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UNIVERSITY OF WYOMING

Avoiders vs. Amenders: Implications for the Investigation of Guilt and Shame during Toddlerhood?

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Recent research and theory highlights the distinctive features of shame vs. guilt, as well as the important implications of that distinction for typical and atypical behaviour regulation. Briefly, shame is characterised by withdrawal and hiding from judgemental others, and guilt by making amends—repairing and confessing. The present study was aimed at determining whether a shame-relevant and a guilt-relevant pattern of responses to a standard violation could be distinguished in toddlers.

Two-year-old children participated in a play session, during which a mishap occurred that the children appeared to have caused. Based upon whether or not children avoided the experimenter (E) after the mishap, they were dichotomised into a shame-relevant group of subjects (Avoiders) who avoid E after the mishap, and a guilt-relevant group of subjects (Amenders) who tell E about the mishap; and a guilt-relevant group (Amenders) showing the opposite pattern. All guilt-relevant behaviours were greater for Amenders than Avoiders, and all but one shame-relevant behaviour was greater for Avoiders than for Amenders, suggesting coherence in the organisation of

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responses. Moreover, convergent evidence from a maternal report questionnaire indicated that in non-laboratory settings as well, Amenders manifested greater guilt relative to shame than did Avoiders. Further research is needed to determine developmental antecedents and consequences of the Avoider/Amender dichotomy.

INTRODUCTION

Historically, psychological theories have recognised the importance of guilt for conscience, identification, and/or symptom formation (e.g. Freud, 1896/1962; Hoffman, 1976). However, many theories either neglected shame (e.g. Hoffman, 1982), or viewed it as an immature, uninternalised precursor to guilt (e.g. Benedict, 1946; Freud, 1923/1961). Recent research indicates that shame is not simply a guilt precursor that is relinquished with maturity. On the contrary, shame and guilt are distinctive emotions for both children and adults (e.g. Ferguson, Stegge, & Damhuis, 1991; Lindsay-Hartz, 1984; Tangney, 1992). Moreover, children as young as 7 or 8 years old reliably distinguish shame-relevant from guilt-relevant characteristics (Ferguson et al., 1991); and the characteristics they associate with guilt and shame are virtually identical to those identified by adults (Lindsay-Hartz, 1984; Tangney, 1992) and those theorised by Helen Block Lewis (1971) and others (e.g. Ausubel, 1955; Barrett & Campos, 1987; Geppert & Heckhausen, 1988; Nathanson, 1987).

In brief, shame and/or guilt often are elicited when one does something that wrongs another (e.g. breaking a prized possession, physically harming, or cheating others: cf. Ferguson et al., 1991; Tangney, in press a).¹ However, the phenomenology and action tendencies for shame and guilt differ greatly. Shame involves feelings that the *whole self* is a failure, is stupid, or is bad; and that *others* are viewing one with disparagement (although no others need be present physically) (Ferguson et al., 1991; Tangney, 1992). The action tendencies associated with shame are sensible and functional given such phenomenology. If everyone views the whole *self* as bad, then one can only ameliorate the situation by withdrawing or hiding from the disparaging others—one can not remake the self there and then. Shameful persons are impelled to run away and/or hide from others, and to avoid looking at them (Ausubel, 1955; Barrett & Campos, 1987; Ferguson et al., 1991; Geppert & Heckhausen, 1988; Lewis, 1971; Lindsay-Hartz, 1984; Tangney, 1992).

In contrast, guilt involves feelings that one has *done something wrong*. The experiencing individual focuses upon the wrongful *act*, rather than

upon the bad *self*, although s/he has a sense of *responsibility for the wrongful act* and control over its consequences (Ferguson et al., 1991; Tangney, 1992). Again, action tendencies are functional, given the phenomenology; guilt impels one to undo the wrongdoing, often by repairing the harm and/or telling others about it (confessing) (Ausubel, 1955; Barrett & Campos, 1987; Carlsmith & Gross, 1969; Ferguson et al., 1991; Geppert & Heckhausen, 1988; Lindsay-Hartz, 1984; McMillen, 1971; Regan, 1971; Tangney, 1992; Underwood et al., 1977).

Thus, although shame and guilt can be elicited by similar occurrences, shame is associated with withdrawal and hiding, whereas guilt is associated with confronting and remediating the problem. In the present study, the action pattern established as shame-relevant by current research and theory will be contrasted with that established as guilt-relevant. A major goal of the study is to establish that such patterns can be distinguished in 2-year-olds and that the functional concomitants of shame and guilt are evident even before verbal understanding and/or self-report of those emotions is possible.

Guilt and Shame during Toddlerhood

To date, no studies of toddlers or preschoolers have investigated the distinction between guilt and shame. In fact, many mainstream developmental theorists view "guilt during toddlerhood" as a contradiction in terms: They hold that guilt *cannot* be experienced during this period (e.g. Freud, 1923/1961; Higgins, 1991; Kagan, 1984; but see Hoffman, 1976). Despite such theories, it is evident *empirically* that toddlers try to make reparation when they hurt another (Zahn-Waxler, Radke-Yarrow, Wagner, & Chapman, 1992). Although certainly reparation may occur for many reasons and cannot be considered isomorphic with guilt, such findings raise the possibility that guilt is aroused at this age.

As opposed to the above controversy regarding guilt during toddlerhood, most theorists accept the possibility that toddlers show shame (but see Buss, 1980). In fact, Erikson (1963) and Kagan (1981) described the growth of awareness of standards and resultant emotions (shame, doubt, anxiety to possible task failure) as a major developmental milestone of this period. Moreover, recent research from two different laboratories has documented toddlers' embarrassed (Lewis, Sullivan, Stanger, & Weiss, 1989) and/or shame-like behaviours (Lewis, Alessandri, & Sullivan, 1992; Stipek, Recchia, & McClintic, 1992). Embarrassed behaviour involved smiling while averting gaze; shame-like behaviour in one study included avoiding eye contact with the experimenter, turning away from the experimenter, and having a closed posture, and in the other study required

¹Shame also can be elicited by failure to meet non-moral standards, such as achievement standards.

