

SOCIAL REJECTION: WHAT DOES THE FACE TELL US?

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Abstract

This study examines whether people can detect rejection within a dating context by only seeing a screenshot for a couple of seconds. A questionnaire of 40 clips of the dating show 'Take me out' was filled out by a sample of 26 participants. The other question which has been answered in this study is or a layperson can detect rejection and if there are any differences in the recognition of emotions between British men or Dutch men. It was expected that a layperson could detect rejection by only seeing a screenshot. The results showed that participants indeed recognized rejection, but there are no significant differences between British and Dutch men. According to the theory, Dutch men are more likely to show facial expressions than British men. But this research shows the opposite: British men showed more expressions than Dutch men.

Keywords: non-verbal communication; rejection; approval; dating context; cultural differences; emotions; perception test

Introduction

Human beings have the capacity to understand what the emotional state of others is by just looking at the observable features of the facial expression of others (Johnston, Miles, & Macrae, 2010). Traditionally, the face is considered as an important channel for the expression of emotion. According to the 'emotional view', facial expressions are a reflection of the internal state of an individual. In addition, some facial expressions are universal. They are used across cultures to express a similar emotion (Ekman, 1994; Ekman & Friesen, 1971). However, as a result of social and cultural differences, there are differences in facial expressions across cultures as well. Nevertheless, it is not always clearly visible what the emotional state of an individual is. Sometimes, the situation has a greater influence on the facial expressions of a person than his or her feelings. This especially occurs in contexts where others are present, in situations in which two or more people are communicating (Manstead & Fisher, 2010). A smile is universally observable when people are experiencing a positive emotion. Furthermore, the smile often serves as an additional function in communication during social interactions (Gunnery, Hall, & Ruben, 2012; Ansfield, 2007; Ekman & Friesen, 1971). In general, people respond

in a different way when they are experiencing a negative emotion. For example, embarrassment often is experienced as an awkward and uncomfortable feeling. When there are no other people present, an individual shows his or her embarrassment in a specific way. But when other people are present, they may show embarrassment in a non-familiar way. For example, people may smile and laugh as a reaction to a similar embarrassing incident (Ansfield, 2007).

Smiles

Ekman (2001) explains that there are at least 50 different type of smiles. The most common distinction for smiles is the division between Duchenne and non-Duchenne smiles. This division is based on the function of a smile and the kind of the situation the person is located. When there are no or few positive emotions, a person will use a non-Duchenne smile (Gunnery et al, 2012). Typically, a non-Duchenne smile appears to hide feelings of discomfort, disgust, disappointment, shame and fear (Ansfield, 2007). This smile is also referred to as the non-enjoyment, false, fake or social smile. When doing research to different kind of smiles, the Facial Action Coding System (FACS) can be used. FACS is a research tool useful for measuring any facial expression a human being can make. According to the Facial Action Coding System (FACS; Ekman, Friesen & Hager, 2002), the non-Duchenne smile is operationalized by Action Unit 12 (AU 12) (henceforth: AU's). This AU is referred to as the *Lip Corner Puller* and means that only the corners of the mouth go up. The non-Duchenne smile is not spontaneous and generally requires more control. There can be referred to a real Duchenne smile on the other hand, when the smile is real or genuine. It is a spontaneous reflection on a positive event (Gunnery, et al., 2012). In FACS, the real Duchenne smile is operationalized as a combination of Action Unit 6 (AU 6) and Action Unit 12 (AU 12) (Ekman et al., 2002). AU 6 is referred to as the *Cheek Raiser* and means that the muscle at the outer corner of the eye slightly wrinkles. Thus, when the mouth corners are up and the muscles at the outer corner of the eye slightly wrinkles, a Duchenne smile occurs.

According to Ekman (1972), the reason that

people sometimes 'produce' a smile in negative situations and thus express their emotion differently than one would expect, is self-presentation. Ekman (1972) suggests that in a social environment, people use a self-presentation mask to camouflage negative emotions which they are experiencing. This mask can camouflage any negative emotion and is based on the assumption that people in a society live according to certain cultural rules. Therefore, in presence of others people will be more inclined in certain situations to 'fake' a smile, than when they are alone (Ekman, 1972).

