to improve the validity of cross-cultural studies (Hupka et al., 1996; Philippot & Rimé, 1997). In addition to the estimates of global cultural variation used in previous research, the study explicitly focused on the identification of culture-specific deviations against the background of culturally similar profiles. The most salient deviations were observed for *weak in the knees* with the Rarámuri, and for the association between *goose-flesh* and *fear* with the Javanese. Overall it can be concluded that the methodological improvements suggested by Rimé et al. (1990) increased cultural variation, but that body sensation profiles with emotions still showed high generalizability across cultures. This finding has implications for both emotion theory and cross-cultural psychology.

Emotion theory has seen a gradual decrease of the emphasis on bodily aspects of affective experience, from James' (1884) peripheral emotion theory to the emphasis of cognitive determinants of experienced arousal in emotions (Valins, 1972). Like previous studies on body sensations (e.g., Rimé & Giovanni, 1986; Scherer, Summerfield, & Wallbott, 1983; Scherer & Wallbott, 1994), the results indicate that these are associated with emotions in a similar way across cultures, strongly suggesting that body sensations are an important component of emotional experience. The replicable differentiation of body sensations across emotions indicates their relevance for contemporary emotion theory, next to more established components such as appraisals, facial expressions, and action tendencies (Mesquita & Frijda, 1992).

The finding of substantial cross-cultural similarities limits explanations regarding the origin of experienced body sensations to psychological functions that are themselves cross-culturally similar. The most obvious candidate is universal emotion physiology, but ambiguous findings in the current empirical record on physiological differentiation (see Levenson et al., 1990; Zajonc & McIntosh, 1992) and self-perception of physiological processes (see Rimé et al., 1990) make this explanation imprecise, and hence problematic. The alternative explanation of cognitive construction of bodily concomitants of emotions (see Philippot & Rimé, 1997) cannot be ruled out, but would mean that such construction occurs in a very similar way across cultures, which is implausible. A third explanation could be found in the embodied memory of emotional experiences (see Barsalou, Niedenthal, Barbey, & Ruppert, in press); that is, body sensations are an intrinsic part of the cognitive representation of emotional experiences. This links the experience of physiological concomitants of emotions to the cognitive construction of emotional experiences, possibly explaining why retrospective experiences and stereotypic representations of bodily emotions concomitants are very much alike. Such a relationship could

also explain why bodily metaphors and metonyms are prominent elements of emotion talk in cultures around the globe (Kövecses, 2000).

For cross-cultural psychology, body sensations do not only provide an accessible entry for the comparison of affective experience across cultures (LeVine, 1973), but also an illustration of the need to consider simultaneously cultural invariance and variations in studying psychological phenomena. Many contemporary cross-cultural studies seem to take the position that differences between groups are culturally meaningful unless these have been proven to be artifacts (Matsumoto et al., 2001). A combined culture-specific and culture comparative approach, identifying cultural specificity with reference to a common standard, leads to a more precise search for cultural differences (Fontaine, Poortinga, Setiadi, & Markam, 2002). Rather than focusing on the universality-relativity dichotomy (see Manstead & Fischer, 2002), cultural differences should be seen as variations within the boundaries imposed by universal psychological processes (Poortinga & Soudijn, 2002).

Thus, in this study the correlations of cultural profiles with the average profile (Table 3) reflect an estimate of the range of cultural variation. The tentative interpretation of salient cultural deviations from this pattern (see Table 2) show how one can begin to make sense of such variation. Estimation of the range of variation is an empirical question and likely to become more refined when specific cultural deviations are identified as bias or culturally meaningful specificities. The culturally shared body sensation profiles may lead to the identification of more culture-specific deviations in future studies. Conversely, the investigation of cultural deviations in emotions, for example *surprise* with the Javanese or *anger* with the Rarámuri, may lead to more accurate estimates of cross-cultural generalizability of body sensation profiles. As such, detailed studies of culture-specific body sensations with emotions (e.g., Ameka, 2002) are complementary to global studies of the range of cultural variations in broad bodily categories (e.g., Scherer & Wallbott, 1994) with emotions, since both answer a different part of the same question.

In conclusion, there seems to be truth in James' (1884) claim of a central place for body sensations in shaping emotional experience. People from cultures around the world report embodied feelings of emotions. Although their exact feelings may vary, this variation is bounded by universal aspects of emotional experience; there are limits to the cultural definition of emotion. *Anger* will always be a "hotter" emotion than *fear*, whether this is felt in blood rushing to the head or in boiling intestines.

Appendix

Table A1

Effects of Culture and Emotion in Repeated Measures Analyses of Twelve Body Sensations

Body Sensation	Between-subjects		Within-subjects			
	Culture		Emotion		Emotion * Culture	
	MS_{error}^a	F^b	Wilks' Lambda	F^c	Wilks' Lambda	F^d
Lump in the Throat	4.89	57.27	0.42	98.78	0.55	11.67
Breathing Changes	4.70	30.94	0.51	70.27	0.57	10.87
Stomach Sensations	5.95	67.01	0.48	79.55	0.65	8.21
Feeling Cold	4.44	16.39	0.54	62.38	0.42	17.57
Feeling Warm	1.77	16.23	0.24	223.28	0.62	9.33
Feeling Hot	4.04	28.71	0.32	152.32	0.6	10.18
Heart Beats Faster	4.92	27.13	0.24	235.48	0.47	15.17
Sweating	5.87	13.84	0.44	90.76	0.61	9.59
Goose-flesh	4.27	34.12	0.56	57.80	0.51	13.50
Blushing	4.38	34.87	0.32	152.42	0.52	12.95
Weak in the Knees	5.46	15.17	0.46	84.20	0.38	20.11
Hot in the Eye	4.77	17.95	0.57	53.96	0.63	9.03

Note. All effects are significant ($p < .001$).

^a $df_{error} = 438$

^b $df = 4$

^c hypothesis $df = 6$; error $df = 433$

^d hypothesis $df = 24$; error $df = 1511.77$

Table A2*Rank Orders of Body Sensations per Emotion for the Five Samples*

Body Sensations	Samples				
	Students			Non-students	
	Indonesian	Mexican	Belgian	Rarámuri	Javanese
	Joy				
Lump in the Throat	5	8	10	10	12
Breathing Changes	3	5	5	6	2
Stomach Sensations	9	6	4	11	7
Feeling Cold	11	10	11	4	9
Feeling Warm	1	2	2	1	1
Feeling Hot	6	3	3	5	5
Heart Beats Faster	2	1	1	2	3
Sweating	7	7	7	7	4
Goose-flesh	10	12	8	12	10
Blushing	4	4	6	8	6
Weak in the Knees	12	9	9	3	11
Hot in the Eye	8	11	12	9	8
	Anger				
Lump in the Throat	3	4	5	9	5
Breathing Changes	2	2	2	3	3
Stomach Sensations	9	7	3	8	7
Feeling Cold	6	9	10	5	9
Feeling Warm	12	12	12	12	12
Feeling Hot	4	3	4	4	2
Heart Beats Faster	1	1	1	1	1
Sweating	8	6	6	6	8
Goose-flesh	11	11	11	11	11
Blushing	7	5	7	10	4
Weak in the Knees	10	8	8	2	10
Hot in the Eye	5	10	9	7	6

Table A2 continued

Body Sensations	Samples				
	Students		Non-students		
	Indonesian	Mexican	Belgian	Rarámuri	Javanese
	Fear				
Lump in the Throat	7	6	8	9	8
Breathing Changes	2	2	2	5	4
Stomach Sensations	8	3	3	7	7
Feeling Cold	4	7	6	3	3
Feeling Warm	12	12	12	12	12
Feeling Hot	9	9	9	4	9
Heart Beats Faster	1	1	1	1	1
Sweating	5	4	4	6	5
Goose-flesh	6	8	7	10	2
Blushing	11	10	11	11	11
Weak in the Knees	3	5	5	2	6
Hot in the Eye	10	11	10	8	10
	Sadness				
Lump in the Throat	1	1	1	8	5
Breathing Changes	2	5	4	4	4
Stomach Sensations	7	2	3	9	10
Feeling Cold	5	3	5	3	2
Feeling Warm	12	12	8	12	12
Feeling Hot	10	9	10	2	7
Heart Beats Faster	6	6	6	1	3
Sweating	8	8	7	6	8
Goose-flesh	9	7	11	10	11
Blushing	11	10	12	11	9
Weak in the Knees	3	4	9	7	1
Hot in the Eye	4	11	2	5	6

Table A2 continued

Body Sensations	Samples				
	Students			Non-students	
	Indonesian	Mexican	Belgian	Rarámuri	Javanese
	Disgust				
Lump in the Throat	4	4	6	11	2
Breathing Changes	1	5	4	3	4
Stomach Sensations	2	1	1	1	1
Feeling Cold	7	3	2	6	5
Feeling Warm	12	12	12	12	12
Feeling Hot	11	10	10	5	10
Heart Beats Faster	5	6	5	2	6
Sweating	8	8	8	8	8
Goose-flesh	3	2	3	9	3
Blushing	10	9	9	10	11
Weak in the Knees	6	7	11	4	7
Hot in the Eye	9	11	7	7	9
	Surprise				
Lump in the Throat	4	9	7	11	7
Breathing Changes	3	2	2	3	2
Stomach Sensations	8	7	3	9	8
Feeling Cold	11	12	9	4	4
Feeling Warm	2	4	11	7	10
Feeling Hot	6	3	5	5	9
Heart Beats Faster	1	1	1	1	1
Sweating	9	6	6	6	5
Goose-flesh	12	10	8	12	3
Blushing	5	5	4	8	11
Weak in the Knees	7	8	10	2	6
Hot in the Eye	10	11	12	10	12

Table A2 continued

Body Sensations	Samples				
	Students			Non-students	
	Indonesian	Mexican	Belgian	Rarámuri	Javanese
			Shame		
Lump in the Throat	5	4	7	10	8
Breathing Changes	7	6	6	6	9
Stomach Sensations	10	7	5	9	6
Feeling Cold	8	9	9	4	2
Feeling Warm	12	12	12	12	12
Feeling Hot	3	3	3	3	3
Heart Beats Faster	1	2	2	1	1
Sweating	4	5	4	5	4
Goose-flesh	11	10	10	11	11
Blushing	2	1	1	7	5
Weak in the Knees	6	8	8	2	10
Hot in the Eye	9	11	11	8	7

CHAPTER 3

Assessing (non)identity of shame and guilt across cultures

In his novel called *Shame*, writer Salman Rushdie (1983) explained to his readers that the English emotion term *shame* cannot adequately render the emotion *sharam* that is central to his story. He argued that the meaning of *sharam* is much broader than the meaning of the English *shame*. To psychologists, such accounts of cultural differences in emotion terms prompt the question to what extent emotion processes underlying these terms are also culturally variable. Emotion scholars stand divided on this issue. Some contend that differences in word meaning indicate differences in emotional experiences (e.g., Menon & Shweder, 1994), but others argue that there is no perfect match between emotion words and emotion processes (e.g., Frijda, Markam, Sato, & Wiers, 1995), implying that there can be cross-cultural similarities in emotions even when terms are different (Ekman, 1994).

In spite of encompassing reviews (Mesquita & Frijda, 1992, Mesquita, Frijda, & Scherer, 1997), meta-analyses (Van Hemert, Poortinga, & Van de Vijver, 2003), and empirical culture-comparative studies (Scherer & Wallbott, 1994) that all indicate the existence of both cross-cultural similarities and differences in emotions, much of cross-cultural psychology still seems dominated by a dichotomy between universalism and cultural relativism of emotions. One reason that has been given for the persistence of this dichotomy is the absence of precise theories of where and how cultures differ in emotions (see Mesquita, 2001). Alternatively, it can also be argued that the theoretical lacuna is due to an inadequate empirical record, making it unclear where and how cultural differences in emotions can be expected. This is aggravated by lack of consensus on the interpretation of empirical findings of such differences (e.g., Ekman, 1994; Russell, 1994). Empirical clarity on cross-cultural variation in emotions is needed before any cultural theory of such differences can be formulated.

This chapter presents two empirical studies on shame and guilt that are meant to contribute to a more precise delineation of where cultures are similar and where they are different in these emotions. Shame and guilt were chosen because the empirical basis for the (non-)identity of these two social emotions is less clear than for the basic emotions that can be identified on the basis of facial

expressions (for a review see Matsumoto, 2001). Social emotions lack such distinct markers (see Izard, 1977). On the one hand, the importance ascribed to shame and guilt in current emotion psychology (e.g., Tangney & Dearing, 2002) suggests that these will be found in all cultures. On the other hand, the social nature of shame and guilt (see Kitayama & Markus, 1994; Tangney & Fischer, 1995) points to substantial cultural variation in these emotions.

Claims of cultural variation in shame and guilt have been fueled by the well-known distinction between shame-cultures and guilt-cultures by Ruth Benedict (1946). Benedict used this to describe differences in the regulation of moral behavior between Japan and the U.S.A., but she was unclear in indicating exactly where and how differences in shame and guilt should be found. Some scholars interpreted the distinction as categorical, implying that in shame cultures there is no room for an emotion of guilt (Mead, 1964), but such positions could not be maintained (see Ausubel, 1955; Piers & Singer, 1971). Others argued that differences should be found in the degree or emphasis on shame or on guilt (Sabini & Silver, 1997), resulting in lower guilt after transgression in shame cultures (Grinder & McMichael, 1963; McMichael & Grinder, 1966). However, these claims have also been disputed. For example, Lebra (1983) has argued that Japanese are especially prone to experiences of guilt, in contrast with their designation as a shame-culture.

Still, the distinction has been argued to be useful because it is related to differences in cultural values (Creighton, 1990), notably the distinction between individualist and collectivist cultures (Triandis, 1988). Individualism and collectivism (Hofstede, 1980) have enjoyed much popularity in the past decades in explaining cultural differences. However, the exact meaning of these concepts as cultural characteristics is not entirely clear (e.g., Berry, Poortinga, Segall, & Dasen, 2002; Oyserman, Coon, & Kimmelmeier, 2002). Predictions of cultural differences in shame and guilt have been contradictory. Triandis (1995) has argued that collectivists experience more shame, whereas Eid and Diener (2001) have argued that collectivists focus more on guilt.

Parallel to theoretical unclarity, empirical studies have reported cultural similarities and differences in a variety of characteristics. For example, cross-cultural differences have been reported on the intensity and frequency of shame and guilt experiences (e.g., Ha, 1995), the distinctness of these emotions (e.g., Marsella, Murray, & Golden, 1974; Retzinger, 1995; Wallbott & Scherer, 1995), and the types of situations in which they occur (e.g., Liem, 1997; Marcus & Kitayama, 1991; Stipek, 1995). Accounts range from broad statements that shame and guilt are cultural emotions par excellence (Lutz, 1988), to very specific findings that these emotions are closer to fear and further from anger in Indonesia than in the Netherlands (Fontaine, Poortinga, Setiadi, & Markam,

2002). Cultural similarities have also been reported, for example in ratings across situations (Hashimoto & Shimizu, 1988; Johnson et al., 1987), and in characteristics of emotional experiences (Fontaine et al., 2003; Hong & Chiu, 1992). All in all, these varied findings in empirical studies illustrate the divergence in approaches to the assessment of cross-cultural (non)identity of shame and guilt.

A major problem in assessing cultural variation is the absence of consensus on how to interpret the results of empirical studies. In experimental psychology it is common practice to test for statistically significant differences in scores between conditions. Many cross-cultural scholars follow the same procedure in culture-comparative studies, assuming that scores obtained from different cultural samples are directly comparable (i.e., they meet the psychometric condition of full-score equivalence, see Van de Vijver & Leung, 1997). However, this assumption is questionable given the quasi-experimental nature of cross-cultural research. Cultural samples vary on numerous characteristics and there is a high likelihood of bias in data (see Berry et al., 2002). This makes the straightforward interpretations of differences in mean scores between samples in terms fundamental cultural differences in emotions (e.g., Mesquita, 2001) questionable. The large a priori possibility of finding such differences, even in the absence of differences in the underlying psychological trait (see Poortinga & Malpass, 1986), makes testing for significant differences a poor strategy for estimating cultural variation.

In various extensive cross-cultural studies on emotions, Scherer and Wallbott (1994; Scherer, 1997; Wallbott & Scherer, 1988) have proposed that the interpretation of relative effect sizes is more informative about the extent of cultural variation (see also Matsumoto, Grissom, & Dinnel, 2001). Effects involving culture with relatively small effect sizes were taken to indicate only limited cross-cultural differences. Effect sizes can be seen as indicating the generalizability of cultural differences, but they do not resolve any problems of bias in the data.

A further step in this direction can be taken by distinguishing between various levels of equivalence of cross-cultural measurements. Van de Vijver & Leung (1997; see Poortinga & Van de Vijver, in press) have described three levels of equivalence that are now quite common in culture-comparative research. In the case of structural or functional equivalence, the same psychological trait is measured, but not necessarily on the same quantitative scale (cf. Celsius and Fahrenheit scales); in the case of metric equivalence the same trait is measured on the same quantitative scale, but not with the same scalar origin (cf. Celsius and Kelvin scales); in the case of scalar or full-score equivalence the same trait is measured on the same ratio scale (cf. Celsius and

Celsius). Van de Vijver and Leung have argued that equivalence of cross-cultural measurements cannot be assumed and should be empirically established for any level.

Two culture-comparative studies were conducted that assessed cultural variation in shame and guilt at different levels of equivalence. The aim of these studies was to generate empirical findings that may narrow down the range of plausible viewpoints on universality or cultural relativity in emotions. Hence, the focus is on the extent and level of cultural variation in shame and guilt rather than on testing categorical claims of similarities or differences (see Mesquita & Frijda, 1992). This required designs that allowed for the emergence of both cross-cultural similarities and differences and that tried to avoid the imposition of a priori categories upon the data (Fontaine et al., 2003; Russell, 1994). Important features of such designs are the selection of samples with divergent cultural background, and the interpretation of differences against the background of cross-culturally similarities (Fontaine, Poortinga, Setiadi, & Markam, 2002). Study 1 focused on the ratings of shame and guilt across a wide range of situations, and Study 2 focused on the association of various emotion components with ratings of shame and guilt.

Three major types of cross-cultural differences were examined: (i) in the experience of shame and guilt across situations (i.e., the factorial structure of the constructs of "shame" and "guilt"), (ii) in the relations of each of these two emotions with each other, with other emotions, and with various emotion components (i.e., the correlations of shame and guilt with other constructs), and (iii) in the relative intensity with which shame and guilt are experienced.

Study 1

Introduction

This study addressed the question to what extent similar ratings of shame and guilt would be obtained for a range of everyday situation between Indonesian and Dutch students. These countries were chosen because they can be seen as good representatives of the currently popular distinction between collectivist and individualist societies (Hofstede, 1980, 2001), and because previous studies between these samples allow for somewhat detailed expectations regarding differences in shame and guilt (Fontaine et al., 2002; Heider, 1991).

Because lay people often have difficulties in distinguishing shame and guilt, most assessments of these emotions make use of scenarios or situation descriptions (Tangney, 1996). Caution is needed when using situations as

stimuli because these may be interpreted differently across cultures, for example because of specific cultural concerns (see Mesquita, Frijda, & Scherer, 1997; Rodriguez Mosquera, Manstead, & Fischer, 2000). In the present study, participants were presented with a wide range of situations that originated from widely different regions, including both more proximate (i.e., Javanese for the Indonesians, and Flemish Belgians for the Dutch) and more distant (i.e., Rarámuri from Mexico) cultures. Although this does not remove any effects of cultural specificity in any separate situation, it should provide a better over-all estimate of cultural variation in shame and guilt.

An objection that can be raised against the comparison of emotion ratings across situations is that translations of emotion words in different languages do not map perfectly (Wierzbicka, 1992). This means that differences in ratings need not so much indicate differences in the underlying emotion processes, but rather reflect specific connotations of words (e.g., the uniquely positive connotation of "being aggressive" in the USA; Osgood, May, & Miron, 1975). With the Indonesians and Dutch this may also be the case, as Fontaine et al. (2002) found the linguistic equivalents of shame (i.e., *malu* and *schaamte*) and guilt (i.e., *bersalah* and *schuld*) to be related differently to other emotions that were found to be both linguistically and cognitively equivalent. In order to avoid such difficulties, participants were asked to rate situations using instruments in the English language. All participants were competent in the English language. This approach should provide a stronger test of cultural differences in shame and guilt than could be obtained with data collected with translated instruments. If previously found differences would be replicated, then this would strongly suggest that these were due to variation in the underlying emotion processes and not to mere linguistic differences.

Three types of possible cross-cultural differences were examined:

1. Studies that compared shame and guilt ratings across situations have reported that factorial structures of these ratings were similar among cultures (Hashimoto & Shimizu, 1988; Johnson et al., 1987). This suggests that structurally the emotions are equivalent. Hence, a first hypothesis was that the factorial structures of both shame ratings and guilt ratings would be equivalent between Indonesians and Dutch. It may be noted that lack of equivalence would suggest that an emotion "shame" or "guilt" is not the same construct in both cultures, rendering further comparisons meaningless (see Van de Vijver & Leung, 1997).

2. A recurring claim regarding cultural differences in shame and guilt is that these emotions are more distinct in Oriental, collectivist cultures than in Western, individualist cultures (Marsella, Murray, & Golden, 1974; Retzinger, 1995; Wallbott & Scherer, 1995). In addition, Fontaine et al. (2002) found that

shame and guilt were related more to fear and less to anger in Indonesia than in the Netherlands (see also Heider, 1991). This led to the second hypothesis that ratings of shame and guilt should be correlated stronger with each other in the Netherlands than in Indonesia, and that ratings of each of these two emotions should show higher correlations with anger, and lower correlations with fear in the Netherlands than in Indonesia.

3. A third type of differences pertained to intensity levels of emotions. Cross-cultural comparisons of ratings are particularly vulnerable to method bias (Van de Vijver & Poortinga, 1997) that affects all items in a study (e.g., response styles or acquiescence), so full-score equivalence, which is required for direct comparison of scores, can almost never be attained. Because of this, only relative differences in emotion ratings (i.e., differences in the target emotions after centering data on the cultural means of ratings on a larger number of emotions) were addressed in the present study. As was already mentioned, claims of cultural variation in emotion intensity levels are not consistent, so predictions were difficult to make. According to some authors, shame is experienced more intensely in collectivist/shame-cultures and guilt more intensely in individualist/guilt cultures (Grinder & McMichael, 1963; Ha, 1995; Triandis, 1995), but according to others collectivists experience more guilt (Eid & Diener, 2001; Lebra, 1983), or more shame as well as more guilt (Bierbrauer, 1992). Two separate expectations seemed to best represent the literature: (i) intensity ratings of shame should be relatively higher with Indonesians than with the Dutch, and (ii) ratings of guilt should be higher with Indonesians than with the Dutch.

Method

Participants

In the study participated 80 students enrolled in psychology at Tilburg University in the Netherlands (61 female, 18 male, 1 missing) with a mean age of 21.58 years ($SD = 6.57$), and 74 students enrolled in English language and literature at Sanata Dharma University in Indonesia (52 female, 22 male) with a mean age of 21.97 years ($SD = 1.77$). Before entering university, Dutch students had received a minimum of 6 years of education on the English language. At university, textbooks are frequently offered in English only and students are expected to be able to follow lectures in English. Indonesian participants followed a curriculum to become either a professional translator or a teacher of English. Preliminary probing of the stimulus materials ascertained that

participants in both samples had no difficulties with a questionnaire in the English language.