3 of the following 5 behaviours: gaze aversion; withdrawal; body collapsed; mouth corners down/lip biting; and/or negative verbal evaluations.

Any of these behaviours, in isolation, could reflect a variety of motivations and functions. However, the co-occurrence of functionally related patterns of behaviour is meaningful and important. According to a functionalist view of emotion, emotions are important to the extent that they regulate or dysregulate behaviour (Barrett & Campos, 1987; J. Campos, R. Campos, & Barrett, 1989). To the extent that a set of several, *functionally related* behaviours occurs *under circumstances expected to elicit* the relevant emotion, it is useful to view the ongoing process as a member of that emotion family. In this study, we are not able to determine what the toddlers are feeling; however, no study is truly capable of doing so, even if verbal self-report is possible. We do not assume that toddlers experienced exactly the same state that adults do when they report guilt and shame. Certainly, a toddler's appreciation of self and responsibility should be quite rudimentary—a low-level sensing rather than an understanding of concepts. The variant of the shame and guilt families that is experienced should differ accordingly (cf. Barrett & Campos, 1987). Nevertheless, if we can uncover meaningful patterns of behaviour that occur under particular circumstances and have particular implications, this is important—whether or not the behaviour pattern would be considered by all to be the true emotion.

Individual Differences in Shame- and Guilt-relevant Behaviour

Not only does the literature suggest differences in types of behaviours associated with shame and guilt; it suggests individual differences in shame- and guilt-proneness, with differential implications for aggression regulation and psychopathology (Retzinger, 1987; Tangney, 1991). For example, Tangney (1991); Tangney, Wagner, Fletcher, & Gramzow (1992); Tangney, Wagner, & Gramzow (1992) found that adults could be characterised as more or less shame-prone and more or less guilt-prone, and that shame was associated with *less* other-oriented empathy, greater aggression, and greater tendencies toward psychopathology; whereas guilt was associated with *greater* other-oriented empathy, and less aggression. A central goal of the present research is to determine whether toddlers who are more prone to shame-like behaviour can be distinguished from those prone to guilt-like behaviour. If proneness to shame-like and guilt-like patterns of individual differences can be established at this young age, this might pave the way for further research into the antecedents and consequences of these patterns. It is important to note that shame-prone

individuals are not expected to be guilt-free; nor are guilt-prone individuals expected to be shame-free. Rather, such people are distinguished by relative propensity to manifest one or the other pattern of behaviour. In fact, as H. Lewis (1971) and others have pointed out, guilt and shame often co-occur; this does not in any way preclude the possibility that some individuals are more prone to guilt than to shame, and vice versa.

Gender Differences in Shame- and Guilt-relevant Behaviour

A person's gender may be a partial determinant of individual differences in shame- and guilt-proneness. The contrast between shame-relevant and guilt-relevant behaviour resembles more general distinctions made by others [e.g. communion vs. agency (Bakan, 1966) and expressive vs. instrumental (Parsons & Bales, 1955)]. The shame-like pole of each of these dimensions is considered more feminine and the guilt-like pole more masculine. Helen B. Lewis (1971) theorises that females are more shame-prone and males more guilt-prone, and some recent research is consistent with these predictions (Golding & Singer, 1983; Lewis et al., 1989; Lewis et al., 1992). Although Tangney (1990) found that females reported both more guilt- and shame-proneness, this may have reflected the well-established tendency of females to self-report stronger negative emotionality (e.g. Allen & Haccoun, 1976; Brody, 1985; Hall & Halberstadt, 1981; Maccoby & Jacklin, 1974). In contrast, in the Golding and Singer (1983) and Lewis et al. (1989) studies, subjects did not self-report emotional responses. Golding and Singer's subjects reported daydream content (which was later classified as guilt-oriented), Lewis et al. (1989) examined behavioural embarrassment, and Lewis et al. (1992) studied behavioural shame. One hypothesis tested in this study was that girls would be more likely to show the shame-like pattern, and boys the guilt-like pattern.

In summary, although research suggests that it is important to distinguish shame from guilt, and although behavioural shame and embarrassment have been documented in toddlerhood, there exist no systematic data bearing on the distinction between shame and guilt for preschool or toddler-aged children. Nor have studies examined shame-relevant vs. guilt-relevant *individual differences* in responses to a standard violation. The present study will do so. It is directed at documenting two styles of responding to the infraction of a standard: a shame-relevant group—Avoiders; and a guilt-relevant group—Amenders.

METHOD

Subjects

A total of 52 toddlers and their mothers participated; however, data for 8 of these were discarded for procedural reasons [mother did not comply with instructions ($n = 5$); child primarily spoke Spanish ($n = 1$); child failed to "warm up" ($n = 1$); mother had psychiatric diagnosis ($n = 1$)]. Thus, data for 44 toddlers (22 boys) ranging from 25 to 36 months of age ($M = 29.98$ months), and their mothers were utilised for this study. Children were predominantly Caucasian, from middle to upper class families [M for SES, using the revised Duncan (Stevens & Cho, 1985), = 61.29, $sd = 22.1$]. Half were later-born. Of the mothers, 17 were at home full-time, 19 worked outside of the home full-time, and 8 were employed part-time outside the home. Eight subjects failed to return questionnaires (see later); these 8 did not differ significantly from the 36 who returned questionnaires with respect to gender, age, Avoider-Amender status (see later), SES, mother's work status, or birth order (all P s > 0.10). Two subjects' videotapes could not be coded for facial expressions, so embarrassment analyses involve 42 subjects.

Questionnaire

A maternal-report questionnaire was used to obtain information regarding the frequency with which toddlers: (1) displayed guilt, shame, sadness, and fear; and (2) were involved in the type of situation occurring in this study (breaking another's toy). Mothers rated all frequencies on a 0-9 scale, with the following anchors: 0 = never; 1 = Once or twice in child's life; 5 = About once a week; 6 = Several times a week; 7 = Once a day; 8 = 2 or 3 times a day; 9 = Many times a day.

