# Experiment to investigate the baby face effect



This study was conducted to investigate whether our impressions of others rely on their facial characteristics. It is a replication of the Berry and Zebrowitz-Mc Arthur (1988a) study in which it was supported that people who have baby face features give the impression that they are incompetent of deceiving, or of committing crimes on purpose, whilst people with mature face features influence our judgement negatively in cases of deceit, making us think it is more intentional.

The Independent Variable to be manipulated was a photo of a young man with either baby face or mature face features, whereas the Dependent Variable to be measured was the answer to the same question. The target population was Greek adolescent students. A systematic sample was selected, consisting of 20 schoolmates, both male and female, aged between 17 and 18 years old. The experimental design chosen was the independent measures design. The questionnaire addressed to participants contained a brief description of the assumed crime committed, and questioned whether the person in the picture committed the crime " due to negligence" or " on purpose". The participants should tick one of the two alternative choices.

The results obtained are in accordance with the study of Berry and Zebrowitz-Mc Arthur (1988a), that is people tend to believe that baby faced individuals are more likely to commit a crime by negligence, whereas mature faced individuals are more likely to commit the same crime on purpose.

Berry and Zebrowitz-Mc Arthur (1988a) supported that facial characteristics influence our judgement on whether a person is high-principled, honest and trustworthy.

In their study they investigated the impact of baby-faced individuals on judgements about defendants in courts, testing whether participants were more likely to associate facial immaturity with incompetence rather than misconduct. They used data from a mock trial, where subjects read descriptions of individuals who had falsified income tax records by negligence or intentionally. Participants in the experiment were more likely to believe that baby-faced defendants were incompetent of committing a crime, whereas mature face defendants had deliberately deceived the tax authorities.

This study is a replication of the Berry and Zebrowitz-Mc Arthur (1988a) study. Its aim is to show to what extent baby face and mature face features influence Greek participants' judgement about other people's misdeeds. It investigates whether people believe that baby faced individuals are more likely to commit a crime from negligence, whereas mature faced individuals are more likely to commit the same crime on purpose.

# Method

# Design

A field experiment was used. Actually, the experiment took place in the participants' school, which consists their natural environment.

Two questionnaires, especially prepared for the needs of this research, were addressed to participants. The questionnaires contained the same simple question: whether the man in the picture had conducted a particular crime due to negligence or on purpose. Each questionnaire had a picture of a young man with different features: either of one man with a baby face or

with a mature one. Thus, the photo in each questionnaire was the Independent Variable to be manipulated, and the Dependent Variable was the answer to the question (impression formed).

The experimental design chosen was the independent measures design, which involves different participants in each condition. This design was preferred because it doesn't present demand characteristics and order effects, since as each person participated only once in the experiment, could not guess the aim of the study and act differently.

The sex of the persons in the photos, the expressions on their faces and their general appearance consisted possible Confounding Variables. In order to control these, the persons in the photos were of the same sex, the expressions on their faces were alike and their general appearance was similar. The researcher made sure that the individuals in the pictures were of the same age as the participants. Moreover, the judges that participated in the study were of the same age as the participants, of both sexes. To avoid any ethical implications, a special Informed Consent Form and a Debriefing Sheet were given to all participants, ensuring them about confidentiality of findings.

# **Participants**

The target population was Greek adolescent students. The sample consisted of 20 schoolmates, both male and female. They were aged between 17 and 18 years old, and attended the last year of the International Senior High School. To avoid any errors in the results, the participants were chosen systematically. More specifically, a list with the names of all students in the

last year of the International Senior High School was made and from this list every second person was chosen until the planned size of the sample was reached. Then, they were randomly divided in two different groups with 10 participants each. This method consists an unbiased procedure and a fast process of sampling.

### **Materials**

Two photos with unknown young men, one with baby face and one with mature face characteristics

Informed Consent Form, (Appendix A)

Standardised instructions, (Appendix B)

Questionnaire with different photos, (Appendix C)

Debriefing Sheet, (Appendix D)

### **Procedure**

Initially, two pictures of young men had to be chosen. For this, several pictures of young male individuals were selected from the Internet, making sure that all pictures were very clear and the persons on them were of about the same age. About half of them were the pictures of men with baby face characteristics and the other half of men with mature face characteristics. The pictures were shown to the judges from the Psychology class in order to help in the choice of the two most representative pictures to put on the questionnaire.