Instrument

There were two versions of the instrument, each consisting of a questionnaire with 105 short descriptions of situations, accompanied by a list of five emotions (*anger, guilt, sadness, shame, and fear*). Participants indicated the intensity with which they would experience each of the emotions for each situation, using a 6-point Likert-scale ranging from 0 ("I would not experience this emotion at all") to 5 ("I would experience this emotion very strongly").

Two versions were used because participants could not rate 210 situations without loss of accuracy due concentration problems or fatigue. Participants were arbitrarily assigned to one of two versions of the questionnaire; in version 1 participated 40 Dutch students (31 female, 9 male) and 36 Indonesian students (24 female, 12 male). In version 2 participated 40 Dutch students (30 female, 9 male, 1 missing) and 38 Indonesian students (28 female, 10 male).

The total set of 210 situations was composed of three sets of descriptions of everyday shame and guilt episodes gathered in two other studies of shame and guilt. Sixty-eight episodes were collected from Rarámuri Indians from Northern Mexico, 102 episodes with rural Javanese from Indonesia (see Chapter 4), and 40 episodes were gathered with Flemish Belgian students (Fontaine et al., 2003). Episodes in all three cultures were gathered with both female and male informants. The sampling of situations across these very different populations should make the total situation set more representative of the full range of naturally occurring shame and guilt situations than scenarios drafted by researchers or than situations gathered with a single population.

Situations were gathered in Indonesia and Mexico by local interviewers, asking participants if they could shortly describe an episode in their life in which they felt very much shame or guilt. Episodes were written down literally by the interviewers and translated from Rarámuri/Spanish and Javanese/Indonesian into English by several local bilinguals using a committee approach (Van de Vijver & Leung, 1997). Situations in Belgium were collected with a questionnaire asking participants to describe situations in which they experienced strong feelings of shame or of guilt. Translation into English of the Flemish situations was done using a back-translation approach. Descriptions of episodes were culturally decentered if necessary (e.g., names of places or specific animals were replaced by a generic term) and any sentences containing reference to shame or guilt, and closely related terms, were deleted or, if deletion would disturb the coherence of the description, replaced by a neutral

substitute (e.g., upset). The resulting situational descriptions were divided arbitrarily over the two versions of the questionnaire.

Procedure

Participants were requested to take part in a study about “emotional episodes as described by people from different parts of the world”. Participation was voluntary and anonymous. Indonesian students were paid 7,500 Indonesian rupiah (at the time of the study approximately 1 US dollar) and Dutch students received credits for a course requirement. Indonesians completed questionnaires during a lecture period and the Dutch completed questionnaires in a lecture room reserved for the purpose of the study. Completing the questionnaire usually took between 50 and 80 minutes.

Results

Before the analyses, missing values (0.08%) in the data were replaced by the group mean on the variable.

Structural similarities

Cross-cultural equivalence of shame and guilt ratings across situations was examined through comparison between the two samples of the factor solutions of shame ratings and of guilt ratings across the 105 situations in a version. In all four data sets (2 samples by 2 versions) a single factor was extracted for shame ratings (explaining 20% and 32% of variance) and for guilt ratings (explaining 20% and 27% of variance). Factorial agreement between samples was computed using Tucker’s phi, which is a measure of association of factor solutions. Values above .90 can be seen as indicators of acceptable factorial similarity (Van de Vijver & Leung, 1997). In version 1, congruence was slightly below the criterion value, both for shame ($\phi = .88$) and for guilt ($\phi = .85$). Inspection of factor loadings at item level showed that there were a few items with deviant factor loadings. For shame two situations out of 105 were the major reason why phi was lower than .90; exclusion of these items led to a phi of .90. With guilt, exclusion of seven situations out of 105 produced a phi of .90. The nine deviant situations originated from Javanese ($N = 5$; 5% of the situations), Belgians ($N = 2$; 5% of the situations), and Rarámuri ($N = 2$; 3% of the situations), providing no indication that cultural origin made a major contribution to inequivalence. In addition, no patterns could be found in the content of the inequivalent situations. In version 2, congruence was acceptable in both shame ($\phi = .93$) and guilt ($\phi = .93$), and no situations with clearly deviant factor loadings were observed.

Thus, for 201 out of 210 situations in this study, structural equivalence was found for both shame ratings and guilt ratings¹.

Correlations among emotions

For the examination of correlations among the five emotions, a single situation (210) x emotion (5) matrix was made per sample by combining the two versions of the questionnaire, where cells represent the mean ratings of an emotion on a situation. Because participants were distributed in an arbitrary manner between versions, sub-samples can be considered equally representative of the combined cultural sample.

Correlations between shame, guilt, and the other three emotions can be found in Table 1. Shame and guilt are correlated differently in the two samples. These two emotions are not significantly correlated with the Indonesians ($r = .04$, ns), while there is a significant positive correlation with the Dutch ($r = .38$, $p < .001$). The difference between these correlations is significant ($z = -3.66$, $p < .001$), suggesting that shame and guilt are more distinct emotions in Indonesia than in the Netherlands.

Table 1

Bivariate Correlations between Emotions for Indonesian and Dutch Participants (Based on 210 Situations)

Emotion	Shame	Guilt	Anger	Fear	Sadness
Shame	--	.04	-.21**	.23**	-.19*
Guilt	.38**	--	-.49**	.41**	.29**
Anger	-.19*	-.16*	--	-.27**	.18*
Fear	.34**	.27*	.03	--	.03
Sadness	.03	.16*	.55**	.15*	--

Note. Correlations above the diagonal were calculated for the Indonesian participants and values below the diagonal were calculated for the Dutch participants.

* $p < .05$. ** $p < .001$.

¹ There are two ways to deal with deviant situations. First, these can be seen as disturbing the cultural comparability of the shame and guilt ratings and be deleted for further analyses. This would reduce cultural variation in the shame and guilt ratings. Second, they can be seen as informative of cultural differences in shame and guilt and be included in further analyses. Given the relatively small number of deviant items (in total 9 out of 210), elimination of the situations did not markedly affect the results of the correlations ($r_{(shame,guilt)} = .38$ with $N = 201$ in the Netherlands and $r_{(shame,guilt)} = .03$ with $N = 201$ in Indonesia) or ANOVAs (version 1, repeated measures ANOVA with culture [4 levels] as between-subjects factor and emotion [5 levels] and situation [96 levels] as within-subjects factors produced similar results to those in Table 2, only $\eta^2 = .30$ for Situation and $\eta^2 = .37$ for Emotion * Situation). Hence, it was decided to leave the situations in the data set for further analyses.

As can be seen in Table 1, the hypothesized cultural differences in correlations of shame and guilt with the other emotions were not found. In both samples, shame and guilt were positively correlated with fear (no significant differences in correlations between samples, $ps > .05$) and negatively with anger (guilt more so in Indonesia, $z = 8.81$, $p < .001$). Also, correlations of shame and sadness were significantly different between the two samples ($z = -2.26$, $p < .05$): in Indonesia these emotions were negatively correlated, but in the Netherlands there was no significant correlation.

Relative differences in emotion intensities

Relative differences between samples in shame and guilt intensities were examined with repeated measures ANOVAs for each version, with culture (2 levels) as a between-subjects factor and emotion (5 levels) and situation (105 levels) as within-subjects factors. Prior analyses including gender yielded only very small main effects and interaction effects (all $\eta^2 < .03$). Hence, in further analyses gender was not included as a factor. Table 2 shows that results for the two versions were very similar except for the main effect of culture, which was significant in version 2, with Indonesians rating situations on average higher ($M = 2.40$, $SD = 0.70$) than the Dutch ($M = 2.03$, $SD = 0.55$).

In both versions the main effect of emotion showed large effect sizes, suggesting strong differences between emotions in average intensity ratings. Pairwise comparisons of emotions (using Bonferroni adjustment for multiple comparisons with $\alpha = .05$) showed *shame* to be rated significantly higher than all other emotions. *Guilt* was second in average intensity. The higher ratings for shame and guilt indicate that the manipulation (selection of shame and guilt situations) can be taken as successful.

The same patterns of differences were found in pairwise comparisons (Bonferroni with $\alpha = .05$) within each version and culture. In both cultures *shame* (Indonesia: $M = 3.13$, $SD = 0.63$; Netherlands: $M = 3.10$, $SD = 0.65$) was rated significantly higher than all other emotions. *Guilt* (Indonesia: $M = 2.77$, $SD = 0.59$; Netherlands: $M = 2.39$, $SD = 0.58$) was rated higher than *sadness* (Indonesia: $M = 2.42$, $SD = 0.86$; Netherlands: $M = 2.14$, $SD = 0.89$), *fear* (Indonesia: $M = 2.01$, $SD = 0.75$; Netherlands: $M = 1.43$, $SD = 0.73$), and *anger* (Indonesia: $M = 1.41$, $SD = 0.65$; Netherlands: $M = 1.67$, $SD = 0.82$).

Prior to comparisons of shame and guilt ratings between cultures, ratings in each version were centered on the sample mean (calculated over all five emotions and 105 situations). One-sided t tests (Indonesians were expected to be higher on shame and on guilt) indicated that there were no significant differences in shame in version 1 of the instrument, $t(74) = 0.60$, *ns*, or version 2, $t(76) = 1.66$, *ns*. Guilt was also not different in version 2, $t(76) = -0.48$, *ns*,

but significantly higher for the Indonesians ($M = 2.75$, $SD = 0.61$) than for the Dutch ($M = 2.47$, $SD = 0.51$) in version 1, $t(74) = -2.18$, $p < .05$. Calculation of effect size using Cohen's d (Cohen, 1988)² indicated that the difference in guilt was of moderate size ($d = 0.50$). Thus, in only one out of four instances were relative differences between samples found in shame or guilt intensity.

Table 2

Repeated Measures ANOVAs for Each Version with Culture (2) as Between-Subjects Factor and Emotion (5) and Situation (105) as Within-Subjects Factors

Source	Version 1			Version 2		
	<i>df</i>	F	η^2	<i>df</i>	F	η^2
Between-subjects						
Culture (C)	1	0.13	.00	1	6.61*	.08
Error (C)	73	(34.23)		76	(41.44)	
Within-subjects						
Emotion (E)	4	150.86**	.65	4	172.91**	.66
E x C	4	9.78**	.04	4	12.77**	.05
Error (E)	292	(22.78)		304	(18.90)	
Situation (S)	104	35.60**	.31	104	37.16**	.31
S x C	104	5.92**	.05	104	6.21**	.05
Error (S)	7592	(2.22)		7904	(2.54)	
E x S	416	48.67**	.38	416	50.18**	.38
E x S x C	416	6.01**	.05	416	5.85**	.04
Error (E x S)	30368	(1.38)		31616	(1.29)	

Note. Values in parentheses are mean square errors.

* $p < .05$. ** $p < .01$.

The main effect for situations in Table 2 indicated differences in mean ratings between situations. Minor cultural variation in these ratings was suggested by the relatively small effect sizes of the situation x culture interaction. The large effect for the emotion x situation interactions indicated that emotions were rated differentially across situations, and thus that some situations more typically elicit certain emotions (e.g., *shame* or *guilt*) more than others. The relatively small three-way interaction again suggested limited cultural variation in this effect.

² Cohen's $d = (M_1 - M_2) / \sigma_{\text{pooled}}$, where $\sigma_{\text{pooled}} = \sqrt{[(\sigma_1^2 + \sigma_2^2) / 2]}$

Discussion

The high average ratings for guilt and shame are evidence that the situation descriptions presented to the participants were indeed recognized as pertaining to these emotions. In addition, it was found that the constructs of shame and guilt were structurally equivalent across cultures. The nine situations out of 210 for which equivalence was doubtful can be of interest in a further inquiry of bias or cultural differences, but the finding of evidence for equivalence of the remaining 201 situations suggested that shame and guilt were largely equivalent between Indonesians and Dutch. This interpretation is strengthened by the fact that cultural origin of the situations did not have noticeable effects on the equivalence of shame and guilt ratings.

Also in line with the expectations were the differences between Dutch and Indonesians in correlations between shame and guilt ratings. The assertion that shame and guilt are more distinct emotions in Asian/collectivist societies than in Western/individualist societies (e.g., Marsella, Murray, & Golden, 1974; Wallbott & Scherer, 1995) was supported; shame and guilt were not related in Indonesia, but positively related in the Netherlands. This suggests that shame and guilt may be more confounded experiences in the Western conception of these emotions (Scheff, 1995). Given the structural equivalence in shame and guilt ratings, this finding is unlikely to be caused by differences between the emotion constructs in the two samples. Contrary the expectations, no differences were found in the relatedness of shame and guilt with other negative emotions (see Fontaine et al., 2002; Heider, 1991).

Also contrary to expectations, relative differences in the intensity of shame and guilt intensity were only found in one out of four tests. This means that interpretation should be done with caution. The relatively higher rating of guilt by the Indonesians in version 1 concords with suggestions by Eid and Diener (2001) and Lebra (1983) that guilt is more salient in Asian/collectivist societies, but the absence of any difference in guilt in version 2 does not warrant an explanation in terms of such broad cultural characteristics.

Study 2

Introduction

The next step in the assessment of cultural variation in shame and guilt was to look at emotion components associated with either shame or guilt. Componential theories (e.g., Frijda, 1986) emphasize that emotional

experiences consist of an array of characteristics in several emotion components, such as appraisals, body sensations, and action tendencies. In addition, reviews suggest that cultural variation in emotions can differ from one component to the other (Mesquita & Frijda, 1992; Mesquita, Frijda, & Scherer, 1997). Because in Study 1 structural equivalence was found for words of shame and guilt, in Study 2 it was expected that structural equivalence of emotion components associated with shame and guilt might also be found between Indonesians and Dutch.

Distinct emotion components for shame and guilt have been suggested in both theoretical and empirical analyses. Early conceptions distinguished these emotions on the basis of an internal or external locus of sanction (e.g., Parsons & Shils, 1952), with shame originating from exposure of one's transgression or flaws to an external audience, and guilt from a violation of one's own standards of conduct or condemnation by an internalized authority figure. Recent conceptions mostly follow Lewis (1971), who posited that the focus of negative affect pertains to the whole self in shame, and to a concrete behavior in guilt. This self – behavior distinction has been extensively studied by Tangney and colleagues (e.g., Tangney, 1995, 1998; Tangney & Dearing, 2002) and is suggested to explain distinct experiences, motivations, and behaviors for shame and guilt. There seems to be evidence for both conceptions, with shame relating both to a focus on the self and to public exposure, and guilt both to a focus on the behavior and to internal morality (e.g., Fontaine et al., 2003; Smith, Webster, Parrott, & Eyre, 2002). Characteristics of shame and guilt found in empirical studies also tend to be compatible with both conceptions (e.g., Frijda, 1993; Frijda, Kuipers, & Ter Schure, 1989; Manstead & Tetlock, 1989; Mauro, Sato, & Tucker, 1992; Roseman, Antoniou, & Jose, 1996; Roseman, Wiest, & Schwartz, 1994; Scherer, 1997; Tangney, Miller, Flicker, & Barlow, 1996; Wallbott & Scherer, 1995).

There are indications that some of the shame and guilt characteristics are shared across cultures. For example, Wallbott and Scherer (1995; Scherer & Wallbott, 1994) found similarities in emotion components associated with shame or guilt. Hong and Chiu (1992) reported strong resemblance of shame and guilt experiences by Chinese compared to Western samples (see also Mingyi & Yianli, 2002). A recent study by Fontaine et al. (2003) in Peru and Belgium found that distinctions between shame and guilt across various emotion components were very similar between these cultures.

For the present study, 38 characteristics from six emotion components were selected as well as nine emotion terms that have been reported to be more typical of either shame or guilt experiences. The emotion components were

appraisals, self-experiences, action tendencies, body sensations, rumination and, social sharing.

Appraisals. Shame was expected to be more related to appraisals of (1) being at the center of attention, (2) others disapproving of what one has done, (3) harm to one's reputation, (4) having lost control over the situation, (5) not having expected what happened, and (6) falling short of the expectations of others. Guilt was expected to be related more to appraisals of (7) having done damage to someone, (8) being responsible for what happened, (9) having violated a social or moral norm, (10) deserving to be punished, and (11) falling short of one's own expectations (see Fontaine et al., 2003; Frijda, 1993; Frijda, Kuipers, & Ter Schure, 1989; Manstead & Tetlock, 1989; Mauro, Sato, & Tucker, 1992; Roseman, Antoniou, & Jose, 1996; Roseman, Wiest, & Schwartz, 1994; Smits & De Boeck, 2003).

Self-experiences. Of both emotions, shame is reported to involve a stronger focus on the self. Shame was expected to involve experiences of the self as (1) confused, (2) isolated from others, (3) powerless and small, and (4) weak and incompetent. Guilt was expected to involve experiences of being a (5) bad person (see Fontaine et al., 2003; Roseman, Wiest, & Schwartz, 1994; Tangney, Miller, Flicker, & Barlow, 1996).

Action tendencies. Shame was expected to be related more to tendencies of (1) avoiding the gaze of others, (2) hiding oneself from others, (3) smiling about what happened, (4) improving oneself. Guilt was expected to be related more to tendencies of (5) apologizing, (6) changing future behavior, (7) explaining what happened to others, (8) punishing oneself, and (9) repairing damage done (see Fontaine et al., 2003; Frijda, 1993; Frijda, Kuipers, & Ter Schure, 1989; Roseman, Wiest, & Schwartz, 1994; Smits & De Boeck, 2003).

Body sensations. Shame is reported to be the emotion that involves more physical sensations, especially sensations of activation. Hence, shame was expected to be associated with (1) blushing, (2) feeling warm, (3) trembling, (4) heart beating faster, (5) sweating, and (6) feeling weak in the limbs. Guilt was expected to be associated with (7) getting pale, (8) feeling cold, and (9) feeling a lump in the throat (see Roseman, Wiest, & Schwartz, 1994).

Rumination. Because shame is reported to be the more painful emotion (Tangney, Miller, Flicker, & Barlow, 1996), it was expected to be related more to (1) trying to forget about what happened, and guilt more to (2) ruminating about what happened (see Smits & De Boeck, 2003; Rimé, Mesquita, Philippot, & Boca, 1991).

Social sharing. For the same reason shame was expected to lead to (1) avoiding others from knowing what happened, and guilt to (2) talk to others about what happened (see Rimé, Mesquita, Philippot, & Boca, 1991).

Emotion terms. Among the emotion terms were (1) shame and (2) guilt. Other emotions that were expected to be more related to shame were (3) fear, and (4) angry with others. Emotions that were expected to be more related to guilt were (5) regret, (6) sadness, (7) remorse, (8) disappointed with oneself, and (9) angry with oneself (see Fontaine et al., 2003; Heider, 1991; Tangney, Wagner, Fletcher, & Gramzow, 1992).

In order to investigate whether cross-cultural differences in shame and guilt could be explained by differences between individualist and collectivist cultures, the samples of Study 1 were extended with Mexicans. In many studies comparisons between individualist and collectivist cultures amount to comparisons between Asian and Western (i.e., U.S.A./European) samples (Oyserman, Coon, & Kemmelmeier, 2002). The Mexicans represent a culture that is high on collectivism (Hofstede, 1980, 2001) but that is not Asian, providing a better test for an explanation differences in terms of this dimension. In addition, a sample of Flemish Belgians was included, who share a common language and much of their cultural heritage with the Dutch. This allowed for an estimate of a base-rate variation that can be expected between two highly related cultural samples.

In Study 1, structural equivalence was found for shame and guilt using an instrument in the English language. This suggests that the underlying emotion processes are also similar. In Study 2 instruments were translated into the local language. If shame and guilt are equivalent across cultures, then structural equivalence should also be found using linguistic equivalents in the participant's native language (see Fontaine et al., 2002).

Following the results from Study 1, it was hypothesized that:

1. Emotion components associated with either shame or guilt should be structurally equivalent in all four samples.
2. Ratings of shame and guilt should be correlated stronger in Belgium and the Netherlands than in Indonesia and Mexico.
3. Ratings of guilt should be relatively higher (i.e., after centering on the cultural mean) in Indonesia and Mexico than in Belgium and the Netherlands.
4. Limited cross-cultural differences should be found in terms of relative effect sizes in ANOVA analyses.

Method

Participants

In the study participated 481 undergraduate students: 115 Flemish-speaking students (90 female, 25 male) at the Catholic University of Leuven in Belgium

with a mean age of 19.73 ($SD = 1.62$), 120 students (75 female, 45 male) at Sanata Dharma University in Indonesia with a mean age of 21.30 ($SD = 1.23$), 126 students (101 female, 25 male) at the Universidad Autónoma de Ciudad Juárez in Mexico with a mean age of 22.65 ($SD = 6.19$), and 120 students (94 female, 26 male) at Tilburg University in the Netherlands with a mean age of 19.93 ($SD = 3.34$). Participation was voluntary and anonymous.

Belgian and Dutch students participated in partial fulfillment of a course requirement. Indonesian students were paid 7,000 Indonesian rupiah (at the time of the study approximately 1 US dollar). Mexican students participated within the frame of a series of guest lectures on cross-cultural psychology.

Instrument

Each of the three versions of the instrument consisted of a questionnaire with 5 short situation descriptions, each accompanied by a list of 47 emotion characteristics (11 appraisals, 5 self-experiences, 9 action tendencies, 9 body sensations, 2 rumination, 2 social sharing, and 9 emotion words). Situations were provided in a separate booklet. On the response sheets, participants indicated the intensity with which they would experience each of the emotion components for each situation, using a 6-point Likert scale ranging from 0 (*not at all*) to 5 (*very strongly*).

Preliminary tests of the instrument showed that 5 situations was about the maximum number that students could rate without loss of accuracy due to concentration problems of fatigue. This increased the possibility of finding differences due to situation-specific factors that would not be representative of the general domains of shame and guilt. In order to assess characteristics of shame and guilt across a wider range of situations, three versions of the instrument were created, each with a set of 5 situations.

Within each sample, participants were arbitrarily divided over 3 versions of the questionnaire. In Version 1 participated 164 students (40 Belgians, 41 Indonesians, 41 Mexicans, and 42 Dutch); in Version 2 participated 161 students (38 Belgians, 40 Indonesians, 43 Mexicans, and 40 Dutch); and in Version 3 participated 156 students (37 Belgians, 39 Indonesians, 42 Mexicans, and 38 Dutch).

The total set of 15 situations consisted of strong *shame* ($N = 5$), strong *guilt* ($N = 5$), and strong *shame* and *guilt* ($N = 5$) evoking situations selected on the basis of Study 1. For each of the 201 equivalent situations in Study 1, difference measures ($diff$)³ were calculated between ratings of shame and of guilt. These

³ Difference $diff = (M_{shame} - M_{guilt}) / \sqrt{(\sigma_{shame}^2 + \sigma_{guilt}^2 - 2 * r_{(shame, guilt)} * \sigma_{shame} * \sigma_{guilt})}$

can be interpreted similarly to Cohen's d (Cohen, 1988). Situations were selected from Study 1 on the basis of the following criteria: (i) a large difference ($|diff| > .80$) between shame and guilt ratings for the strong shame and the strong guilt situations and a small difference ($|diff| < .20$) between these emotions for the strong shame plus guilt situations, (ii) at most a small effect ($\eta^2 < .03$) for culture and gender in repeated measures ANOVA analyses per situation with culture (2) and gender (2) as between-subject factors and emotion (5) as within-subject factor, (iii) average ratings higher than 3.5 on the target emotions (i.e., shame, guilt, or shame and guilt), (iv) average ratings lower than 2.5 on the other emotions.

