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Who Knows What About Contempt: A Reply to Izard and Haynes

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Izard and Haynes question our findings and claims for disovery because they did not consider the difference between a one-to-one and one-to-many relationship between a sign (the facial expression) and what it signifies (a message about emotion). Clarifying this matter not only shows that the disagreement between us is more apparent than real, but more importantly highlights what remains to be discovered about which emotional states are signaled by which facial expressions.

A facial expression may convey information about one emotional state, or about two or more quite different states. For example, the lowered and drawn together brow due to the action of the *corrugator* muscle signals not only slight anger, but also may signal determination, concentration, or perplexity. This is a one-to-many relationship between expression and state. Consider another expression in which the jaw drops open, and the upper eyelid and brows are raised. Izard (1971, 1977) reported that this expression signals "surprise-startle," disregarding Landis and Hunt's (1939) classic study of the startle reaction[2]. Landis and Hunt had documented beyond any doubt that the expression when startled has an entirely different appearance from the expression Izard imputed to both surprise and startle. Izard's data could not allow him to determine that there are, in fact, two quite different expressions, one for surprise[3] and the other for startle, because he had given

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[2]Izard (personal communication, 1987) informed me that when he published his procedure for measuring the face (Izard, 1979) he no longer combined startle with surprise.
[3]Ekman, Friesen, and Ellsworth (1972) report that the jaw dropped open, upper eyelid and brow raised expression signals surprise. In a study in which just the one word *surprise* defined one of the alternative emotion judgments, the majority of the observers in a number of cultures who saw this expression chose the word *surprise*.

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his observers a number of terms—"surprise, startle, sudden reaction to something unexpected, astonished" (Izard, 1971, p. 236)— to define *one* of their response choices. Agreement among observers in selecting this choice for a set of facial expressions could occur if each expression had signaled surprise and none had signaled startle, or if just the opposite had obtained.

If we are to discover whether an expression signals one emotion (one-to-one) or two or more emotions (one-to-many), then more than one emotion term should not be included within a judgment response category unless there is independent evidence that all of the words are exact synonyms, or that the words used to define each qualitative response category differ on only one quantitative dimension such as intensity. Izard (1971) provided his observers with may words to define each of the alternative responses they had to choose among to give their interpretation of an expression. Izard was not consistent, however, in what he included. For example, his "shame-humiliation" category included words that may signify different if related emotional states ("shy, embarrassed, ashamed, guilty," as well as "shame-humiliation"), his "fear-terror" category included words more similar in type of emotion but different in intensity ("scared, afraid, terrified, panicked"), while his "enjoyment-joy" category included words that seem more similar in both type and intensity ("glad, merry, delighted, joyful").

Our strategy and that followed by some other investigators has been to bypass the ambiguity created by using more than one word to define an emotional state (which is compounded when studying observers in different cultures since the terms must be translated), and use only one word to define each choice. The cost of this strategy is to increase the chance that the observers will not know what we mean by that choice. If that happens the observers will be more likely to disagree among themsleves in how they use this response choice. That would work to deflate the level of agreement, which is an acceptable type II error.

Now let us consider whether we made unwarranted claims to discovery. The investigators cited by Izard and Haynes (1988) as meriting prior credit did not find what we did. Those who, like us, used just the one word *contempt,* unlike us, did not obtain high agreement among their observers. The other investigators he cites did not obtain data relevant to the issue, for they combined the word *contempt* with other emotion terms either in the list of categories they provided the observers or in their report of the data. Thus we do not believe we were wrong in writing that no one else before us had identified a contempt expression, for no prior study had found high agreement among observers about which expressions showed just contempt. There was no such prior finding when that response choice by the observer was unambiguous, i.e., when only the word *contempt* was used to define that emotional state. And no one, including Izard, among those who used

a single word to define the contempt category or those who used multiple words to define this emotion category, obtained high agreement across all cultures studied in the judgment of which expressions signaled contempt.

Izard's (1971) own prior research on contempt, which Izard and Haynes report again, illustrates the difference between our study and the work of others cited by Izard and Haynes. The reader might mistakenly believe Izard had utilized just the word *contempt* to designate one of the response choices given to the observers in his research, for Izard and Haynes used just that single word to describe Izard's findings. Table I in Izard and Haynes shows a bit more of what did happen, for in the table the words *contempt* and *scorn* are paired as a single choice. Actually, Izard used many more words to designate this single response choice: "contempt, scorn, disdainful, sneering, derisive and haughty." While the meaning of these words seems related, we see no reason to presume *ex cathedra* that they identify identical emotional states that share a single expression or alternative expressions. In fact, Izard's data cannot reveal whether *any* of the different facial expressions he showed to his observers signaled contempt. His results would be identical if one expression had signaled haughtiness, another derisiveness, and still another was considered a sneer. There is no way to know what each different expression signaled to the observers since he conglomerated into a single response choice all these emotion terms. We think we were correct, therefore, in not citing Izard as having established an expression unique to contempt.