Additionally, other researchers explain that aside from social purposes, a non-Duchenne smile has a self-regulatory function as well. Kleck, Vaughan, Cartwright-Smith, Vaughan, Colby and Lanzetta (1976) found that when someone is experiencing a negative emotion, the presence of others may simultaneously increase irritability. When people experience negative emotions in the presence of others, they may consequently experience increased levels of fear and lose control. By 'using' a smile, negative emotional expressions are suppressed (Ansfield, 2007).

According to Ekman and Izard (as cited in Ansfield, 2007), negative situations in combination with the presence of others, leads especially for men to a tendency to oppress their negative emotional feelings. In such situations, men will smile more often than women. Ekman and Izard (as cited in Ansfield, 2007) explain this tendency with the need to fulfill masculine expectations. Men produce a smile in negative situations to project an unaffected macho stance (Hess, Beaupré and Cheung, 2002).

Physical and social pain

Research with respect to facial expressions has appeared to be useful in the medical world. For example, a considerable amount of research on facial expression while experiencing physical pain has been conducted over the years. According to Craig (1992), this body of research has grown as a result of the fact that self-report in terms of pain was found to be insufficient. Therefore, the medical world increasingly relies on facial expressions, because they provide more valid information with regard to the nature and sensitivity of pain (Craig, 1992). According to William (2002), facial expressions related to pain are associated with sadness, fear and anger. However, there are some AU's which seem to occur solely when one is feeling pain, such as a wrinkled nose, pulled lip corner, stretched mouth and closed eyes.

Eiserberger and Lieberman (2004) define social pain as the result of a threatened, damaged or lost social relationship, which may derive from exclusion or rejection. Recent studies indicated that both psychical pain and social pain are located within the same brain area (i.e. the cingulate gyrus). Therefore, it may be possible that social pain elicits the same AU's as physical pain.

The extent to which an individual non-verbally expresses social pain as a reaction to social exclusion may differ between cultures. According to Hofstede (2001) people in masculine countries are more hesitant in terms of expressing negative emotions. A masculine society can be recognized by people who are highly success oriented and driven by competition and achievement. Countries that are highly masculine are for example the United Kingdom, Belgium, Japan and Mexico. On the other hand, a country or culture can be a feminine society as well. A feminine society can be characterized as people who value equality, solidarity and quality in their working lives. Other important values of a feminine culture are modesty, gentle, tender, caring and comforting (Hofstede, 2011). The Netherlands, USA, Chile and Spain are examples of a more feminine society.

Due to the aforementioned masculine values, a masculine society is more hesitant in expressing negative emotions. A study of Ekman and Friesen (1972) showed that Japanese people, who are more masculine, used their smile to mask their negative feelings and to prevent a so-called loss of face in the presence of an experimenter with a higher status. Besides, a study of Paez and Vergara (1995) found that people of a feminine society express their emotions more strongly than people of a masculine society. This result was also supported by findings of Fernandez, Carrera, Sanchez, Paez, and Candia (2000).

Research question and hypotheses

Similar to some of the previously discussed studies, this study focuses on the differences in facial expressions of men between masculine and feminine societies. The focus is on the United Kingdom, which is operationalized as a masculine society, and the Netherlands, which is operationalized as a feminine -or low masculine society. In this study approval the television dating show 'Take me out' is used as the experience of positive emotions, whereas rejection in the same dating show is used as the experience of negative emotions. More about the context of the show 'Take me out' is explained in the

method section of this report. The focus of this study leads to the following research question: *“To what extent do people from countries either high or low in masculinity differ in facial expressions when they are being rejected on the basis of a first impression within a dating context and can a layperson recognize this rejection?”*

Based on previous research, it is expected that a layperson can detect rejection by seeing a screenshot, of a person who is just approved or rejected, for a couple of seconds. People will detect rejection because of the non-Duchenne smile a person shows. Another expectation is based on the differences in masculinity. It is expected that men from the Netherlands will show more facial expressions after experiencing positive and negative emotions than men from the United Kingdom. For the reason that men from the Netherlands will most likely show more facial expressions, it is hypothesized that a layperson is better in recognizing rejected and approved Dutch men than rejected and approved British men. Besides that, it can be hypothesized that rejected British men show more non-Duchenne smiles as a consequence of a tendency to oppress their negative feelings and to fulfill masculine expectations. Based on these expectations, the following hypotheses are formulated.