Situations were divided over the three versions in such a way that each version contained at least one situation from all three categories (i.e., shame, guilt, or shame and guilt evoking situations). Each version started with a situation from a different category and situations of the same category within one version were never in consecutive positions.

Situation descriptions were adapted so that the gender of all persons in the situation descriptions was the same as that of the participant: female participants received situations featuring only females, male participants received the same situations featuring males. The translations of the situations from English into Indonesian and Spanish were made by several local bilinguals, using a committee approach (Van de Vijver & Leung, 1997). The Dutch translation was made using a back-translation approach.

Results

Prior to the analyses, missing values in the data ($< 0.01\%$) were replaced by the sample mean on the variable.

Correlations among emotion characteristics

In order to examine the relationships among emotion characteristics, the three versions were combined in a situation (15) x item (47) matrix for each sample separately, with each cell representing the mean rating of an item in a situation. Combining the three versions limits the interpretation of data to sample-level, but it allows for a more stable estimate of relations between the emotion characteristics on the basis of all 15 situations.

Bivariate correlations were calculated between all 47 items on the ratings across 15 situations. Table 3 shows for all samples the correlations both of shame-ratings and of guilt-ratings with ratings of the other emotion characteristics, and also of these emotions with each other. The correlations

between shame and guilt were not significant in any sample, indicating that these emotions were rated as independent constructs within the domain of situations that were selected for this study. In addition, many emotion characteristics were related strongly either to shame or to guilt. In all four samples, the correlation patterns of variables with shame and with guilt were strongly negatively correlated (between $-.81$ and $-.56$ across samples). These correlation patterns were also very similar between samples. Guilt patterns correlated between $.89$ and $.99$ across samples, and shame patterns between $.85$ and $.96$. The correlations between Belgians and Dutch were highest (i.e., $.99$ for guilt and $.96$ for shame). These results indicated both divergence between shame and guilt patterns within samples, and convergence between samples for both the correlation pattern of shame and for that of guilt. There are some salient between-sample differences in these patterns (e.g., with *unexpected*), but these are relatively few compared to the similarities.

Dimensions underlying the correlations

In order to examine cultural variation in the complete correlation matrices, for each sample these were represented along a single dimension using Multidimensional Scaling (Proxscal in SPSS 11.5). With MDS, correlations can be treated as measures of dissimilarity between items, with negatively correlated items positioned further apart and positively correlated items positioned closer together. In each sample, a unidimensional representation was sufficient to account for $.96$ to $.98$ of the dispersion.

The individual sample representations were then compared using a Generalized Procrustes Analysis (GPA, Commandeur, 1996). GPA calculates a centroid configuration of the four samples representations through transformations that leave the relative distances between items intact (see Fontaine et al. 2003). Generally, a fit $> .90$ (81% of the squared distances accounted for) can be seen as an indication of cross-cultural similarities in the sample representations. GPA rotation resulted in a centroid configuration that could account for 86% of the squared distances in the four sample representations. Inspection of fit at item level showed that for 12 items the centroid accounted for less than 64% of the squared distances. Most cross-cultural differences could be found in these items. In addition, a GPA with only the Belgian and Dutch representations produced a near perfect fit, accounting for 98% of the squared distances in both samples. Because the cluster of two nearly identical samples might lead to an overestimation of cross-cultural similarities if both were included separately in cross-cultural comparisons, it was decided to use their centroid configuration to represent the combined samples in subsequent analyses.

Table 3*Correlations Between Ratings of Shame, Ratings of Guilt, and Ratings of Other Emotion Characteristics for Four Cultures*

Items	Predicted association	Mexicans		Dutch		Indonesians		Belgians	
		Guilt	Shame	Guilt	Shame	Guilt	Shame	Guilt	Shame
Guilt		--	.04	--	-.28	--	-.34	--	-.37
Shame		.04	--	-.28	--	-.34	--	-.37	--
Center of attention	Shame	-.34	.72**	-.77**	.61*	-.48	.79**	-.71**	.71**
Others disapprove	Shame	.95**	.11	.90**	-.05	.88**	-.01	.90**	-.11
Harms reputation	Shame	.76**	.53*	.39	.45	.52*	.42	.31	.58*
Lost control	Shame	.91**	.34	.91**	-.10	.69**	.30	.93**	-.12
Unexpected	Shame	.57*	.26	-.29	.55*	.42	.20	-.27	.46
Expectations others	Shame	.89**	-.08	.90**	-.20	.91**	-.45	.91**	-.31
Done damage	Guilt	.96**	.02	.97**	-.18	.99**	-.36	.94**	-.30
Responsible	Guilt	.95**	-.01	.89**	-.06	.94**	-.18	.97**	-.25
Norm violated	Guilt	.61*	.54*	.08	.71**	.32	.66**	.12	.50
Deserve punishment	Guilt	.91**	.29	.90**	.02	.91**	-.03	.88**	.01
Personal expectations	Guilt	.89**	.30	.82**	.04	.49	.22	.83**	.00
Confused	Shame	.44	.68**	-.33	.75**	-.14	.56*	-.46	.73**
Isolated	Shame	.65**	.44	-.23	.45	.50	.46	-.18	.39
Powerless and small	Shame	.55*	.72**	-.46	.77**	-.04	.76**	-.41	.65**
Weak person	Shame	.58*	.55*	.25	.52*	.14	.62*	.07	.60*
Bad person	Guilt	.96**	.16	.93**	-.09	.71**	.29	.88**	.02
Evade looks	Shame	-.27	.83**	-.69**	.73**	-.41	.92**	-.65**	.84**

Table 3 continued

Items	Predicted association	Mexicans		Dutch		Indonesians		Belgians	
		Guilt	Shame	Guilt	Shame	Guilt	Shame	Guilt	Shame
Hide	Shame	-.22	.90**	-.68**	.75**	-.41	.85**	-.61*	.89**
Smile	Shame	-.87**	.19	-.90**	.26	-.94**	.39	-.89**	.32
Improve self	Shame	.90**	.12	.85**	-.06	.66**	.30	.84**	-.03
Apologize	Guilt	.83**	-.37	.80**	-.52*	.79**	-.55*	.79**	-.64**
Change behavior	Guilt	.92**	.19	.76**	.09	.57*	.26	.76**	-.02
Explain	Guilt	.40	-.35	.49	-.46	.49	-.73**	.33	-.58*
Punish self	Guilt	.89**	.34	.87**	.00	.59*	.37	.85**	.11
Repair	Guilt	.92**	-.30	.94**	-.30	.88**	-.35	.97**	-.46
Blushing	Shame	-.38	.78**	-.78**	.67**	-.63*	.87**	-.85**	.70**
Feeling warm	Shame	-.14	.77**	-.65**	.75**	-.37	.84**	-.64**	.77**
Trembling	Shame	.10	.72**	-.20	.70**	-.10	.76**	-.21	.75**
Heart beats faster	Shame	.16	.68**	-.31	.78**	-.18	.78**	-.35	.78**
Sweating	Shame	.02	.81**	-.41	.76**	-.14	.78**	-.35	.86**
Weak limbs	Shame	.08	.74**	.22	.50	-.06	.80**	.08	.58*
Lump in the throat	Guilt	.71**	.25	.71**	.26	.05	.69**	.50	.31
Getting pale	Guilt	.41	.76**	.43	.34	-.13	.88**	.27	.52*
Feeling cold	Guilt	.26	.74**	.46	.17	.03	.78**	.47	.35
Ruminating	Guilt	.65**	.46	.54*	.33	.07	.66**	.48	.29
Trying to forget	Shame	.16	.63*	-.71**	.45	-.53*	.65**	-.84**	.64*
Talk to others	Guilt	.30	.10	.40	.15	.22	-.40	.18	-.19

Table 3 continued

Items	Predicted association	Mexicans		Dutch		Indonesians		Belgians	
		Guilt	Shame	Guilt	Shame	Guilt	Shame	Guilt	Shame
Conceal	Shame	.35	.66**	-.04	.67**	-.14	.71**	.07	.72**
Fear	Shame	.48	.49	.05	.54*	.37	.58*	.06	.59*
Angry with others	Shame	.04	.44	-.14	.37	-.05	.66**	-.15	.64**
Regret	Guilt	.94**	-.07	.92**	-.23	.89**	-.02	.95**	-.44
Sadness	Guilt	.88**	.13	.69**	.19	.75**	-.01	.74**	-.05
Remorse	Guilt	.97**	.01	.97**	-.18	.90**	-.03	.97**	-.38
Disappointed with self	Guilt	.87**	.39	.89**	.06	.62*	.38	.87**	.01
Angry with self	Guilt	.87**	.36	.77**	.29	.48	.53*	.78**	.16

* $p < .05$. ** $p < .01$.

In a subsequent GPA on the Indonesian, Mexican and joint Belgian/Dutch representations, the 12 items with lower fit were treated as culture-specific items. This means that they were not included in the calculation of the fit of the centroid configuration, but that their position within this configuration could be determined on the basis of the other items. This allowed for an inspection of culturally different items within the frame of a cross-culturally shared configuration. The GPA on the 35 culturally similar items produced a centroid configuration that could account for 96% of the squared distances, indicating an excellent fit. This configuration is depicted in Figure 1, with items plotted along a single (guilt-shame) dimension. Because of the transformation of correlations into dissimilarity measures and subsequent GPA, the scale values have no direct meaning; important are the relative distances between the items, representing the degree to which these are related (exact positions and proportions of squared distances accounted for can be found in Table A1).

In Figure 2, culturally different items are depicted for each sample on the cross-culturally shared dimension in Figure 1. Items were ordered according to the magnitude of cross-cultural differences, calculated by the mean of absolute item distances between samples, with the least congruent item first (for all items exact positions and mean absolute distances can be found in Table A2). The positions of shame and guilt were added to facilitate interpretation.

Relative differences in shame and guilt intensities

For comparison of relative differences in intensities, data were centered on the cultural mean across all components and five situations in a version. For both shame ratings and guilt ratings, repeated measures ANOVAs were done with culture (4) as between-subjects factor and emotion (5) as within-subjects factor. The effects of culture were significant in two out of three versions for shame ($ps < .001$) and also for guilt ($ps < .001$). Post-hoc comparisons (Tukey's honestly significant difference with $\alpha = .05$) showed that Indonesians, but not Mexicans, rated shame lower than Dutch and Belgians, and that Indonesians rated guilt higher than the other three samples.

Estimates of the extent of cultural variation

The general extent of variation in the data on a metric level was assessed in each version of the instrument by a repeated measures ANOVA with culture (4) as between-subjects factor, and situation (5) and item (47) as within-subject factors. In the three analyses, all main effects and interactions were significant ($ps < .01$). Table 4 shows estimates of effect size (η^2) for all main effects and interactions per version.

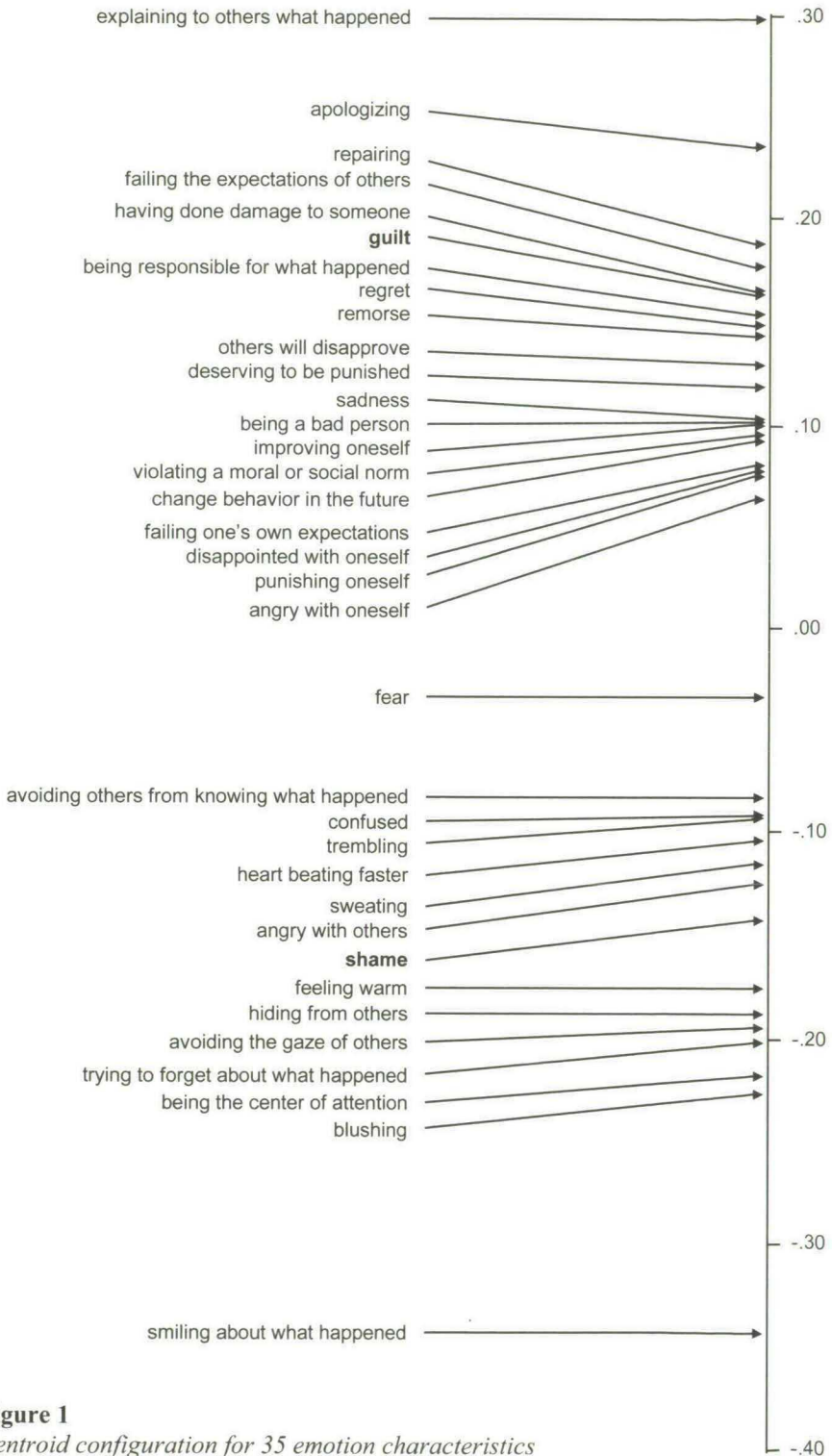


Figure 1
Centroid configuration for 35 emotion characteristics

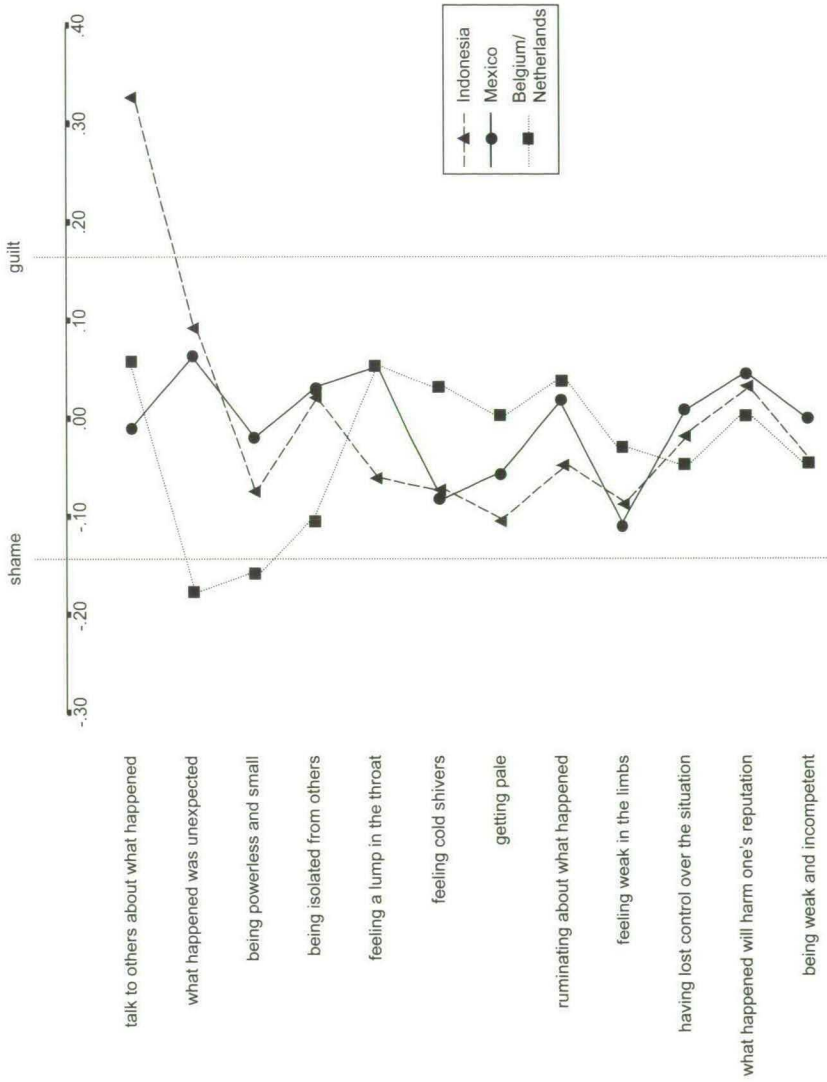


Figure 2
Positions of cross-culturally different emotion characteristics on the guilt-shame dimension from Figure 1

The main effect of culture is substantial in all three versions. Post-hoc inspection of means (using Tukey's honestly significant difference with $\alpha = .05$) showed that in all three versions Indonesians scored highest, followed by the Dutch and Belgians, and that Mexicans scored lowest ($ps < .05$). All interaction effects involving culture are low to moderate (all $\eta^2 < .07$; Cohen, 1988) and much smaller than the main effects of situation and of item, and than the situation \times item interactions. These effect sizes suggest that there is limited cultural variation in ratings of situations, items, and the differentiation of items across situations (see Scherer & Wallbott, 1994).

Table 4

Estimates of Effect Size (η^2) in Repeated Measures ANOVAs with Four Cultural Samples and Five Situations for Three Versions of the Instrument

Source	Version 1	Version 2	Version 3
Between-subjects			
Culture (C)	.21	.20	.21
Within-subjects			
Situation (S)	.36	.11	.64
S * C	.05	.07	.02
Item (I)	.49	.50	.50
I * C	.06	.07	.06
S * I	.25	.37	.31
S * I * C	.04	.04	.04

Note. All effects and interactions were significant ($ps < .01$).

Discussion

In line with the first hypothesis, evidence was found for structural equivalence for a substantial set of emotion components. A single guilt-shame dimension could adequately represent correlations among emotion characteristics in every sample. In addition, positions along this dimension were cross-culturally similar for most characteristics, even by the strict standards (i.e., structure fit $> .90$, and item fit $> .80$) that were used to identify structural similarity. These findings strongly suggest that experiences of shame and guilt share various distinct characteristics across cultures (Fontaine et al., 2003; Hong & Chiu, 1992).

No evidence was found that a distinction between individualist (i.e., Belgians and Dutch) and collectivist (i.e., Indonesians and Mexicans) samples could explain cross-cultural differences in this study. Contrary to the second hypothesis, no significant correlation was found between ratings of shame and

guilt in any sample. Contrary to the third hypothesis, relative ratings of guilt by the Mexicans were not higher than with the Belgians or the Dutch. Only in two out of three versions of the instrument did Indonesians rate guilt relatively higher. This makes interpretations in terms of broad cultural differences such as individualism-collectivism unlikely. Finally, in line with the fourth hypothesis, ANOVA analyses showed only limited cross-cultural differences in the rating of situations, emotion items, and ratings of emotion items across situations.

Cross-cultural differences were mostly found in the association of specific characteristics with either shame or guilt. Because a strict criterion was used to identify such differences (i.e., item fit $< .80$) some of the items Figure 2 show only very limited cultural variation in their position on the shame-guilt dimension. In addition, no clear cultural pattern was found in these differences. The Mexicans did not appear to differ more from Belgians/Dutch than from Indonesians. However, several culturally different characteristics (e.g., *unexpected, powerless and small, isolated, lump in the throat, getting pale, ruminating*) followed the predicted associations more clearly with the Belgian/Dutch than with both other samples. This suggests some Western bias in the emotion literature when it comes to the association of these characteristics with shame or guilt.

Most items in Figure 1 fit the predicted associations with either shame or guilt. Three exceptions were *failing the expectations of others, others will disapprove*, and *improving oneself*, which were expected to be associated with shame but found to associate with guilt in all samples. Items associated with shame or guilt contributed about equally to cross-cultural differences; of the 12 items that were treated as cross-culturally different seven were shame items and five were guilt items. In comparison with guilt, shame seemed to be characterized by greater bodily activation and a strong tendency to hide, conceal, and forget. Guilt, on the other hand, appeared the more 'cognitive' emotion, characterized by a preoccupation with a personal failure or transgression and a strong tendency to repair, apologize, and punish or improve oneself and one's behavior.

The MDS representation (Figure 1) and the correlations (Table 3) give complementary information on emotion characteristics. For example, the two items with most extreme positions on the guilt – shame dimension (i.e., *explaining to others* and *smiling*) appeared to owe this position to a negative association with the opposite emotion rather than to a strong positive association with the target emotion (i.e., in Table 3, guilt was negatively correlated with smiling, and shame negatively with explaining). In contrast, the two items that came second (i.e., *apologizing* and *blushing*) showed strongly positive correlations with respectively guilt and shame, as well as negative

correlations with the other emotion. Similarly, the item showing most cultural differences in Figure 2 (i.e., *talk to others*) was not strongly correlated with either emotion in any culture. The second and third most culturally different items (i.e., *unexpected* and *powerless and small*) were more strongly correlated with either shame or guilt, suggesting that these differences may be more relevant in the present context .

General Discussion

This study set out to give a detailed empirical assessment of the extent of cross-cultural variation in shame and guilt. Evidence was found for structural equivalence in ratings of shame and guilt across a wide range of situations (Study 1), as well as in emotion components associated with each of these two emotions (Study 2). In addition, ANOVA analyses in both studies suggested only limited cross-cultural variation in quantitative aspects. Cross-cultural differences were mainly found in the relatedness of shame and guilt experiences (Study 1) and in the association of specific emotion characteristics with either shame or guilt (Study 2). Differences in the relative intensity of shame and guilt experiences did not show a clear pattern across studies, except that Indonesians tended to experience guilt more intensely.