Mothers were asked to complete the questionnaires when they could work undisturbed. It was emphasised that they should think back very carefully to the kinds of events about which information was requested. Specific anchors were given for each point on the Likert scale, so as to increase the likelihood that mothers used it in a uniform manner. The questions about sadness and fear provided discriminant validity for shame-relevant behaviours because sadness and fear are associated with some of the same behaviours as shame but are considered different emotions (e.g. Barrett & Campos, 1987; Geppert & Heckhausen, 1988). Behavioural examples of the different emotions were not provided, so that the investigators' definitions of these emotions could not bias the mothers' reports—the information mothers provided was independent of the laboratory data to which it would be compared. As indicated earlier, several studies

have demonstrated that adults reliably distinguish shame and guilt. The frequency with which children break another's toy was of interest, given that children who frequently break another's toy should have more occasions on which to be socialised regarding such "misbehaviour". The questionnaire included other items; however, these were not used in this study. Mothers also were asked to complete another questionnaire during the laboratory session; these data were used in a different study.

Procedure

After about 3 minutes of free play with other toys, a female experimenter (E) brought in a clown rag doll, Pat, from another room and introduced it to the child. For approximately 1½ minutes, she demonstrated the many activities that could be executed with Pat. Next, E said that the child could play with Pat while E did some things in another room, and that the child should take good care of it, because it is E's favourite doll. E left the room, taking all toys but Pat with her (the mother remained, but was asked not to become involved with the child). The child played with this clown doll, which had been modified so that its leg fell off in the course of play (the mishap).

After the child's reaction to the mishap was complete, or after 3 minutes, whichever came first ($M = 139.9$ sec; $sd = 53.7$ sec.), E returned and said nothing for 1 minute, merely looking at the leg. Next, E asked, matter-of-factly, what the child thought happened to make the doll's leg come off. Then, E expressed mild concern about the doll's leg, reminding the child that this was E's favourite doll. (This step would have been omitted if the child already had begun to cry; however, no child cried as a function of experimental procedures.) Finally, E indicated, cheerfully, that the toy already had been broken and it was not the child's fault. E reassured the child if appropriate, and brought out other toys.

Behaviours Coded. Assistants, each naive both to experimental hypotheses and to the classification system that would be used to dichotomise subjects, coded the discrete behaviours listed in Table 1, in real time and slow motion, from videotapes of the experimental sessions. The period coded began when E first introduced the clown doll and ended when the experimental session was over.

All instances of the relevant behaviours were coded, along with the onset and offset time for each code. All coders were trained on pilot tapes until they reached a criterion of at least 80% reliability with another coder on each coded behaviour. During training, it was emphasised that they should not try to form hypotheses about the meaning of the behaviours they were coding—that behaviours would be used in ways that would not

TABLE 1
Variables Coded

Variable	Operational Definition
Repairing the leg	Tries to fix leg, or asks E or mother to fix leg.
"Telling" E about the leg	Pointedly shows disembodied leg to E and/or verbalises to E that it is broken.
Gaze aversions from E	Looks at E's face, then immediately looks away from her face toward no meaningful object nor person. Looks at floor, ceiling, or furniture were not considered meaningful unless the child was engaging in some instrumental action toward those objects (e.g. sitting in or picking up the chair), or there was some object on them toward which the child was looking (e.g. a toy on the floor).
Bodily avoidance of E	Backs up while looking at E; or moves away from E, toward no meaningful object nor person, after focusing on E.
Direction of gaze	Gaze at E, mother, doll, or other.
Smile	Zygomaticus major muscle moves, causing mouth corners and cheeks to move upward.

be self-evident. After coding was complete, coders were interviewed about their beliefs regarding the purpose of the study; none guessed that it regarded shame- and/or guilt-relevant behaviours nor that children were classified into types.

Variables Utilised as Outcome Measures. The behaviour codes actually utilised in the study were derived from the above behaviours. Table 2 describes these derived variables. For all variables that do not involve E's presence, the experimental period began when the child noticed that the leg was off; for those involving E's presence it began when E returned to the room following the mishap. Inter-observer reliabilities, based upon one-quarter of the sample and averaged across the six possible combinations of coders, appear in parentheses following each variable. Spearman correlations were used for continuous variables and a Kappa for the nominal variable (embarrassment). The one derived questionnaire variable is also described. We wished to utilise measures that would be sensitive to degree of each type of response; for this reason, latency measures were used when possible.

Gaze aversion was defined in a very conservative manner (see Table 2) such that it clearly involved *averting* gaze from the experimenter's face. Although we could have defined gaze aversion as amount of time looking at something other than E, this seemed undesirable because it could primarily stem from attention to something other than E (e.g. the doll),

TABLE 2
Variables Utilised as Outcome Measures

Variable (Reliability)	Definition
<i>Guilt-relevant Variables</i> Latency to repair (0.90)	Seconds from child noticing leg off until child repairs leg. If child never repaired, this was duration from child noticing to end of paradigm (M for the 9 children who did not repair = 244.19 sec; sd = 81.68).
Latency to tell E (0.89)	Seconds from time E returns after the leg falls off until the child tells or shows E about it.
Guilt vs. shame	Maternally reported frequency of child's guilt responses, minus maternally reported frequency of child's shame responses.
<i>Shame-relevant Variables</i> Latency to gaze at E (1.0)	Seconds from time E returns after mishap until first look at E's face, excluding orienting look when door opens.
Rate of avoiding E after mishap (0.83)	Gaze aversions + gross motor avoidances of E <i>after the mishap</i> , divided by amount of time E was present after the mishap.
"Embarrassment" after mishap (1.0)	Presence* of at least one smile that is followed within 5sec by gaze aversion from E.
<i>Other Variables</i> Rate of smiling before mishap (0.96)	Number of seconds smiling before child notices mishap, divided by amount of time before noticing mishap.
Rate of smiling after mishap (0.99)	Number of seconds smiling after child notices mishap, divided by amount of time from noticing mishap to end of paradigm.
Rate of avoiding E before mishap (0.92)	Gaze aversions + gross motor avoidances <i>before the mishap</i> , divided by a moment of time E was present before the mishap.

Note. Noticing leg was defined as looking at disembodied leg, telling or showing someone about the mishap, or repairing the leg (whichever came first).

