Evidence for the Distinctness of Embarrassment, Shame, and Guilt: A Study of Recalled Antecedents and Facial Expressions of Emotion

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Following proposals regarding the criteria for differentiating emotions, the current investigation examined whether the antecedents and facial expressions of embarrassment, shame, and guilt are distinct. In Study 1, participants wrote down events that had caused them to feel embarrassment, shame, and guilt. Coding of these events revealed that embarrassment was associated with transgressions of conventions that govern public interactions, shame with the failure to meet important personal standards, and guilt with actions that harm others or violate duties. Study 2 determined whether these three emotions are distinct in another domain of emotion—namely, facial expression. Observers were presented with slides of 14 different facial expressions, including those of embarrassment, shame, and candidates of guilt (self-contempt, sympathy, and pain). Observers accurately identified the expressions of embarrassment and shame, but did not reliably label any expression as guilt.

INTRODUCTION

Embarrassment, shame, and guilt figure prominently in human affairs. They are associated with social and moral transgressions, involve self-awareness, and motivate reparations for transgressions (Ausubel, 1955; Goffman, 1956; Harré, 1990; Taylor, 1985; Wicker, Payne, & Morgan, 1983). These "social-moral emotions" play critical roles in psychopathology (e.g. Sattler, 1966; Keltner, Moffitt, & Stouthamer-Loeber, in press; Tangney, 1991), personality (Edelmann & McCusker, 1986), and such

social phenomena as the demarcation of status differences (Clark, 1990) and moral behaviour (Kochanska, 1993; Miller & Leary, 1992).

Research on the social-moral emotions inevitably faces the question of whether embarrassment, shame, and guilt are distinct. Do these three emotions make separate contributions to personality and psychopathology? Can clinicians identify a client's proneness to embarrassment, shame, or guilt in that individual's nonverbal behaviour? Do these three emotions relate to different domains of social-moral behaviour?

For various reasons, several theorists fail to consider embarrassment, shame, and guilt to be distinct emotions (e.g. Darwin, 1872; Izard, 1971, 1977; Lazarus, 1991; Roseman, Wiest, & Swartz, 1994; Tomkins, 1963, 1984). For example, none of the aforementioned theorists lists embarrassment as a "basic", discrete emotion. Certain of these theorists (e.g. Tomkins, 1963) consider shame and guilt to belong to the same category of emotion. The general tendency to group embarrassment, shame, and guilt into one category may trace back to Darwin's similar treatment of the three emotions.

In contrast, researchers have recently undertaken the task of determining whether embarrassment, shame, and guilt are distinct emotions (e.g. Edelmann & Hampson, 1981; Keltner, 1995; Miller, 1992; Tangney, 1992a). Following criteria regarding the characteristics of discrete emotions (Ekman, 1992; Mesquita & Frijda, 1992), the current investigation gathered two different kinds of evidence to address whether embarrassment, shame, and guilt are distinct. Study 1 focused on the recalled antecedents of the three emotions, following a tradition of studying people's representations of emotion antecedents to differentiate emotions (e.g. Boucher & Brandt, 1981; Brandt & Boucher, 1985; Miller, 1992; Scherer, Summerfield, & Wallbott, 1983; Tangney, 1992a). Study 2 turned to the study of facial expression, to determine whether the nonverbal displays of embarrassment, shame, and guilt are distinct.

Following studies reviewed later, we hypothesised that the recalled antecedents of embarrassment, shame, and guilt will be distinct. These studies show, for the most part, that embarrassment, shame, and guilt pertain to different social-moral transgressions, and consequently, have distinct antecedents.

Will embarrassment, shame, and guilt likewise be marked by distinct facial expressions? The answer to this question depends on the role of facial expressions in the remediation of mistakes and transgressions—a process that is central to embarrassment, shame, and guilt (Miller & Leary, 1992; Semin & Manstead, 1982). Previous studies point to some hypotheses. People feeling guilt remediate the transgression through direct action, such as confession, apology, or charitable acts (Carlsmith & Gross, 1968; Wicker et al., 1983). In contrast, people feeling embarrassment or shame are

often confused and inhibited in their actions (e.g. Goffman, 1956), suggesting that they may remediate the transgression through different means, such as through submissive, appeasement displays (see Castelfranchi & Poggi, 1990; Keltner, 1995; Miller & Leary, 1992; Semin & Manstead, 1982). This reasoning led us to expect to document distinct nonverbal displays for embarrassment and shame, but have less confidence in expecting a distinct display for guilt.