The cross-cultural similarities in the results appear to indicate that cultural variations in shame and guilt are constrained by the universal characteristics of these emotions (Poortinga & Soudijn, 2002) and should be interpreted accordingly. There may be cross-cultural differences in shame and guilt in specific meanings (e.g., Liem, 1997; Menon & Shweder, 2000), in the distinctness of these emotions (e.g., Marsella, Murray, & Golden, 1974; Wallbott & Scherer, 1995), or in relations with particular concerns or values (e.g., Rodriguez Mosquera, Manstead, & Fischer, 2002), but these cannot be interpreted to indicate non-identity of the emotion processes in themselves. There appears to be a core of cross-culturally similar emotion components associated with either shame or guilt. This view of shame and guilt is not necessarily at variance with research focusing on cross-cultural differences, as long as such differences are interpreted in relation to the universal constraints implied by cross-culturally similar characteristics of shame and guilt.

To conclude, the two studies presented in this chapter cannot pretend to give a definite assessment of universality and cultural relativity in emotions. However, they do narrow down the range of plausible positions. In view of the results, positions claiming non-identity of shame and guilt as well as positions assuming full equivalence of these emotions are implausible. Additional studies

are needed to examine in more detail where and how cultural samples are similar and where they are different in shame and guilt. A strategy aimed at identifying cultural differences within the frame of cross-cultural similarities seems most promising for the assessment of the importance and the direction of cross-cultural differences.

Appendix

Table A1

*Positions and Proportion of Distances Explained of Items
in a Cross-Culturally Shared Guilt – Shame Dimension*

Item	Position	Proportion of Explained Distances
Explaining	0.298	0.97
Apologizing	0.237	0.98
Repairing	0.189	1.00
Expectations others	0.180	0.98
Done damage	0.167	0.96
Guilt	0.166	0.97
Being responsible	0.155	0.99
Regret	0.151	0.98
Remorse	0.145	0.99
Others disapprove	0.130	1.00
Deserving punishment	0.119	0.96
Sadness	0.105	0.96
Bad person	0.102	0.85
Improving self	0.101	0.91
Violating norm	0.097	0.82
Changing behavior	0.096	0.94
Personal expectations	0.094	0.96
Disappointed with self	0.081	0.79
Punishing self	0.077	0.76
Angry with self	0.064	0.67
Fear	-0.031	0.60
Avoiding others knowing	-0.081	0.80
Confused	-0.091	0.64
Trembling	-0.102	0.99
Heart beating faster	-0.111	0.96
Sweating	-0.123	0.97
Angry with others	-0.140	0.89

Table A1 continued

Item	Position	Proportion of Distances Explained
Shame	-0.141	1.00
Feeling warm	-0.173	0.98
Hiding	-0.187	0.99
Avoiding gaze	-0.193	0.98
Trying to forget	-0.200	0.85
Center of attention	-0.216	0.98
Blushing	-0.224	1.00
Smiling	-0.341	0.98

Table A2

Positions and Mean Absolute Distances of Culturally Different Items on a Cross-Culturally Shared Guilt – Shame Dimension

Item	Culture			Mean Absolute Distance
	Indonesia	Mexico	Belgium/ Netherlands	
Talk to others	-0.33	0.01	-0.06	0.23
Unexpected	-0.09	-0.06	0.17	0.18
Powerless and small	0.07	0.02	0.16	0.09
Isolated	-0.02	-0.03	0.10	0.09
Lump in the throat	0.06	-0.06	-0.06	0.08
Feeling cold shivers	0.07	0.08	-0.03	0.08
Getting pale	0.10	0.06	-0.01	0.07
Ruminating	0.05	-0.02	-0.04	0.06
Weak limbs	0.09	0.11	0.03	0.05
Lost control	0.02	-0.01	0.05	0.04
Harms reputation	-0.04	-0.05	-0.01	0.03
Weak and incompetent	0.04	0.00	0.04	0.03

CHAPTER 4

Emotion without a word: Studies of shame and guilt with Rarámuri Indians and Javanese

In the preparations for a study on emotions with Rarámuri Indians from Northern Mexico (Chapter 2) no clear translation was found for the English emotion term *guilt* in the Rarámuri language. Shame was the emotion word typically reported in response to various guilt-evoking situations (see Keltner & Buswell, 1996) that were probed with several informants. The present study investigated to what extent distinct emotional experiences of shame and guilt could be found with the Rarámuri, given the absence of a clear term for guilt.

This question seems pivotal to the cross-cultural study of emotion because the relationship between emotion words and emotion processes is still debated. While some scholars see cultural differences in the emotion lexicon as reflecting differences in emotions (e.g., Heelas, 1986; Shweder & Haidt, 2000; Wierzbicka, 1998), others assume that emotion processes can be cross-culturally similar even if the lexicon differs (e.g., Ekman, 1994; Frijda, Markam, Sato, & Wiers, 1995; Riezler, 1943). Proponents of both positions tend to draw support from different types of evidence. Cultural studies generally focus on the meaning of specific emotions within a single cultural group (e.g., Lutz, 1988; Menon & Shweder, 1994), whereas culture-comparative studies focus on similarities and differences between several cultural groups in the characteristics of a fixed set of emotions (e.g., Roseman, Dhawan, Rettek, Naidu, & Thappa, 1995; Scherer & Wallbott, 1994). Both approaches have been criticized for giving a biased view of cultural variation. The culture-comparative methodology has been accused of imposing Western (i.e., English-language) terms upon emotional experiences in different cultures (see Russell, 1994; Wierzbicka, 1992), and cultural approaches have been argued to lack a standard of comparison against which claims of cultural differences can be assessed (Poortinga, 1992).

The debate on emotion processes and emotion words has important consequences for the possibility of comparing emotional experiences across cultures. If the culture-comparative method is intrinsically biased, then it seems that psychology should limit itself to a description of emotions in various cultures (see Misra & Gergen, 1993). On the other hand, if a standard of comparison can be found that does not impose Western categories upon the

data, then studies of cross-cultural similarities and differences in emotions are meaningful.

Frijda et al. (1995) have taken the position that emotion processes can be compared across cultures through their characteristic emotion components, even if emotion terms are different. However, Wierzbicka (1995) has argued that such a comparison still rests on the questionable assumption that emotion components can be formulated in universal terms. A possible solution to the imposition of Western emotion constructs in culture-comparative studies has been proposed by Fontaine, Poortinga, Setiadi, and Markam (2002). They have presented an empirical strategy for identifying standards of cross-cultural comparison, in which the basis for comparisons is derived from the data of the cultural samples, rather than determined in advance. That is, relationships between emotion constructs are first examined within cultural samples (an "emic strategy"; Berry, Poortinga, Segall & Dasen, 2002), and only then compared between cultures in order to examine cross-cultural similarities ("derived etics"; Berry et al.) and differences.

In a recent study on shame and guilt (Fontaine et al., 2003) this approach has been successfully applied in identifying various emotion components that were distinctly associated with either shame or guilt across samples from different cultural backgrounds (i.e., Belgians and Peruvians). In this study, the association of emotion components in response to various situations was first determined for each sample separately and then compared across samples. This produced a cross-culturally similar constellation of emotion characteristics associated either with shame or with guilt, which was subsequently used to identify cross-cultural differences. The findings concur with other cross-cultural comparisons of shame and guilt components (Hong & Chiu, 1992; Wallbott & Scherer, 1995). These studies suggest that many of the characteristics that are associated with shame or guilt in the (Western) emotion literature (e.g., Frijda, 1993; Frijda, Kuipers, & Ter Schure, 1989; Manstead & Tetlock, 1989; Roseman, Antoniou, & Jose, 1996; Roseman, Wiest, & Schwartz, 1994; Scherer, 1997; Tangney, Miller, Flicker, & Barlow, 1996) can also be found in other cultural groups.

Culture-comparative studies of shame and guilt are limited in that most evidence of cross-cultural similarities has been gathered with student samples. Reviews and meta-analyses of studies on emotion suggest that more cross-cultural differences are found when non-Western, non-student samples are included (e.g., Russell, 1994; Van Hemert, 2003). This means that a comparison of students with the Rarámuri, most of whom have received little formal education at Mexican schools, might yield more cultural differences even if a linguistic equivalent of guilt in the Rarámuri language were available.

In order to get a better estimate of the cultural variation when characteristics of shame and guilt are studied in non-Western, non-student samples, the present study also included a sample of rural Javanese. The Javanese were chosen because they were culturally distant from both Western student samples and the Rarámuri. In addition, shame (*isin*) has been argued to be a central emotion in traditional Javanese culture in the regulation of interpersonal relations, especially in relation to the concept of respect (Geertz, 1959). A person who has *isin* is seen as a virtuous person and a sense of *isin* is taught to children from a very young age (Keeler, 1987). This does not mean that *isin* is necessarily a desirable emotion. Many of the rules for interpersonal conduct are aimed at avoiding experiences of *isin* (Magnis-Suseno, 1997). So, the Rarámuri and the Javanese are both non-Western groups that, for very different reasons, appear to emphasize shame over guilt as the dominant social emotion. This in contrast to Western culture, which has been argued to emphasize guilt over shame (see Scheff, 1995, 2001). Hence, the study of shame and guilt in the Rarámuri and Javanese should optimize the probability of finding differences with the results of previous studies, if these were biased towards Western culture.

In the ethnographic literature on the Rarámuri, some indications were found that guilt as an emotion did exist, even though no clear emotion term was found. Several descriptions of events and behaviors would qualify as a reflection of guilt in a Western context, for example confessing a theft (Bennett & Zingg, 1935/1976, p. 337). In addition, the Rarámuri have been frequently described as very conscious of "doing right", not to steal, disturb or harm others in any way (Heras Quezada, 2000; Merrill, 1988). In preparatory field interviews, thoughts and behaviors typically associated with guilt, such as feeling responsible for having done damage to someone and engaging in reparative behavior seemed to be readily recognized by local informants. However, such experiences seemed to be described with the same emotion label as experiences of shame.

In view of the substantial cross-cultural similarities found in previous culture-comparative studies on shame and guilt, it was expected that shame and guilt would be found as distinct emotions in both Rarámuri and Javanese. Hence, this study departed from a position of psychological universalism (Berry, Poortinga, Segall, & Dasen, 2002; Poortinga & Soudijn, 2002), according to which basic psychological processes (i.e., the emotions of "shame" and "guilt") can be expected to be found across cultures, but that also allows for differences in the specific cultural manifestations of these processes (e.g., labeling with a single or more emotion terms).

Two empirical studies of shame and guilt were done with the Rarámuri and the Javanese. In Study 1, daily situations of shame were gathered with Rarámuri and situations of shame or guilt were gathered with the Javanese. These were

rated by students from Indonesia and the Netherlands on the emotions of shame and of guilt. It was expected that many situations collected from the Rarámuri would be rated higher on guilt than on shame by the students, because the emotion word for shame appears to be used by the Rarámuri as a generic label for experiences of the emotions of both shame and guilt. In contrast, it was expected that student ratings of the Javanese situations would match the target emotion they were gathered for (i.e., shame situations rated higher on shame, and guilt situations higher on guilt). It may be noted that no perfect correspondence was expected because situations or situation types reported in the emotion literature usually do not elicit exclusively shame or exclusively guilt (e.g., Keltner & Buswell, 1996).

Study 2, examined ratings on 31 emotion characteristics from various emotion components (e.g., appraisals and action tendencies) in response to strong shame, guilt, or shame and guilt eliciting situations. These situations were selected from Study 1; half originated from the Rarámuri and half from the Javanese. The emotion components were selected from a previous study with only student samples (Chapter 3) and were either characteristic for the emotion of shame or for the emotion of guilt. It was expected that ratings of the emotion components in response to the selected situations would result in a distinct clustering of shame characteristics and of guilt characteristics with both the Rarámuri and the Javanese samples, and that this clustering would be similar to the results that were previously found with student samples.

Study 1 – Phase 1

Introduction

This study consisted of two phases. In phase 1, daily situations of shame were collected from the Rarámuri, and situations of shame and of guilt were collected from the Javanese. In phase 2, these situations were rated by students from Indonesia and the Netherlands on the emotions of shame and of guilt.

As mentioned in the introduction, no clear term in was found in Rarámuri to translate the emotion of guilt, while other emotions (e.g., joy/happy – *gání'reame* or *kaniliame*, fear/afraid – *majawá* or *majaá*, and shame/ashamed – *riweera* or *riwérama*)¹ could be translated. Field interviews probing situations

¹ Several Rarámuri translations can be given because Rarámuri is not a written language and no consensual orthography exists. This is complicated by the fact that Rarámuri language has some phonemes that are not present in English, for example an “rl” consonant. In addition, words may be pronounced slightly different in the various Rarámuri variants. Hence, the translations given in

of varying intensity with local informants usually produced responses of shame, and a few instances of fear and sadness. A Spanish-Rarámuri dictionary (Brambila, 1983) gave two possible translations of guilt: *iyiri* and *chokira*. When these words were presented to local bilinguals and Rarámuri informants, neither was found to refer to a feeling of guilt. *Iyiri* seemed to be closest in meaning to guilt, but only in the legal sense of *being* responsible, not of *feeling* responsible. The meaning of *chokira* was more complex, as it referred to the initial cause, the origin of something, which could be both an object and a social event. In its social meaning, *chokira* applied to the person who initiated a chain of events.

With the Javanese, both words for shame (*isin* or *lingsem*) and for guilt (*salah* or *lepat*) could be found. Javanese language has different forms, depending on the relative social status of the speakers (Keeler, 1984). The polite equivalent of *isin* is *lingsem*, which is used when the relative status of the speaker is lower than that of the addressed. According to Koentjaringrat (1985), both terms signal a position of inferiority in social relationships, but *lingsem* is a slightly stronger marker of inferiority. The polite equivalent of *salah* is *lepat*.

Method

Participants

In this study participated 54 Rarámuri (20 female, 34 male) with a mean age of 40.57 years ($SD = 15.63$) and 63 Javanese (31 female, 32 male) with a mean age of 38.36 years ($SD = 17.33$).

The Rarámuri resided in small communities located within 30 km from the town of Guachochi in the Mexican state of Chihuahua. They are a native Indian group of Uto-Nahua descent, forming the largest indigenous group in northern Mexico. The Rarámuri are known for their resistance to Spanish, and later Mexican cultural influences (Levi, 1998; Merrill, 1988). Traditionally, individual families live dispersed over the available land, practicing small-scale agriculture of crops such as maize and beans. Few of the participants (less than 10%) had finished (Mexican) primary education and none secondary education. A local radio station transmits programs in both Rarámuri and Spanish, but most of the people in this sample had very little access to other mass media.

Javanese participants were sampled from various small villages in the central south region of Java, located around 40 km from the city of Yogyakarta.

the text are only examples of several variants that were recorded, usually with a similar root (e.g., *riwe* or *rigue* in shame). In the field, interviewers adapted the emotion words to the variant of Rarámuri spoken by the interviewee.

Data were collected in traditional communities where agricultural labor was the main source of income. Of the participants, 10% had not finished primary education, 42% had finished primary education only, and 46% had attended secondary education (2% missing).

Instrument and procedure

Descriptions of situations were gathered in open-ended interviews. Participants were asked to describe a situation in which they had experienced shame (both Rarámuri and Javanese) or guilt (Javanese only).

Before the interviews were held, local municipal leaders (*gobernadores* with the Rarámuri and *dusun* or *desa* leaders with the Javanese) were contacted in order to explain the nature of the studies and to ask for approval. When approval was obtained, the municipal leader informed his community of the study, and within three days interviews would start. Participants were approached in their villages by locally trained interviewers, and informed that participation in the study was voluntary and that all information obtained would be treated confidentially. Interviewers were not aware of the research questions and only knew that situation descriptions were gathered for academic purposes.

In Mexico, situations were gathered by three interviewers, one Rarámuri and two Mexican, all of whom spoke Spanish as well as Rarámuri and who had extensive experience in interviewing Rarámuri for academic or governmental organizations. They were known to all municipal leaders and to most of the Rarámuri participants in this study. In Indonesia, situations were gathered by four Javanese interviewers who spoke Javanese as their native language and who were also proficient in English. The interviewers originated from the region or communities in which the interviews were held. Interviewers in both countries were trained in several trial interviews and instructed to record verbatim descriptions of the situations during the interview. After the interview, situational descriptions were translated into Spanish by the Mexican interviewers, translated into English, and checked by two independent Mexican translators. Javanese interviewers translated situation descriptions directly into English.

Results

A total of 183 situations were generated. Eighty-one situations were collected from the Rarámuri describing episodes of *riwérama* (shame). With the Javanese, 55 situations of *isin/lingsem* (shame), 39 situations of *salah/lepat* (guilt), and 8 mixed situations of “shame/guilt” were gathered. The mixed

situations were reported by eight participants who told the interviewers that they thought shame and guilt were the same emotion. With the Rarámuri, 13 situations were taken out of the data set because they contained brief and general descriptions of situations (e.g., "When I was at a meeting and there were many people I did not know") that were very similar to other situations that were described in more detail

Study 1 – Phase 2

Introduction

In phase 2, all 170 situations that were collected from the Rarámuri and the Javanese were rated on the emotions of shame and guilt by students from Indonesia and the Netherlands. The aim of this study was twofold: (i) to test the expectations regarding ratings of Rarámuri shame situations in comparison with ratings of Javanese shame and guilt situations, and (ii) to look for situations originating from both rural samples that were rated to elicit strong shame, strong guilt, or strong shame and guilt to be used as stimuli in Study 2.

The following two expectations were tested:

1. A substantial number of shame situations collected from the Rarámuri are rated higher on guilt than on shame by the students.
2. Most shame situations collected from the Javanese are rated higher on shame than on guilt, and most guilt situations are rated higher on guilt than on shame.

Method

Participants

Eighty students from Tilburg University in the Netherlands (61 female, 18 male, 1 missing) with a mean age of 21.58 years ($SD = 6.57$), and 74 students from Sanata Dharma University in Indonesia (52 female, 22 male) with a mean age of 21.97 years ($SD = 1.77$) participated in this study (see Chapter 3).

Instrument

In the situation descriptions collected from Javanese and Rarámuri in phase 1, names of places or specific animals were replaced by generic terms, and any sentences containing a reference to shame, guilt, or closely related terms was deleted or, if deletion would disturb the coherence of the description, replaced

by a neutral substitute (e.g., upset). Participants rated for each situation the intensity with which they would experience shame and guilt, using a 6-point Likert-scale ranging from 0 ("I would not experience this emotion at all") to 5 ("I would experience this emotion very strongly").

Procedure

Participants were requested to take part in a study about "emotional episodes as described by people from different parts of the world". Participation was voluntary and anonymous. Indonesian students were paid 7.500 Indonesian rupiah (at the time of the study approximately 1 US dollar) and Dutch students received course credits.

Results

Unifactorial factor solutions of the ratings of shame and of guilt showed structural equivalence (Tucker's $\phi > .90$; Van de Vijver & Leung, 1997) between Indonesian and Dutch raters for all situations, except for five Javanese situations and two Rarámuri situations (Chapter 3). These seven situations were excluded from further analyses.

For both samples, average shame and average guilt ratings were calculated per situation. From these averages, difference scores (*diff*) were calculated such that each situation had a single score, indicating a higher shame rating if positive and a higher guilt rating if negative. The intraclass correlation (absolute agreement) between the two student samples of the difference scores across situations was very high ($ICC = .88$; $p < .001$), so in further analyses the mean of the difference scores of both samples is used. The distribution of the difference scores had a median of 0.19 and ranged from -2.05 to 3.14. This indicated that slightly more situations were rated higher on shame, and that both strong shame and guilt situations ($|diff| > 0.80$) were found.

Of the Rarámuri situations, 66% had a positive difference score (higher shame than guilt) and 34% a negative difference score (higher guilt than shame). Of the Javanese situations, 82% of the shame situations had a positive difference score, and 74% of the guilt situations had a negative difference score. Of the eight shame/guilt situations, five had a positive and three a negative difference score.

Discussion

The results confirmed the (first) expectation regarding the Rarámuri construct of shame. More than one-third of the situations that were collected from the Rarámuri as shame eliciting (*riwérama*) were rated higher on guilt than on shame by Indonesian and Dutch students. This suggests that situations eliciting Rarámuri *riwérama* may encompass experiences of what would be labeled in English as emotions of shame and of guilt.

In contrast, 82% of the situations that were collected from the Javanese as eliciting shame (*isin/lingsem*) were also rated higher on shame than on guilt by the students, and 74% of the guilt-eliciting (*salah/lepat*) situations were also rated higher on guilt. Because no perfect agreement between situation types and situation ratings was expected (see Keltner & Buswell, 1996), these results confirmed the (second) expectation. The eight mixed shame/guilt situations did not show a clear pattern in the student ratings.

The presence of strong shame and strong guilt situations in both rural samples made it possible to use a selection of these situations as “emically derived” (Berry et al., 2002) stimuli in Study 2, where ratings of emotion components across situations were compared.

Study 2

Introduction

This study investigated ratings of emotion components in response to a range of shame eliciting or guilt eliciting situations in the Rarámuri and the Javanese. In previous studies with student samples from different cultures (Fontaine et al., 2003) it was found that the correlations of components across such situations were distinct between shame and guilt. If a similar distinction in emotion components could be found with the Rarámuri, then this would strongly suggest that distinct experiences of shame and guilt are present in this group, even in the absence of a linguistic distinction. Thus, the present study investigated whether the distinction between shame and guilt characteristics that was found with student samples could also be found with the Rarámuri and the Javanese.

In Chapter 3 student samples from Belgium, Indonesia, Mexico, and the Netherlands rated strong shame-eliciting or guilt-eliciting situations on 47 emotion components. Correlations between components across situations were first analyzed for each sample separately using Multidimensional Scaling (MDS), and then compared across samples using a Generalized Procrustes

Analysis (GPA). These analyses showed substantial cross-cultural similarities in the differentiation of components associated with shame or with guilt. For the purpose of comparison with the Rarámuri and the Javanese, the data of Chapter 3 were re-analyzed with only those 31 emotion components that were used in the present study. In each sample correlations were represented in a two-dimensional space using MDS (Proxscal in SPSS 11.5) that could account for almost all of the dispersion (in all samples normalized raw stress = .01). Comparison of the four sample representations using a GPA (Commandeur, 1996) produced a cross-culturally similar centroid configuration for 29 items (overall fit > .90; see Fontaine et al., 2003). Two items (i.e., *feeling alone* and *getting pale*) were excluded because less than 50% (item fit < .71) of the squared distances could be accounted for across samples.

The first dimension in the cross-culturally similar configuration distinguished shame characteristics from guilt characteristics, and the second dimension externally oriented characteristics from internally oriented characteristics. These findings are similar to those obtained in a comparison between Belgian and Peruvian students by Fontaine et al. (2003). Emotion characteristics associated with shame were: appraisals of (1) being at the center of attention; experiences of the self as (2) confused, (3) powerless and small, and (4) angry with others; body sensations of (5) blushing, (6) feeling weak in the limbs, (7) feeling warm, (8) trembling, (9) heart beating faster, and (10) sweating; action tendencies of (11) avoiding the gaze of others, (12) hiding oneself from others, and (13) smiling about what happened; and (14) trying to forget about what happened. Emotion characteristics associated with guilt were: appraisals of (1) having done damage to someone, (2) being responsible for what happened, (3) others disapproving of what one has done, (4) harm to one's reputation, (5) having violated a social or moral norm, and (6) deserving to be punished; experiences of the self as (7) a bad person, and (8) angry with oneself; action tendencies of (9) apologizing, (10) changing future behavior, (11) explaining what happened to others, (12) punishing oneself; and (13) ruminating about what happened. The second dimension was mostly defined by the externally oriented characteristics of *explaining what happened*, *smiling about what happened*, and *apologizing*, and the internally oriented characteristics of *feeling weak in the limbs* and *harm to one's reputation*.