*Coded as a dichotomous variable: 1, if present; 0, if absent.

rather than avoidance of E. The baseline period for this measure, as well as for the embarrassment measure (see below) was the period during which E discussed and demonstrated the doll; thus, it was natural for children to look primarily at the doll, while glancing at E from time to time. After the mishap, E again discussed and looked at the doll, but this time the doll was broken. In both situations, using the current criteria, simply looking back and forth between E and doll did not qualify as gaze aversion; the child had to look away at nothing in particular. The baseline period for this measure was selected because the general characteristics of the situation (who was present, where they were located, who was interacting with the child, and focus of attention on Pat) were very similar to those in the situation with which it would be compared.

Each "rate of avoiding E" measure summed gaze aversion and gross motor avoidance because a number of subjects showed no instances of one of these two codes but many instances of the other. The combined measure seemed to better capture avoidance of E. It seemed unreasonable to consider a child nonavoidant when he or she repeatedly averted gaze from E (but never avoided E through gross motor behaviour), or nonavoidant when he or she repeatedly showed gross motor avoidance but never averted gaze.

Rate of avoidance (number of instances, divided by available time), rather than absolute amount of avoidance, was utilised primarily because comparisons between rate of avoidance after the mishap and rate of avoidance before the mishap were planned. The period during which E was present prior to the mishap tended to be slightly shorter than that after the mishap ($M = 83.32\text{sec}$ (1.4min), $sd = 54.8\text{sec}$, and $M = 152.1$ (2.5min), $sd = 47.6\text{sec}$, for duration prior to and following mishap, respectively). Rate of avoiding E *before* the mishap was used to help determine whether avoidance of E might not be a function of the mishap but rather a function of other, more general, individual differences, which would not distinguish the period before the mishap from those after the mishap.

RESULTS

In this section, we will discuss three sets of results bearing upon the three major research questions of the study. The first major question that will be addressed is whether or not shame-relevant and guilt-relevant responses are manifested by toddlers when they are led to believe that they broke someone's favourite doll. The second question regards whether children can be classified as showing more shame-like than guilt-like behaviour and vice versa, and what characteristics are associated with each of these patterns. The third regards whether there are gender differences in shame-relevant and guilt-relevant responsiveness.

Shame- and Guilt-relevant Responses to the Mishap

Shame-relevant Variables. As expected, 35 out of the 44 toddlers (79.5%) showed at least one instance of gaze aversion and/or overt behavioural avoidance of E following the mishap. On the other hand, only 10 of the 44 (22.7%) children showed at least one instance of gaze aversion and/or overt behavioural avoidance of E *prior* to the mishap. A Sign test indicated a significant difference between proportion of subjects avoiding E before and after the mishap ($P < 0.0001$, 2-tailed), suggesting a strong

effect of the experimental manipulation. Similarly, whereas only 2 (of 42) children showed embarrassment before the mishap, 11 showed embarrassment after the mishap. Again, a Sign test indicated a significant difference in proportions as a function of whether or not the mishap had occurred ($P < 0.012$, 2-tailed). Finally, of the 36 mothers who completed questionnaires, 25 reported that their children expressed shame at home (69.4%), providing converging evidence of shame in 2-year-olds.

Guilt-relevant Variables. Guilt-relevant variables concerned repairing the leg and telling E about the mishap. Of the 44 toddlers, 35 (79.5%) eventually tried to repair the leg, and 34 of the 44 (77.3%) eventually "told" E about the mishap. Thus, the great majority of the children showed guilt-relevant behavioural responses to the situation. (Data were not available for these measures prior to the mishap, given that there was neither nothing to repair nor to tell E about.) In addition, 33 of the 36 children on whom questionnaire data were available (91.7%) reportedly showed guilt at home. These data suggest that the findings were not restricted to the laboratory paradigm utilised in this study—mothers of 2-year-olds do feel that their toddlers experience guilt.

Individual Differences: A Shame-relevant vs. Guilt-relevant Dichotomy

The above analyses indicated that both guilt- and shame-relevant responses were manifested. Our next goal was to determine whether some children were more prone to guilt-like responses, and some to shame-like responses. As a first attempt to devise a classification system, we used the measure that both increased following the mishap and was observable in the majority of the children—Rate of avoiding E after the mishap. The 24 children who showed more than one instance of gaze aversion from E and/or avoidance of E *after* the mishap were classified as Avoiders, and were contrasted with those who showed no more than one instance of E avoidance after the mishap (the 20 subjects who will later be labelled as "Amenders").

One instance of avoidance/aversion was allowed primarily for methodological reasons. We planned to contrast embarrassment in Avoiders with embarrassment in the nonavoidant group, and did not want to dichotomise in a fashion that precluded nonavoiders from showing embarrassment. Given that operationalisation of embarrassment included gaze aversion, it was necessary to allow for children in both groups to show gaze aversion. We decided to use a dichotomous measure of embarrassment—simply whether or not the child *ever* showed embarrassment following the mishap, and to allow nonavoiders one instance of avoidance/aversion. Avoidance/

aversion included gross motor avoidance and/or gaze aversion, so some Avoiders would show no instances of gaze aversion. Moreover, avoidance/aversion had no necessary relationship to the smile code, which also was required for embarrassment. Finally, smiles were coded by assistants who were unaware that avoidance/aversion would be coded and/or co-ordinated with their coding. Thus, any *necessary* connection between embarrassment and differentiation between groups was minimised.

The criterion of two or more avoidances/aversions to be considered avoidant also was desirable because the median number of avoidances/aversions was 2. Thus, children who were classified as nonavoidant were below the median for avoidance/aversion.

Given the relatively small, unequal *ns* for the two groups, as well as the unequal standard deviations for the two groups on many measures, a nonparametric approach was taken—all variables were converted to ranks that were then normalised to a mean of 0 and standard deviation of 1. These normalised ranks were utilised in all analyses (cf. Canover & Iman, 1981). First, MANOVAs were executed: one for guilt-relevant continuous variables; and one for shame-relevant continuous variables—with Sex and Group Status (Avoider vs. nonavoidant subject) as factors. If Sex was nonsignificant *and* the interaction term was nonsignificant, the MANOVA was rerun collapsing across Sex. Significant MANOVAs were followed up by ANOVAs, using partial sums of squares so as to render all effects independent of one another. Nonsignificant univariate Sex effects also were collapsed. Z^2 tests were executed to determine association between group status and dichotomous variables. All probability values are 2-tailed unless indicated.

