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**Men and Women: Preferences in Description****Christopher H. Cook, Debra Leek, and Stefanie Sutton**

*With many observable differences between men and women, this study tires to identify preferences in description of specific colored shape stimuli. We hypothesized that men would more likely describe the stimuli by naming its shape while women would most likely identify the color. Our study found significant difference between men and women's descriptions, but not in a way to support our hypothesis. Undergraduate students recruited through the Lindenwood University Human Subject Pool for this experiment showed that men mostly described the stimuli using "other" phrases (like stop sign or sun) while women mostly identified stimuli by shape. However, women described the stimuli by color for all pink and green cards.*

While we know that men and women vary in many ways such as how they cope with depression, choose their favorite professors, recall and describe vivid memories, and with both the content and emotion linked with color description, this study sought to find if there was a gender-related difference among participants between shape and color when asked to describe an object (Arthur, Johnson, & Young, 2007; Basow, Phelan, & Capotosto, 2006; Daughtry & Paulk, 2006; Niedzwienska, 2003). Given that people have been shown to act in ways that are classified as either masculine or feminine on an Extended Personal Attributes Questionnaire in different situations, we can see that a typically male, or typically female, response are affected by situations and stimuli (Vonk & Ashmore, 1993). A possibility of this could be that people are acting in ways that they think are socially acceptable; a form of this thinking is what we were trying to capture here. According to the findings in the previous study, if we present our

participants with stimuli, they should project their own masculinity or femininity into the description of that stimulus.

In a recent study, significance was found showing adolescents were more likely to choose candidates who expressed strong stereotypical gender qualities associated with each participant's gender while young adults chose candidates mostly by looking at his or her professional qualities (Lobel, Nov-Krispin, Schiller, Lobel, & Feldman, 2004). Most of the participants who took part in our study would have been classified by the last experiment as adolescents; this may suggest that when presented with the stimuli in our experiment, the participants would also describe the objects in ways that are either stereotypically masculine or feminine. In addition, while the stimuli presented here were not being asked to be judged on merit, we assumed that even the young adults that took part in our experiment gave descriptions analogous to ones that would coincide with his or her gender.

When asked to describe the ideal person for professional activity, it was found that both men and women would tend to assign that person more masculine traits rather than when asked to describe the ideal person for close personal relationships (Echabe & Castro, 1999). Also, it was found that prototypically popular men disliked school subjects and students who did not correlate with the mainstream male stereotype (Kessels, 2005). Not only are there differences in the types of classes and people preferred by those who are prototypically masculine or feminine, but that general levels of intelligence differ between the sexes in that women achieve more detailed interpersonal relationship knowledge while men achieve higher cognitive skills (Raty & Snellman, 1992).

An interesting article suggests that there may also be evolutionary benefits that would promote a greater ability for women to distinguish and notice color and for men to be perceptive

of more complex shapes (Alexander, 2003). These neurological evolutions that promote specific color/shape recognition difference between the sexes could be because of added chances in survival. The study suggests that men greatly identify and recognize forms (shapes) that elicit some possible forms of motion (Alexander, 2003). For example, a circle could be seen to men as a ball that could be set into motion. The evolutionary advantage here for men comes from being able to recognize an object and see how it would go into motion, then later relating that form and motion recognition into life skills like hunting. Also, the study suggests that women have an evolutionary predisposition to color discrimination/recognition (Alexander, 2003). The evolutionary advantage for the women here is that they will be able to discern flora better when gathering food or be more responsive in the care of infants.

As previous research clearly states, the differences between men and women are very complex and almost infinite. Pertaining specifically to our experiment of men and women's description differences between shapes and colors, there is evidence supporting an evolutionary neurological predisposition to be more discriminatory between the two that exists between the sexes (Alexander, 2003).

The rationale driving our experiment was to see if yet another sex difference, that between color and shape description, significantly occurs. Our hypotheses for this experiment include, if men are presented with a stimulus and asked to describe it with one word, then they will be more likely to give preference towards a shape description. Also, if women are presented with the same stimuli and asked to describe it with one word, then they will be more likely to give preference towards a color description. These hypotheses were somewhat reached from the review of the previous literature in the field, especially the neurological study presented by

Alexander, however, the hypotheses were mostly concluded by face-value validity seen in everyday interactions.

## Method

### *Participants*

Participants were 32 undergraduate students from Lindenwood University (8 men and 24 women) who took part in the study to earn optional extra-credit points in their social science classes. The students were recruited via Lindenwood's Human Subject Pool, which consists of students in introductory level psychology, anthropology, and sociology courses. The students received extra credit for those courses listed above for their participation in the experiments. Students were able to participate by signing up for the study on the HSP board located on the fourth floor of Lindenwood's Young Hall.