This centroid configuration was used as a reference for comparisons with the Rarámuri and Javanese samples. It was expected that with these groups a similar distinction between emotion components would be found in response to various shame-eliciting or guilt-eliciting situations that had been selected from Study 1. In this report, the Javanese sample are first compared with the student reference configuration, and then same is done for the Rarámuri.

The following results were expected:

1. Emotion characteristics associated with shame in the student reference configuration are similarly associated with these emotions in the Javanese and in the Rarámuri.

2. Emotion characteristics associated with guilt in the student reference configuration are similarly associated with this emotion in the Javanese, and are similarly associated with each other in the Rarámuri, even in the absence of an equivalent emotion term.

The Javanese

Method

Participants

In this study participated 213 Javanese (107 female, 106 male) with a mean age of 42.14 years ($SD = 15.30$). Participants were sampled in different communities, but in the same region as participants from Study 1. Living conditions and cultural background of the communities were similar to those described in Study 1.

Instrument

Each of the six versions of the instrument consisted of three descriptions of situations, each accompanied by a list of 31 emotion characteristics (7 appraisals, 6 self-experiences, 7 action tendencies, 7 body sensations, 2 rumination, and the emotion words *isin/lingsem* [shame] and *salah/lepat* [guilt]). Participants were arbitrarily divided over six versions of the instrument. The number of participants per version ranged from 32 to 40.

In interviews, participants were asked to indicate the intensity with which they would experience each of the emotion characteristics for each situation, using a 6-point scale that ranged from 0 (*not at all*) to 5 (*very strongly*). The scale was visually illustrated by a sheet showing a series of circles of increasing size, representing the different intensities of the responses.

The situations were selected from Study 1 on the basis of the difference measures (*diff*) between ratings of shame and of guilt by the Indonesian and Dutch students. Nine situations originated from the Rarámuri and nine from the Javanese. Each set of nine situations included three strong shame-eliciting, three strong guilt-eliciting, and three strong shame plus guilt eliciting situations, as rated by the student samples in Study 1. Criteria for the selection of situations were: (i) a large difference ($|diff| > .80$) between shame and guilt ratings for the

strong shame and the strong guilt situations and a small difference ($|diff| < .20$) between these emotions for the strong shame plus guilt situations; (ii) at most small effects ($\eta^2 < .03$) for both culture and gender in repeated measures ANOVA analyses per situation with culture and gender as between-subjects factors and emotion as within-subjects factor; (iii) average ratings higher than 3.0 on the target emotions (i.e., shame, guilt, or shame and guilt); (iv) average ratings lower than 2.5 on all other emotions. Situations were divided over the six versions such that each version contained one shame-eliciting situation, one guilt-eliciting situation, and one shame plus guilt situation. Three versions were composed of situations derived from the Rarámuri and three versions were composed of Javanese situations. Rarámuri situations were translated from English into Javanese by a committee of four professional translators (Van de Vijver & Leung, 1997). Translations were made both in polite Javanese, and in regular Javanese so that interviewers could adapt their word-use to the form appropriate in the interviews.

Procedure

Approval of local community leaders was sought prior to data collection, similar to Study 1. The study was announced in the villages by the local leader before interviews would start. Participants were approached by the interviewers with the question if they would be willing to cooperate in a study on thoughts and feelings that people could have in various situations. Interviewers explained that they were going to be presented with three situations that other people had experienced (the situation descriptions) and that they were asked to imagine how they themselves would have felt in each of these situations. The interviewer then explained the response scale with the aid of the illustration sheet and by giving several examples. Generally, participants understood the task without problems; in cases where the interviewer got the impression that the task was not understood the interview was ended after the first situation and the data were excluded. In order to avoid biases due to different gender of the interviewee and the interviewer, women were interviewed by female interviewers, and men by male interviewers.

Four female and two male Javanese conducted the interviews. All of them had previous experience with interviewing and were trained in trial interviews under guidance of an experienced Javanese researcher. Interviews typically took between 30 and 50 minutes to complete.

Results

The two items for which insufficient cross-cultural similarities had been found with the student samples were excluded from the analyses. The six versions of the questionnaire were combined in a situations (18) x items (29) matrix, with each cell representing the mean rating of an item in a situation. Bivariate correlations were calculated between all 29 emotion characteristics across the 18 situations. The resulting correlation matrix was fit in a two-dimensional space using Multidimensional Scaling (Proxscal in SPSS 11.5). A representation using one dimension accounted for .92 of the dispersion, and a two-dimensional representation for .98.

The Javanese representation was compared with the student configuration using GPA. The resulting centroid configuration could account for 71% of the squared distances between Javanese and students. Inspection of fit at item level showed that the centroid configuration could account for less than 50% of squared distances in the case of seven items. These items were treated as culture-specific emotion characteristics. In a subsequent GPA on the 22 items with good fit, culture-specific characteristics were not included in the calculation of the fit of the centroid configuration, yet their position within this configuration could be determined on the basis of the other items. The centroid configuration for the 22 items accounted for 83% of the squared distances in the Javanese and student representations, indicating substantial similarities in the representations of these items. Figure 1 shows the positions of the 22 items in the two-dimensional centroid configuration (for all items exact positions and proportion of squared distances accounted for can be found in Table A1). In Figure 2, culturally different items are positioned for both Javanese participants and students on the cross-culturally shared guilt-shame dimension depicted in Figure 1. Items were ordered according to the magnitude of cross-cultural differences on this dimension, calculated by the absolute item distances between samples, with the least congruent item first (for all items exact positions and absolute distances can be found in Table A2). The positions of shame and guilt on the guilt-shame dimension were added to facilitate interpretation. For example, it can be seen that the item *changing future behavior* is related more to *guilt* with the students, but more to *shame* with the Javanese.

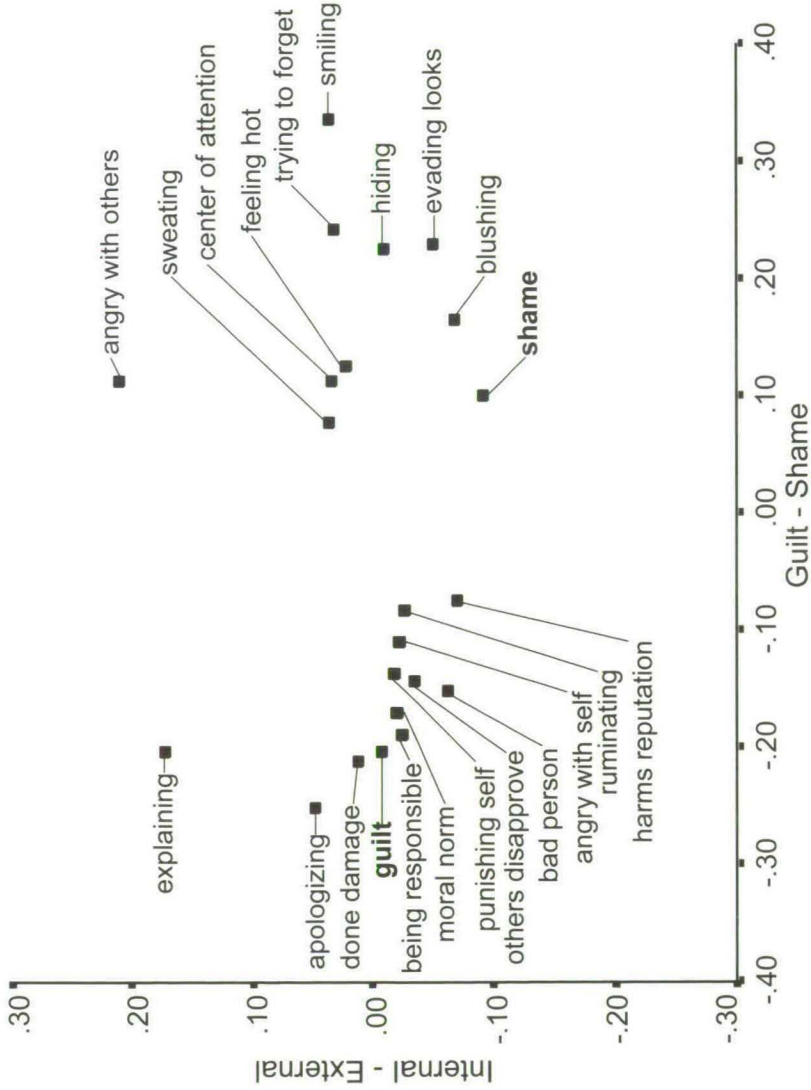


Figure 1
Centroid configuration of 22 emotion characteristics for the Japanese and the students

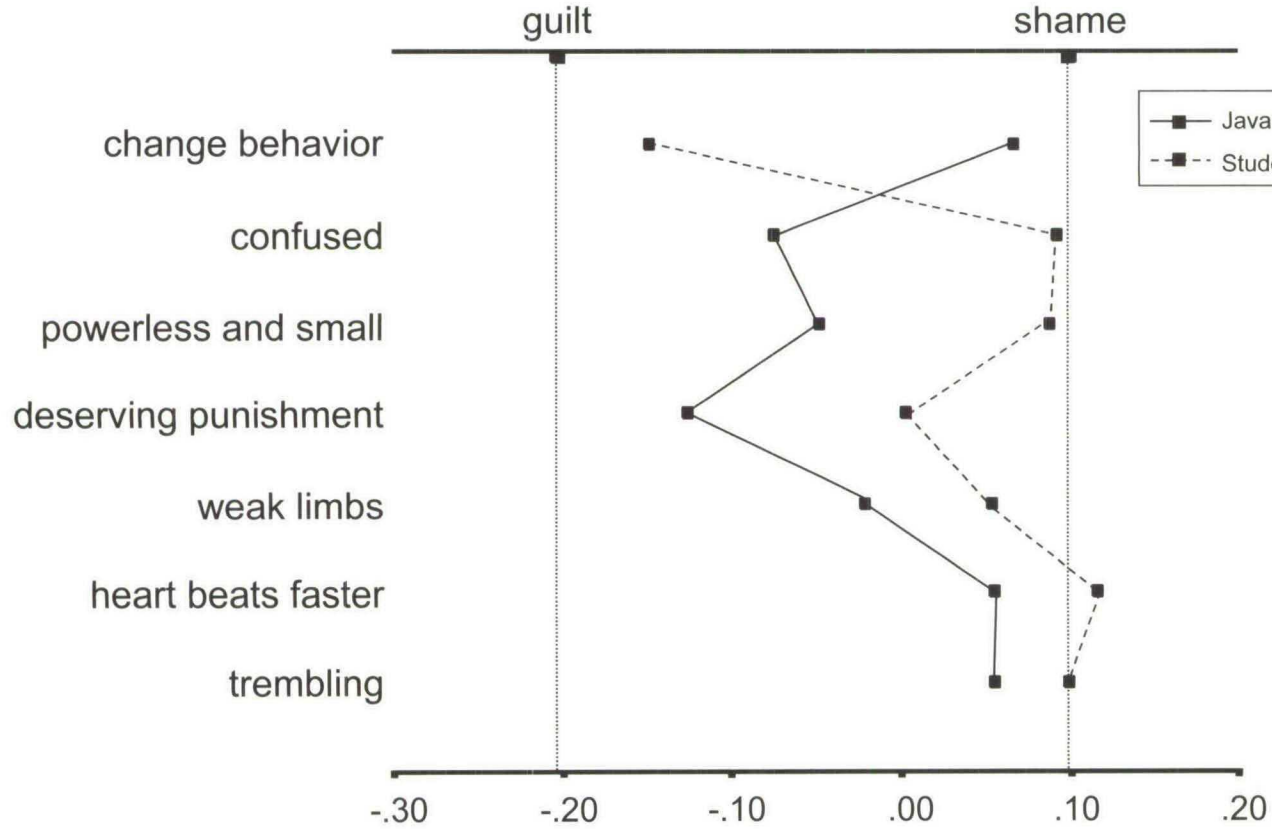


Figure 2

Positions of cross-culturally different emotion characteristics on the guilt-shame dimension from Figure 2

Discussion

In line with the expectations formulated in the introduction of this study, a substantial number of emotion characteristics that were found to distinguish between shame and guilt in student samples, also distinguished between *isin/lingsem* (shame) and *salah/lepat* (guilt) in rural Javanese. This strongly suggests that the emotion components characterizing shame and guilt are shared to an important extent across cultures. In addition, there are characteristics that were found to be cross-culturally variable.

Cross-cultural differences in Figure 2 show that some emotion characteristics that have been distinctly associated either with shame or with guilt in the emotion literature (e.g., *changing behavior* with guilt and *being confused*, and *feeling powerless and small* with shame) replicated with the students, but not with the Javanese sample. This may be caused by bias in these items with the Javanese, but may also indicate that the association of these components with shame or with guilt is not universally shared. Some differences on the guilt-shame dimension are relatively small (e.g., *heart beats faster* and *trembling*), which indicates that the cultural variation in these items is mainly found on the intrapersonal-interpersonal dimension. These differences will not be elaborated upon because the dimension contributed relatively little to the dispersion accounted for in the individual samples.

To summarize, substantial cross-cultural similarities were found between students and rural Javanese in the emotion characteristics associated with shame or with guilt. In addition, seven out of 29 characteristics (24%) were found to be positioned differently in a two-dimensional representation of shame and guilt characteristics. These results suggest that a similar shame-guilt distinction between students and the Rarámuri can be expected in about 75% of the emotion characteristics, unless the absence of a clear term for guilt has a bearing on how emotional situations are experienced.

The Rarámuri

Method

Participants

In this study participated 230 Rarámuri (116 female, 114 male) with a mean age of 40.68 years ($SD = 15.33$). Participants were sampled from different communities, but in the same region as participants in Study 1. Living

conditions and cultural background of the communities were also similar to those described for Study 1.

Instrument

Participants were arbitrarily divided over six versions of the instrument, which were the same as described in the study with the Javanese. The number of participants per version ranged from 36 to 41. Situations were accompanied by a list of 30 emotion characteristics (7 appraisals, 6 self-experiences, 7 action tendencies, 7 body sensations, 2 rumination, and the emotion word *riwérama*). There were only 30 items because a term for the emotion of guilt could not be used with the Rarámuri. Situations were translated from English into Spanish, and checked by two independent Mexican translators. Translations from Spanish to Rarámuri were done independently by two Rarámuri bilinguals and any differences were subsequently discussed (Van de Vijver & Leung, 1997). Because of the variations in spoken Rarámuri, multiple translations were provided to the interviewers where necessary. Interviewers could adapt their word-use to the specific variant spoken by an interviewee, though the differences between Rarámuri variants within the region of data collection were minor.

Procedure

The procedure followed was similar to the study with the Javanese. Interviews were done by three female and four male Rarámuri. Five of them had previous experience in interviewing Rarámuri for governmental organizations and all were trained in several trial interviews under guidance of an experienced Rarámuri who had cooperated in Study 1.

Results

The two items for which insufficient cross-cultural similarities had been found with the student samples were excluded from the analyses. The six versions of the questionnaire were combined in a situation (18) x item (28) matrix, with each cell representing the mean rating of an item in a situation. Bivariate correlations were calculated between the 28 emotion characteristics across the 18 situations. The resulting correlation matrix was fit in a two-dimensional space using Multidimensional Scaling (Proxscal in SPSS 11.5). A representation using one dimension accounted for .81 of the dispersion, and a two-dimensional representation for .95.

The Rarámuri representation was compared with the student configuration using GPA. The initial centroid configuration could account for 61% of the squared distances between Rarámuri and students. Inspection of fit at item level showed that the centroid configuration could account for less than 50% of squared distances in the case of nine items. These items were treated as culture-specific characteristics in a subsequent GPA on the 19 items with a good fit. In addition, the student emotion word *guilt* was included as a "culture-specific" item, in order to examine its position within the shared configuration of students and Rarámuri. The centroid configuration with 19 items accounted for 86% of the squared distances in the Rarámuri and student representations, indicating substantial similarities in the representations of these items. Figure 3 shows the positions of the 19 items in the two-dimensional centroid configuration (for all items exact positions and proportion of squared distances accounted for can be found in Table A3), plus the position of the emotion word *guilt* with the students. In Figure 4, culturally different items are positioned for both Rarámuri participants and students on the cross-culturally shared guilt-shame dimension depicted in Figure 3. Items were ordered according to the magnitude of cultural differences on this dimension, calculated by the absolute item distances between samples, with the least congruent item first (for all items exact positions and absolute distances can be found in Table A4). The positions of shame and "student guilt" were added to facilitate interpretation.

Discussion

In line with the expectations (1 and 2), a number of emotion characteristics that distinguished between shame and guilt in student samples were found to differ from each other in a similar manner with the Rarámuri, even though a term for "guilt" was not present with this group. This result indicates that a core distinction between the emotions shame and guilt can be found universally, irrespective of cultural differences in the emotion lexicon.

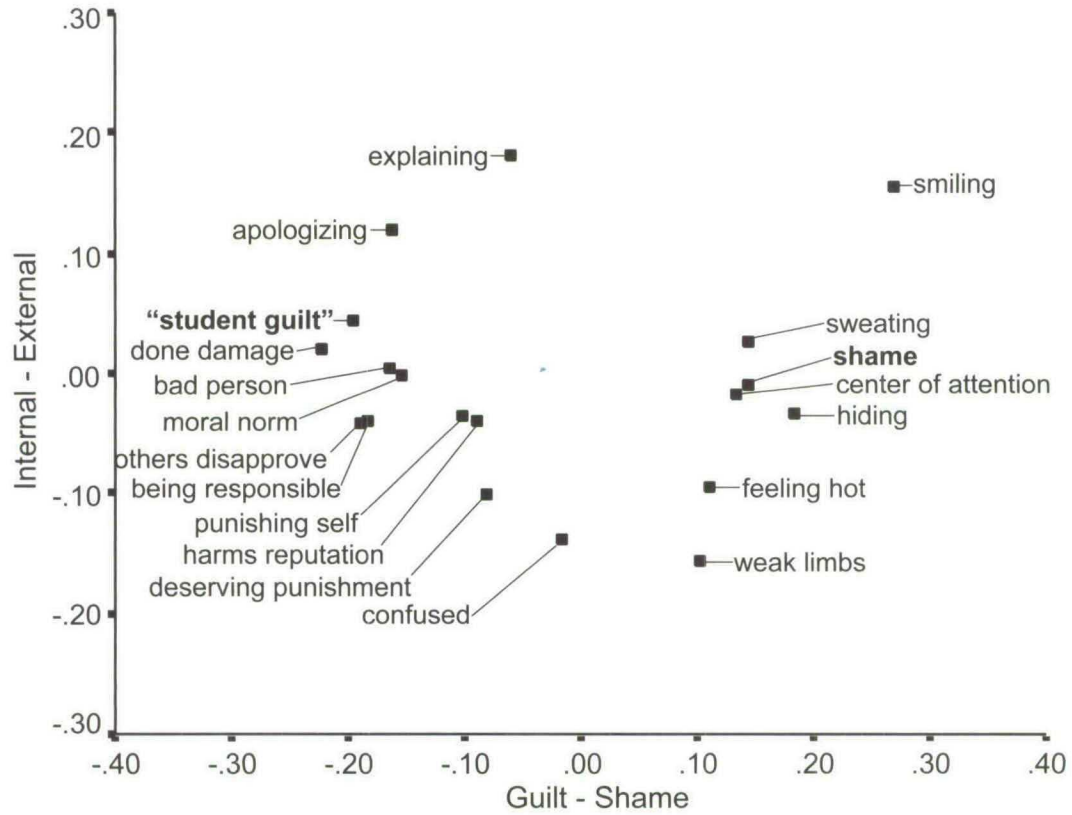


Figure 3

Centroid configuration of 19 emotion characteristics for the Rarámuri and the students

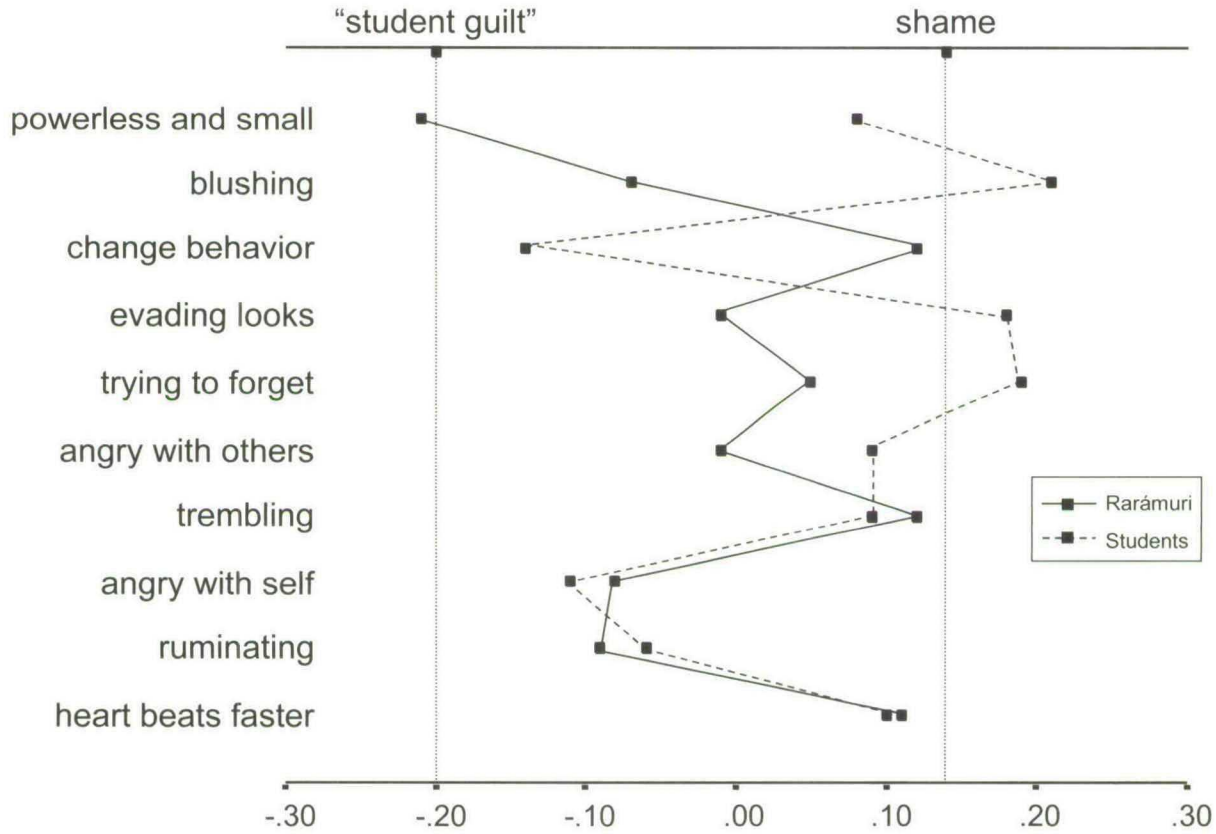


Figure 4

Positions of cross-culturally different emotion characteristics on the guilt-shame dimension from Figure 3

Of the 28 emotion characteristics, nine were found to be different between students and Rarámuri, which is slightly more than between students and Javanese. Four of these characteristics (i.e., *trembling*, *angry with oneself*, *ruminating*, and *heart beats faster*) show mainly a difference on the internal-external dimension, but are very similar on the guilt-shame dimension. Two salient differences (i.e., *feeling powerless and small* and *changing future behavior*) differ from the students in a similar way as found for the Javanese, which makes it less likely that these results are caused by bias. Another salient difference is the association of *blushing* with guilt-characteristics by the Rarámuri. This is in line with other studies suggesting that a strong association of blushing with shame is not universally shared (e.g., Casimir & Schnegg, 2002; Drummond & Kim, 2000; see also Chapter 2).