Guilt-relevant Variables

The Sex \times Group MANOVA for guilt-relevant variables: Latency to repair leg; Latency to tell E; and maternally reported guilt vs. shame, indicated significant effects of Group ($F(3,30) = 10.5, P < 0.0001$), qualified by a significant Sex \times Group interaction ($F(3,30) = 4.77, P < 0.008$). These effects indicated that Avoiders manifested significantly less guilt-relevant behaviour, but that this effect was affected by child gender.

Follow-up ANOVAs indicated that the Sex \times Group interaction only was significant for Latency to Repair ($F(1,40) = 4.54, P < 0.039$). Table 3 provides the normalised mean ranks (normalised to $M = 0$ and $sd = 1$). Inspection of the means indicates that the difference between groups was in the same direction for both genders, but that the effect was stronger for boys than for girls.

Group exerted a significant influence on all three variables ($F(1,40) = 14.16, P < 0.0005$ for Latency to Repair; $F(1,42) = 12.7, P < 0.001$ for

TABLE 3
Means and Standard Deviations for Guilt-relevant Measures

Group	<i>M</i>	<i>sd</i>
Latency to repair the leg after noticing mishap (LR)		
<i>Avoiders</i>		
Girls	+0.21	1.01
Boys	+0.84	0.79
<i>Nonavoiders</i>		
Girls	-0.22	0.63
Boys	-0.71	0.69
Latency to point out mishap to E (LTE)		
<i>Avoiders</i>		
Girls	+0.54	0.73
Boys	+0.23	0.95
<i>Nonavoiders</i>		
Girls	-0.15	1.11
Boys	-0.71	0.79
Maternally reported guilt minus shame (GS)		
<i>Avoiders</i>		
Girls	-0.58	0.73
Boys	+0.15	0.60
<i>Nonavoiders</i>		
Girls	+0.43	0.79
Boys	+0.36	1.19

Note. All entries in Table 3 are ranks that were normalised to a mean of 0 and a standard deviation of 1.

Latency to "Tell" E; and $F(1,34) = 5.87, P < 0.021$ for Guilt vs. Shame). (Differences in degrees of freedom are due to collapsing across Sex for Latency to Tell E and Guilt vs. Shame, and reduced numbers for Guilt vs. Shame because of unreturned questionnaires.) As Table 3 indicates, in all cases Avoiders showed *less* of the guilt-relevant behaviour. Moreover, the significant Guilt vs. Shame group difference provides evidence, from an independent observer of nonlaboratory situations, that the two groups are distinguished by proneness to guilt vs. shame.

Thus, although the two groups were dichotomised solely on the basis of a shame-relevant behaviour, they differed significantly on all three guilt-relevant variables, with the shame-relevant group in all cases showing less of the guilt-relevant behaviour. The nonavoidant group is well characterised as a guilt-relevant group. It thus seems appropriate to give the

nonavoidant group a name that captures their proneness to guilt-relevant behaviour. The above results were strongest for Latency to Repair, despite the loss of 2 degrees of freedom. Moreover, inspection of the data indicated that the nonavoidant subjects were uniformly quick to repair the leg, in comparison to Avoiders. Figure 1 depicts the difference between the two groups in raw (unranked) latency scores. The mean normalised rank for Avoiders is $+0.45$ ($sd = 0.97$); that for the nonavoidant group is -0.53

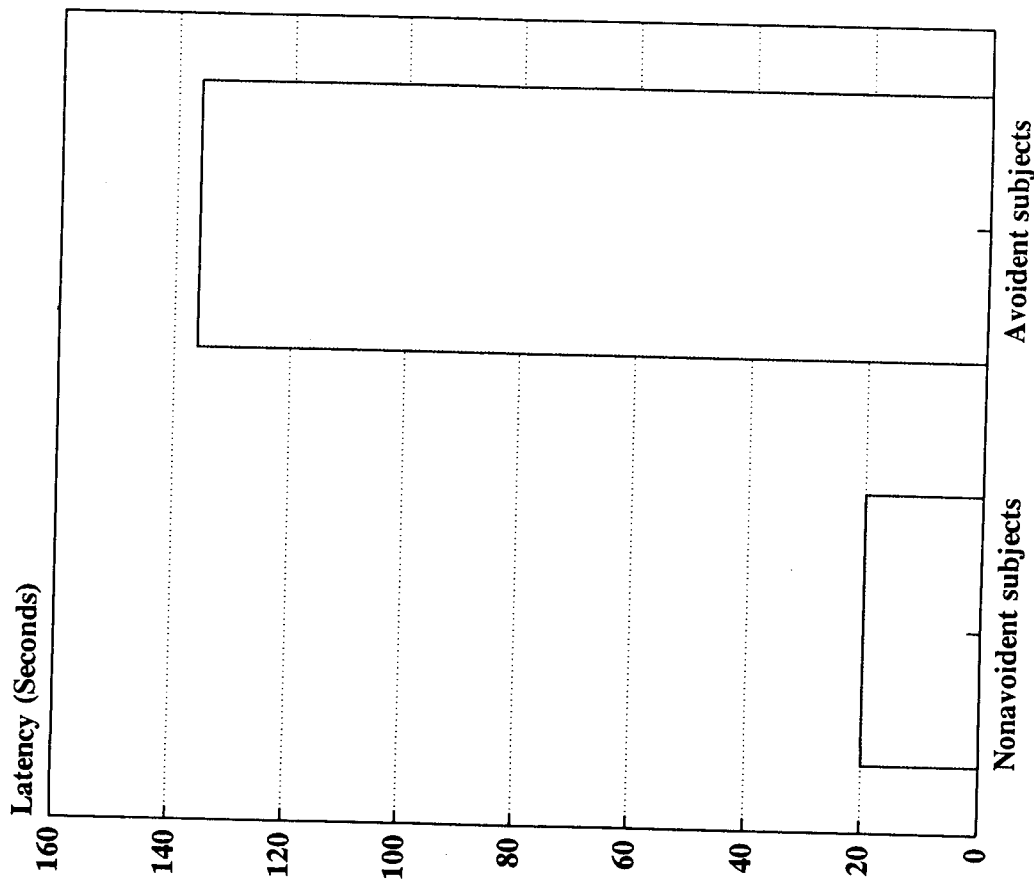


FIG. 1 Differences between avoidant and nonavoidant subjects in Latency to repair leg.