STUDY 1
THE ANTECEDENTS OF EMBARRASSMENT, SHAME, AND GUILT

Numerous studies indicate that the antecedents of embarrassment, shame, and guilt are relatively distinct. Embarrassment follows transgressions of conventions that govern social interactions (Babcock & Sabini, 1990; Edelmann, 1987; Miller, 1992; Miller, Tangney, & Wallstein, 1992). Shame follows the failure to live up to central personal expectations or those of significant others (Lindsay-Hartz, 1984; Tangney, 1992a; Tangney, Marschall, Rosenberg, Barlow, & Wagner, submitted). Guilt follows specific actions that violate obligatory, moral standards (Ausubel, 1955; Lindsay-Hartz, 1984; Tangney et al., submitted).

Although promising, the emotion antecedent studies are limited in two ways. First, participants typically described only *one* event for the target emotion (e.g. Edelmann, 1987; Lindsay-Hartz, 1984; Miller, 1992; Tangney et al., submitted). This procedure increases the likelihood that participants will recall more rather than less prototypical antecedents of the target emotion, which may accentuate the between-emotion differences. Secondly, only rarely has research simultaneously compared the antecedents of embarrassment, shame, and guilt (e.g. Manstead & Tetlock, 1989). The distinctions among the antecedents of the three emotions observed in studies of only one (Miller, 1992) or two emotions (Lindsay-Hartz, 1984; Tangney, 1992a) may not be observed in comparisons of all three. These two issues were addressed in Study 1 to characterise better the full range of antecedents of embarrassment, shame, and guilt.

Method

Participants.   Fifty-one undergraduates (37 females, 14 males) in a large Midwestern university participated in the study to earn extra credit towards an introductory psychology class. Participants participated in individual sessions.

Procedure.   In the first part of the study, participants were asked to: "Describe the different events that you can recall that have made you feel (target emotion). Describe each of the events as specifically as you can in one or two sentences". Participants were asked to recall the three target emotions in one of two randomly assigned orders. The influence of order and gender did not affect the results and will not be discussed further. Participants were given 3 minutes to recall and write down the antecedents for each emotion.

Participants were then taken to another laboratory where they filled out the three relevant emotion proneness scales following another, unrelated task that lasted about 30 minutes. Participants first filled out the Tangney Self-Conscious Affect Scale (TOSCA; Tangney, 1992b). In this inventory, participants rate the likelihood of potential responses that capture the proneness to shame, guilt, pride, externalisation, and detachment to 15 hypothetical situations. For example, one item reads: "While out with a group of friends, you make fun of a friend who's not there". A shame proneness response would be a strong endorsement of: "You would feel small, like a rat". A guilt proneness response would be a strong endorsement of: "You would apologise and talk about that person's good points". Only the shame and guilt proneness scales were used in the current study. Finally, participants then completed an embarrassment proneness scale (Edelmann, 1985), in which they rated how embarrassed they would feel in 17 different situations. These scales were included to provide another form of evidence regarding the distinctness of embarrassment, shame, and guilt.

Coding of Antecedents.   The 757 antecedents generated by the 51 participants were transcribed and randomly scrambled so that each antecedent was neither associated with its emotion nor the sex of the participant. This guaranteed that coders would not be swayed by these factors, which could create strong contexts for interpreting the antecedents. All words that referred to an emotion were also removed from the transcriptions of the antecedents. Two characteristics of the events were coded. Coders assessed the emotional intensity of each antecedent on a 7-point scale (1 = not very emotional, 7 = extremely emotional). In making this assessment, coders imagined how emotionally evocative the antecedent would be for "people in general". Coders also rated the specificity of each antecedent on a second scale (1 = very specific, 7 = very general). Two dimensions of specificity/generality were considered in this single assessment: (1) whether the antecedent was specific to one time or generalised across time; and (2) whether the antecedent was about a specific personal domain or a global condition.

