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# The Verbal Overshadowing Effect: Influence on Perception

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**ABSTRACT-** *The current study aims to observe alterations on perception of attractiveness due to the Verbal Overshadowing Effect (VOE). University students (N=458, 178 males and 280 females) participated in a study where two faces were shown, one male and one female, for 5 seconds. The experimental group verbalized their perception of the face and then immediately rated the attractiveness of the face on a Likert scale ranging from 1-7. It is hypothesized that describing the face will influence the rating of attractiveness, and that gender will also influence perception. Statistical analysis supported the hypothesis and revealed significance in the factor of verbalization, and between males and females in the experimental group. There was no main effect for the factor of gender; however, a test for interactions revealed a significant main effect for females. Results are discussed in relation to gender differences and a general shift in cognitive process.*

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Talking about an issue may not be the best way to reach a conclusion or an answer. It is a common practice to talk about things that are occupying the mind and when trying to reach a certain outcome. Individuals are encouraged to talk about their problems and express themselves so that others can help. But does talking about something change the way one views it? Recent studies have explored this question, and specifically how views of physical attractiveness can change with verbalization.

What we consider to be facial attractiveness depends in part on whether we verbalize the perception, which is the ability to visually recognize and describe, before making a rating or decision (Valentine, 2004). Many people's perception of attractiveness is magnified after consciously giving a description of what stands out to them and then giving a rating of attractiveness. A previously rated average attractive face may be shown to a participant and then the participant is asked to rate the face accord-

ing to a given measuring scale. Accordingly, the ratings of the face should come out to be average. If the same procedure is done, but the subject is asked to give a description of the face prior to the rating, the rating will be affected toward an extreme. The verbalization impairs the participant's ability to accurately rate the face (Schooler, 1990). Gender might also moderate a change as perception often varies greatly between men and women.

This phenomenon is known as the Verbal Overshadowing Effect (VOE), the finding that recognition performance for certain stimuli is impaired if it is described verbally (Westerman, 1997). It is common to see the Verbal Overshadowing Effect in such situations as criminal description, face identification, voice recognition, eyewitness accounts and many others (Lane, 2004). For instance, a witness of a robbery may easily identify the criminal out of a series of faces without any verbalization. But if a police officer asks the witness to try and verbally describe the criminal without any facial stimuli present, the witness's ability to later identify the correct criminal is reduced (Clare, 2004). VOE normally occurs when participants describe a non-verbal stimulus, such as a face, prior to a recognition memory test (Chichester, 2002), or when one's perception exceeds one's ability to describe it verbally. In other words, it's difficult to explain in words but easily recognized.

This study explored the effects of the Verbal Overshadowing Effect, as seen in non-verbal stimuli recognition, in the visual perception of facial attractiveness (Rhodes, 2006) and in the effects of gender roles on perception. A control group of 218 participants was shown two faces, one female and one male that had been rated at an earlier time by a panel of judges as "average" on a scale of attractiveness. They

were then asked to rate the attractiveness of the faces using a Likert attractiveness measuring scale. Conversely, an experimental group of 240 participants were shown the same faces and asked to describe the attractiveness of the faces before rating the faces using the same Likert scale as the control group. Results supported the theory of VOE and its ability to shift the participants' ratings to either extreme. The methodology and design used in this experiment has been shown to be valid in many other situations (e.g., Valentine, 2004; Schooler, 1990; Chichester, 2002).

As a result of previous effects of the Verbal Overshadowing Effect in many situations, it seemed advantageous to experiment its effects on facial attractiveness perception. This experiment sought to examine how the effects of VOE influence attractiveness rating results using faces that have been previously shown to distribute on a normal attractiveness curve. We hypothesize that describing the attractiveness of the face will result in the Verbal Overshadowing Effect and influence the attractiveness ratings to either extreme of the attractiveness scale. We hypothesize a two-directional influence due to the possibility that the initial perception of attractiveness of the given face may be positive or negative. The initial perception will be accentuated due to the verbal overshadowing effect, thus the possibility of a two-directional influence. We also hypothesize that participant gender will moderate the attractiveness ratings.

## Method

### *Participants*

With prior consent from the professor and approval from the universities Institutional Review Board, students at the university attending selected psychology 300-level and anthropology 100-level courses were asked to participate in the experiment. The classes were selected based on the professor's consent for the researchers to take five to ten minutes of class time to administer the experiment. Two sections from each course were randomly assigned to either the control group or experimental group. Participants voluntarily consented to the experiment and were not compensated for their participation. A total of 458 students participated in the study with 240 in the experimental group and 218 in the control group. Participants ranged from 18 to 27 years in age and included 178 males and 280 females.