($sd = 0.70$). The sd of 0.70 is well below the 1.0 to which the total set of scores was normalised. Moreover, a condition of complete dominance exists (Darlington, 1973). That is, if percentiles are determined within each group, the latency to repair score for the Avoider at every percentile is longer than the latency for the nonavoider at the same percentile. For example, the nonavoidant subject ranked 10 (50th percentile) repaired the leg only 16.7sec after he noticed that the leg fell off, whereas the Avoider ranked 12 (50th percentile) repaired the leg after 11.24sec. (This effect held true if raw ranks, rather than percentiles, were also used.)

As another demonstration of the huge difference between groups in latency to repair, consider that whereas 90% of the nonavoidant group had a latency of less than 30secs, 71% of the Avoiders had a latency of more than 30sec. Given the alacrity with which nonavoidant subjects repaired, especially in comparison to Avoiders, nonavoiders were named "Amenders". Thus, the 20 subjects originally distinguished from Avoiders simply because they failed to avoid E more than once, now were known to be quick to make amends, and were labelled accordingly. *These are not new groups; the sole criterion for distinguishing the groups remains the number of times the subjects avoided E following the mishap.*

Another aspect of repairation is whether it is self-initiated, or whether it is triggered by E's "noticing" the mishap. E never told subjects to fix the doll, but she did point out the mishap to them. What proportion of Amenders and Avoiders repaired the leg before E verbally mentioned the mishap? All of the 20 Amenders repaired before E commented; whereas only 11 of the 24 Avoiders did so. The association between Avoider/Amender and repairing before E commented was highly significant ($Z^2 = 15.38, P < 0.0001$).

One also could ask whether Latency to Tell E occurred before E mentioned the mishap—whether the toddler pointed out the mishap to E before E pointed it out to the child. Fifteen of the 20 Amenders did so; whereas only 7 of the 24 Avoiders did. This association between Avoider/Amender and telling E before she told the subject was highly significant ($Z^2 = 9.17, P < 0.0025$). If one considered whether or not subjects both repaired and confessed before E pointed out the mishap, the association was even stronger ($Z^2 = 23.65, P < 0.00001$). Only 1 of 24 Avoiders both confessed and repaired; 15 of 20 Amenders did so.

Differences between Avoiders and Amenders in Shame-relevant Variables

The shame-relevant variables included rate of avoiding E after the mishap, latency to first eye contact with E after the mishap, and number of children showing embarrassment; however, only the first two were continuous

TABLE 4
Means and Standard Deviations for Shame-relevant Measures

Group	M	sd
Rate of avoiding E after E returns following mishap (RAEA)		
Avoiders	+0.70	0.62
Amenders	-0.84	0.52
Latency to gaze at E after E returns following mishap (LGE)		
Avoiders	+0.1	0.97
Amenders	-0.2	1.03

Note. All entries are ranks that were normalised to a mean of 0 and a standard deviation of 1.

variables that could be entered in the MANOVA. Rate of avoiding E after the mishap necessarily would be greater for Avoiders than Amenders; however, the magnitude of the difference was of interest, as was the contrast between group differences in avoidance *after* the mishap and avoidance *before* the mishap. The latter would help determine whether Avoiders' greater avoidance of E was a function of the mishap.

The MANOVA revealed nonsignificant effects of Sex and Sex \times Group; thus Sex was collapsed across. Table 4 presents the normalised mean ranks for the two shame-relevant variables. As expected, there was a highly significant effect of group ($F(2,41) = 38.53, P < 0.0001$). This effect was primarily a function of Rate of avoiding E after the mishap, which was significantly greater for Avoiders than for Amenders ($F(1,42) = 78.54, P < 0.0001$). In contrast, as Table 2 suggests, the Group effect for Latency to Gaze at E was nonsignificant ($F(1,42) < 1$).

A separate ANOVA revealed that there was no effect of Sex nor Sex \times Group on Rate of Avoiding E *before* the mishap, so Sex was collapsed. In the resulting ANOVA, Avoiders and Amenders did not differ ($F(1,42) < 1$; mean normalised ranks = 0.11 and -0.09 for Amenders and Avoiders, respectively).

Embarrassment. As expected, the incidence of embarrassment was significantly greater for Avoiders than for Amenders. Whereas only 2 of 20 Amenders ever smiled and immediately averted gaze from E after the mishap, 9 of the 22 codeable Avoiders showed this pattern ($Z^2 = 5.18, P < 0.023$). There was no comparable association between Sex and Embarrassment ($Z^2 = 1.11, P < 0.29$). Moreover, there was no association between Group and incidence of embarrassment before the mishap. Only two children showed embarrassment before the mishap, and these were both

Amenders. It should be noted that the greater incidence of embarrassment following the mishap in the Avoiders was not simply due to their higher rate of gaze aversion. Avoiders manifested a higher rate of smiling following the mishap than did Amenders ($F(1,40) = 4.26, P < 0.046$; M ranks = +0.28 and -0.305 for Avoiders and Amenders, $sds = 0.96$ and 0.86), but no such difference *before* the mishap ($F(1,40) = 1.91, P < 0.175, M$ ranks = +0.195 and -0.215 for Avoiders and Amenders, $sds = 1.02$ and 0.90). Effects for Sex and Sex \times Group were all nonsignificant.