Antecedents were then categorised according to a taxonomy based primarily on previous research. Eleven categories were included from previous research on embarrassment (Miller, 1992), and 25 categories from research on shame and guilt (Tangney et al., submitted). Nine new categories were added because of difficulties in categorising certain antecedents into the categories established by previous research. To establish reliability, the two coders first coded a subset of antecedents and then discussed their results. Having resolved ambiguities and discrepancies, the coders then coded the antecedents of 10 randomly selected participants (118 antecedents altogether). Inter-rater agreement in categorising the events was 73%. Inter-rater correlations for emotional intensity ($r = 0.72$, $P < 0.001$) and specificity $r = 0.71$, $P < 0.001$) were substantial. The coders then independently coded the antecedents of 20 and 21 participants, respectively. For the 10 participants' antecedents that were used to establish reliability, one coder's codings were used in the data analysis.

Results and Discussion

Distinctions in Recalled Antecedents.   Table 1 presents the frequency with which the antecedents that participants recalled for embarrassment, shame, and guilt were placed into each of the 45 categories.[1]

The table is organised so that the five most frequently mentioned antecedents for which each emotion was the dominant are listed first, beginning with embarrassment at the left.

Chi-square analyses compared the distributions of the three emotions across each category.[2]

Fifty-six per cent (24 of 43)[3] of the chi-square analyses were significant at $P < 0.05$, 42% (18 of 43) of the chi-square analyses where significantly at $P < 0.01$. Inspection of Table 1 reveals that of the three emotions, shame seemed to have the least distinct antecedents. Specifically, poor performance was the most frequently recalled antecedent for both embarrassment and shame. Hurting others emotionally, the second most common antecedent of shame, was also commonly mentioned for guilt. Beyond these

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[1] Within-subjects repeated occurrences of antecedents within a category and emotion were eliminated from analysis. Had these occurrences of antecedents been included, the distinctions among the emotions would have been more pronounced.

[2] Log-linear analyses could not be done to examine the overall distribution of emotions across antecedents because the occurrences of emotions across antecedents were not independent.

[3] Two of the antecedent categories were not mentioned.

TABLE 1

Distribution of Antecedents Across Emotions

Antecedent Category	Embarrassment	Shame	Guilt	χ^2
Physical pratfall	39.22_a	1.96_b	0.00_b	36.29***
Cognitive shortcoming	37.25_a	1.96_b	9.8_c	21.45***
Loss of control over body	37.25_a	1.96_b	0.00_b	34.28***
Shortcoming in physical appearance (*)	35.29_a	5.88_b	0.00_b	26.57***
Failure of privacy	33.33_a	3.92_b	3.92_b	21.43***
Poor performance	45.10_a	58.83_a	17.65_b	11.06***
Hurt others emotionally	0.00_a	23.53_b	17.65_b	11.14***
Failure to meet others' expectations (*)	3.92_a	21.57_b	9.80_b	8.32**
Disappointment in self	5.88_a	19.61_a	7.84_a	5.06*
Role-inappropriate behaviour	9.80_a	17.65_a	5.88_a	3.29
Failure at duties (*)	3.92_a	21.57_b	52.94_c	24.06***
Lying	3.92_a	23.53_b	49.02_c	20.46***
Neglecting another	1.96_a	9.80_a	27.45_b	13.29***
Breaking a diet/physical regime	1.96_a	7.84_a	23.53_b	11.41***
Cheating	1.96_a	3.92_a	21.57_b	12.99***
Conspicuousness	27.45_a	1.96_b	0.00_b	21.20***
Loss of social script	19.61_a	7.84_a	3.92_b	6.50**
Knowledge of past transgression	1.96_a	0.00_a	1.96_a	1.00
Group members transgress	11.76_a	7.84_{ab}	0.00_b	5.61
Others publicise own transgressions	11.76_a	1.96_{ab}	0.00_b	8.87**
Others tease, badger, attend to self	19.61_a	7.84_{ab}	1.96_b	8.40**
Others are embarrassed	3.92_a	0.00_a	0.00_a	4.04
Stealing	0.00_a	5.88_{ab}	17.65_b	10.50***
Infidelity	1.96_a	7.84_{ab}	19.61_b	8.40**
Hurt others physically	3.92_a	3.92_a	7.84_a	1.00
Disobeying parents	1.96_a	7.84_a	5.88_a	1.75
Damage to objects	1.96_a	5.88_a	11.76_a	3.80
Breaking the law	3.92_a	7.84_a	3.92_a	1.00
Sex	7.84_a	7.84_a	5.88_a	0.09
Not helping others	0.00_a	0.00_a	9.80_b	9.98***
Overt hostility	0.00_a	0.00_a	3.92_a	3.98
Death of a loved one	0.00_a	3.92_a	1.96_a	2.00
Break-up of romance	0.00_a	1.96_a	1.96_a	1.00
Accomplishment in work	0.00_a	0.00_a	1.96_a	2.02
Attributes of a loved one	0.00_a	1.96_a	0.00_a	2.02
Separation from a loved one	0.00_a	0.00_a	1.96_a	2.02
Benefit at another's expense (*)	0.00_a	3.92_{ab}	17.65_b	12.17***

