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The Universality of a Contempt Expression: A Replication[1]

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Two experiments replicated Ekman and Friesen's finding of an expression that signals contempt across cultures. The subjects, from West Sumatra, Indonesia, were members of a culture that differs in a number of ways from Western cultures. In one experiment the subjects judged photographs of Japanese and American faces, both males and females, which showed many different emotions. There was very high agreement about which expressions signaled contempt in preference to anger, disgust, happiness, sadness, fear, or surprise. In a second experiment the Indonesian subjects judged expressions shown by members of their own culture, and again there was very high agreement about which expression signals contempt.

Ekman and Friesen (1986) identified a specific facial expression that observers in each of 10 cultures, both Western and non-Western, agreed signaled contempt. This was the first study in which the level of agreement about a contempt expression was very high in every culture sampled—greater than 75%. Although a number of prior investigators had included contempt in the list of emotions they studied, most had not separated it from disgust but instead had combined both words into one response category. Those who

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did separate contempt and disgust into separate judgment responses found that the majority of observers did not agree about which expressions showed contempt. One of Izard's (1971) experiments is an exception, for he did obtain majority agreement among both American and Turkish observers in judging four expressions that he thought would signal contempt. Izard failed, however, to establish the universality of a contempt facial expression, for the majority of the Indians in his study judged all four of these same facial expressions as showing an emotion *other* than contempt, and the majority of the Japanese judged two of the four expressions as not showing contempt. The contradiction between Izard's failure to find universal agreement in the judgment of contempt and Ekman and Friesen's (1986) positive findings may be due to the fact that different facial expressions were studied. Izard had not examined the facial expression that Ekman and Friesen found universally signals contempt—a tightening and slight raising of the lip corner, primarily on one side of the face.

While strong in terms of the number of cultures sampled, Ekman and Friesen's study of contempt was weak in terms of the number of expressions the observers saw, which was only two. The need for replication was emphasized by Izard and Haynes (1988), who questioned the validity of Ekman and Friesen's findings because the number of expressions was so few. We report two experiments that sought to replicate and extend the finding of a universally recognized facial expression for contempt.

The Minangkabau, who live in West Sumatra, Indonesia, where one of us (K.G.H.) has been working for a number of years, offered an excellent opportunity for such work because of the contrast they provide to Western culture. They are famous in the anthropological literature as the largest matrilineal society in the world and are also strong Moslems (Kato, 1982). The Minangkabau differ from Western cultures in emphasizing the social, interactive aspects of emotion more than subjective internal feelings, and in masking negative emotions (especially anger) with positive emotion displays to a greater degree than Westerners (Heider, 1984).

EXPERIMENT 1

Fifty-seven males and females, aged 17 to 25, attending the Andalas University, in Padang, West Sumatra, judged a series of facial expressions. The expressions were projected life-size, one at a time, for 10 seconds each. Included were pictures that are perceived across at least 10 cultures as showing anger, fear, sadness, surprise, disgust, and happiness (Ekman et al., 1987). In addition to these black-and-white pictures of Caucasian male and females, another set of pictures were intermixed, comprising color photographs of facial expressions displayed by American Caucasians and by Ameri-

can Japanese stimulus persons (Matsumoto, 1986; Matsumoto and Ekman, 1988).

Among these expressions were 10 pictures intended to depict contempt. In every contempt picture the lip corner was raised and tightened, either on only one side of the face or more strongly on one side than the other by the action of the *buccinator* muscle and, to a lesser extent, by the action of the *zygomatic major* muscle. (A photograph of this expression was shown as Figure 1 in Ekman and Friesen, 1986.) Two facial expressions were the ones used in the Ekman and Friesen (1986) study, and eight were new expressions from another study by Matsumoto and Ekman (1988). The eight new pictures were of eight different people.

All observers were fluently bilingual in Minangkabau and the national language, Indonesian. The task was carried out in Indonesian. The following emotion terms were translated into Indonesian: *contempt, disgust, anger, fear, sadness, surprise,* and *happiness.* The observers recorded their judgment of every expression by choosing one term from this list.

By using one word to define each emotional choice we risked the possibility that the observers might not understand what emotion was designated by each choice, which could thereby lower the level of agreement we would obtain. The alternative research strategy of defining each emotional choice with multiple terms (followed for example, by Izard, 1971; Tomkins & McCarter, 1964; Woodworth, 1938) results in less certainty about exactly which emotion message is conveyed by an expression. If we were to follow their example, defining the contempt choice not just with that one word but with a cluster of presumably related words, such as *contempt-scorn-haughty,* we could not know whether an expression that elicited that choice signaled all, some, or

Table I. Judgments of Contempt by Minangkabau Observers from Indonesia When Viewing Expressions Shown by Caucasians and Japanese

Stimuli judged	Percentage of observers choosing contempt
Original Ekman and Friesen study	
Caucasians	
Male A, Picture 1	98
Male A, Picture 2	86
New stimuli	
Caucasians	
Male B	90
Male C	76
Female A	85
Female B	85
Japanese	
Male D	80
Male E	88
Female C	77
Female D	70

only one of those messages. (For a discussion of this methodological issue see Ekman and Friesen, 1988).