H1: A layperson has the capacity to detect rejection within a dating context, by only seeing a screenshot for a couple of seconds.

H2: A layperson is better in recognizing rejected Dutch men than rejected British men within a dating context.

H3: Dutch men show more facial expressions when they are rejected within a dating context than British men.

H4: Rejected British men show more non-Duchenne smiles than rejected Dutch men.

Method

Research design

The research entailed a 1 (rejection) x 2 (masculinity index) factorial research design, in which the latter independent variable contained two conditions. On the one hand, rejection was manipulated with forty screenshots of a television dating show in which men could be rejected on the basis of their physical appearance. On the other hand, the masculinity

index was manipulated by taking screenshots from the TV-show broadcasted in a country high in masculinity (i.e. United Kingdom) and a country relatively low in masculinity (i.e. the Netherlands). The dependent variable was the subject's perception whether they thought the participant was either accepted or rejected. In order to be able to put the results into a framework, a simplified facial expression coding system was designed. In this framework the researchers were able to detect different facial features with help of the Facial Action Coding System (FACS).

Subjects

In the perception test, a convenience sample was used to measure the recognition of the acceptance valence. A total of twenty-six subjects filled out the perception test. Age, gender or other demographics were not taken into account.

Materials and instruments

A total of forty screenshots of the Take Me Out TV-show were collected (Appendix I). This TV-show was used because of its accessibility in Youtube and its close-up shots of participant directly after being rejected. In this dating show, one man has to present himself to thirty ladies in three rounds. In the first round, the man is judged on the basis of his physical appearance. Subsequently, in the second round, friends of the man tell something about him and finally in the third round the man is free to impress the ladies however he wants. After every round, each lady can decide for herself to either reject or approve the man. In the end, the man can choose one of the remaining women, if any, to take her out on a date.

The screenshots used for this study stem from the first close-up moment after the participant hears he is either accepted or rejected. These screenshots were used in the perception test. The perception test consisted of forty screenshots, in which the subject was asked to indicate whether the participant was either accepted or rejected after solely seeing the screenshot (see Appendix II for an example).

Furthermore, the researchers analyzed the screenshots themselves by subscribing Action Units to every screenshot. By doing so, the researchers wanted to detect the exact features that were elicited by acceptance or rejection and examine whether the features were the same for all stimuli.

Procedure

Perception test

In order to carry out the experiments, stimuli were gathered from the Take Me Out videos that were available on the Internet. The British and Dutch versions were chosen, in first instance because of the differences regarding masculinity between the countries. More of the countries in which Take Me Out is broadcasted have conflicting masculinity indexes with the Netherlands. However, a second important criterion was the accessibility of the videos. The British and Dutch TV-shows met both criteria. Therefore, they were chosen for this study as stimuli.

For each country, screenshots were used from the first moment a close-up shot was shown of the show-participants, after they had learned whether they were approved or rejected by the women. This was at most five seconds after the show-participant saw the number of women who rejected him. To select a baseline, twenty videos for both countries were analyzed for the mean number of rejections. It appeared to be that the British jury (i.e. the women) was less critical than the Dutch. The mean number of rejections for the British show was ten, whereas for the Dutch show-participant, the number of rejections was fifteen on average.

A perception test was designed in Qualtrics (free account). Forty screenshots were shown randomized with the question whether the subject thought the show-participant was accepted or rejected. On the basis of these results, we were able to elaborate on hypothesis one and two.

