

PSYCHOLOGY

Expressive Hands

Emotions Are Betrayed By the Gestures of the Hands As Well as by Voice or Eyes, Experiment Shows

By MARJORIE VAN DE WATER

THE human hand has always been associated in the popular mind with the human emotions.

The clenched fist is linked in our minds with anger. The closed hand with greed. The outstretched palm with begging. The upraised folded hands with supplication. And the palm turned outward from the body with disgust or fear.

The hand has throughout the ages gathered about it a wealth of symbolism, and many customs are associated with it. The "hand of God" is a symbol of His supreme power. We shake hands as a gesture of friendliness. Hands laid upon the head are a symbol of benediction, and the "Laying on of hands," is a sacrament of the Church. And "holding hands" is an intimate expression of affection as meaningful as a kiss.

Though your face should be masked, your eyes hidden, and even the posture of your body be undisclosed to the observer, still your mood of the moment might be revealed to him if he could see your hands.

The extent to which even unanimated "still" photographs of the hands serve as a clue to the emotions is indicated by a series of experiments conducted by psychologists at Brown University, Dr. Leonard Carmichael and S. O. Roberts, and recently reported by them to the American Psychological Association.

Posed By Actor

A skilled actor of the old school was selected to pose for a series of photographs. Prof. Thomas Crosby was the actor. After careful rehearsal before a mirror, Prof. Crosby would assume a pose of fear, or anger, or thought, or whatever was selected for expression. Then instead of photographing his face or his entire figure, just the hands were taken as they projected through a dark curtain which hid the rest of his figure.

The photographs thus obtained were later shown to a group of judges to

determine just what was the emotion being expressed.

No clue was given to the judges. They were not given a list of words to select one which applied to the picture before them. They were not given the smallest hint of what was intended by the pose. They were given a sheet of paper, ruled to provide thirty-five blanks, one for each of the thirty-five photographs. With it were the following instructions:

"On the paper before you are thirty-five blanks. On the screen will be shown thirty-five pictures of hands in various positions. Write on the appropriately numbered blank the best single word which seems to describe the emotional or other attitude which is being expressed by the individual whose hands you see. If absolutely necessary use more than one word in your description."

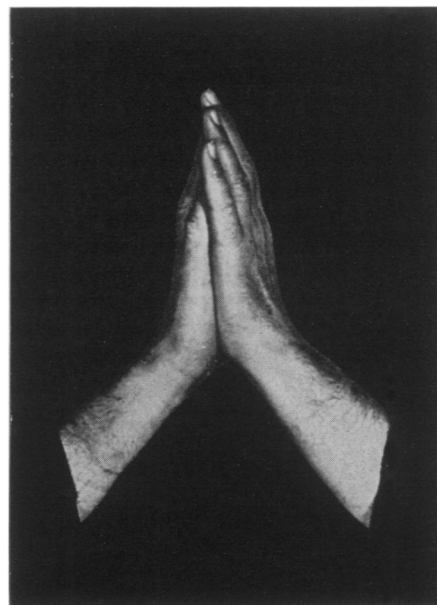
Student Judges

A group of students of Brown University, numbering 348, acted as the judges. Naturally, since they were entirely without restriction in the selection of words to describe the pictures, not all of them would hit upon the same term for the same picture. Yet a surprising amount of agreement was observed.

For the hands posed in the reverent attitude of worship, upraised with palms together, 75 per cent. of the 348 judges assigned the title "prayer." A pose intended to express entreaty, hands raised and fingers spread upward, was called pleading by more than half of those who named it.

A pose with hands clasped and forefinger tips touching, intended to express thoughtfulness, was correctly named by just a third of the judges who named it. Another pose with hands thrown up, intended to express surprise, was correctly named by 30 per cent. But another pose intended to convey the impression of bewilderment was judged by 30 per cent. to be a pose of fear.

"Might the large number of correct



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judgments be due to years of theater-going which have taught people to know that certain gestures are intended to indicate certain emotions?" Dr. Carmichael was asked.

"Of course we cannot be sure," he replied. "But one fact brought out in connection with the experiment points to a genuine association of certain gestures or postures of the hands with certain emotions rather than a conventional meaning for the gestures.

"After the judgments had been recorded, two oral questions were asked, 'Have you ever had any experience in acting, either as an amateur or as a professional?' and 'Did you imitate the expression on the screen while seeking the word for your answer?'"