General Discussion

Several approaches to the analysis of shame and guilt in the Rarámuri and Javanese data were considered. The choice of comparing each rural sample with the student reference group was motivated by the observation that almost all evidence for cross-cultural similarities in shame and guilt so far had been gathered with student samples. Hence, two separate comparisons were considered to best answer the question to what extent the results obtained with students could be generalized to culturally distant nonstudent samples. It can be noted that other comparisons did not produce substantially different results: comparison of the Rarámuri and the Javanese as well as comparison of Rarámuri, Javanese, and students, both resulted in centroid configurations (fit > .90) with 18 cross-culturally similar items.

The distinction between shame and guilt that was found with the Javanese and with the Rarámuri supports a position of psychological universalism (Poortinga & Soudijn, 2002) regarding these emotions. In response to various shame-eliciting and guilt-eliciting situations, the Rarámuri, who lack an emotion word for guilt, showed distinct reactions in terms of associated emotion components, similar to reactions of shame and guilt found with student samples. This can be seen as empirical support for the position taken by Frijda et al. (1995) that emotion components can be used to study emotion processes across cultures, even if the relevant emotion lexicons differ. Differences in emotion terms do not necessarily imply differences in emotion processes, as is claimed by some scholars in cultural anthropology and cultural psychology (e.g., Lutz, 1988; Shweder & Haidt, 2000).

The studies also illustrate that cross-cultural comparisons on the basis of an empirically derived standard of comparison as proposed by Fontaine et al.

(2002) can be used to avoid the imposition of Western emotions or emotion words. The Javanese and the Rarámuri were compared with students on the basis of their within-culture organization of emotion characteristics in response to locally produced situations. Hence, this strategy seems useful in establishing a common basis against which specific cultural differences in emotions can be identified. A position of psychological universalism does not imply cross-cultural invariance in emotions. For example, two emotion characteristics (i.e., the self-experience of *feeling powerless and small* and the action tendency of *changing future behavior*) were associated with shame and guilt in a reverse manner among both the Javanese and the Rarámuri, when compared to student samples. Such differences can inform more detailed studies of cultural variations in shame and guilt experiences in terms of specific cultural factors. Another example is the Rarámuri association of *blushing* with guilt-characteristics, which is in line with other evidence that this body sensation may not be as strongly related to shame as is often assumed in the (Western) emotion literature (Casimir & Schnegg, 2002; Drummond & Kim, 2000; see also Chapter 2). Furthermore, it is quite likely that there are other typical characteristics of shame and guilt besides the ones included in this study, that could also show cross-cultural differences. However, the common core of shame and guilt characteristics does put constraints upon claims of cultural variation in these emotions. On the basis of the findings presented in this chapter, it seems likely that everywhere shame is associated more with exposure and social withdrawal, and guilt more with being responsible for harm to someone and social amending. These emotion characteristics were found not to be dependent upon the presence or absence of a specific emotion label; there can be emotions without a word.

Appendix

Table A1

Item Positions and Proportion of Distances Accounted for by the Centroid Configuration for Students and Javanese

Item	Position		% Distances accounted for
	s-g dimension	i -e dimension	
Apologizing	-0.252	0.048	.98
Done damage	-0.212	0.012	.98
Explaining	-0.205	0.173	.92
Guilty	-0.203	-0.008	.98
Being responsible	-0.190	-0.024	.98
Moral norm	-0.171	-0.021	.99
Bad person	-0.153	-0.061	.96
Others disapprove	-0.144	-0.034	.89
Punishing self	-0.137	-0.019	.99
Angry with self	-0.110	-0.023	.98
Ruminating	-0.083	-0.026	.61
Harms reputation	-0.075	-0.070	.95
Sweating	0.078	0.037	.39
Shame	0.101	-0.091	.83
Angry with others	0.103	0.210	.86
Center of attention	0.112	0.034	.71
Feeling hot	0.125	0.022	.79
Blushing	0.165	-0.068	.81
Hiding	0.225	-0.011	.97
Evading looks	0.229	-0.050	.94
Trying to forget	0.241	0.033	.94
Smiling	0.335	0.035	.93

Table A2

Positions of Culturally Different Items of Javanese and Students, and Absolute Item Differences per Dimension

Item	Students		Javanese		Absolute difference	
	G-S	I-E	G-S	I-E	G-S	I-E
Change behavior	-0.15	-0.03	0.07	-0.02	0.21	0.01
Confused	0.09	-0.11	-0.08	0.05	0.17	0.16
Powerless and small	0.09	-0.03	-0.05	-0.11	0.14	0.08
Deserving Punishment	0.00	-0.08	-0.13	0.02	0.13	0.10
Weak limbs	0.05	-0.08	-0.02	0.12	0.08	0.20
Heart beats faster	0.12	-0.08	0.06	0.15	0.06	0.23
Trembling	0.10	-0.06	0.06	0.16	0.04	0.23

Note. G-S: guilt – shame dimension, I-E: internal – external dimension.

Table A3

Item Positions and Proportion of Distances Accounted for by the Centroid Configuration for Students and Rarámuri

Item	Position		% Distances accounted for
	S-G dimension	I -E dimension	
Done damage	-0.223	0.020	1.00
Others disapprove	-0.191	-0.042	.93
Being responsible	-0.182	-0.039	.95
Bad person	-0.166	0.004	.98
Apologizing	-0.163	0.118	.85
Moral norm	-0.153	-0.002	.98
Punishing self	-0.103	-0.035	.93
Harms reputation	-0.090	-0.040	.95
Deserving punishment	-0.082	-0.102	.73
Explaining	-0.061	0.180	.75
Confused	-0.017	-0.139	.70
Weak limbs	0.101	-0.157	.81
Feeling hot	0.110	-0.096	.84
Center of attention	0.132	-0.019	.78
Sweating	0.144	0.026	.70

Table A3 continued

Item	Position		% Distances accounted for
	S-G dimension	I -E dimension	
Shame	0.144	-0.010	.88
Hiding	0.184	-0.033	.98
Smiling	0.270	0.154	.93

Table A4

Positions of Culturally Different Items of Rarámuri and Students, and Absolute Item Differences per Dimension

Item	Students		Rarámuri		Absolute difference	
	G-S	I-E	G-S	I-E	G-S	I-E
Powerless and small	0.08	-0.05	-0.21	0.15	0.29	0.19
Blushing	0.21	-0.04	-0.07	-0.27	0.29	0.23
Change behavior	-0.14	-0.02	0.12	-0.04	0.26	0.02
Evading looks	0.18	-0.03	-0.01	-0.10	0.18	0.07
Trying to forget	0.19	-0.04	0.05	0.25	0.14	0.29
Angry at others	0.09	0.10	-0.01	-0.16	0.09	0.26
Trembling	0.09	-0.08	0.12	0.16	0.03	0.23
Angry at self	-0.11	-0.03	-0.08	0.22	0.03	0.24
Ruminating	-0.06	-0.10	-0.09	0.11	0.03	0.21
Heart beats faster	0.10	-0.09	0.11	0.25	0.01	0.34

Note. G-S: guilt – shame dimension, I-E: internal – external dimension.

CHAPTER 5

Cross-cultural (non)equivalence in experiences of shame and guilt

Psychologists seek to explain human behavior through the identification of specific psychological processes, for example emotions. Emotions can motivate behavior and strong emotions can even gain priority in guiding behavior (Frijda, 1986). Our understanding of why emotions promote certain behaviors lies in their characteristic experiences on various emotion components (e.g., Zeelenberg, Van Dijk, Manstead, & Van der Pligt, 2000). Thus, if we want to know to what extent emotions can be used to explain the behavior of people in different cultures, we first have to establish to what extent characteristics of these emotions are equivalent across cultures. This study addresses the cross-cultural equivalence of two social emotions: shame and guilt.

These emotions have been argued to be important factors in social behavior (Tangney & Fischer, 1995). Although they are closely related, arising in similar circumstances (e.g., social transgression or personal failure), the behavioral consequences of shame and guilt appear to be markedly different. Whereas shame motivates social withdrawal or even antagonistic reactions, guilt motivates social approach, amending, and repair (e.g., Barrett, Zahn-Waxler, & Cole, 1993; Caprara, Barbaranelli, Pastorelli, Cermak, & Rosza, 2001; Lindsay-Hartz, De Rivera, & Mascolo, 1995; Lewis, 1971; Tangney, 1992, 1998; Tangney, Wagner, Fletcher, & Gramzow, 1992).

The social contexts in which emotions arise can vary across cultures. This variation has been argued to have marked effects on the experience of emotions (Kitayama & Markus, 1994). The different cultural contexts have been reported to lead to different experiences of shame and guilt (e.g., Liem, 1997; Stipek, 1988). In addition, specific cultural values have been reported to lead to differences in reactions of shame (Rodriguez Mosquera, Manstead, & Fischer, 2002). Such findings raise the question to what extent shame and guilt are comparable across cultures. If the characteristics of shame and guilt are different across cultures, then behaviors associated with these emotions, as reported in current (Western) emotion literature, cannot be expected to generalize to other cultural contexts.

Studies that asked participants from various cultures to recall experiences of shame and of guilt and to rate these on various emotion components found

evidence for both cross-cultural similarities and differences (Scherer & Wallbott, 1994; Wallbott & Scherer, 1995). A limitation of the method used in such studies is that emotion words may not have a linguistic equivalent in all cultural groups (Russell, 1994). This problem has been addressed by asking participants from various cultures to rate shame-eliciting or guilt-eliciting situations on various emotion components, including emotion words for shame and guilt (Fontaine et al., 2003; see also Chapters 3 & 4). These studies found evidence for structural equivalence of shame and guilt, with limited cultural differences in associated emotion components. Such results indicate that the emotion words for shame and guilt measure similar constructs, at least for the samples that were studied, supporting the validity of measures that use emotion words as stimuli.

A possible shortcoming of situations as stimuli lies in their selection. As was noted before, cultures can differ in the types of situations that lead to shame and guilt. This means that a selected set of situations may underestimate the cross-cultural variation in these emotions across the full range of naturally occurring situations. The present study set out to investigate whether cross-cultural similarities and differences found with a preselected set of situations in Chapter 3 could be replicated in a study of self-reported shame and guilt experiences. Similar samples (i.e., Indonesians, Mexicans, and Dutch) were selected and the same emotion components were used to assess a possible method effect.

Cross-cultural similarities and differences were examined at three levels: (1) the extent of cross-cultural variation in quantitative analyses, (2) the correlations between shame and guilt, and (3) the association of emotion components with shame or guilt.

1. Interpretation of effect sizes in quantitative analyses has been argued to lead to a more accurate estimate of the extent of cross-cultural variation than mere interpretation of significance levels (Matsumoto, Grissom, & Dinnel, 2001; Scherer & Wallbott, 1994). In Chapter 3 it was found that cross-cultural variation in the ratings of shame and guilt (Chapter 3, Study 1) and of 47 emotion characteristics of shame and guilt (Chapter 3, Study 2) was limited, in that effect sizes involving culture were generally small relative to the effects of emotion or emotion characteristics. In the present study effects involving culture were also expected to be relatively small, in ANOVAs of ratings of shame and guilt on different emotion components (Hypothesis 1).

2. Shame and guilt have been argued to be more distinct emotions in Asian/collectivist countries than in Western/individualist (i.e., Europe and the U.S.A.) countries (Marsella, Murray, & Golden, 1974; Retzinger, 1995; Wallbott & Scherer, 1995). In Chapter 3 it was found that ratings of shame and

guilt were positively correlated in the Netherlands, but not in Indonesia across a wide range of situations (Chapter 3, Study 1). However, in a second study with selected shame-eliciting or guilt-eliciting situations this finding was not replicated; no significant correlation was found between shame and guilt in either sample. It is possible that the selection of situations has obscured a difference in relatedness of shame and guilt occurring over a wide range of situations. Hence, the present study tested the hypothesis that ratings of emotion characteristics on shame should be correlated stronger with ratings of guilt in the Netherlands than in Indonesia (Hypothesis 2).

3. In the emotion literature, several distinct characteristics of shame and guilt have been reported on a range of emotion components (e.g., Frijda, 1993; Frijda, Kuipers, & Ter Schure, 1989; Manstead & Tetlock, 1989; Mauro, Sato, & Tucker, 1992; Rimé, Mesquita, Philippot, & Boca, 1991; Roseman, Antoniou, & Jose, 1996; Roseman, Wiest, & Schwartz, 1994; Smits & De Boeck, 2003; Tangney, Miller, Flicker, & Barlow, 1996; Tangney, Wagner, Fletcher, & Gramzow, 1992). In Chapter 3, substantial cross-cultural similarities were found as well as some differences in the association of shame or guilt with appraisals, self-experiences, action tendencies, body sensations, rumination, social sharing, and emotion words. In the present study a replication of these findings was expected. Some emotion characteristics were expected to be rated higher on shame than on guilt, and others were expected to be rated higher on guilt than on shame. The following hypotheses were tested about the ratings of emotion characteristics for shame and for guilt (Hypothesis 3):

Appraisals. For shame, higher ratings were expected on appraisals of (1) being at the center of attention, (2) harm to one's reputation, (3) having lost control over the situation, and (4) not having expected what happened. For guilt, higher ratings were expected on appraisals of (5) having done damage to someone, (6) being responsible for what happened, (7) having violated a social or moral norm, (8) deserving to be punished, (9) falling short of one's own expectations, (10) others disapproving of what one has done, and (11) falling short of the expectations of others.

Self-experiences. For shame, higher ratings were expected on experiences of the self as (1) confused, (2) isolated from others, (3) powerless and small, and (4) weak and incompetent. For guilt, higher ratings were expected on experiences of the self as a (5) bad person.

Action tendencies. For shame, higher ratings were expected on action tendencies of (1) avoiding the gaze of others, (2) hiding oneself from others, and (3) smiling about what happened. For guilt, higher ratings were expected on action tendencies of (4) improving oneself, (5) apologizing, (6) changing future

behavior, (7) explaining what happened to others, (8) punishing oneself, and (9) repairing damage done.

Body sensations. For shame, higher ratings were expected on sensations of (1) blushing, (2) feeling warm, (3) trembling, (4) heart beating faster, (5) sweating, and (6) feeling weak in the limbs. For guilt, higher ratings were expected on sensations of (7) getting pale, (8) feeling cold, and (9) feeling a lump in the throat.

Rumination. For shame, higher ratings were expected on (1) trying to forget about what happened. For guilt, higher ratings were expected on (2) ruminating about what happened.

Social sharing. For shame, higher ratings were expected on (1) avoiding others from knowing. For guilt, higher ratings were expected on (2) talking to others about what happened.

Emotion terms. For shame, higher ratings were expected on (1) angry with others. For guilt, higher ratings were expected on being (2) disappointed with oneself, and (3) angry with oneself.

4. In addition, it was expected that with Multidimensional Scaling a unidimensional representation of the differences between shame and guilt characteristics would show high agreement with the representation of differences between these characteristics found in Chapter 3 (Hypothesis 4).

Method

Participants

In the study participated 244 undergraduate students: 65 students (21 male, 44 female) at Sanata Dharma University in Indonesia with a mean age of 19.94 years ($SD = 1.70$); 81 students (23 male, 58 female) at the Universidad Autónoma de Ciudad Juárez in Mexico with a mean age of 22.98 years ($SD = 5.53$); and 98 students (20 male, 78 female) at Tilburg University in the Netherlands with a mean age of 20.63 years ($SD = 4.14$). Participation was voluntary and anonymous. Indonesian students were paid 7,000 Indonesian rupiah (at the time of the study approximately 1 US dollar). Mexican students participated within the frame of a series of guest lectures on cross-cultural psychology. Dutch students participated as partial fulfillment of a course requirement.

Instrument

The instrument consisted of a questionnaire divided into two sections: one for shame and the other for guilt. Each section contained a blank sheet where

participants could describe a personal experience of shame or guilt. This was followed by a list of 41 emotion characteristics from various components (11 appraisals, 5 self-experiences, 9 action tendencies, 9 body sensations, 2 rumination, 2 social sharing, and 3 emotion words). On this list participants indicated the intensity with which they had experienced each of the emotion components during the episode they had described, using a 6-point Likert scale ranging from 0 (*not at all*) to 5 (*very strongly*).

The instrument was translated from English into each of the participant's languages. The translations into Indonesian and Spanish were done by several local bilinguals, using a committee approach (Van de Vijver & Leung, 1997). Translation into Dutch was done using a back-translation approach. The following translations of shame and of guilt were used: *malu* and *bersalah* in Indonesian, *vergüenza* and *culpa* in Spanish, and *schaamte* and *schuld* in Dutch.

Procedure

Participants were requested to take part in a study on the way that people from different parts of the world experience shame and guilt. They were assured that the study was anonymous and that all data would be treated confidentially. Completing the questionnaire usually took about 30 minutes.

Results

Before the analyses, missing values (0.02%) in the data were replaced by the sample mean on the variable.

General estimates of cultural variation

The extent of cultural variation in the data was assessed by a repeated measures ANOVA with culture (3 levels) as between-subjects factor, and emotion (2 levels) and item (i.e., emotion components; 41 levels) as within-subjects factors. The results of this analysis can be found in Table 1. In line with the expectations, all effects involving culture are relatively small in comparison to the effects of Item and the Emotion x Item interaction (see Cohen, 1988). This indicates that there are substantial differences in the rating of items (i.e., emotion characteristics) between the two emotions, and that cultural variation in these ratings is limited.

Correlations between shame and guilt

For all three samples, mean scores were calculated for the ratings of the 41 emotion characteristics on shame and on guilt. Subsequently, bivariate

correlations were calculated between shame and guilt ratings across the 41 characteristics. No significant correlation was found with the Mexican sample ($r = .02, ns$) and a positive correlation was found for both the Indonesian sample ($r = .39, p < .05$) and the Dutch sample ($r = .33, p < .05$).

Table 1

Repeated Measures ANOVA with Culture (2) as Between-Subjects Factor, and Emotion (2) and Item (41) as Within-Subjects Factors

Source	<i>df</i>	<i>F</i>	η^2
Between-subjects			
Culture (C)	2	6.52**	.05
Error (C)	241	(47.56)	
Within-subjects			
Emotion (E)	1	4.56*	.02
E x C	2	2.94	.02
Error (E)	241	(12.66)	
Item (I)	40	68.41**	.21
I x C	80	7.17**	.04
Error (I)	9640	(2.74)	
E x I	40	56.18**	.19
E x I x C	80	2.42**	.02
Error (E x I)	9640	(1.87)	

Note. Values in parentheses are mean square errors.

* $p < .05$. ** $p < .01$.

Distinct characteristics of shame and guilt

For each participant difference scores¹ (*diff*) were calculated between the ratings of emotion characteristics for shame and for guilt. This resulted in a single difference score for each emotion characteristic, indicating whether it was rated higher for shame (positive *diff*) or for guilt (negative *diff*). Difference scores can be interpreted similarly to Cohen's *d* (Cohen, 1988): a score with an absolute value of .20 indicates a small difference, of .50 a medium difference, and of .80 a large difference. Table 2 shows for each sample the average difference scores for each emotion characteristic, ordered according to the size of these scores in the Indonesian sample.

¹ Difference $diff = (x_{shame} - x_{guilt}) / \sqrt{(\sigma_{shame}^2 + \sigma_{guilt}^2 - 2 * r_{(shame,guilt)} * \sigma_{shame} * \sigma_{guilt})}$, where *x* is the score on an emotion characteristic.

Table 2*Mean Difference Scores per Emotion Characteristic for Three Cultures¹*

Emotion characteristic	Predicted	Indonesia	Mexico	Netherlands
	association ²			
Blushing	shame	.91	.42	.39
Smile	shame	.89	1.13	.95
Avoiding gaze	shame	.74	.78	.81
Center of attention	shame	.67	.84	1.11
Hiding	shame	.52	.69	.80
Powerless and small	shame	.21	.21	.46
Confused	shame	.17	.21	.24
Weak limbs	shame	.12	.63	.58
Feeling warm	shame	.05	.08	.12
Avoiding others knowing	shame	.04	.18	.28
Heart beating faster	shame	.03	.58	.29
Trembling	shame	-.01	.00	.08
Feeling cold	guilt	-.02	.13	-.04
Trying to forget	shame	-.03	-.19	-.04
Sweating	shame	-.05	.33	.24
Angry with others	shame	-.06	.38	.19
Weak person	shame	-.10	.09	.13
Lump in the throat	guilt	-.13	-.10	.27
Isolated	shame	-.14	-.00	.50
Lost control	shame	-.17	.21	.08
Harms reputation	shame	-.17	-.08	-.15
Ruminating	guilt	-.17	.18	.43
Talk to others	guilt	-.21	-.07	-.10
Getting pale	guilt	-.24	.24	-.07
Unexpected	shame	-.26	-.19	-.38
Explaining	guilt	-.27	.16	.01
Personal expectations	guilt	-.30	-.27	-.13
Changing behavior	guilt	-.36	-.28	-.26
Disappointed with self	guilt	-.37	-.47	-.14
Improving self	guilt	-.42	-.45	-.18

Table 2 continued

Emotion characteristic	Predicted association ²	Predicted		
		Indonesia	Mexico	Netherlands
Bad person	guilt	-.43	-.68	-.65
Punishing self	guilt	-.48	-.48	-.29
Others disapprove	guilt	-.52	-.48	-.30
Angry with self	guilt	-.55	-.61	-.83
Repairing	guilt	-.58	-.86	-.41
Violating norm	guilt	-.58	-.19	-.30
Apologizing	guilt	-.60	-.57	-.46
Expectations others	guilt	-.60	-.39	-.20
Being responsible	guilt	-.66	-.48	-.49
Deserving punishment	guilt	-.92	-.60	-.61
Done damage	guilt	-1.04	-1.10	-1.19

¹ Scores higher than zero indicate higher ratings for shame than for guilt, and scores lower than zero indicate higher ratings for guilt than for shame.

² For items predicted to be associated with shame a positive difference score was expected, and for items predicted to be associated with guilt a negative difference score was expected.

Agreement between samples in average difference scores is substantial: bivariate correlations between samples range between .89 and .93. Of the 41 emotion characteristics, 34 are associated with either shame or with guilt in the way that was predicted in all samples. One characteristic (*feeling cold*) was rated in all samples higher for shame, rather than for guilt, contrary to the hypothesis. For the remaining 6 emotion characteristics (15%) the sign of the average difference score is not the same in all samples.