Antecedent Category	Embarrassment	Shame	Guilt	c^2
Inappropriate emotion, thought (*)	1.96_a	9.80_{ab}	15.69_b	5.28*
Failed social relationship (*)	0.00_a	1.96_a	1.96_a	1.00
Failure to reciprocate (*)	0.00_a	0.00_a	15.69_b	15.98***
Talking behind others' backs (*)	1.96_a	5.88_{ab}	17.65_b	8.01**
Broken promise (*)	0.00_a	1.96_a	13.73_b	10.74***
Inappropriate spending of money (*)	0.00_a	7.84_a	5.88_a	3.72

Note: Numbers refer to percentages of participants who recalled an antecedent placed into the category. Categories followed by (*) indicate categories derived for this study.

***$P < 0.01$; **$P < 0.05$; *$P < 0.10$.

Means that do not share subscripts differ in pairwise chi-square comparisons at $P < 0.05$.

overlapping antecedents, however, the most common antecedents of embarrassment, shame, and guilt were fairly distinct.

The most frequently recalled antecedents for which embarrassment was the cominant emotion were: (a) *physical pratfalls*, such as slipping in the mud; (b) *cognitive shortcomings*, such as forgetting a new acquaintance's name; (c) *loss of control over the body*, such as burping or vomiting after drinking too much; (d) *shortcoming in physical appearance*, such as walking around with toilet paper stuck to one's shoe; and (e) *failure at privacy regulation*, such as accidentally walking in on others engaged in sexual intercourse. The most common antecedents for which shame was the dominant emotion were: (a) *poor performance*, typically academic; (b) *hurting others emotionally*, such as hurting a younger sibling's feelings; (c) *failing to meet others' expectations*, typically those of a parent about school; (d) *disappointment in oneself*, which usually involved not reaching a personal goal; and (e) *role-inappropriate behaviour*, such as failing to act appropriately at a family reunion. The most common antecedents for which guilt was the dominant emotion were: (a) *failures at duties*, which typically involved not studying enough; (b) *lying*, typically to one's parents or a romantic partner; (c) *neglect of another*, such as not calling a friend for a long time; (d) *breaking a diet or exercise regime*; and (e) *cheating*, typically on exams.

Between-emotion Overlap.   For the three possible pairings of embarrassment, shame, and guilt, a between-emotion overlap score was tallied for each participant. Each score was equal to the number of times that an antecedent was listed for the two target emotions. Across participants, the

mean overlap between embarrassment and shame was 9%, between embar-
rassment and guilt, 5%, and between guilt and shame, 11% (these 3
percentages did not differ in z-tests; all $Ps > 0.15$).

*The Number, Intensity, Specificity, and Diversity of Recalled Antece-
dents.*   Some researchers propose that shame is more difficult to talk about
than other emotions (Babcock & Sabini, 1990; Lindsay-Hartz, 1984). If so,
one might expect shame antecedents to be less specific than those of
embarrassment and guilt, because people are unpractised in describing
them, and fewer in number, perhaps because people hesitate in bringing
them up. Table 2 presents the means relevant to these conjectures.