Analyzing facial features

In order to test hypothesis three and four, based on the Facial Action Coding System (FACS), the facial features to be analyzed were composed. A feature analysis was conducted to get an understanding of the extent to which both cultures show facial expressions when they are being rejected. The eyes and the mouth of every screenshot were the focus of this analysis. The following Action Units were used to analyze the eyes: AU5: upper lid raiser, AU44: pinch eyes to a small gap and AU43: eyes closed. For the mouth the following Action Units were used: AU14: dimpler, AU15: lip corner depressor, AU12: lip corner puller, AU27: mouth stretch, AU26: jaw drop, AU 25: lips part. The lip suck and visible tongue, which is not determined as an Action Unit, was included because it occurred several times

Additionally, the features AU6: raised cheeks, appearance of eye wrinkles and AU12: raised mouth corners were examined to differentiate between Duchenne and non-Duchenne smiles. For the analysis, for each screenshot it was determined whether the features occurred or not. This allowed the researchers to determine whether there was a visible difference between rejected British men and rejected Dutch men. In order to increase the reliability of the analysis of the features, results were checked among the researchers. If there was an disagreement, researchers consulted with each other until they reached an agreement.

Measurements

The perception test was analyzed in SPSS to see whether a layperson has the capacity to detect rejection within a dating context, by only seeing a screenshot for a couple of seconds. In addition, it was tested whether a layperson is better in recognizing rejected Dutch men than rejected British men within a dating context. Qualtrics provided an Excel file on the basis of the gathered results in the survey. Based on this file, an SPSS file was build (for the SPSS file, see Appendix I). In order to compare both countries with regard to rejection, a new variable was computed. In this variable, the show-participant's *expectations* regarding whether or not someone was rejected was subtracted from the *actual* outcome. Consequently, the two countries could be compared in terms of accurateness of the subject's perceptions with regard to rejection.

Results

Rejection

The first hypothesis has been measured with a one sample t-test. Hypothesis one is defined as follows: *H1: A layperson has the capacity to detect rejection within a dating context, by only seeing a screenshot for a couple of seconds.* The one sample t-test was conducted to see whether the subjects' could identify a rejected man. By comparing the subject's expectations to the actual outcome, the hypothesis was tested. The results show that subjects could identify rejection: $t(19)=15,77, p<.001$.

Rejection in different cultures

The second hypothesis: *A layperson is better in recognizing rejected Dutch men than rejected British men within a dating context* has been measured with a Chi-Square. No support was found

for this hypothesis. Table 1 shows the computed variables `Recognition_rej_dutch` and `Recognition_rej_british`. These variables are the sum of the participant's perception and the actual outcome. The distributions of these means are compared by using a Chi-Square. The results show that there is no difference in the distribution: $F(3)=2,0, p=.57$. On the basis of these results, it cannot be concluded that rejected people from a feminine country are more often recognized than rejected people from a masculine country.

Table 1: Recognition & Rejection

	Recognition Rejection Dutch	Recognition Rejection British
Chi-Square	2,000 ^a	2,800 ^b
Df	3	7
Assymp. Sig.	.572	.903

Facial expressions and culture

In order to calculate the number of features that Dutch- and British men show when they are being rejected, the variable 'Features total' was computed in SPSS. Since the computed variable shows no normal distribution (z-score skewness = 2.58) and since there is a small sample (rejected Dutch and British men, N=20), a non-parametric T-test is performed. The results show that rejected Dutch men show less features ($M= 1.7, SD = 0.48$) than rejected British men ($M =2.3, SD = .48$). Furthermore, this difference was significant, $U = 22.5, z = -2.24, p = .025$, and represents a small sized effect, $r = -.11$.

The results indicate that there is no support found for the expectation that Dutch men show more facial expressions when they are rejected than British men within a dating context. In fact, the results show that British men show a significant higher number of features. This leads to the conclusion that British men show more facial expressions than Dutch men when they are being rejected. The opposite from the expected effect occurred.

Smiles and culture

H4: Rejected British men show more non-Duchenne smiles than rejected Dutch men.

To test the fourth hypothesis, a chi-square test was conducted with 'Country' as independent variable and 'Non-Duchenne smile' as dependent variable. Of the 10 rejected British men, 4 showed a non-Duchenne smile, whereas of the 10 rejected Dutch men, 3 showed a non-Duchenne smile. The Fisher's exact test showed that there was a no significant association between country and whether or not showing a non-Duchenne smile, $\chi^2(1) = .22, p = .50$.

