

# The Influence of Family Upbringing on the Facial Inference Process

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## Abstract

This study examined personality trait inferences on the basis of facial expressions by showing participants multiple photographs of either one young female face or one young male face, exhibiting three distinct facial expressions. Participants were asked to indicate whether they were raised in one or two parent households and then answer questions pertaining to facial inferences. Results indicated that there were no environmental factors that appear to influence facial inferences upon those three distinct facial expressions.

## Literature Review

### Trait Inference

- People infer personality characteristics from facial expressions in photographs (Shevlin, Walker, Davies, Banyard & Lewis, 2003)
- People infer emotional states from facial expressions in photographs (Ekman, 1999)

### Trait Categorization

- People often use traits to categorize other people. These traits are used to infer actions attitudes and other personal descriptions. (Anderson & Klatzky, 1987)

### Family Type and Assignment of Gender Behaviors and Traits

- Boys that were raised in a one parent household, especially without a father, versus a two parent household were more likely to assign less masculine behaviors and traits to males (Stevens, Golombok, Michael, Beveridge, ALSPAC, 2002)

## Research Questions and Hypotheses

### Does the type of household an individual is raised in influence how they perceive faces, and the types of inferences they apply to faces?

- H<sub>1</sub>: Children raised in single parent households will perceive all of the faces as more threatening, particularly the angry face.
- H<sub>2</sub>: Children raised in a single parent household will attribute more negative inferences, where children raised in a two-person household will attribute more positive inferences.

### Does the parent's gender and level of interaction with an individual influence the type of traits that the individual applies to someone of the same gender?

- H<sub>3</sub>: Whichever gender they interacted with more, they will apply more positive traits, and whichever gender they interacted with less, they will apply more negative traits.

### Will the gender of the parent and whether or not they were a nurturing or a disciplinary parent influence whether the traits they assign to someone of the same gender are positive or negative?

- H<sub>4</sub>: Whichever gender was more nurturing, they will be the gender the participant assigns positive traits.
- H<sub>5</sub>: Whichever gender was more of a disciplinarian, will be the gender the participant assigns more negative traits

## Methods

### Participants

- 142 Central Washington University students participated in this study
  - 110 two-parent households
  - 32 single-parent households

### Survey Questions

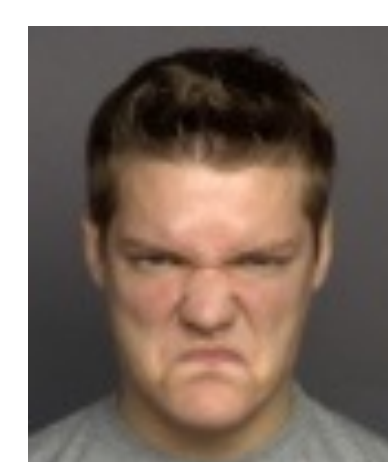
- Were you raised in a primarily one or two parent household? Please select one of the options below:
  - 2 caregivers (male and female)
  - 2 caregivers (male and male)
  - 2 caregivers (female and female)
  - 1 caregiver household
- In the previous question, you selected "two parent household". Please indicate the person you interacted with the most when growing up?
  - Female
  - Male
- Which of your caregivers was more NURTURING? (please slide the bar to indicate)
- Which of your caregivers disciplined you more? (please slide the bar to indicate)

### Procedure

- This study consisted of an online (Qualtrics) survey, accessed through the online CWU Psychology Research Participation System (SONA)
- University participants assessed each of the six photographs, answering the same questions for each photograph
- The photos were of the same young female and young male models manifesting either an angry, happy or sad face, presented in random order
- Photographs were obtained from the FACES database (Troje & Bühlhoff, 1996; Ebner, Riediger, & Lindenberger, 2010);



Angry



Happy



Sad



## Measures

Minimarkers (MM; Saucier, 1994)

- A 40 adjective assessment of the Five Personality Factors (Extroversion, Agreeableness, Conscientiousness, Emotional Stability, Openness)

### Extroversion

Talkative, extroverted, bold, energetic

### Agreeable

Sympathetic, warm, kind, cooperative

### Conscientious

Organized, efficient, systematic, practical

### Emotionally stable

Un-envious, relaxed

### Open

Creative, imaginative, philosophical, intellectual, complex, deep

### Introversion

Shy, quiet, bashful, withdrawn

### Disagreeable

Cold, unsympathetic, rude, harsh

### Un-conscientious

Disorganized, sloppy, inefficient, careless

### Emotionally unstable

Moody, jealous, temperamental, envious,

### Closed

Uncreative, unintellectual

## Results

After running tests comparing two-parent and one-parent household we found no significance between these groups and responses to facial inferences.

## Discussion

We found no significant differences in the results between single and two parent households and the respective inferences that they made towards happy, sad, and angry faces. Therefore, we believe this supports the narrative that environmental factors play an insignificant role upon ones facial inferences. Drawing upon former research our lack of significant results strengthen claims that these facial inferences are universal.

## Limitations

- This study is built off of a previous study called, "The Assessment of Personality Traits Using Facial Expressions: What do We Infer about Happy, Sad, and Angry Faces?"
- By building off of a study that had already been done, it limited the freedom of the design of this study.
- One of the confounding variables from this study is the fact that the sample included 110 participants who were raised in a two parent household and only 32 participants were raised in a one parent household. With only around a third of the sample being from a one parent household, it made it difficult to compare the two groups.

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