Multidimensional scaling of emotion characteristics

For each sample, Euclidean distances between emotion characteristics were computed using Multidimensional Scaling (Proxscal in SPSS 11.5), based on the difference scores matrices of participants by emotion characteristics. A unidimensional representation accounted for .90 of the dispersion for the Indonesians, .92 for the Mexicans, and .91 for the Dutch.

The individual sample representations were then compared using a Generalized Procrustes Analysis (GPA, Commandeur, 1996). GPA calculates a centroid configuration of the three samples representations through transformations that leave the relative distances between items intact (see Fontaine et al. 2003). The resulting centroid configuration could account for

90% of the squared distances in the three sample representations. Inspection of fit at item level showed that for 9 items the centroid accounted for less than 60% of the squared distances. In a subsequent GPA these items were treated as culture-specific items. This means that they were not included in the calculation of the fit of the centroid configuration, but that their position within this configuration could be determined on the basis of the other items.

The GPA on the 32 culturally similar items produced a centroid configuration that could account for 94% of the squared distances, indicating a very good fit. This configuration is depicted in Figure 1, with items plotted along a single (guilt-shame) dimension. Because of the transformation of difference scores into dissimilarity measures and subsequent GPA, the scale values have no direct meaning; important are the relative distances between the items, representing the degree to which these are related (exact positions and proportions of squared distances accounted for can be found in Table A1).

In Figure 2, culturally different items are depicted for each sample on the cross-culturally shared guilt-shame dimension of Figure 1. Items have been ordered according to the magnitude of cross-cultural differences. For each item the mean was taken of the absolute distances between pairs of samples (for all items exact positions and mean absolute distances can be found in Table A2).

Congruence with Chapter 3

The centroid configuration obtained in the present study shared 29 items with the centroid configuration reported in Chapter 3. GPA of the two configurations resulted in a centroid that could account for 94% of the squared distances, indicating a very good fit of MDS representations across studies.

Discussion

This study assessed cross-cultural similarities and differences in ratings of emotion characteristics for self-reported experiences of shame and guilt. The results were compared with findings of Chapter 3 in which preselected emotion situations were rated. It was tested whether more cross-cultural variation would be found with ratings of self-reported situations than with ratings of preselected situations. No evidence was found that this was the case.

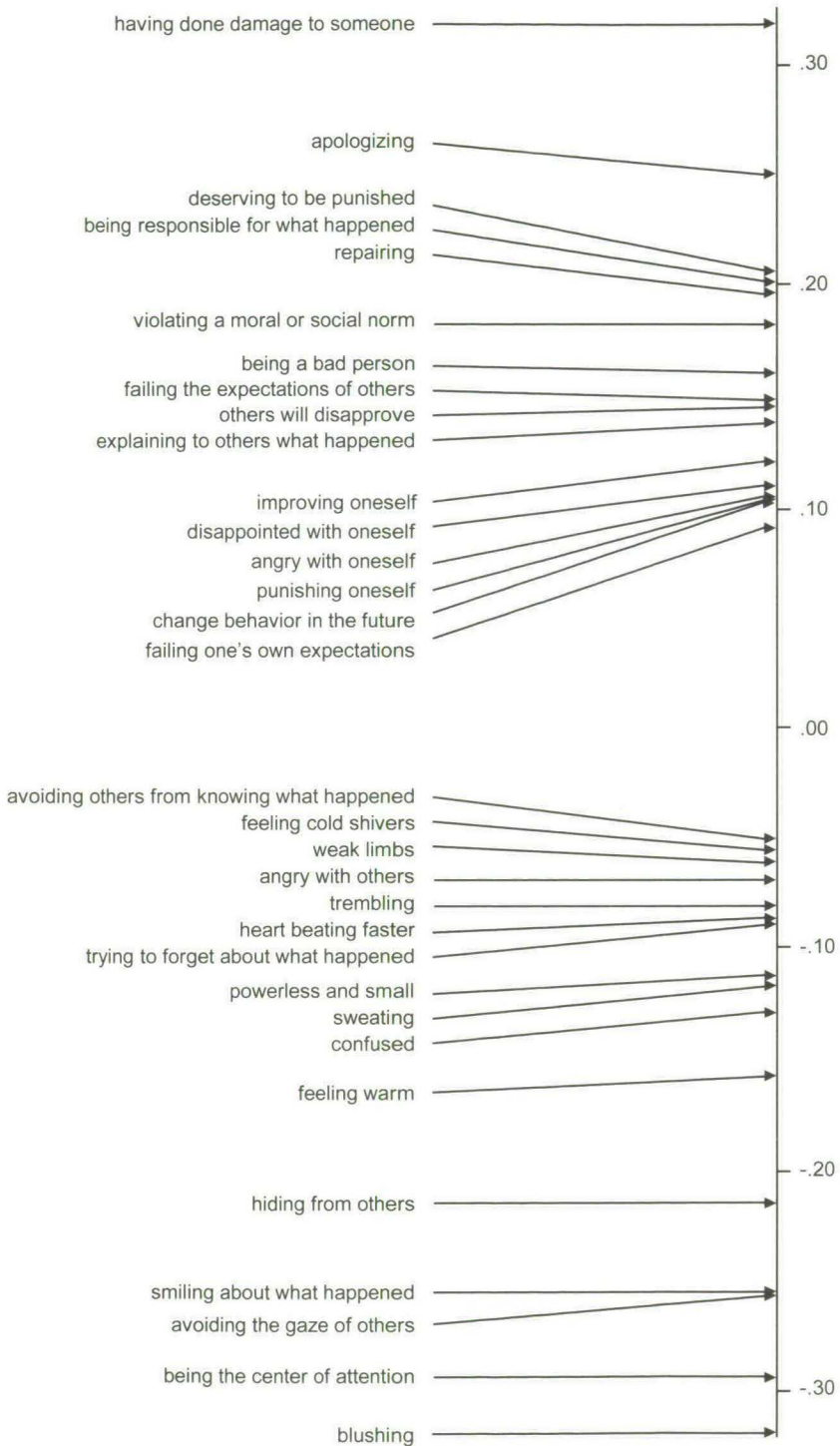


Figure 1
Centroid configuration for 32 emotion characteristics

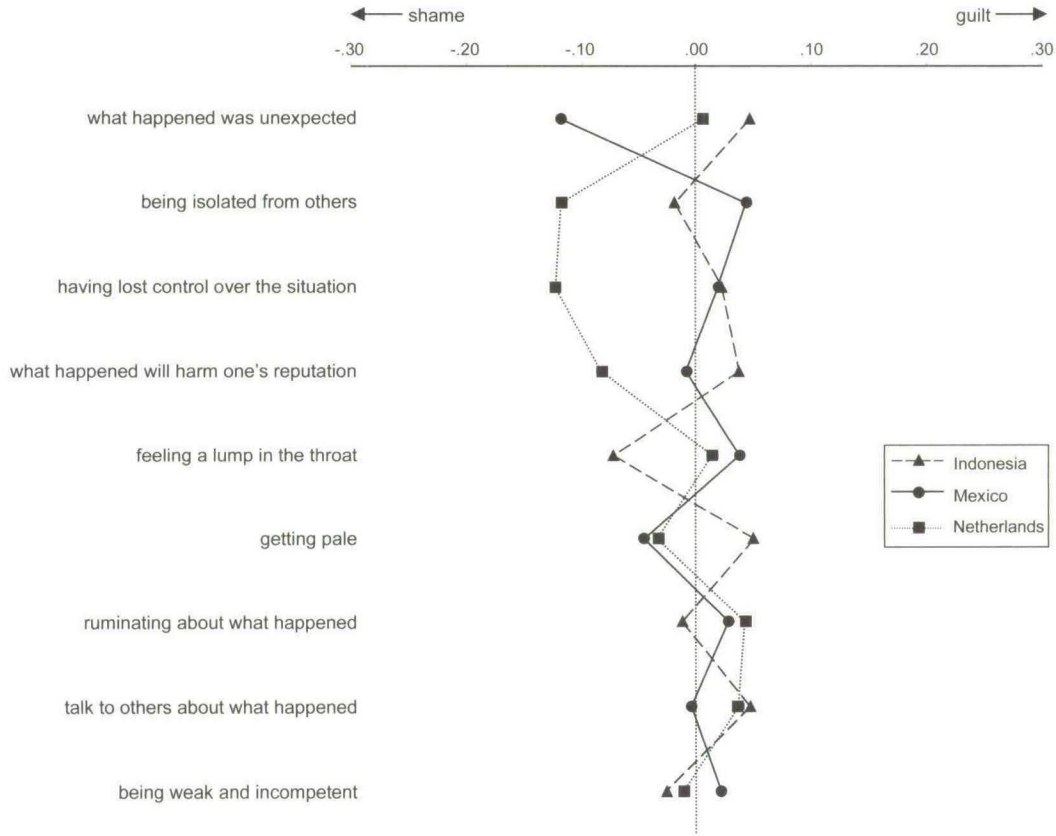


Figure 2
Positions of cross-culturally different emotion characteristics on the guilt-shame dimension from Figure 1

In line with the first hypothesis, the effects involving culture in ANOVA were relatively small (see Cohen, 1988). In contrast, large effects were found for differences between emotion characteristics and for the differentiation of emotion characteristics across emotions. These results were confirmed in the analysis of difference measures. Thirty-four out of 41 emotion characteristics were rated higher on either shame or guilt in all three samples in line with the third hypothesis. The high correlations of difference scores between the three samples indicate that cross-cultural similarities in the differentiation between shame and guilt were substantial.

Conversion of the difference scores into distances using Multidimensional Scaling allowed for a direct comparison of the results of the present study with those in Chapter 3. The similarities between the configuration depicted in Figure 1 and the configuration found in Chapter 3 are substantial, given that the two configurations were based on data gathered with two different methods. This confirms the fourth hypothesis that shame and guilt characteristics would be organized in a similar fashion in both studies. In addition, all emotion characteristics that showed most cross-cultural differences (Figure 2) in the present study, were also found to show differences in Chapter 3. However, these cross-cultural differences were not always in the same direction (i.e., the association with shame or guilt) in the two studies, suggesting that further inquiry into these differences should leave open the possibility that they are due to (item)bias.

Contrary to hypothesis 2, no difference was found in correlations of shame and guilt ratings between the Indonesians and the Dutch. This goes against a study by Wallbott and Scherer (1995) who found that shame and guilt characteristics were more clearly defined in collectivist societies than in individualist societies. The results do not follow a difference between individualism – collectivism, but it can be that the sampling was too limited to adequately test for such a difference.

The present study did not investigate the behavioral consequences of shame and of guilt. However, in view of the large cross-cultural similarities of emotion characteristics associated with these emotions, it is likely that across cultures experiences of shame of guilt will function in a similar way.

Appendix

Table A1

*Positions and Proportion of Distances Explained of Items
in a Cross-Culturally Shared Guilt – Shame Dimension*

Item	Position	Proportion of Distances Explained
Done damage	-0.319	.99
Apologizing	-0.250	.99
Deserving punishment	-0.206	.98
Being responsible	-0.201	.98
Repairing	-0.197	.94
Violating norm	-0.182	.99
Bad person	-0.160	.95
Expectations others	-0.149	.94
Others disapprove	-0.147	.97
Explaining	-0.139	.87
Improving self	-0.121	.96
Disappointed with self	-0.110	.99
Angry with self	-0.106	.94
Punishing self	-0.106	.97
Changing behavior	-0.104	.99
Personal expectations	-0.091	.96
Avoiding others from knowing	0.050	.92
Feeling cold shivers	0.054	.90
Weak limbs	0.060	.77
Angry with others	0.069	.79
Trembling	0.080	.95
Heart beating faster	0.086	.87
Trying to forget	0.089	.97
Powerless and small	0.112	.92
Sweating	0.117	.93
Confused	0.129	.90

Table A1 continued

Item	Position	Proportion of Distances Explained
Feeling warm	0.167	.97
Hiding	0.214	.98
Smiling	0.254	.95
Avoiding gaze	0.256	1.00
Center of attention	0.293	1.00
Blushing	0.319	.99

Table A2

Positions and Mean Absolute Distances of Culturally Different Items on a Cross-Culturally Shared Guilt – Shame Dimension

Item	Culture			Mean Absolute Distance
	Indonesia	Mexico	Netherlands	
Unexpected	0.05	-0.12	0.01	0.11
Isolated	-0.02	0.04	-0.12	0.11
Lost control	0.02	0.02	-0.12	0.10
Harms reputation	0.04	-0.01	-0.08	0.08
Lump in the throat	-0.07	0.04	0.01	0.07
Getting pale	0.05	-0.05	-0.03	0.06
Ruminating	-0.01	0.03	0.04	0.04
Talk to others	0.05	-0.01	0.04	0.03
Weak and incompetent	-0.03	0.02	-0.01	0.03

CHAPTER 6

Conclusion

The studies in this thesis attempt to contribute to our understanding of cultural variation in emotions through culture-comparative studies including various emotion components. A research strategy was followed aiming at the empirical identification of cross-cultural equivalence in emotions (see Fontaine, Poortinga, Setiadi, & Markam, 2002), and using multiple emotion components as indicators. This strategy produced findings of structural equivalence in various emotion characteristics. Cross-cultural similarities were found in the association of body sensations with seven emotions (Chapter 2), and of a range of emotion components with shame and guilt (Chapters 3 to 5). In addition, analyses in Chapters 2, 3, and 5 also suggested limited cultural variation in quantitative comparisons, as reflected in the relatively small effect sizes regarding cultural differences (see Scherer & Wallbott, 1994). It seems difficult to dismiss these findings as due to impositions of Western views of emotion in so far as stimulus situations were collected in the target cultures, and cross-cultural similarities and differences in emotion components were established by comparing within-culture constellations of findings.

The most important finding of Chapter 2 is that patterns of body sensations associated with emotions were, by and large, also found with rural, non student samples (i.e., Rarámuri Indians and Javanese). This implies that in discussions about the nature of body sensations with emotions, strict cultural-constructivist accounts are not plausible. In addition, the interpretation of culturally different body sensations against the background of common profiles gave a detailed picture of where differences could be found.

In Chapter 3 substantial cross-cultural similarity was reported in the association of different emotion components with either shame or guilt. This finding makes basic differences in shame and guilt unlikely, even in widely divergent cultures. Hence, discussions about cross-cultural differences in shame and guilt should not so much address issues of cross-cultural identity of the emotion constructs, but rather focus on how shame and guilt function in different cultural contexts.

The most important finding of Chapter 4 is that distinctions between the emotions of shame and guilt can be found even in a culture that does not lexically distinguish between these emotions. This strongly suggests that there does not need to be a one-to-one match between emotion processes and emotion

words. In addition, this finding supports structural equivalence across cultures of a core of emotion components associated with shame or guilt in Chapter 3, and extends this finding to populations for which substantial cultural variation in these emotions can be expected.

Finally Chapter 5 shows that cross-cultural similarities that were found in Chapters 3 and 4 are not a consequence of any imposition of preselected shame and guilt situations. Ratings of emotion components for self-reported experiences of shame and guilt distinguished between these emotions in a similar fashion as ratings of preselected shame and guilt situations in Chapter 3. This suggests that the distinction between shame and guilt is robust across different methods.

The ultimate goal of cross-cultural studies of emotions is to explain why and where cultural context makes a difference in emotions. Currently popular theories about general cross-cultural differences in psychological processes, notably individualism and collectivism (Hofstede, 1980) tend to focus on global differences and appear to lack the precision that is needed for such explanations. In this thesis no evidence was found that differences in emotion components and emotion-related terms between samples could be explained by a distinction between individualist and collectivist societies. An observed difference between Indonesian and Dutch students in the correlation of shame and guilt did not replicate, and no systematic differences were found between Dutch and Belgian samples and samples from Indonesia and Mexico in ratings of emotion words and emotion components. The construction of more precise theories depends on a body of empirical findings that provide at least a tentative indication of the level and extent of cultural variation in emotion processes. In other words, we first need to know what is different in emotions across cultures before theories about such differences can be drafted.

Although a single series of studies as presented in this thesis cannot provide any definite answers regarding the extent and level of cultural variation in emotions, the results do narrow down the range of plausible positions in the universalism – relativism debate. Most important, the evidence for structural equivalence in shame and guilt (in terms of associated emotion components) across a wide range of cultural samples makes it very unlikely that these emotions differ to such an extent across cultures that they are incomparable. Hence, the data presented in this thesis make claims of strong cultural relativism in the emotions implausible. On the other hand, specific cross-cultural differences that were found in the association of emotion components with shame and guilt indicate that universality of emotions does not imply strict invariance of psychological processes across cultures. For example, the body sensation of blushing does not appear to be a universal indicator of shame, even

though the association is very strong in Western conceptions of shame (Casimir & Schnegg, 2002; Drummond, 2000; Simon & Shields, 1996). In addition, specific appraisals (e.g., *unexpectedness*), self-experiences (e.g., *feeling powerless and small*), and action tendencies (e.g., *changing one's behavior in the future*) appear to be related differently to shame and guilt across cultures.

The results of the studies are in line with the perspective of psychological universalism that was described in the introduction of this thesis (Berry, Poortinga, Segall, & Dasen, 2002; Poortinga & Soudijn, 2002). Even in studies designed to maximize the probability of finding cross-cultural differences, structural equivalence of emotion components of shame and guilt was found to be the rule rather than the exception. This strongly suggests that there is basic identity across cultures of emotion processes of shame and of guilt. This view is not at variance with approaches that focus more on cultural differences in emotions, but it does call for a qualification of the interpretation of such differences. For example, Menon and Shweder's (1994) finding that *lajja* (shame) has a culture-specific meaning in Orissa, India, does not necessarily mean that this emotion is not comparable with experiences of shame in other cultures (see Shweder & Haidt, 2000). Though specific expressions or experiences may be related differently with shame (or guilt) across cultures, other components can still be cross-culturally similar (Mesquita, Frijda, & Scherer, 1997).

Cross-cultural differences can also be found in salient values or concerns that are associated with a specific emotion. For example, Rodriguez Mosquera, Manstead, and Fischer (2002) found that concerns of family honor lead to stronger reactions of shame in Spanish than in Dutch participants. This finding suggests that more cross-cultural differences in shame will be found in situations in which family honor is salient, but also implies as a condition for meaningful comparison that the emotion of shame is structurally equivalent across cultures. These examples support the position taken in this thesis that the simultaneous study of cross-cultural similarities and differences in emotions is necessary to provide a more detailed body of evidence on cultural variation in the emotions. Any study of what is different between cultures in emotions in some way or another also has to be a study of what is similar.

A main objective of this thesis was to extend quasi-experimental research on emotions to non-Western and non-student samples, in order to make a more accurate assessment of the extent of cross-cultural variation. The most salient realization of this objective was the study of shame and guilt with the Rarámuri, who lack a term for guilt. A focus on finding cross-cultural equivalence in a range of emotion components enabled a comparison of emotional reactions in this sample with student samples who did distinguish lexically between shame

and guilt. The success of this study supports the assertion by Frijda, Markam, Sato, and Wiers (1995) that characteristic emotion components can be used to study emotion processes across cultures, even when the emotion lexicon differs. Thus, multicomponential theories of emotion do not only allow for a more detailed investigation of cross-cultural similarities and differences (see Mesquita et al., 1997), but also enable the study of emotion processes independent of specific emotion words that are prominent in much of the cross-cultural literature.

In Chapter 1 it was argued that issues of equivalence are a central concern for culture-comparative research. The main emphasis in the studies reported has been on structural equivalence: on the cross-cultural identity of emotion constructs in terms of associated emotion components. It has to be noted that the design of these studies did not permit an inquiry of bias at the level of separate items. This implies that findings of culture specificity could not be differentiated with any precision from item bias, although inspection of cultural differences against the background of similarities did provide tentative suggestions for interpretation. The clearest example is the study on body sensations reported in Chapter 2. Three possible types of differences have been distinguished on the basis of association patterns across cultures and emotions: (i) differences due to a general association of a body sensation with emotions (e.g., *weak in the knees* with the Rarámuri), (ii) differences due to a general absence of a body sensation with emotions (e.g., *lump in the throat* with the Rarámuri), and (iii) differences due to a specific association of a body sensation with an emotion (e.g., *goose-flesh* and *fear* with the Javanese). In future studies a more detailed investigation of observed differences should enable a finer differentiation between bias and real cross-cultural differences. Such studies should be a major step towards identifying more precisely where and how cultural variation affects emotions.

For the Rarámuri and the Javanese, correlations between emotion characteristics could best be represented in a two-dimensional space defined by a primary shame-guilt dimension, and a secondary internal-external dimension. In contrast, in both chapters (3 and 5) describing student studies, emotion characteristics could be adequately represented in a unidimensional space. At the same time, a two-dimensional representation showed that the second dimension with the students was very similar to that with the Rarámuri and Javanese (Chapter 4). A study by Fontaine et al. (2003) with students from Belgium and Peru also used two dimensions to represent shame and guilt characteristics. The first dimension, distinguishing between guilt and shame, accounted for most of the dispersion in all samples.

Still, the question needs to be addressed whether the findings are a consequence of bias or of a stronger link between these social emotions and interpersonal orientation with the Rarámuri and Javanese. Bias may be caused by the type of situations that were used as stimuli with the Rarámuri or with the Javanese, or by the procedure of gathering data by means of an interview, which may have primed interpersonal concerns. If in future research the currently observed cross-cultural differences would be replicated while bias can be ruled out, then the present results suggest that the characteristics of shame and guilt are not equally related in all cultures to intrapersonal and/or interpersonal orientations (see Baumeister, 1994, 2001; Koentjaringrat, 1985).

Finally, the basic structural similarities between emotions found in the present thesis may explain why people from different cultures can understand each other even in the face of widely different customs and habits. For the studies in this thesis, I had the privilege of visiting both Indonesia and Mexico. One night, when I was on Java watching television with my host family, I had the confusing experience of watching a Mexican soap, dubbed in the Indonesian language. I asked my hosts if they did not think that the narrative and the rather turbulent emotional lives of the protagonists were somewhat odd. They agreed that it was different from what they were used to, but said it was entertaining to watch anyway. The approach to cross-cultural differences presented in this thesis should make it better understandable how it is possible that there can be cultural differences in the emotion vocabulary and in emotional reactions to specific events, but at the same time sufficient cross-cultural similarities in emotional experiences for Indonesian viewers to enjoy Mexican soap-operas.

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Summary

Issues of cross-cultural variation in emotions have been prominent in psychology for more than a century. However, theories and measures of culture and emotion tend to vary substantially from one study to another. In addition, discussions about cross-cultural (non)equivalence in emotions are often characterized by a dichotomy between positions of pan-cultural universalism and cultural relativism. The studies in this thesis attempt to contribute to our understanding of cultural variation in emotions, especially shame and guilt, by showing how emotions can have at the same time universally shared and culturally variable components.

