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# Is That a Grimace? Ask a Pigeon

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In experiments at the University of Iowa eight trained pigeons were shown photographs of different people displaying emotions of happiness, anger, surprise and disgust. The birds learned to distinguish between these expressions.

Their achievement does not suggest that the pigeons have any idea what the human expressions mean, researchers report. But after a pigeon has learned to distinguish expressions on faces with which it is familiar, it can then correctly identify the same expressions on unfamiliar faces.

The experiments were carried out by Edward A. Wasserman, professor of psychology, and his colleagues. The results are described in a paper prepared for publication.

### Importance to Interactions

The pigeons used as subjects were trained and tested in a type of Skinner box, named for its inventor, the behavioral psychologist B. F. Skinner. The pigeons were taught to reply to questions by pecking at four different keys. A correct response was automatically rewarded with a pinch of grain, a training strategy known as positive reinforcement. At the end of the box facing the pigeon was a screen on which photographs were projected.

"Our results support Darwin's thesis that nonhuman animals can learn to discriminate between human emotional expressions," Dr. Wasserman said. The ability to recognize expressions is not necessarily innate even in human babies, he said in an interview,

but may have to be learned in much the way pigeons learn.

Some psychologists have theorized that because of the importance of facial expressions to human interactions, human beings may have evolved specialized nervous systems capable of quickly recognizing the subtleties of expression. Dr. Wasserman believes that his pigeon experiment casts doubt on this idea, since it is now evident that even pigeons can learn to identify differences in expression.

In earlier experiments Dr. Wasserman's group had demonstrated that pigeons can organize images of things into the same logical categories human beings use. All this work tends to confirm Darwin's view of a continuity in mental development from animals to human beings, he said.