Posed Themselves

"The answers to these questions revealed that a surprisingly large proportion, 81 per cent. of the men, and 88 per cent. of the women, did not judge the emotion expressed merely by looking at the hands, as you would guess at what a person is feeling by looking at his face. Instead, these persons first placed their hands in the positions shown in the pictures. Then they began to get a feeling of what was intended."

The psychologist William James once proposed the theory that it is the attitude that leads to the emotional feeling, not the emotion that results in the attitude. Thus, he argued that when we see a vicious dog, we first start running and then feel afraid. The faster we run, the greater the fear. If we were to put up a bold front and face the dog stolidly, we should then feel brave.

Such a theory seems to gain support from this observation that the judges gained their clue to the emotion expressed by the actor by the process of themselves assuming his pose.

About thirteen of the thirty-five poses were correctly named by the greater number of judges. Some, however, were difficult to put over without the aid of motion. One pose intended to express distrust looked to the observers like the kind of pressing down gesture you use when you are saying "Sh! Be quiet!" A gesture of scorn was judged to be surprise, one of haughtiness was thought to be fear, one of curiosity was considered merely pointing, assurance was mistaken for anguish, one of wistful appeal and another of admiration were mistaken for explanation, and one intended to convey the impression of critical superiority looked to the judges like nothing but scratching.

Correctly Interpreted

Prayer, grief, surprise, entreaty, thoughtfulness, disgust were poses which were correctly interpreted by the majority of the judges. Other poses suggested moods very similar to the one intended. The quietly folded hands intended to express resignation were thought to represent rest while the knotted hands meant to portray pain were called nervousness. The outspread palms of humility were considered to represent pleading, stubbornness was called anger, and the pounding fist of determination was judged to be emphasis.

One source of confusion to the judges is of particular interest to psychologists. Fear and anger were consistently mistaken for each other but not for any other emotion. One pose intended to express anger was judged to be fear, another, quite similar in appearance but intended to express terror, was judged to be anger. Still a third, intended to portray strong anger, was judged to represent fear.

These "errors" are significant because of the fact that physiologically fear and anger are really one emotion. Scared and mad produce the same quickened pulse, rapid breathing, dilated eyes, and the same changes in blood chemistry. Both represent the defense reaction of a person threatened by danger.

Intellectual Difference

Modern psychologists have suggested that the only difference between the two emotions is an intellectual rather than an emotional one. When you are faced with an opponent or someone steps on your corns in the subway or "cusses you out" you feel this defensive emotion. If your mind says that you are equal to the situation, you interpret this emotion as anger, and are inclined to "sock him one" or use explosive language. If, on the contrary, you notice that he is a burly ruffian with a bulge rather like that made by an automatic under his coat, or if you recognize him as someone very powerful in the company which employs you, you are more likely to feel intimidated by his aggression. Your impulse will then be to get away from him with all possible speed.

An animal in terrified flight will, when cornered, turn and fight with great viciousness. The most violent crimes have been committed not alone by persons in blind rage but by those who have suffered from a terrific fear. So it may be that had the judges selected the words "violent emotion" or "tenseness" to describe the poses of both

terror and rage they would have been more accurate.

That the appearance of the hands does provide a clue to the individual's mood seems evident from these experiments.

Servants of the Mind

Students of evolution have said that it is man's hands, enabling him to grasp and use tools and make countless delicate manipulations of his environment, that are responsible for his development from the level of his nearest of kin, the great apes.

Now it appears that man's hands, acting as the servants of his mind, also serve to speak the language of his emotions, cooperating with lips and eyes and mobile face to convey to fellow men what he is thinking and feeling.

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ORNITHOLOGY

Goose-Swan Hybrid Bred in Munich Zoo

A GOOSE-SWAN hybrid, with a gander for father and a swan for mother, has been bred in the Munich Zoological Park. The bird, a male, is intermediate in size between goose and swan, has a neck more swan-like than goose-like, but feathers closer to those of a goose. Next spring it will be given a goose for a mate, and the second-generation hybrids subjected to further study.

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WHAT DO THESE HANDS TELL?

The pose at the left, intended to portray thoughtfulness, was correctly judged by most. Terror, as portrayed by the second, and strong anger, in the third, were mistaken for each other. The one at the right intended for pain, was judged to indicate nervousness.