Chapter 1 identified several problems in the cross-cultural study of emotions. It was noted that psychologists like to focus on cultural variation in emotions, but that the interpretation of such variation is hampered by the quasi-experimental design of cross-cultural studies, the likelihood of bias in the data, and the absence of well-defined theories of cultural variation in emotions. The logic of testing for cultural differences in emotions requires that emotions are to some extent equivalent across cultures; any meaningful comparison becomes impossible when emotions are fundamentally different between cultures. Three levels of equivalence were distinguished: structural equivalence, metric equivalence, and full-score equivalence. The lowest level, structural equivalence, implies that the same construct (e.g., the emotions *shame* or *guilt*) is measured across cultures, but not necessarily on the same quantitative scale. This is a minimal condition for any cross-cultural comparison. The studies in this thesis assessed cultural variation at different levels of equivalence, with emphasis on structural (non)equivalence of emotion constructs across cultures. Chapter 1 also described how recent developments of componential emotion theories offer a basis for comparing emotions across cultures without relying on single measures, such as emotion words. This is especially important for the study of the social emotions, such as shame and guilt, that can not be distinguished on the basis of (observable) facial expressions like the basic emotions. Although reports of cross-cultural differences in shame and guilt have a long history, the extent to which these emotions are equivalent is still unclear. Chapter 1 further described the research strategy followed in this thesis. Various emotion components were studied to assess cross-cultural equivalence in emotions, especially shame and guilt, in samples from a broad range of cultural

backgrounds. This included students from Belgium, Indonesia, Mexico, and the Netherlands, but also non-student Rarámuri Indians and rural Javanese. The thesis departed from a perspective of psychological universalism, which means that basic emotion processes were expected to be found across cultures, but that there could be differences in the cultural manifestations.

Chapter 2 focused on body sensations associated with seven emotions: joy, anger, fear, sadness, disgust, surprise, and shame. Findings of cross-cultural similarities in previous studies have been disputed by scholars who argue that studies with non-student samples from non-western countries yield more cultural variation than had been previously found. The study in chapter 2 tested this claim by including Rarámuri Indians from northern Mexico and rural Javanese from Indonesia with low exposure to western culture, in addition to student samples from three continents. Cultural variation was found in the data, but to a limited extent. Patterns of body sensations associated with emotions were, by and large, replicated with the non-student samples. Some salient cultural differences were identified against the background of the cross-culturally shared patterns. Although the non-student samples did contribute more to the cultural variation than the student samples, it was concluded that a core of body sensations is associated with emotions in a similar way across cultures.

Chapter 3 presented two studies that assessed cross-cultural similarities and differences in the emotions shame and guilt, at different levels of equivalence. Many claims have been made in the literature about (non)equivalence of shame and guilt across cultures, but it is not clear to what extent these emotions are similar or different. In the first study, students from Indonesia and the Netherlands rated a large set of situations on the extent to which these would elicit shame and guilt, next to anger, fear, and sadness. Ratings of shame and guilt were found to be largely equivalent between both samples at a structural level, but differences were found in the correlation of both emotions (i.e., shame and guilt were positively correlated in the Netherlands but not in Indonesia). In the second study, students from Belgium, Indonesia, Mexico, and the Netherlands, rated 15 strong shame-eliciting and/or guilt-eliciting situations on 47 emotion characteristics (including appraisals, action tendencies, body sensations, emotion words, self-experiences, rumination and social sharing) that were selected from the literature as typical for either experiences of shame or experiences of guilt. The correlations of ratings of shame and of guilt with ratings of the emotion characteristics showed substantial similarity among all samples. Most emotion characteristics were associated with either shame or

guilt in the predicted way in all samples. The correlations among all emotion characteristics could be represented on a single dimension (using Multidimensional Scaling), representing a clear shame-guilt distinction. The positions of 35 emotion characteristics on this dimension were found to be similar in all four samples, whereas with 12 characteristics some cultural differences were found. Correlations between ratings of shame and guilt were not significant in any sample. Some differences in intensity ratings were found with the Indonesians, who tended to rate guilt more intensely than the other samples. Over-all, the studies in chapter 3 suggested substantial structural equivalence in shame and guilt among cultures, both in ratings of these emotions across situations and in the association of these emotions with various emotion characteristics.

Chapter 4 extended the assessment of structural equivalence in shame and guilt to Rarámuri Indians, who lack an emotion term for guilt, and to rural Javanese from Indonesia. Two studies addressed the question to what extent the findings obtained with student samples in chapter 3 could be generalized to non-student samples, including a culture that lacks a lexical distinction between shame and guilt. In the first study a range of descriptions of daily episodes eliciting shame were collected from the Rarámuri, and descriptions of episodes eliciting shame or eliciting guilt were collected from the Javanese. These episodes were rated by Dutch and Indonesian students on the extent to which they would elicit shame and guilt. It was found that 34% of the Rarámuri shame episodes were rated by the students higher on guilt than on shame. In contrast, 82% of the Javanese shame episodes were rated by the students higher on shame than on guilt, and 75% of the guilt episodes were rated higher on guilt than on shame. This suggested that Rarámuri shame may encompass both experiences of, what would be labeled in English, emotions of shame and guilt. In the second study Rarámuri and Javanese samples rated 18 strong shame-eliciting and/or guilt-eliciting situations on 29 emotion characteristics (including appraisals, action tendencies, body sensations, *shame*, *guilt* [Javanese only], self-experiences, and rumination) that were selected from the literature as typical for either experiences of shame or experiences of guilt. For each sample, the correlations among all emotion characteristics were represented in a two-dimensional space (using Multidimensional Scaling), showing a shame-guilt distinction, and an internal-external distinction. Comparison of the Javanese configuration with a two-dimensional configuration of 29 emotion characteristics calculated on the student data in chapter 3 (study 2), showed similar positions for 22 emotion characteristics, and cultural differences for 7 characteristics. Comparison of the Rarámuri configuration (including 28 characteristics, because an emotion word

for guilt was lacking) with the student configuration showed similar positions for 19 emotion characteristics, and cultural differences for 9 characteristics. A clear distinction was found between emotion characteristics associated with shame, and emotion characteristics associated with guilt, even with the Rarámuri who lacked an emotion term for guilt. Some emotion characteristics were found to be associated differently with shame and guilt with both the Rarámuri and the Javanese when compared to the students. This suggests that some characteristics of shame and guilt in the current emotion literature may not be universal. Over-all, the studies in chapter 4 supported a position of psychological universalism regarding shame and guilt. A core of shame and guilt characteristics could be found in all samples, even when a term for an emotion was absent.

Chapter 5 assessed cross-cultural equivalence of shame and guilt in ratings of self-reported experiences, rather than preselected situations as was done in chapters 3 and 4. This was to ascertain that the cross-cultural similarities found in both preceding chapters were not due to an imposition of the stimulus situations. Students from Indonesia, Mexico, and the Netherlands, rated self-reported experiences of shame and of guilt on 41 emotion characteristics (including appraisals, action tendencies, body sensations, self-experiences, rumination and social sharing). Differences in ratings of emotion characteristics between shame and guilt experiences showed substantial similarity among all samples. A unidimensional configuration of the difference scores showed a clear shame-guilt distinction that was very similar to the configuration found in chapter 3. This suggested that a cross-culturally similar distinction between shame and guilt characteristics can be found using different methods.

Finally, chapter 6 recapitulated the main findings of the preceding chapters. It was concluded that the research strategy followed in this thesis was successful in producing evidence for structural equivalence in various emotion characteristics. This finding narrows down the range of plausible positions in the universalism-relativism debate. On the one hand, claims of strong cultural relativism in emotions become implausible in view of the structural equivalence that was found. On the other hand, the cultural differences in emotion characteristics that were found indicate that universality of emotions does not imply strict invariance of psychological processes across cultures. All in all, the results of the studies described in this thesis appear to support the position of psychological universalism that was outlined in the first chapter.

Samenvatting (Summary in Dutch)

Culturele verschillen in emoties zijn al meer dan een eeuw een belangrijk onderwerp in de psychologie. Theorieën en metingen met betrekking tot cultuur en emoties zijn echter zeer verschillend van de ene studie op de andere. Daarnaast worden discussies over cross-culturele (on)gelijkheid van emoties vaak gekenmerkt door een dichotomie tussen posities van pan-cultureel universalisme enerzijds en cultureel relativisme anderzijds. De studies in dit proefschrift proberen een bijdrage te leveren aan ons begrip van culturele variatie in emoties, met name schaamte en schuld, door te laten zien hoe emoties zowel universeel gedeelde als cultureel variabele kenmerken kunnen hebben.

In hoofdstuk 1 werd een aantal problemen in het cross-culturele emotieonderzoek besproken. Er werd geconstateerd dat psychologen zich bij voorkeur richten op culturele variatie in emoties, maar dat de interpretatie van deze variatie bemoeilijkt wordt door het quasi-experimentele design van cross-culturele studies, door het voorkomen van bevooroordeeldheid in de data, en door de afwezigheid van eenduidige theorieën over culturele verschillen in emoties. De logica van het testen van culturele verschillen veronderstelt dat emoties tot op zekere hoogte equivalent zijn tussen culturen; elke zinvolle vergelijking wordt onmogelijk wanneer emoties fundamenteel verschillend zijn tussen culturen. Er werden drie niveaus van equivalentie onderscheiden: structurele equivalentie, metrische equivalentie, en schaal equivalentie. Op het laagste niveau, structurele equivalentie, wordt hetzelfde construct (bijv. de emotie *schaamte* of *schuld*) gemeten tussen culturen, maar niet noodzakelijk op dezelfde kwantitatieve schaal. Dit is een minimale voorwaarde voor elke cross-culturele vergelijking. De studies in dit proefschrift bestudeerden culturele variatie op verschillende niveaus van equivalentie, met de nadruk op structurele (in)equivalentie van emotieconstructen tussen culturen. In hoofdstuk 1 werd ook beschreven hoe recente ontwikkelingen van componentiële emotietheorieën de mogelijkheid bieden om emoties te vergelijken tussen culturen zonder afhankelijk te zijn van enkelvoudige metingen, zoals emotiewoorden. Dit is bij uitstek belangrijk voor het bestuderen van sociale emoties als schaamte en schuld, omdat deze niet onderscheiden kunnen worden op basis van (observeerbare) gelaatsexpressies zoals de basisemoties. Hoewel beweringen over cross-culturele verschillen in schaamte en schuld een lange geschiedenis

kennen is het nog onduidelijk in hoeverre deze emoties equivalent zijn. Verder werd in hoofdstuk 1 beschreven welke onderzoeksstrategie gevolgd werd in dit proefschrift. Verschillende emotiecomponenten zijn gebruikt om de cross-culturele equivalentie van emoties, met name schaamte en schuld, te bestuderen. Dit is gedaan in steekproeven van uiteenlopende culturele achtergrond, waaronder studenten uit België, Indonesië, Mexico, en Nederland, alsmede Rarámuri Indianen en rurale Javanen. Het uitgangspunt van dit proefschrift was een perspectief van psychologisch universalisme. Dit betekent dat er verwacht werd dat basale emotieprocessen in alle culturen gevonden zouden worden, maar ook dat er culturele verschillen kunnen bestaan in de manier waarop deze processen tot uiting komen.

Hoofdstuk 2 richtte zich op lichaamsgewaarwordingen geassocieerd met zeven emoties: blijdschap, boosheid, angst, droefheid, walging, verassing, en schaamte. Bevindingen van cross-culturele overeenkomsten in eerdere studies worden betwist door onderzoekers die verwachten dat studies met niet-studenten uit niet-westerse landen veel meer culturele verschillen zullen opleveren. De studie in hoofdstuk 2 testte deze verwachting door het bestuderen van Rarámuri Indianen uit Noord-Mexico en Javanen uit Indonesië met weinig blootstelling aan de westerse cultuur, naast studenten afkomstig uit drie continenten. Er werden culturele verschillen gevonden in de data, maar slechts tot op beperkte hoogte. Patronen van lichaamsgewaarwordingen geassocieerd met emoties werden over het algemeen ook gevonden bij de twee niet-student groepen. Hoewel de niet-student groepen meer bijdroegen aan de culturele variatie dan de studenten, kon geconcludeerd worden dat een kern van lichaamsgewaarwordingen op eenzelfde wijze geassocieerd is met emoties in verschillende culturen.

In hoofdstuk 3 werden twee studies gepresenteerd naar cross-culturele overeenkomsten en verschillen in de emoties schaamte en schuld, op verschillende niveaus van equivalentie. In de literatuur zijn veel claims te vinden over de vermeende (in)equivalentie van schaamte en schuld, maar het is nog onduidelijk tot op welke hoogte deze emoties overeenkomstig of verschillend zijn. In de eerste studie beoordeelden studenten uit Indonesië en Nederland een omvangrijke set van situaties op de wijze waarop deze bij hen gevoelens van schaamte en schuld zouden opwekken, naast gevoelens van boosheid, angst, en droefheid. Beoordelingen van schaamte en schuld bleken grotendeels equivalent tussen de twee groepen op een structureel niveau, maar er werden verschillen gevonden in de mate waarop deze twee emoties correleerden (schaamte en schuld waren positief gecorreleerd in Nederland

maar niet in Indonesië). In de tweede studie beoordeelde studenten uit België, Indonesië, Mexico, en Nederland 15 sterke schaamte-opwekkende en/of schuld-opwekkende situaties op 47 emotiekenmerken (waaronder evaluaties, actietendensen, lichaamsgevoelens, emotiewoorden, zelf-ervaringen, piekeren en sociaal delen), die in de emotieliteratuur genoemd werden als typisch voor ofwel ervaringen van schaamte ofwel ervaringen van schuld. De correlaties van de beoordelingen van schaamte en van schuld met de beoordelingen van de andere emotiekenmerken vertoonden grote gelijkenis tussen de culturen. De meeste emotiekenmerken waren op de verwachte wijze geassocieerd met ofwel schaamte ofwel schuld in alle culturen. De correlaties tussen alle kenmerken konden worden weergegeven op één enkele dimensie (door middel van Multidimensional Scaling), die een onderscheid maakte tussen schaamte en schuld. De posities van 35 emotiekenmerken op deze dimensie was hetzelfde in alle vier culturen, terwijl bij 12 kenmerken culturele verschillen werden gevonden. De correlaties tussen beoordelingen van schaamte en schuld waren in geen enkele cultuur significant. Culturele verschillen in de intensiteit van de beoordelingen werden gevonden bij de Indonesiërs, die ernaar neigden meer schuld te rapporteren dan de andere culturen. Samenvattend kan gesteld worden dat de studies in hoofdstuk 3 substantiële structurele equivalentie suggereerden tussen culturen in schaamte en schuld, zowel in beoordeling van deze emoties over situaties als in de associatie van deze emoties met verschillende emotiekenmerken.

In hoofdstuk 4 werd het onderzoek naar structurele equivalentie in schaamte en schuld uitgebreid met Rarámuri Indianen, die geen term voor de emotie schuld kennen, en met Javanen uit Indonesië. In twee studies werd nagegaan in hoeverre de bevindingen met studenten in hoofdstuk 3 veralgemeniseerd konden worden naar niet-studenten, waaronder een cultuur waarin geen woordelijk onderscheid wordt gemaakt tussen schaamte en schuld. In de eerste studie werden beschrijvingen verzameld van dagelijkse situaties die bij de Rarámuri schaamte opwekten, en beschrijvingen van situaties die bij de Javanen ofwel schaamte ofwel schuld opwekten. Deze situaties werden beoordeeld door Indonesische en Nederlandse studenten op de mate waarin deze bij hen schaamte en schuld zouden opwekken. Er werd gevonden dat 34% van de schaamte-situaties van de Rarámuri door de studenten werd beoordeeld als meer schuld dan schaamte opwekkend. Daarentegen werd 82% van de Javaanse schaamte-situaties door de studenten beoordeeld als meer schaamte dan schuld opwekkend, en 75% van de Javaanse schuld-situaties als meer schuld dan schaamte opwekkend. Dit suggereerde dat schaamte bij de Rarámuri zowel

ervaringen omvat die in het Nederlands schaamte genoemd zouden worden, als ervaringen die schuld genoemd zouden worden. In de tweede studie beoordeelden Rarámuri en Javanen 18 schaamte- of schuld-opwekkende situaties op 29 emotiekenarakteristieken (waaronder evaluaties, actietendensen, lichaamsgewaarwordingen, *schaamte*, *schuld* [alleen bij de Javanen], zelf-ervaringen, en piekeren), die in de literatuur genoemd werden als kenmerkend voor ervaringen van schaamte of van schuld. Voor beide culturen werden de correlaties tussen alle emotiekenarakteristieken weergegeven in een tweedimensionele ruimte (door middel van Multidimensional Scaling), met een onderscheid tussen schaamte en schuld op een dimensie en een onderscheid tussen interne en externe ervaringen op de andere dimensie. Vergelijking van de Javaanse configuratie met een tweedimensionele configuratie van 29 emotiekenarakteristieken berekend op de studentendata uit hoofdstuk 3 (studie 2), liet een gelijke positie zien voor 22 emotiekenarakteristieken, terwijl culturele verschillen werden gevonden voor 7 karakteristieken. Vergelijking van de Rarámuri configuratie (met slechts 28 karakteristieken, omdat een emotiewoord voor schuld ontbrak) met de studentenconfiguratie liet een gelijke positie zien voor 19 karakteristieken, en culturele verschillen voor 9 karakteristieken. Een helder onderscheid werd gevonden tussen emotiekenarakteristieken geassocieerd met schaamte en emotiekenarakteristieken geassocieerd met schuld, zelfs bij de Rarámuri die geen emotieterm voor schuld hebben. Sommige emotiekenarakteristieken waren anders geassocieerd met schaamte en schuld bij de Rarámuri en de Javanen in vergelijking met de studenten. Dit suggereert dat een aantal karakteristieken van schaamte en schuld die beschreven worden in de huidige emotieliteratuur niet universeel zijn. Over het algemeen ondersteunden de studies in hoofdstuk 4 een positie van psychologisch universalisme ten aanzien van schaamte en schuld. Een kern van schaamte- en schuldkenarakteristieken werd gevonden in alle culturen, zelfs als een emotiewoord afwezig was.

In hoofdstuk 5 werd cross-culturele equivalentie van schaamte en schuld onderzocht in beoordelingen van zelf-gerapporteerde ervaringen, in plaats van geselecteerde situaties zoals in hoofdstukken 3 en 4. Dit was om er zeker van te zijn dat de cross-culturele overeenkomsten in beide voorafgaande hoofdstukken niet veroorzaakt werd door de opgelegde stimulus situaties. Studenten uit Indonesië, Mexico, en Nederland beoordeelden zelf-gerapporteerde ervaringen van schaamte en van schuld op 41 emotiekenarakteristieken (waaronder evaluaties, actietendensen, lichaamsgewaarwordingen, zelf-ervaringen, piekeren en sociaal delen). Verschillen in beoordelingen van de emotiekenarakteristieken voor de schaamte- en de schuldervaring vertoonden substantiële

overeenkomsten tussen alle culturen. Een ééndimensionele configuratie van de verschijscores vertoonde een duidelijk onderscheid tussen schaamte en schuld, op eenzelfde wijze als de configuratie in hoofdstuk 3. Dit suggereert dat eenzelfde, cross-cultureel gedeeld onderscheid tussen schaamte- en schuldkenmerken gevonden kan worden met behulp van verschillende onderzoeksmethoden.

Hoofdstuk 6, tenslotte, besprak de belangrijkste bevindingen van de voorgaande hoofdstukken. Er werd geconcludeerd dat de onderzoeksstrategie die gevolgd werd in dit proefschrift succesvol was in het vinden van evidentie voor structurele equivalentie in verscheidene emotiekenmerken. Deze bevinding beperkt de ruimte voor aannemelijke posities in het universalisme-relativisme debat. Aan de ene kant worden sterke claims van culturele relativiteit van emoties onaannemelijk in het licht van de gevonden structurele equivalentie. Aan de andere kant geven de gevonden culturele verschillen in emotiekenmerken aan dat universaliteit van emoties niet betekent dat deze totaal hetzelfde zijn in alle culturen. Alles bij elkaar ondersteunen de resultaten van de studies in dit proefschrift de positie van psychologisch universalisme ten aanzien van emoties, zoals beschreven werd in het eerste hoofdstuk.

Acknowledgements

Many people have contributed in many ways to the realization of this thesis. I would like to dedicate it to all of them as a token of my gratitude for their help and friendship.

Dank aan Ype en Fons. Dank voor de vrijheid en het vertrouwen waardoor ik mij bij de uitvoering van het onderzoek op verre locaties immer gesteund wist.

Muchísimas gracias a todos los Mexicanos. Su apoyo y amistad era indispensable para realizar mis estudios en su maravilloso país. Gracias a Benito (mateteraba), Imelda, Jesús, René, y Roxana por hacer posible los estudios y por ser gran amigos. Gracias a Ramona y toda la familia Luna Hernández, gracias a Alejandra y Germán, y gracias a Abril, Rocío, Guillermo y toda la familia Olmos Loya por ofrecermé su casa y su amistad.

Terima kasih banyak Pak Priyo, Ibu Esti, Ika, dan Banu. Thank you very much for your friendship and hospitality. Thank you for making my time in Yogya both so pleasant and productive.

Dank aan alle geweldige collega's met wie het zo goed toeven was de afgelopen jaren.

Dank aan mijn familie en mijn vrienden. Verre oorden zijn alleen maar avontuurlijk als je weet dat je altijd weer thuis kunt komen.

Dank aan Marije. Hoewel je naar eigen zeggen niets aan dit proefschrift hebt bijgedragen ben je onmisbaar.

Curriculum Vitae

Seger Breugelmans werd geboren te Dongen, op 17 juli 1974. In 1992 behaalde hij zijn V.W.O. diploma aan het Dr. Schaepmancollege te Dongen en in 1999 studeerde hij af in de Theoretische en Experimentele Psychologie (cum laude) aan de Katholieke Universiteit Brabant te Tilburg (tegenwoordig Universiteit van Tilburg). In het kader van zijn afstudeeronderzoek verbleef hij een half jaar in Mexico. Na zijn studie werkte hij zes maanden als junior onderzoeker voor de Wetenschapswinkel van de Universiteit van Tilburg op een studie naar het draagvlak voor multiculturalisme onder inwoners van Tilburg. Hierover verscheen in 2000 het rapport *Lokaal draagvlak voor gastvrijheid: Meting van de acceptatie van allochtonen in de gemeente Tilburg*. In september 1999 begon hij als Assistent in Opleiding aan de Universiteit van Tilburg op het onderzoeksproject 'Cross-cultural differentiation between shame and guilt: An empirical investigation.' In het kader van dit project verbleef hij geruime tijd in Indonesië (Yogyakarta) en Mexico (Chihuahua). Naast het promotieonderzoek schreef hij samen met Benito Martínez en Jesús Vaca een boek over de Rarámuri van Noord-Mexico getiteld *Reflexiones en el Bosque* dat verscheen in 2002. Het onderzoeksproject werd afgerond met de voltooiing van dit proefschrift in 2003. Momenteel werkt Seger als Universitair Docent bij Cross-Culturele Psychologie aan de Universiteit van Tilburg.

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The extent to which emotions are similar or different across cultures is an important issue in the psychology of emotions. This thesis aims to contribute to our understanding of cross-cultural (non)equivalence in emotions, especially shame and guilt, through a series of studies including various emotion components. Studies include samples from a broad range of cultures, such as students from three continents, Rarámuri Indians, and rural Javanese. A core of emotion characteristics was found to be universally associated with either shame or guilt, even in cultures lacking a lexical distinction between these two emotions. In addition, several cultural differences in emotion characteristics were identified.