### *Materials*

Experiments were conducted in university classrooms. Participants looked at large projector screens where the pictures of the two faces were shown, one female and one male. A multicultural panel selected the faces from a pool of 300 pictures. The pictures chosen had been previously rated as "average" on an attractiveness scale. The two faces were displayed in the form of a PowerPoint presentation. Participants rated and described the faces on the screen using a handout that was given to them before the commencement of the experiment.

The control group participants each received a handout that contained two boxes, each box containing the seven-point scale used to rate the each face. Below the scale were the words "unattractive, average, and attractive," with an additional two points between each descriptive word. The scale ranged from the left extreme of "unattractive" to the right extreme being "attractive." The numbers on the scale were not shown as to reduce rating bias (assigning a number to attractiveness). The experimental group was given a document with the same two boxes for rating attractiveness along with space after each box to describe, in written form, each of the faces separately. In both groups, space was provided at the top of the form for demographic information including gender, race, age, and marital status.

### *Procedures*

Research was administered in a classroom setting with individual desk space for each participant. Participating groups ranged from 20 to 75 students. Research took place at the beginning of each scheduled class.

The administrator first passed out the respective form to each participant. The administrator gave the respective instructions to each group. The control group was given instructions that a female face would first be viewed on the screen for about five seconds. They would then have one minute to rate the attractiveness of the face on the provided scale. The same process was repeated for the second face, that of a male. The experimental group was given the same instructions except that after viewing each face they were given three minutes to describe the face before rating it. In both conditions the administrator collected handouts after ratings had been completed and debriefed the participants on the purpose of the study. Later, the numbers on the scale, which were initially omitted, were added to the attractiveness scale, 1 being "unattractive" to

Table 1

Sample Means			
Control Group Ratings			
GENDER	Mean	N	Std. Deviation
Male	.1556	90	.80603
Female	.3125	128	.82050
Total	.2477	218	.81638
Experimental Group Ratings			
GENDER	Mean	N	Std. Deviation
Male	.2386	88	1.12438
Female	.5855	152	.87227
Total	.4583	240	.98436

7 being “attractive,” to assist the researchers in data entry and statistical analysis.

### Results

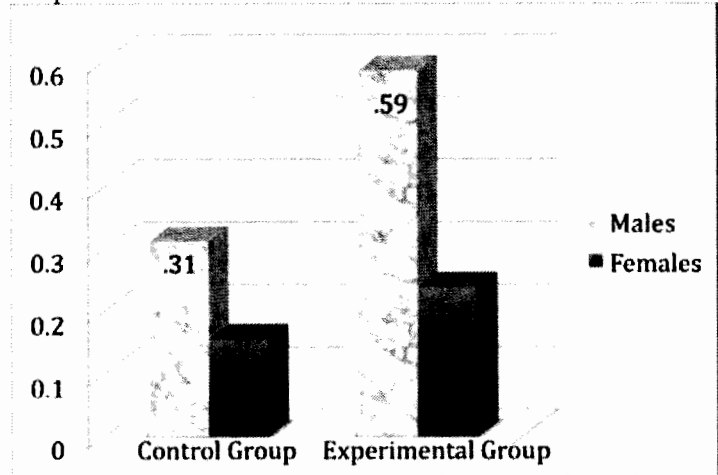
The raw data from each condition were compiled. No outlier scores were found, thus, no data points were eliminated from the analysis. The means for the total number of each group of participants (N=458) were control group: .25, and experimental group: .46 (see Table 1).

To test for significant differences between the means of the main factors, and to test for interactions between these factors, the data were analyzed with a one-way ANOVA. The analysis revealed a main effect for the factor of verbalization,  $F(1, 456) = 6.143, p = .01$ , in which the experimental group rated significantly different than the control group. There was no main effect for the factor of overall participant gender,  $F(1, 456) = 1.023, p = .31$ . However, in our test for interactions (see Table 2, and Graph 1) we found a significant main effect when com-

Table 2

Paired Sample Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	RATING	.3581	458	.91340	.04268
	GENDER	1.6114	458	.48798	.02280
Pair 2	RATING	.3581	458	.91340	.04268
	CONDITION	1.5240	458	.49997	.02336

Graph 1



paring control vs. experimental conditions within female participants,  $F(1, 278) = 7.186, p = .01$ , in other words, the females in the experimental group rated higher than the females in the control group. We did not find significance within males participants. We further found a significant difference between participating males and females in the experimental group,  $F(1, 239) = 2.32, p = .02$ , but not in the control group. Females in the experimental group rated higher than males in the experimental group. These findings suggest an interaction between gender and verbalization, or gender as a moderator between perception of facial attractiveness and verbalization of that perception.

