



RECOGNITION OF EMOTIONALLY EXPRESSIVE SOUNDS DERIVED FROM
EMOTIONALLY EXPRESSIVE TOUCH
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Subtleties of the structure of acoustic expressions of human emotion free from linguistic influence have not been extensively studied scientifically. In this study expressive sounds, as frequency and amplitude modulated sinusoids, derived from touch expressions of emotion were tested in a number of ways.

The findings to be described were prompted by a previous study where specific recognition touch expressions of emotion was tested on 232 subjects, who identified them from a film of a hand executing the expressions. Expressions of Anger, Hate, Love, Grief, Joy, Sex and Reverence were correctly recognized by a large majority of subjects both male and female, given the choice of these seven categories. Confidence ratings were systematically higher when correct choices were made. The touch expressions thus appeared to validly express the emotions concerned.

1. These expressive forms were transduced into sound in the manner presented in the previous paper, and were then tested on 100 subjects. Three expressions of each of the seven emotions tested were presented to each subject. The sequence was repeated and subjects were asked to identify the seven different expressive sounds and give a confidence rating for each choice.

2. In a separate study subjects were asked to choose the "best" expression of a particular emotion from a set of nine expressions. This set comprised the expression transformed from the corresponding touch expression as well as eight modifications of this expression created by deliberately varying parameters, such as depth of frequency modulation. Parameter changes were kept slight so as to make the discrimination rather difficult. This process was repeated for each emotion tested. Emotions in both studies were ordered according to a latin square design to avoid biasing results with the order of presentation.

Further, to test the interaction between the sound and touch forms they were superimposed on film together. Subjects were tested similarly with the combined touch and sound expressions.

The results of these studies are significant in showing that the expression of touch and sound have common formal elements in brain function.

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