The findings represented in Table 2 are consistent with the supposition
that shame is more difficult to talk about than embarrassment and guilt. The
antecedents that participants recalled for shame were fewer in number,
$\{F(2, 100) = 11.33, P < 0.001\}$, less diverse $\{F(2, 100) = 9.78, P < 0.001\}$,
more general $\{F(2, 100) = 7.71, P < 0.001\}$, and more emotionally
evocative $\{F(2, 100) = 19.10\}, P < 0.001\}$, than those of embarrassment
and guilt. Across participants a greater percentage of the 45 categories was
recalled for shame (84%) than embarrassment (68%; $z = 1.89, P < 0.05$), in
spite of the fact that participants recalled fewer antecedents of shame.
Consistent with the speculations offered earlier, participants' representa-
tions of the antecedents of shame were less elaborate than those of
embarrassment and guilt: The language used was less specific, and the
categories, when compared to embarrassment, more numerous.

Distinctions in the Measures of Emotion Proneness.   To the extent that
the self-report measures of the proneness to embarrassment, shame, and
guilt are not correlated with one another, one can infer that the response
styles and domains of experience that these emotion scales measure are
likewise distinct. The relevant correlations are presented in Table 3.

The correlations between the self-report scales provide partial support
for the idea that embarrassment, shame, and guilt are distinct. The measure
of embarrassment proneness was not correlated with either the measure of

TABLE 2
Correlations among Individual Difference Scales

	Shame	Guilt
Prone to shame	–	
Prone to guilt	0.68***	–
Prone to embarrassment	– 0.15	0.07

Note: Significance levels for correlations are 2-tailed.
***$P < 0.01$.

TABLE 3
Characteristics of recalled Antecedents of Embarrassment, Shame, and Guilt

	Embarrassment	Shame	Guilt
No. of antecedents	5.10$_a$	4.25$_b$	5.49$_a$
Emotional intensity	3.96$_a$	4.62$_b$	4.04$_a$
Specificity	2.80$_a$	3.49$_c$	3.17$_b$
No. of different categories	3.80$_b$	3.43$_a$	4.35$_c$
No. of words per antecedent	15.79$_a$	15.63$_a$	13.83$_b$

Note: Emotional intensity ratings were made on a 7-point scale (1 = not at all emotionally evocative to 7 = extremely emotionally evocative). Specificity ratings were made on a 7-point scale (1 = very specific to 7 = very general). Means that do not share a subscript differ at $P < 0.05$ in *post-hoc* comparisons.

shame or guilt proneness. The measures of the shame and guilt proneness, however, were highly correlated ($r = 0.68$, $P < 0.001$), consistent with previous findings (Tangney, 1990).

STUDY 2
THE FACIAL DISPLAYS OF SOCIAL-MORAL EMOTION

Study 1 showed that the recalled antecedents of embarrassment, shame, and guilt, were, for the most part, distinct. In Study 2, we examined the distinctions among these three social-moral emotions in another domain of emotion measurement—facial expression. A first reason for studying facial expression has to do with the limitations of studying recalled antecedents. Specifically, people's recollections of emotion antecedents may have more to do with people's stereotypes of emotions than the emotions *per se*. Study 2, in contrast, determined whether observers could differentiate among the facial displays that attend the actual experiences of embarrassment, shame, and guilt (e.g. Edelmann & Hampson, 1981; Keltner, 1995; Keltner et al., 1995). A second reason for studying facial expression was to test the claim that embarrassment, shame, and guilt, although distinct in their antecedents, belong in the same emotion category because they share one behavioural expression (Darwin, 1872; Tomkins, 1984).

In the only study of the facial displays of social-moral emotions, observers accurately discriminated between *spontaneous* displays of embarrassment and shame (Keltner, 1995). The current study extends that study in three ways. First, observers were presented with plausible displays of guilt. Secondly, observers were presented with *still* photographs of emotion, to determine whether it is the nonverbal actions *per se* or the

unfolding pattern of those actions that communicates such emotions as embarrassment and shame (see Ekman, 1993). Thirdly, observers were presented with several facial displays in addition to those of embarrassment, shame, and guilt. We therefore could address claims that the displays of certain social-moral emotions, such as shame, are the same as other emotions, such as sadness (Ekman, 1993).