### Discussion

Consistent with our hypothesis we found that verbalization does have an effect on face perception and that gender does play a role. Three significant results were seen: (1) Female participants in the experimental group rated significantly higher when compared to the females in the control group; (2) females in the experimental group also rated higher when compared to males in the experimental group; and (3) experimental group participants rated overall higher compared to the control group participants.

The effects of verbalization were more evident in the female participants. Females in the experimental group tended to give much higher ratings of attractiveness than females of the control group. A possible change in their level of perception was seen as most females responded verbally in the experimental group justifying their initial

perception. Responses such as, "She seems like a nice person," demonstrate an additional focus on internal characteristics due to verbalization, whereas females in the control group rated the faces according to their initial perceptions without the verbalization. These responses illustrate that female participants face ratings were highly influenced by their tendency to allot other traits to the target face given only the visual stimulus. Attempting to verbalize a non-verbal stimulus will illicit such responses (Schooler, 1990). The females' focus on positive attributes also dispensed a shift in perception; however, further studies may result in more conclusive evidence for why this shift takes place (McKelvie, 1981).

While the overall effect of verbalization was significant, there was not a significant difference between males in the control group and males in the experimental group. The majority of the significance was found in the female portion of the sample. This coincided with our hypothesis in that gender would affect verbalization. This may be influenced by the difference between male and female cognitive processes, in that females might naturally internalize their perceptions whether or not they were asked to verbalize them. So why was it that females rated so much higher than males?

First, we found that females included personality traits in their descriptions of attractiveness while men interpreted "attractive" as solely based on physical appearance. Men made comments like, "She has a mole on her left cheek," "She has big ears," or "Her teeth are off white," while females made comments like, "She seems really happy, like she could be a fun person." Also, females tended to emphasize positive attributes while men were more critical in their observations. When females did make negative comments, they tended to follow them with positive comments such as, "She has a round face, but she seems really happy and seems like a nice person." Additionally, it is possible that females give more generous ratings than men in general.

The effects seen in the three significant areas, (females participants in the experimental rated higher than females in control group, females in the experimental group rated higher than males in the experimental group, and the experimental group rated higher than the control group) specifically in the third difference, may be partially explained by a general shift in cognitive processes and retrieval of information before rating the faces (Meissner,

2001). When the participant considers the reasons for their perceptions their thoughts about the perception are disrupted. A shift occurs from a normal cognitive process to a more analytical procedure and thus affects the outcome (Westerman, 1997). This general shift may explain the overall affect or a change in how the faces are viewed (Clare, 2004). But just as we have discussed, there are many elements that were uncovered as we looked deeper at each significant difference.

The results supported our original hypothesis, but not without several limitations, including a homogenous sample and class size. All 458 participants were taken from students from one university. The university where the sample was taken is a highly religious campus that focuses and teaches students the importance of personal characteristics other than physical attractiveness. Judging another person based on strictly physical characteristics might elicit feelings of shallowness in highly religious students. While this would be true for both groups, it is possible that this may have been more pronounced for those asked to verbalize their response. Therefore, student's ratings of attractiveness at the university might have underlying meaning attached to it rather than strictly a physical attractiveness opinion. This was highly evident among the female participants in the current study. Some female face descriptions went beyond the physical realm and began to attempt to describe the external person with internal characteristics, known as the halo effect. In other words, the females might have felt shallow judging the face, and in essence the person, based strictly on physical characteristics (Ellison, 1993).

Another limitation concerns the size of the participating groups during each administration of the study. Classes varied in size ranging from 20 students to 70 students. Though the raw number of students in each class does not affect the results, the pressures that might have been felt in each classroom due to its size might have influenced the ratings (Conner-Green, 1988). Social pressure is a strong force among adolescents and even among the university-aged population. Students in larger classes in the current study might have felt more social pressures to rate faces as more attractive when they might have not in an environment where they felt less pressure.

Students were also asked to verbalize their opinion in the form of a written response. Verbalization occurs in this situation when the opinion is put into words, whether it

is spoken or written. The fact that the student's responses were all written might have also played a role in the rating, versus having a spoken verbalization.

Though the current study widens the breadth of study concerning the Verbal Overshadowing Effect, there still remains much to be researched. Future studies should study variables other than gender and its effects on perception and the Verbal Overshadowing Effect. A look at how same-sex and opposite-sex attractiveness ratings affect perception will also shed new light on the changes that are seen after verbalization.

### Conclusion

Individual perception of attractiveness is highly influenced by the verbal attention given to the perception at hand. In other words, if an individual verbalizes, either written or vocally, their perception of attractiveness, then his or her results will be different than if they had not verbalized their perception. After evaluating the many significant differences seen in the current study and considering the limitations and confounds of the current study, we observe that verbalization does affect overall perception of attractiveness, and participant gender does play a role in perception. These observations are consistent with the original hypothesis.

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