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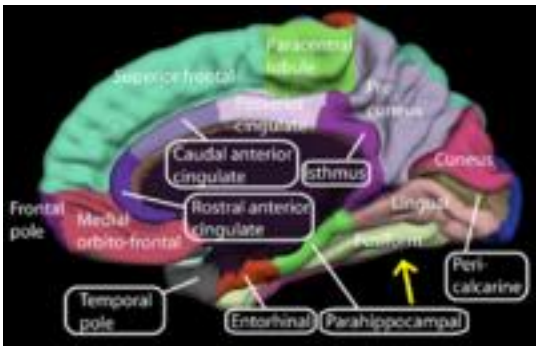
# Interracial Contact and the Own Race Bias in Face Recognition

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## *Interracial Contact and the Own Race Bias in Face Recognition.*

*This study investigates the own race bias phenomenon; people recall faces from their own race better than faces from another race. It focuses on the own race bias explanation of interracial contact; the more people are in contact with a certain race the better they become at differentiating that race from other races. The study was conducted using a PowerPoint presentation showing 10 Asian and 10 White faces and was completed by 30 Asian participants. The participant's recognition accuracy for own and other race face was measured and the results were explored using ANOVA and an independent samples T-test. The results obtained from this study were found to be non-significant, suggesting that the quality of contact may not contribute to the own race bias.*

Own Race Bias (ORB) is a phenomenon that states people are biased when it comes to recognising faces, this is because they will recognise the faces of their own race better than they would recognise any other race. For example people of the black race recognise other black faces more than they would recognise a white person's face and vice versa. Investigating the ORB is important for many reasons as recognising faces is something humans do every day, it is part of our society and is present in all communities. The ability of facial recognition helps us interact with people, we can distinguish people we know from new people that we don't know by their facial features. These features may play a role of whether we like them or not.

ORB in eyewitness identification is a very vital matter as the usual assumption of such and such a race all look alike could be dangerous. An innocent person could be wrongly convicted if an eyewitness makes a wrong identification. It is seen that there can be no argument with the statement "I saw him do it" but research has shown otherwise, eyewitnesses can get it wrong when it comes to cross-racial identification. This is highlighted in such cases as the Quincy Five case in 1971 where later investigations showed that DNA did not match the 5 people initially arrested and there are many other such cases.

ORB is also investigated to test the question of whether other races all do look alike or if it is just a matter of familiarity. Biology has been written out as research with adopted Koreans has shown that the adoptee is better at recognising the faces of his adopted family race than the faces of his original race which he had no contact with. This is why research has moved from biological explanations to explanation consisting of interracial contact.

Most research on ORB has shown that people do indeed recognise faces from their own race faster and more accurately than faces from another race. The question then arises where does this own race bias come from? And what factors influence it,

if any. There have been many attempts to answer this question but there are yet no definite answers, however there are four main explanations that have been put forward, they are, Perceptual expertise, Racial prejudice, Physiognomic homogeneity and Interracial contact.

Perceptual expertise is when frequently experiencing the same features, which usually occurs with one's own race, people become more familiar with those certain features making people experts in remembering faces from their own race and less of experts when it comes to remembering faces from a less familiar race. This extended experience with one's own race is what gives rise to improved perceptual processing and thus leads to perceptual expertise. Racial prejudice or attitudes are seen to account for ORB through the fact that people who hold prejudices and negative attitudes will pay less attention to other races and therefore not be motivated enough to try to differentiate those races apart. Physiognomic homogeneity is another reason which may explain why people are own race biased as it suggests that some groups of people have inherent memorable faces as such groups show less physiognomic variability. However this physiognomic hypothesis has not received much support for ORB in face recognition.

The final explanation for ORB is interracial contact which this study focuses on; formulated by Allport it is also known as the contact hypothesis. This hypothesis states that the more contact that you have with other races the less prejudiced you will be towards them and also better at recognising the faces of that race. This contact is separated in two; the quantity of contact, how often you are in contact with a certain race and the quality of contact, if the contact is positive or negative.

Interracial contact as an explanation for the own race bias has received support from a number of studies, e.g. Malpass & Kravitz 1985, who suggested that the contact hypothesis theory proposes that people are experts at differentiating between faces of their own race due to increased contact with members of their own race compared to those of other races.

However this present study aims to see if the quality and quantity of interracial contact also play a part. Consequently a questionnaire enquiring about the participant's quality and quantity of the race in question was used in this study. This will enable us to determine whether it is mere contact with another race that can overcome own race bias or whether it is also the quality of the contact that will also make a difference.

Thus this study will examine people of the Asian races ability to recognise faces of their own race, along with faces of the White Caucasian race whilst at the same time comparing interracial contact. The two stimuli races used are Asian people and White people. Using a PowerPoint presentation, Asian participants will be tested for how well they recognise both races. In essence this will test how many faces each participant correctly remembers. If the Asian participants remember Asian faces more by having a significantly high score on their own race and significantly low

score on the other White race, this will suggest that the own race bias will be proven correct. On the other hand if the Asian participants do not remember their own race more and instead remember more White faces then this would suggest that own race bias is not in play. Whilst measuring the number of Asian or White faces correctly remembered the quality and quantity of the Asian participants towards the White race will also be measured. If the Asian participants had rated themselves highly on the quantity of contact scale for the White race and if this contact was high on quality then ORB should be low. On the other hand if the Asian participants rated themselves low on the quantity of contact scale with the White race and if this contact was low on quality then ORB should be high.