Table I shows that there was very high agreement about the expressions that signaled contempt. A binomial test was computed to evaluate whether the agreement achieved on each expression was greater than would be expected by chance. Since the observers were given alternative choices, chance might be considered to be one in seven. A more conservative estimate could be derived by presuming that there were only two alternative choices that competed with contempt as a judgment for these expressions—happiness (which is most similar in appearance) and disgust (which is most similar in semantic referent). By that logic, chance should be set as one in three rather than one in seven. Even with this more stringent test, the significance level was beyond .0001 for every entry in Table I.

EXPERIMENT 2

A further replication was obtained in which the Minangkabau were expressors as well as observers. We instructed Minangkabau males about which muscles to move on their faces in order to produce a set of expressions comparable to those shown in the pictures used in Experiment 1. Photographs of their poses were scored with the Facial Action Coding System (Ekman & Friesen, 1976, 1978) to identify those in which the expressors had successfully followed instructions. Thirteen expressions, two each for anger, disgust, contempt, surprise, and happiness, and one for fear, were thereby selected. (The muscle movements required for the fear expressions involve actions that are difficult to produce voluntarily, and only one attempt met the scoring criterion.) These expressions were shown to the same group of observers who had participated in Experiment 1. They used the same set of responses to record their judgments. Table II shows that there was very high agreement that the contempt expression signaled contempt. The binomial test, setting chance expectation as one in three, showed that agreement about each entry in Table II was significant beyond the .0001 level of confidence.

DISCUSSION

These data provide a strong replication of Ekman and Friesen's (1986) finding of a universal expression for contempt. An expression in which the corner of the lip is tightened and raised slightly on one side of the face (or much more strongly on one side than the other) signaled contempt when it was shown by more than 10 people, regardless of whether the person dis-

Table II. Judgments of Contempt by Minangkabau Observers from Indonesia When Viewing Expressions Shown by Minangkabau

Stimuli judged	Percentage of observers choosing contempt
Minangkabau	
Male F	86
Male G	98

playing the expression was male or female, American, Japanese, or Minangkabau. While these data and the Ekman and Friesen data show that this expression signals contempt in contrast to anger, fear, disgust, sadness, surprise, and happiness, they cannot tell us whether this expression signals other messages about other states presumed to be related to contempt, such as *scornful, haughty, smug, vain,* or *disdainful.* That would require another study in which each of those terms is included as a separate response choice.

Izard (personal communication, July 29, 1987) raised the possibility that contempt may have been chosen by a process of elimination. Presumably, this line of reasoning would be that even if the contempt expression signaled nothing, contempt would have been chosen because the observers would know the expression was not a signal of anger, fear, surprise, disgust, happiness, or sadness. But this is not what happened in past studies. Ekman and Friesen (1986) found that the raised upper lip expression and the bilateral lip-tightening expression did not elicit high agreement across cultures that they were contempt signals. Only the unilateral lip-tightening expression did. Izard (1971) also did not obtain cross-cultural agreement about the bilaternal tightening of the lip corners. It was identified as contempt[3] by only 7% of the Japanese observers and only 40% of the Indians in his study. Since the process of elimination was not sufficient for these other expressions to be judged as contempt, there is no reason to expect it would be sufficient for the expression we have identified as signaling contempt universally.

A question does remain, however, about whether there might be another expression that could signal contempt. Izard did not study the raised upper lip expression that Ekman and Friesen (1986) had found did not signal contempt across cultures. However, their examples of this expression showed only a very slight action. It remains to be determined whether a stronger version of the raised upper lip expression signals contempt across cultures.

[3]Izard actually used multiple words to define this one response choice: *contempt, scorn, disdainful, haughty,* and *sneering.*

Quite apart from facial expression, there may be other behaviors that also signal contempt. Izard and Haynes (1988) point out that Feleky (1941), Frois-Wittman (1930), Levy and Schlosberg (1960), and Izard (1971) all included persons tilting the head back and looking downward in their photographs of contempt facial expressions. None of these investigators, however, determined whether this head and eye position alone signals contempt. The one expression of Izard's in which this head and eye position was shown with a blank expression was not interpreted as contempt by the majority of the subjects in all four cultures that saw it (Izard, 1971). Two-thirds or more of the Indians and Japanese judged it as an emotion other than contempt. The findings from Ekman and Friesen's (1986) study, replicated here, do show that contempt is very well signaled without any such change in head and eye position.

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