Photographic slides of 14 facial expressions displayed by 4 individuals (2 females and 2 males) were presented to observers. Included were slides of emotions with well-established displays (anger, contempt, disgust, fear, happiness, sadness, and surprise), potential displays of emotion (amusement, awe), and likely displays of embarrassment, shame, and guilt. The embarrassment and shame displays were configured according to studies of the spontaneous displays of these emotions (Keltner, 1995). Three candidate displays of guilt, derived from relevant conceptual accounts and empirical studies, were also presented. One candidate was a facial display of self-contempt, which is part of the experience of guilt (Higgins, 1987). A second candidate was the nonverbal display of sympathy (Eisenberg et al., 1989), which may accompany the experience of guilt when one has harmed another and feels sympathy for that person. A third candidate was the facial display of pain, which has been observed in children (Cole & Zahn-Waxler, 1992) and adolescents (Keltner et al., 1995) who have made mistakes, and is considered one antecedent of guilt (Emde, Johnson, & Easterbrooks, 1987). The facial display of pain may communicate distress related to the anticipation of being punished for a transgression (Emde et al., 1987). Based on reasoning outlined earlier, observers were expected to identify accurately the displays of embarrassment and shame.

Method

Participants.   Participants were 263 introductory psychology students (148 females, 115 males) at a large Midwestern university who participated in the study as part of a guest lecture.

Materials.   The photographs presented in Study 2 were taken in the first author's laboratory. Four individuals (2 female, 2 male) served as posers for all 14 of the photographed facial expressions. These individuals were all familiar with the Ekman and Friesen's Facial Action Coding System (FACS; Ekman & Friesen, 1978), and able to produce the facial actions required for the photographs of each emotion. The photographs were in colour and depicted the individual's head and upper chest against a grey-green background.

The specific facial actions of the 14 facial displays presented in Study 2 derived from three sources. Photographs of the facial displays of anger, contempt, disgust, fear, happiness, sadness, and surprise were based on the prototypical facial actions of each of these emotions (Ekman & Friesen, 1978). A second group of displays were based on research on the spontaneous displays of emotion. The action units (AUs) as described by the Facial Action Coding System are presented in parentheses. Facial expressions of amusement included an enjoyment (Duchenne) smile accompanied by head movement back and gaze direction upwards (AUs 6, 12, 58, 63) (Keltner, 1995; Ruch, 1993). The embarrassment display included a non-Duchenne smile, lip press, gaze down, head movement to the left and down, and a face touch (AUs 12, 24, 51, 54, 64) (Keltner, 1995). The shame display included head and gaze down (AUs 54, 64) (Izard, 1977; Keltner, 1995). The pain display included lowered eyebrows, raised cheeks, closed eyes, pressed lips, and the upper lip pulled upwards (AUs 4, 6, 10, 12, 24, 43) (Patrick, Craig, & Prkachin, 1986). And the sympathy display included oblique eyebrows and a head movement forward (AUs 1, 4, 58) (Eisenberg et al., 1989). Finally, two facial displays were configured according to intuition and pilot testing with 20 students in the authors' laboratory. The self-contempt display included unilateral lip corner tightening characteristic of contempt and head and gaze down, which are characteristic of the other self-conscious emotions (AUs L14, 54 + 64). The awe display included an enjoyment smile, an open mouth, and widened eyes (AUs 5, 6, 12).

Procedure.   Slides of the 14 facial expressions, each posed by the same 2 female and 2 male posers, were presented to participants in a large lecture hall. Each of the 56 slides were presented for 5 seconds, consistent with notions concerning the duration of facial expressions of emotion (Ekman, 1984). Following the presentation of each slide, participants were given 10 seconds to select "the word that best matched the emotion displayed by the person in the slide". The list of words included amusement, anger, awe, contempt, disgust, embarrassment, fear, guilt, happiness, pain, sadness, shame, surprise, and sympathy, as well as the option of listing "no emotion".

Results and Discussion

There were no observer gender differences in overall accuracy, so all subsequent analyses were collapsed across gender of observer. Table 4 presents the responses observers provide for each of the 14 photos that occurred with above chance (7.2%) frequency for both the male and female posers.