Consequently the hypotheses are:

The higher the quality and quantity of contact with the other race the lower ORB

The lower the quality and quantity of contact with the other race the higher the ORB

**Method**

## Participants

Over all 20 participants took part in this experiment. The participants, who were of Asian race, were approached at random at the London Metropolitan University. After being briefed on the experiment the participants agreed to take part. Although age was not a factor in this study the participants used were over the age of 16 and under 40 years of age, the mean age being 22.5 years.

## Materials

A questionnaire was used to measure the quantity and quality of interracial contact. This questionnaire consisted of 4 questions with a scale of 1-5. The study was conducted on a computer using a PowerPoint presentation that ran automatically in three phases. A response sheet was placed in front of the participants to mark their answers on. The response sheet contained numbers from 1 to 30 and a 'yes' and 'no' beside each number. A fairly easy word search was used as a filler task. The presentation contained 20 photos in the first phase; 10 Asians faces and 10 White faces. Before continuing to the test phase, the presentation stayed still on one slide for three minutes instructing the participants to complete the word search that was placed in front of them, this was the second phase. The third phase was the test phase, here the PowerPoint presentation played the original 20 faces mixed in with 10 new faces 5 of which were Asians and 5 Whites. All 30 faces were mixed up at random and they were all black and white in colour. Briefing and debriefing sheets of the experiment were also used.

The photos used were obtained from university students from a different campus to the students who participated in the test phase. These photos were large close-up photos and the colour was changed to black and white to leave out any cues to the participants, as skin colour is a major cue to recognising faces. There were no facial accessories present on the faces used, such as hats, glasses or facial piercings, as these would be easy cues in remembering the old faces.

## Procedure

Participants were approached at random in the city campus of the London Metropolitan University. After being briefed on the study and agreeing to take part in the experiment the participants were directed to a computer lab with the PowerPoint presentation slides already setup and on stand-by. Before they began the experiment the participants were asked to complete the consent form and fill in the questionnaire on interracial contact. They were then sat in front of a computer and told to watch the presentation, they were also told to carefully look at the faces on the screen. The presentation consisted of 20 faces flashing in front of them for 3 seconds each, with a fixation cross before the image lasting for two seconds and a

blank page after the image lasting for one second. This was done to give the participants time to absorb the faces before the next face appeared. After the last

face was seen by the participant, the presentation continued to the second phase with a slide instructing the participant to complete the word search in front of him/her. This slide stayed on for three minutes before automatically changing to the next slide where the third phase started. In this test phase the 20 original faces were mixed up with 10 new faces; 5 Asians and 5 Whites. In this last phase the participants were told to mark on their answer sheets whether or not they had seen each face by circling 'yes' or 'no' next to each number accordingly. After the participants had completed the experiment on the computer they were then handed a debriefing sheet outlining in more detail the purpose and aims of the study.

## Results

**Table 1**
Descriptive Statistics

| | QualityW | QuantityW | Mean | Std. Deviation | N |
|---|---|---|---|---|---|
| hit | Low | Low | 7.20 | 1.789 | 5 |
| | | High | 6.25 | .957 | 4 |
| | | Total | 6.78 | 1.481 | 9 |
| | High | Low | 8.33 | 2.082 | 3 |
| | | High | 8.13 | 1.553 | 8 |
| | | Total | 8.18 | 1.601 | 11 |
| | Total | Low | 7.62 | 1.847 | 8 |
| | | High | 7.50 | 1.624 | 12 |
| | | Total | 7.55 | 1.669 | 20 |

**Table 2**
Independent samples T-test

## Discussion

The results were obtained by the overall correct faces the Asian participants remembered, the highest score being 20. An ORB score was achieved by subtracting the number of Asian faces correctly remembered by the number of white faces correctly remembered, the higher this score was the more the Asian participants are own race biased. The Asian participants where then split in to two groups depending on their interracial contact ratings, so a high contact group and a low contact group.

A t-test was carried out on the ORB measure using the two groups of low contact group and high contact group. The main question was, is there a significant difference in the ORB scores for the low contact group and the high contact group.

It was fairly straight forward to run this experiment, and there were plenty of the target participants available who were willing to take part in the study. However some limitations were found in the running of this experiment, some of which may have affected the results. The Asian participants who took part in the study were recruited from a population that has many people of the White race. The Asian participants live and study with many white Caucasians so they are already in contact with this other race quite often. So although some participants reported low contact with the White race, these participants are already in contact with Whites because of their community. Consequently in future studies participants should be recruited from communities that are mostly made up of their own race. This would mean by not merely asking participants to rate their interracial contact but by also making sure that the communities they are selected from have that race as the majority race. This is a way of controlling interracial contact even further, as at times cross-racial control may be inadequate. For example white people in London could be tested instead, to see how well they recognise Asian faces as people of the Asian race are fewer than people from the White race. Another way is to carry out such studies in populations that are predominantly made up of one race. Such populations should show a much higher degree of own race bias.

It can be assumed that these White participants will also generate good recognition of Asian faces because of the fact that London is a multicultural city. People are always bombarded with many faces of different races. Results of the own race bias studies conducted in London could be compared to other results obtained from a less multicultural area whilst at the same time using the same two races e.g. Asian and White races. The results achieved from a study such as that could reveal whether this current study was affected by the sample's population.

Many experiments on the own race bias phenomenon are mostly carried out on white people, black people too and less commonly people of the Asian race. It's time that studies in this area are taken further by using other races that have not been used yet, e.g. different races of Africans, Chinese or Middle Eastern race.

Using people from the Middle East might generate good results as there are many different countries that make up the Middle East. Some have similar features and some are completely different. Conducting research in this area will show whether people of this race can distinguish themselves apart or whether ORB is still present. With the many studies on the own race bias around there are still many other factors to include and think about in order to achieve more reliable and valid results