Discriminant Function Analysis

As a final way of documenting that the Avoider/Amender dichotomy accurately captured the important variance in the guilt- and shame-relevant variables, all behavioural guilt- and shame-relevant continuous variables were entered into a discriminant function analysis. Age also was included in this discriminant function analysis, given the common belief that shame is a developmental precursor to guilt. If age really makes little difference, it should not be weighted heavily in the discriminant function. The resulting discriminant function correctly classified all but one subject into the original Avoider/Amender groups, and even this subject was almost equally classifiable as Avoider or Amender (Posterior probabilities of membership in the Amender and Avoider groups for this subject were 0.48 and 0.52, respectively).

Not surprisingly, Rate of avoidance/aversion after mishap made the most important contribution to discriminating Avoiders from Amenders, but Latency to tell E and Latency to repair leg made sizeable contributions to discriminating groups (absolute value of coefficients > 0.85). On the other hand, age and latency to look at E each made negligible contributions to discriminating groups (absolute value of coefficients < 0.25). These results are quite consistent with those described earlier; the most important contribution of the discriminant function analysis is to show that the Avoider/Amender classification captures the variability in these measures well—misclassification was remarkably rare, and all variables but age and latency to look at E contributed to the discriminant function.

Other Variables

Discriminant Validity. Variables that were similar to the shame measures in appearance, but different in meaning were investigated, to determine discriminant validity of the classification. No differences between Amenders and Avoiders were predicted for these measures, which included rate of avoiding E *before* the mishap, incidence of embarrassment before the mishap, maternally reported fear, and maternally reported

sadness. Results regarding the first two of these variables, reported earlier, were consistent with predictions. Also in accordance with predictions, there was no difference between Amenders and Avoiders with respect to either maternally reported sadness or fear ($F_s(1,34) < 1$). All Sex and Sex \times Group effects were nonsignificant as well (all $P_s > 0.25$). It also should be noted that there were no significant differences between Amenders and Avoiders in age ($M_s = 29.3$ and 30.5 months for Amenders and Avoiders, respectively), birth order (50% later-born for each group) proportion of mothers working outside of the home (40% Amenders' mothers home full-time; 37.5% of Avoiders' mothers home full-time), nor revised Duncan SES ($M_s = 61.2$ and 61.3 for Amenders and Avoiders).

Frequency of Breaking Others' Toys. A final variable on which Avoiders and Amenders were contrasted was (maternally reported) frequency with which children broke another's toys. The Sex and Sex \times Group effects were not significant ($F_s(1,32) < 1$); however, there was a significant effect of group ($F(1,34) = 7.02, P < 0.012$). Amenders reportedly broke toys more frequently than did Avoiders (M ranks = $+0.40$ and -0.36 ; $sds = 0.955$ and 0.75 , respectively).

Gender Differences

It was predicted that there would be more girls than boys in the Avoider group and more boys than girls in the Amender group. This hypothesis was supported: 15 of the 24 Avoiders were female, and 13 of the 20 Amenders were male. This association between gender and Avoider/Amender classification was significant ($Z^2 = 3.3, P < 0.035$ (1-tailed)). Moreover, this effect is clarified when one examines whether or not girls and boys pointed out the mishap to E before E mentioned the mishap: 15 of 22 boys did so; whereas only 8 of 22 girls did ($Z^2 = 4.46, P < 0.036$). It will be recalled that there was a greater difference between *male* Avoiders and Amenders than between *female* Avoiders and Amenders with respect to Latency to Repair. In addition, for boys, Latency to Repair was correlated negatively with Frequency of Breaking toys and positively with Rate of Avoiding E. After the mishap (Spearman $r_s = -0.53, P < 0.03$ and $0.81, P < 0.0001$), indicating that boys who repaired quickly had more experience breaking toys and were less avoidant of E after the mishap. On the other hand, for girls, Latency to Repair was not significantly related to other variables. (Latency to tell E was not significantly related to other variables for boys or girls.)

DISCUSSION

The above findings suggest that guilt-like behaviours are possible during the third year of life, and that they cohere into a pattern of behaviour that is distinct from shame-relevant behaviour. They suggest that some children may be more prone to guilt-relevant behaviour than shame-relevant behaviour upon perceiving themselves to have broken another's toy (Amenders), and some show the reverse pattern (Avoiders). Moreover, Avoiders and Amenders did not differ in age. This finding is consistent with Lewis' (1985) predictions, but may be at odds with theories in which shame is a developmental precursor to guilt. The question of age differences in shame-relevant vs. guilt-relevant behaviour needs to be investigated further, in studies utilising younger age groups. Moreover, longitudinal methods are needed to more definitely determine whether or not shame is a precursor to guilt. Finally, given that Amenders reportedly had more experience with breaking toys, it would be important to determine, in a longitudinal study, whether a certain amount of relevant experience is necessary before Avoiders can become Amenders.

It is important to reiterate that shame-proneness need not imply complete absence of guilt-relevant behaviours nor guilt-proneness the absence of shame-relevant behaviours. In this study, in fact, 12 of 20 Amenders showed one instance of avoidance/aversion, 14 of 24 Avoiders eventually repaired the leg, and 15 of 24 Avoiders eventually acknowledged the mishap. However, there are clear individual differences in tendency to show entire *patterns* of guilt-relevant behaviour vs. shame-relevant behaviour, and the Avoider/Amender dichotomy seems to have captured this distinction. Only 1 of 24 Avoiders both repaired and confessed before E verbally pointed out the mishap, whereas, 15 of 20 Amenders did so, *despite the fact that children were classified solely on the basis of their avoidance of E after the mishap*. Only one child was misclassified using a discriminant function to distinguish Avoiders from Amenders. There was no overlap between Avoiders and Amenders in ranked scores for Latency to Repair leg. Moreover, the fact that maternally reported emotions were related appropriately to the Avoider/Amender distinction suggests that the distinction may be generalisable to guilt- and shame-relevant situations other than that experienced in the laboratory.

It is also important to acknowledge that none of the behaviours used as outcomes for this study is peculiar to guilt nor shame. Gaze aversion seems to function to reduce arousal in a wide array of situations, including the shame-inducing situation (see Barrett, in press; Cohn & Tronick, 1983; Field, 1981; Fogel, Diamond, Langhorst, & Demos, 1982; Waters, Matas, & Sroufe, 1975). Similarly, one may repair a broken object for a number of reasons other than guilt-like tendencies. Each particular variable, divorced

from its context, provides insufficient evidence that a shame or guilt family member is in process. However, the coherence of the responses, as well as their appearance in this particular context, makes other interpretations less plausible.

