

Facial feedback theory



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Abstract

Facial feedback theory testing was the main question of this study.

Administering water drops to the cheek will result in reduction in the perceived humour of funny statements. One individual tested four people; in total there were 1128 subjects with half of them having water droplets dropped on their cheek and half on their temple. The results in funniness rating of the experimental group (tears) were much lower than in the control group (temples), supporting the facial feedback hypotheses. This could be used to manipulate how people feel no matter what they are already feeling.

The human brain has excellent ways of expressing how it is feeling through physical manifestations; such as trembling hands letting a viewer know that the individual is feeling nervous. When the face frowns and the person feels an emotion, it is called a facial feedback (Mori & Mori, 2007). A way to test the facial feedback hypothesis is to associate what muscles are used while displaying a certain emotion; since muscles in the face are responsible for the faces appearance. A smile has been associated with the activation of orbicularis oculi muscles and a combination of zygomaticus major and orbicularis oculi; also known as the Duchenne smile (Soussignan, 2002). If we know which muscles are associated with smiling, can we cause a person that is not happy to feel happy due to having those muscles contracted? If so, can that feeling be enhanced? Soussignan (2002) hypothesised that smiling during humorous cartoons would make the cartoons more amusing . To test this theory Strack et al. (1988) conducted research by having subjects hold a pen in their mouth with their teeth to simulate smiling without having them intentionally smile. The premise that smiling leads to

feeling the emotion happiness, it would also follow the fact that frowning would promote sadness.

Strack et al. (1988) method had two test groups: a pen held with only the lips impeding the orbicularis oris muscle to contract and a pen held with the teeth encouraging smiling. The experimental group being tested to prove the hypothesis is the pen held by teeth. In both experiments subjects were individually placed in cubicles alone and viewed humorous cartoons while rating them in humour level (Strack et al., 1988). The results were that the group that held the pen in their lips found the cartoons more comical than the group that suppressed smiling (Soussignan, 2002). Soussignan (2002) Susan's experiment was related to Strack et al.'s (1988) experiment founding similar results as the group who were displaying Duchenne smiles also found cartoons more amusing than those who did not have the Duchenne smile (Soussignan, 2002). If the contraction of muscles that cause a subject to smile lead to feeling positive, it can also be theorized that a sensation can cause an emotional reaction as well (Mori & Mori, 2007). Mori and Mori (2007) put forward that if a subject was to have water drops applied to their cheeks and allowed to run down, it would have a depressing affect on the subject without having them realize correlation with the emotion sadness. The study's results showed that the participants felt depressed after the feeling of simulated tears running down their cheeks (Mori & Mori, 2007), this further supported the facial feedback hypothesis that had been authenticated with specific muscle contractions relating to emotion by the pen holding experiments (Soussignan, 2002). So far the facial feedback hypothesis has only been tested by viewing humours material and

rating it on a scale while simulating smiling. This has only been able to analyze data for when a subject is stimulated, but not just when the pen is held by the teeth. That is why Strack et al. (1988) did a second study to see if the facial feedback hypothesis would be confirmed even when an external stimuli is not provided. The subjects were given the same procedure as study 1 but this time a group was showed the video then taken away to rate (Strack et al. 1988). Study 2 asked two questions: how funny were the cartoons and what was your amusement level towards the cartoons. The results were that the humour levels were less when the pen was held by the teeth than the lips, but the amusement level was higher for those who held the pen by the teeth (Strack et al. 1988). The main concentration of this test was to see if cognitive mediation played a part in the amusement felt; and it did not, further verifying the facial hypothesis (Strack et al. 1988). Administering water drops to the cheek will result in reduction in the perceived humour of funny statements.

Method

Subjects. Two male and two female Brock university students volunteered in the experiment. The subjects were placed in their own private rooms to conduct the experiment so they felt comfortable in their own natural environment.

Procedure. A cup of water and a questionnaire was brought to the room and the participants were read the following.