Afterwards, a questionnaire was constructed containing a brief description of the assumed crime committed, and questioning whether the person in the picture committed the crime "due to negligence" or "on purpose". The participants should tick one of the two alternative choices. The study was carried out during two successive days. Group A (baby face photo) participated in the study during the first day, and Group B (mature face photo) during the second day. All participants were informed as to the purpose of this study and they were given the Informed Consent Form. Next, the researcher gave them the questionnaire together with the same standardised instructions.

Each participant was tested individually in an empty classroom and the procedure of filling in the questionnaire took no longer than five minutes. No extra instructions or help was given. After collecting all the questionnaires, the Debriefing Sheet was given to all participants.

# Results

The number of answers as regards the intention of committing the crime under the two conditions of the independent variable was calculated. The results are presented in the following table.

Table: Number of answers under the two conditions of the independent variable (baby face and mature face)

### Number of answers

### A condition

### **B** condition

# Due to negligence

7

2

# On purpose

3

8

A: Crime conducted by the baby face individual

B: Crime conducted by the mature face individual

As regards the questionnaire with the baby face photo, 7 persons out of 10 replied "due to negligence" and 3 persons out of 10 replied "on purpose". Regarding the questionnaire with the mature face photo, only 2 persons out of 10 replied "due to negligence" and 8 persons out of 10 replied "on purpose". The above information is illustrated in the following graph, in the form of percentages. As we can see, in the baby face case more participants believed that the man committed the crime "due to negligence". In the mature face case, the majority of the participants believed that he acted "on purpose".

Graph: Graphical representation of the participants' answers under the two conditions of the independent variable (baby face and mature face)

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### **Discussion**

Most of the participants with the baby face photo believed that the man conducted this illegal act due to negligence whereas the participants with the mature face believed that the man conducted this illegal act on purpose. These results show that facial characteristics influence peoples' judgement since facial immaturity is associated with incompetence of committing crimes, whilst facial maturity is associated with dishonest behaviour.

The results agree with the results of Berry and Zebrowitz-McArthur (1988a) in which they indicated that people who have baby face features give the impression that they are incompetent of committing crimes, whereas people with mature face features influence our judgement negatively in cases of deceit, even though the target population in this experiment (Greek adolescent students) was different from the one in the study of Berry and Zebrowitz-McArthur (American participants). Therefore, the baby face effect has been confirmed, as a factor affecting people's judgements.

The strengths of the study are that all confounding variables were controlled as much as possible. More specifically, the persons in the photos were of the same sex, the expressions on their faces were alike and their general appearance was similar. In addition, all participants were given the same standardised instructions and the individuals in the pictures were of the same age as the participants.

Nevertheless, there are several limitations that should be mentioned. The sample was very small and hence possibly biased (not all the important to the research characteristics are represented). Moreover, the experimental

design chosen (independent measures design) has as major drawback individual differences between the participants that could affect the results. Furthermore, in such a design one participant could reveal to others the aim of the study making them adjust their performance. In addition, the two photos were of male individuals whereas the participants were of both sexes, leading to a possible interaction of sex of participants and the individuals in the photo. Finally, the questionnaire was in English, which is not the native language of the participants, and some difficulties in understanding the context could have affected the results.

Future work could be carried out to improve the study. There are several suggestions that should be taken into consideration. Firstly, a larger sample could be selected in order to include all the important characteristics of the target population and hence be more representative. Secondly, the questionnaire should include photos of both sexes, so as to investigate whether the sex of the person interferes with the baby face effect. Finally, a questionnaire written in the native language of the participants would eliminate any possible misunderstandings due to the foreign language used.

From the results obtained we can conclude that Greek people tend to believe that baby faced individuals are more likely to commit a crime by negligence, whereas mature faced individuals are more likely to commit the same crime on purpose.