For example, if children repaired the leg quickly to hide the evidence of their wrongdoing, then why did Amenders more quickly tell E about the mishap, and why were Amenders less avoidant of E after the mishap than were Avoiders? On the other hand, the entire set of findings makes sense if one allows 2-year-olds to experience a member of the guilt family as well as a member of the shame family.

One might view the results as suggesting that different children cope differently with stress—some showing an avoidant pattern and some an agentic/mastery pattern. It is quite possible that the individual differences that we observed in this study pertain to such a general pattern. However, for the present, it is more parsimonious to constrain our interpretation to the context in which the behaviours occurred—a context in which children were led to believe that they broke E's favourite doll. Perhaps the avoidant/agentive distinction would apply more widely to other types of mildly stressful events, but this study only provides evidence for the type of context in which the avoidance vs. agency distinction is coterminous with the distinction between shame and guilt. Moreover, the maternal report data lend credence to our generalising to this degree.

Two types of theories suggest that guilt is not possible until children are older than those studied here—classic psychoanalytic theories, including those of Freud (Freud, 1905/1953), and current, cognitively oriented theories such as those of Kagan (1984). Freud and his followers held that guilt was not possible until the Oedipus complex was resolved, at around 4 or 5 years of age. At that time, the superego, the seat of conscience and guilt, was formed. Many cognitively oriented theories hold that in order to experience guilt, a child must be capable of certain forms of *understanding* believed impossible at 2 years of age (e.g. Kagan, 1984, p. 175: "recognising that he could have behaved in a way different from the one he has chosen"). Although such understanding certainly might enable more sophisticated forms of guilt than were possible previously, the present research suggests that it may not be *necessary* for guilt to occur. Throughout this paper, we have used the terms "guilt-relevant" and "shame-relevant" behaviour, in recognition of our inability to conclusively demonstrate that true guilt and shame were experienced. Nevertheless, whatever was aroused in the children served the functions of guilt or shame, as assessed via multiple measures, under the conditions that are expected to arouse such emotions. According to recent theory, then, these behaviours would be considered evidence that some member of these emotion families was present (Barrett & Campos, 1987; Barrett, in press).

Special comment and clarification is needed with respect to one set of findings regarding the distinction between Avoiders and Amenders. We found, consistent with prediction, that more girls were classified as Avoiders, and more boys as Amenders. Moreover, the Avoider/Amender difference in speed of repairing the leg was greater for boys than girls, and appropriately correlated with other variables only for boys. In addition, boys were more likely than girls to "tell" E about the mishap before E told them about it. Lewis (1971) predicted this type of difference, as a reflection of more general differences between males and females in styles of responding. Lewis (1971) framed her conceptualisation in terms of field independence vs. dependence—with females more reliant on the environment in making judgements, and males acting more on their own. Similar differences also have been conceptualised as "femininity" vs. "masculinity"—a tendency for females to be more concerned with interpersonal issues, including others' judgements of them, and males to be more action or agent-oriented (cf. Bakan, 1966; Parsons & Bales, 1955). All of these male/female distinctions are consistent with the pattern of findings we obtained, although we do not have the data that would enable us to document the source of the gender differences. We do *not* interpret our findings to mean that females are less moral than males in any sense of the term. In fact, given the person-centred orientation of females, there might be other conditions under which girls would show greater reparation than males (e.g. mother being hurt: see Zahn-Waxler, Cole, & Barrett, 1991). It also is possible that females tend to be *more* affected by others' hurt such that it takes them longer to become mobilised to help (because they must overcome their own distress first). It is important to note that studies in which guilt was not clearly distinguished from shame (the response was labelled guilt) sometimes revealed *greater* emotion in girls than boys (cf. Hoffman, 1975; D. Perry, L. Perry, & Weiss, 1989).

With respect to shame-relevant variables, one variable, Latency to gaze at E following the mishap, failed to distinguish Avoiders from Amenders. This failure may have been partly a function of our conservative criteria for gaze aversion from E. In order for a look to be classified as gaze aversion from E, the child needed to first *look* at E, and then to look away at nothing. Thus, children who were extraordinarily slow to make eye contact with E (or never made eye contact with E) also would show few gaze aversions. As a result, there may have been some Amenders who showed extreme avoidance. Another possible reason for the failure of this variable is that factors other than shame-relevance affected children's tendency to delay looking at E after the mishap. This variable was not assessed prior to the mishap, because there was no appropriate time marker prior to the mishap from which to calculate latency. It did not seem desirable to use first contact with E, in that children of this age need to "warm up" to a

strange person (which might lead to a similarly long latency to look at E). It did not seem appropriate to calculate the latency from the time E first presents the doll, in that children should look at the doll rather than E while it is being introduced. These difficulties illustrate a few factors that influence latency to look at E. Our desire to score Latency to gaze at E prior to the mishap stemmed from our realisation that temperament, too, might play a role in this measure. It seems likely that other factors affected this variable, reducing the difference between groups on it.

Another shame-relevant variable, embarrassment, distinguished Avoiders from Amenders and period before mishap from after mishap, but occurred relatively infrequently. Only 11 subjects were classified as embarrassed. A possible explanation for this is that there were many occasions during which children's faces were offscreen (and could not be coded for smiles), and these occasions often arose because children turned away from the camera as part of averting gaze. Thus, if the smile began simultaneously with the gaze avert, it might be missed. Another possibility is that many subjects reacted with an emotion more like true shame than embarrassment, and were sober when they averted gaze.

In conclusion, this study highlighted some coherent individual differences in toddlers' responses to their "breaking" another person's "favourite" toy. The differences observed are consistent with those characterising the distinction between shame-related and guilt-related action tendencies. Further research is needed to determine developmental antecedents and consequences of the Avoider/Amender distinction—in terms of temperamental and socialisation factors influencing the development of these patterns, as well as typical and atypical sequelae of them.

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