TABLE 4
Distribution of Responses to 14 Facial Displays

Expression	Female Posers (%)		Male Posers (%)	
"Basic" emotions				
Anger	Anger:	66.7	Anger:	87.3
	Disgust:	17.2	Contempt:	07.7
	Contempt:	11.1		
Contempt	Disgust:	66.5	Disgust:	45.6
	Contempt:	17.5	Contempt:	32.5
Disgust	Disgust:	88.9	Disgust:	85.9
Fear	Fear:	83.2	Fear:	91.9
Happiness	Happiness:	89.7	Happiness	74.8
			Amusement:	15.6
Sadness	Sadness:	84.0	Sadness:	78.6
Surprise	Surprise:	72.2	Surprise:	84.4
	Fear:	12.5	Awe:	12.2
	Awe:	11.8		
"Social-moral" emotions				
Embarrassment	Embarrassment:	51.3	Embarrassment:	55.9
	Shame:	14.6	Amusement:	22.2
	Guilt:	08.3		
	Sadness:	08.3		
Shame	Shame:	55.7	Shame:	46.7
	Guilt:	24.8	Guilt:	20.2
			Sadness:	18.3
Guilt candidates				
Self-contempt	Shame:	45.3	Shame:	35.3
	Guilt:	21.8	Sadness:	22.0
	Sadness:	15.3	Guilt:	09.1
			Disgust:	08.3
Sympathy	Sympathy:	32.9	Sympathy:	43.4
	No emotion:	32.3	Sadness:	36.3
	Guilt:	10.3		
	Sadness:	08.0		
Pain	Pain:	45.0	Pain:	51.7
	Disgust:	15.8	Disgust:	19.5
	Anger:	13.5		
	Contempt:	10.4		
"Exploratory" emotions				
Amusement	Amusement:	45.6	Amusement:	49.0
	Happiness:	34.6	Happiness:	36.1
	Awe:	13.3		
Awe	Awe:	36.1	Surprise:	43.1
	Surprise:	31.9	Awe:	30.2
	Happiness:	15.9	Amusement:	11.5
			Happiness:	08.4

Do embarrassment and shame have distinct displays? With the exception of contempt, observers in the current study accurately identified the facial expressions of anger, disgust, fear, happiness, sadness, and surprise, all Ps < 0.001 in the binomial test. These levels of accuracy resemble those obtained in other research (e.g. Ekman et al., 1969), even though the current study presented observers with twice the number of target expressions and response options. With somewhat lower accuracy, observers also accurately identified the displays of embarrassment and shame, both Ps < 0.01. Observers rarely judged displays of embarrassment as shame (7%) or the displays of shame as embarrassment (3.4%).

Is there a facial display of guilt? Based on conceptualisations of guilt, three candidates' displays were presented to observers: facial displays of self-contempt, sympathy, and pain. Table 4 shows that these displays were each identified as other emotions more frequently than guilt. The facial display of self-contempt was identified as shame. The sympathy display was identified as sympathy, suggesting that this emotion may also have a somewhat recognisable signal. And the pain display was identified as pain. The displays that observers most often labelled as guilt were the facial displays of shame (22.5%) and self-contempt (20%), both Ps < 0.01 in the binomial test.

GENERAL DISCUSSION

A central task in the study of emotion is to ascertain the discrete emotions. Based on recently proposed criteria for differentiating the emotions, the current investigation generated two kinds of evidence relevant to the claim that embarrassment, shame, and guilt are distinct emotions. In Study 1, the antecedents of embarrassment, shame, and guilt were examined. Although certain prevalent antecedents were listed for pairs of emotions (e.g. failed performance for shame and embarrassment), the antecedents of these three social-moral emotions tended to be distinct, replicating previous studies (e.g. Miller, 1992; Tangney et al., submitted). Embarrassment follows relatively innocuous violations, such as losing control over one's body, a cognitive shortcoming, or deviations in one's apearance. These sorts of rules pertain to relations between people unfamiliar with one another, interacting in the "public" interactions that Goffman (1956) so convincingly described. Shame follows the failure to perform according to personal standards, either one's own or those of others. The antecedents of guilt typically involved direct harm to another, brought about by lying, cheating, neglecting another, failing to reciprocate, over hostility, infidelity, or not helping others.