I will be putting some water on your face. Right after I will give you a list of 10 excuses parents sent to schools to explain their children`s absences.

Please circle how funny each excuse is, on a seven-point scale, where 7 means ' Very Funny' and - means ' Not Funny'

The experimenter then proceeded to either place water drops on a temple on each side or drops under the tear ducts. Immediately they were provided with a copy of the PSYCH1F90 2009/10 Research Project Data Collection Form and to rate the humour level.

This experiment was also done on a wide scale using seminar classes in which the students were asked to conduct the same experiment using any volunteers as participants. The number of subjects in total were 1128.

Results

The results are as follows: N = 1128, experimental group mean = 4. 17, control group mean = 4. 33. The study showed that the control group mean was significantly different from the experimental group mean; where the control group were the subjects of temple drops and experimental group subjects were the tear drop subjects. The individual study's result mean was 3. 35 for the control group and 5. 35 for the test group. A female and male were chosen for each to try to get even results from both sexes; attempting to make the study as nonbiased as possible. Male, temple with an average of 3, Male, tear with average of 7; indicating he thought all were humorous. This would be an anomaly as the large scale resulted quite differently. These sorts of things are expected as we only had four participants in the individual study. Female, tear with average of 3. 7, female, temple with average of 3. 7. It is interesting to see that both females, no matter where the droplets were found the excuses equally humorous.

Discussion

The study was based on Mori and Mori (2007) experiment; the only difference being that there was not misspelled school notes, but were required to write down how they felt on a scale from 1 to 7. This study was different because it asked two different groups, one with drops on their temples and the other with drops under their tear ducts, if misspelled school notes were more or less humorous based on facial feedback. It is also valuable to note that Soussignan (2002) and Strack et al. (1988) research was on if muscular manipulation affects emotion while this and the Mori and Mori (2007) study was on sensations felt. Even though the studies are different, the principle of facial feedback that facial expression is enough to significantly affect emotional feelings is still valid. The participants reported that holding the pen with their teeth which aided in smiling made them feel more kindly toward rating tasks Soussignan (2002). This supported the facial feedback hypothesis. The subjects in Soussignan (2002) study rated feeling sadder with drops under the tear ducts than those who had drops on their temples. This also supported the facial feedback hypothesis. This studies hypothesis was if administering water drops to the cheek will result in reduction in the perceived humour of funny statements. The results in funniness rating of the experimental group (tears) were much lower than in the control group (temples), supporting the facial feedback hypotheses. The results from this study are consistent with the rest of the studies in facial feedback. Because this study was done by inexperienced testers the results are up for interpretation as they could be inaccurate. The conditions of when, where and how the procedure of testing were done were variables that should have been controlled. To properly test the hypothesis if administering

water drops under the tear ducts would cause lower ratings in the funniness level the participants should have been in individual rooms at the same time to discourage differences. The testers should all have either agreed on a single way to introduce the experiment, as well as how many drops and where on the temple and cheek, or shown how to; either way there should have been one way all participants were treated. Not previously screening participants is not a proper way to acquire subjects since they could have rushed readings without thinking how humorous the misspelled notes were. For example, a subject could randomly pick out the humour rating or put all sevens indicating they thought all were equally funny. In Martin's experiment some of the participants realized that holding the pen with their teeth caused them to smile and holding it with their lips caused them to frown; these people had to be excluded from the study so the results would not be tainted (Strack et al., 1988). Instead the participants were given a cover story about how this was to study disabled peoples responses (Strack et al., 1988). No procedure was discussed in on how many drops of water were to be applied, age restriction, or where the individual studies were to be conducted. One of my participants asked if the drops under the cheeks were to represent tears, but was not excluded from the study. Another participant noted that the temple drops were distracting because they were easily felt. For future research on how tears affect facial feedback on emotion controls should be put in place to avoid differences in variables. The participants, number of drops, placements of drops, time, environment, and humour level of notes (pre-determined) variables should be kept under control to get proper study results.

References

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