Let us be clear about this. We believe it is an important matter to discover whether there are separate expressions for scorn, disdainful, haughty, etc., or whether all of these emotions are signaled by but one expression. But that is a different question than that one we addressed, a question that cannot be answered by Izard's strategy of combining several messages into a single judgment choice.

Even if Izard had used just the single word *contempt* to define one of the response choices given to the observers, his data would not be conclusive. Table I reported by Izard and Haynes shows that the majority of the Indian subjects did not call these expressions "contempt," and that the majority of the Japanese did not label two of the four expressions as "contempt." Izard's 1971 study provided 16 opportunities for the observers to agree that the expressons showed contempt, scorn, haughty, etc. (4 Different Expressions × 4 Cultures). High agreement, consensus among 75% or more of the observers, was achieved on only 4 of 16 opportunities. By contrast, we, in the article Izard and Haynes criticize (Ekman & Friesen, 1986), found very high agreement uniformly. There were 20 opportunities for the observers to agree (2 Expressions × 10 Cultures), and every time, on all 20 opportunities, agreement was 75% or greater.

To summarize our reply on this point, the Izard 1971 data reported by Izard and Haynes show disagreement, not agreement, across cultures; and the combination of contempt, scorn, disdainful, haughty, sneering, and derisive into a single response choice does not allow determination of just what was signaled by which expressions to those observers who did agree.

So far we have been considering the issue of whether the relationship between an expression and an emotional state is one-to-many or one-to-one: that is, does the expression we identified (lip corners slightly tightened and raised on one side) signal just contempt, or does it also signal scorn, disdain, disgust, etc.? Another question is whether there is only this one expression for contempt or whether there are many different expressions that signal contempt (many-to-one). Our study examined three different facial expressions and found that only one of them was universally a signal for contempt, with that single word (or its translated equivalent) chosen by the majority of observers in each of ten cultures. Izard and haynes disagreed with our use of our facial measurement procedure to score our photographs. We of course disagree, but that is a minor, technical matter, difficult to resolve in print. No matter, for the cruical point is the need to collect new data to resolve what are empirical questions.

We have no reason to disagree with their suggestions regarding the relevance of head and eye position in signaling contempt, but we have shown that contempt is signaled when head and eye position are not varied, or only very slightly. They do not report any data to show that head and eye position alone signal contempt. While we have focused on facial expression itself, on the muscle movements generated by activity from the facial nucleus, other behaviors—posture, voice, etc.—might similarly have evolved to signal emotions. It makes little sense, however, to include in such research, as Izard has done, variations in camera angle, lighting and shadow, which are artifacts unless the study is of theater or cinematography.

Regarding the origin of the contempt expression, Izard and Haynes correctly state that we mentioned the possibility of species-constant learning. We also discussed the possibility that this expression may have evolved. We think it wise to consider the origin of the contempt expression as an unresolved issue, as we suggested in our report, and see no reason to foreclose the matter.

The fundamental questions—are there any other expressions that signal contempt within or across cultures; does the expression we have identified as signaling contempt across cultures signal any other emotional state as clearly; is the relationship between expression and emotional state one-to-one, many-to-one, or one-to-many; when does this expression(s) first appear, and in what other animals?- cannot be settled by argument. They require data. Let us turn to some of the questions needing empirical answer that were raised by our study and by Izard and Haynes' response:

1. Does the expression we identified as contempt – unilateral lip corner raise and tighten – signal other emotional states with equal agreement? We demonstrated that this expression does not signal anger, fear, disgust, sadness, happiness, or surprise, but these data are not relevant to the question of whether other emotional states, closer to contempt, might be as clearly signaled by this expression. To answer that question observers should be shown this expression and allowed to choose among the words *contempt, scorn, disdain, haughty,* etc.

2. Do other facial expression, or head and eye positions, also signal contempt or any other message? This would require presenting these various expressions and head and eye positions separately and in combination, and allowing observers to choose among a variety of single emotion terms.

3. Do our findings replicate? Is the expression we identified as contempt judged as that emotion by other groups of observers? As Izard and Haynes correctly point out, the need for replication is especially important since we used only a few stimulus persons in our original study.[4] In Indonesia, we have recently gathered data in which we showed the expressions from our original study of contempt, new photographs of four other American males and females, and new photographs of four Japanese males and females. In another experiment we asked the Indonesians to display contempt, and then showed their expressions to other members of their culture. We are presently preparing a report of this work.

We believe these new data, once reported, will settle any doubts about whether the unilateral lip corner raise and tighten expression signals contempt. It may signal other emotions. And there may be other expressions that signal contempt as clearly. We hope Izard and Haynes and other investigators will join with us in doing the research to find out.

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[4]Izard and Haynes maintain that the same stimulus person should show every emotion. While this is a method we have used in many of our past studies, we believe an equally powerful stratagem is to use different persons for every expression whether it be of the same or different emotions. That procedure, which we used in the latest studies, establishes the greatest generality of the findings regardless of individual differences in physiognomy.

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