Although Study 1 showed that the antecedents of embarrassment, shame, and guilt are distinct, this sort of evidence may have limited

relevance to the question of whether these three emotions are distinct. Studies of emotion antecedents may pertain more to people's stereotypes of emotions than to the emotions themselves. Others also argue that embarrassment, shame, and guilt share the same nonverbal display (e.g. Tomkins, 1963), which calls into question their status as distinct emotions. For these reasons, Study 2 determined whether embarrassment, shame, and guilt have distinct facial displays. It was hypothesised that embarrassment and shame would indeed have distinct facial displays, consistent with the appeasement function attributed to these emotions (e.g. Castelfranchi & Poggi, 1990; Keltner, 1995; Miller & Leary, 1992). Because guilt moti- vates direct remedial action, it was conjectured that guilt may not be marked by a distinct facial display.

Slides of 14 facial expressions posed by two male and two female targets, including expressions of embarrassment and shame and candidate expressions of guilt (self-contempt, sympathy, and pain), were presented to observers. Observers did reliably identify the displays of embarrassment and shame, rarely confusing the displays of the two emotions for one another. Interestingly, in the current study, which used still photographs of facial displays, observers were less accurate in identifying the displays of embarrassment and shame than the displays of the more "basic" emotions. Another study, which presented observers with spontaneous displays of "basic" emotions and embarrassment and shame, yielded the opposite pattern of results (Keltner, 1995). The perception of dynamic movement may facilitate judgements of embarrassment and shame dis- plays, which are defined by certain movements (e.g. gaze aversion, head movements away from the observer), but hinder judgements of the "basic" emotions, such as anger or disgust.

The case for a distinct display of guilt was not supported by the findings from Study 2. Observers did not offer guilt as the dominant response in judging the three candidate expressions of guilt. Why might guilt not have a distinct nonverbal display? Certainly the capacity to signal remorse for having transgressed a moral rule would seem to be a desirable component of people's nonverbal repertoire. As desirable as this sounds, the current study suggests that people may not communicate guilt in facial expression; nor are they particularly skilful in detecting another's guilt in lying (cf. DePaulo, 1992). In judging others' emotional behaviour associated with moral transgressions, it seems that most people have trouble seeing right from wrong.

The signs of guilt may be more subtle than those represented in the slides used in Study 2. Guilt may involve a complex pattern of facial, gaze, postural, and speech activity (Ekman, O'Sullivan, Friesen, & Scherer, 1991) that cannot be captured in static photographs. Or it may be that the antecedents of guilt, in contrast to those of shame and embarrassment,

require *more* than nonverbal communication. People feeling guilt focus on the harm done to other people (Wicker et al., 1983), which requires them to act to restore what they have done wrong; simple nonverbal gestures may not suffice. People feeling embarrassment and shame, on the other hand, focus on other people's judgements of themselves, and the potential harm done to their own social esteem. The person feeling embarrassment or shame, inhibited in action, may rely on observers to restore what has gone wrong, and prompt such action by signalling submissive appeasement gestures (Castelfranchi & Poggi, 1990; Semin & Manstead, 1982). These sorts of speculations, prompted by the current investigation's findings, warrant subsequent research.

Are embarrassment, shame, and guilt distinct emotions? The current study contributes to a burgeoning body of evidence consistent with the claim that embarrassment, shame, and guilt are distinct emotions. The recalled antecedents and facial displays (at least for embarrassment and shame) of the three emotions are distinct, as shown in the current study. Related research carried out in rural India (Haidt & Keltner, 1994) has replicated the current study's findings, showing that the facial displays (of embarrassment and shame) and the antecedents of these three emotions are similar across at least two diverse cultures. Recent studies of the blush show that the autonomic response of embarrassment is distinct from the autonomic response of fear (Shearn, Bergman, Hill, Abel, & Hinds, 1990). Together, these findings suggest that there are distinct social-moral emotions with different causes and communicative signals that, in essential ways, define what it is to be human.

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