40% of the rejected British men showed a non-Duchenne smile, whereas 30% of the rejected Dutch men, showed a non-Duchenne smile. No support was found for the expectation that rejected British men show more non-Duchenne smiles than rejected Dutch men.

Conclusion & Discussion

The focus of this study was to investigate whether people could detect rejection within a dating context by only seeing a screenshot for a couple of seconds. After being presented with different fragments with either rejected (ten Dutch and ten British men) or approved men (ten Dutch and ten British men), the participants had to indicate whether they thought the person was either rejected or approved.

The results show that people are in fact able to give an accurate indication on whether the person in the screenshot is rejected or not. This confirms the first hypothesis on whether a layperson has the capacity to detect rejection within a dating context, by only seeing a screenshot for a couple of seconds. This is in line with the studies of Johnston, Miles and Macrae (2010); Ekman and Friesen (1971) and Ekman (1944), claiming that a layperson has the capacity to detect rejection by only seeing a screenshot.

No support was found that people are better in recognizing rejected Dutch men than rejected British men. This result indicates that there are no clear differences in facial expressions between persons from a masculine country and persons from a feminine country. Therefore, the second hypotheses (2a and 2b) are discarded. This is in contrast with the study of Hofstede (2001), who suggested that people in masculine countries are more hesitant in terms of expressing negative emotions.

The third hypothesis is not supported as well. Results from the analysis show that British men show a significant higher number of facial expressions than the Dutch men. This is in contrast with our third hypothesis, which suggested that Dutch men show would more facial expressions when they are rejected within a dating context than British men. This expectation was based on the difference in masculinity between the Netherlands and the United Kingdom. British men would be more likely to suppress their emotions in order not to lose face, because they are from a high masculine country (Hofstede, 2001).

The fourth and last hypothesis is also discarded. Results show no support for the

expectation that rejected British men show more non-Duchenne smiles than rejected Dutch men. According to Gunnery et al. (2012), a person will give a non-Duchenne smile when positive emotions are weak or not present. However, when the men were rejected and there were not a lot of positive emotions, both British and Dutch men showed what appeared to be real smiles.

When returning to the research question: “*To what extent do people from either high/low masculinity countries differ in facial expressions when they are either being rejected or approved on the basis of a first impression within a dating context and can a layperson recognize rejection or approval?*”, the following statement can be made: Although one can detect rejection on the basis of solely facial expressions, no difference is found in perception and facial expressions between the Dutch men and the British men.

In the introduction, some differences between high and low masculinity countries are discussed. One of the differences is that in high masculine countries, the focus is on being ‘the best’ and standing out. This could indicate that persons from a high masculine country, such as the United Kingdom, are less likely to show emotions through facial expressions, because they do not want to lose face. However, in this research, no support for this indication was found. The limited number of subject’s in this research (e.g. 26 subjects) can be a cause for this rather unexpected finding. Future research should focus on these differences between high and low masculine countries by including more subjects.

For this research, screenshots were taken of videoclips at the first moment a close-up shot was shown of the show-participants after they were learned whether they were rejected or approved. The episodes from the British version of ‘Take me out’ had to be streamed in order to be able to watch them. Therefore, there was no possibility to show short video fragments of the moment the men in the dating show learned that they were rejected or approved. This is a limitation for the current study, since only one short moment of the facial expressions was available for subject’s to base their perception on. Additionally, subjects were not given the opportunity to observe features such as body language or interaction with the host. Therefore, further research, using video clips of the moment that show-participants learned whether they were rejected or approved is strongly suggested. Another suggestion for future research with regard to this

limitation is to compare the perception of subject’s based on a screenshot or when looking at a short clip.

Another limitation in this research is the fact that, due to shortage of time, only the detection of rejection was studied. Therefore, for future research it may be interesting to compare differences between perception of rejection and approval as well. Another suggestion could be to look at the differences of rejection between men and women, perhaps within one country.

A final, but important limitation of the current study may be that there was a high dropout rate of subject’s during the completion of the survey. This high dropout rate can be attributed to the overall length of the survey, which consisted of 40 screenshots. Therefore, for future research it is important to take this limitation into account by either reduce the length of the survey and show less screenshots or by dividing the survey into several smaller survey’s.

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