### *Materials*

The materials used in this experiment were: chair; desk; pen; data recording sheet (for experimenters); survey questionnaire with questions of: "Are you?" with answer choices of: male or female; a free-response question of "Are you color blind?"; a free-response question of "Do you have a favorite color?" ; a free-response question of "If yes to the previous question, what color?" ; a free-response question of "Do you have a preference for a shape?" ; and a free response question of "If yes to the previous question, what shape?" (Appendix A); sixteen 3"x5" flash cards containing pictures of white shapes outlined thinly with black, colored shapes outlined thickly with black, or colored shapes not outlined at all, there were also flash cards of objects like cars and animals (Appendix B); informed consent form (Appendix C); and feedback letter (Appendix D). The cards of objects like makeup and cars were added to counterbalance the effect of seeing very similar stimuli many times; some cards were outlined to see if a specific

black outline would influence descriptions in color or shape. The study was conducted in the basement of Young Hall in room Y105. The room was small, normally lit, and contained a desk and chairs at which the experimenters and participants sat; the temperature of the room was at standard room temperature. The SPSS computer program was used to run a chi-square analysis of the data

### *Procedure*

When the participants arrived, they were greeted and told to come inside the laboratory room and have a seat at the desk and chair. The participants were given the lab receipt, which was how they received their extra credit, and told to fill it out and return it to the HSP office so they would receive their extra credit. Next, the participants were told to read and sign the consent form and they were given their own copy. The participants were also informed that if for any reason they wished to stop the experiment it would be fine and they would be free to leave while still collecting extra credit. The participants were then instructed to fill out a six-question survey (Appendix A). After the participants took the survey, the experimenter collected it and then the participants were instructed about what would happen next. The participant was told that he or she would be shown 16 different flashcards and that he or she was to describe the items on the cards using only one-word phrases. They were told to say the first word that came to their mind after seeing the card first followed by any other one-word phrases the felt necessary to describe the item. They were told to do this for every flashcard until finished. The words each participant used to describe the items on the cards were recorded in the same order that participants gave them and were coded with a 1 for shape, 2 for color, and 3 for an “other” response. An answer yielding a score of 1 would include giving the name of a color as the description, for example: blue or green. An answer earning a coded score of 2 included giving

the name of a shape as the description, for example: triangle or hexagon. An answer that would earn a coded score of 3 included giving a response that would be classified as “other” (here, these “other” answers were actual object or symbolism drawn for the stimuli) for example: sun or breast cancer. The data was recorded and kept by the experimenters in their own houses in a private file used to store all of the experimental data. After the experiment had been conducted, the participants were debriefed and finally given a feedback letter, and verbally told that they could contact any of the experimenters for results, questions, or concerns at a later time.

### Results

From the data coded and entered into the computer software program SPSS; a chi-square analysis was done on all of the data. It was found that overall men gave a majority of “other” responses for nearly every stimulus while women gave responses of shape for nearly every stimulus except those that were pink or green to which they reported color. The percentages shown represent the most frequently used description of each sex. For the black and white hexagon 62.5% of men described as other while 41.7% of women described as shape;  $\chi^2 = 5.147$ ,  $p = .076$ . For the red triangle 62.5% of men described as other while 54.2% of women described as shape;  $\chi^2 = 8.015$ ,  $p < .05$ . For the pink outlined hexagon 50.0% of males described as other while 75.0% of females described as color;  $\chi^2 = 8.178$ ,  $p < .05$ . For the black and white trapezoid 50.0% of men described as other while 45.8% of women described as shape;  $\chi^2 = 3.623$ ,  $p > .05$ . For the pink hexagon 50.0% of males described as other while 75.0% of females described as color;  $\chi^2 = 9.881$ ,  $p < .05$ . For the outlined orange circle 37.5% of men described both shape and other equally while 50.0% of women described as shape;  $\chi^2 = 6.174$ ,  $p < .05$ . For the Green trapezoid 75.0% of males described as other while 70.8% of females described as color;  $\chi^2 = 10.163$ ,  $p < .05$ . For the black and white circle 62.5% of males described as other and

79.2% of females described as shape;  $\chi_2^2 = 4.848$ ,  $p < .05$ . For the black and white triangle 62.5% of men described as shape while 79.2% of women described as shape;  $\chi_2^2 = 1.111$ ,  $p > .05$ . For the outlined green trapezoid 87.5% of males described as other while 54.2% of females described as color;  $\chi_2^2 = 9.067$ ,  $p < .05$ . For the outlined red triangle 62.5% of males described as other while 54.2% of females described as shape;  $\chi_2^2 = 19.000$ ,  $p < .05$ . For the orange circle 62.5% of males described as other while 45.8% of females described as color;  $\chi_2^2 = 8.222$ ,  $p < .05$  (refer to Table 1).

### Discussion

Other than what was predicted, we found that every time a man described a card, neither color nor shape description was used more than a response classified as “other”. This other category would contain things like “sun” when seeing the orange circle, or “stop sign” for the hexagon. As unpredicted, it was shown that women mostly described the cards by using shape descriptions, except when the colors were green or pink. When the cards depicted shapes that were colored with either green or pink, women described them by using color rather than shape. The responses of color from women when describing green and pink were analogous to the findings of Vonk & Ashmore (1993) where typically masculine or feminine responses can be related to stimuli. Pink was most listed by the women as their favorite color and was the most gender-specific color towards women, possibly prompting them to describe the card using color rather than shape. However, green is most likely gender-neutral, and perhaps a closer look at the correlation between the color green and the aspect femininity can be taken.

This sample rejects the notion presented by Alexander that men will be more geared towards identifying forms (shapes) while women will identify color. With such a small sample



size, the reason the hypothesis presented by Alexander was rejected here was most likely due to inadequate amounts of data.

Men most frequently described every stimulus with an “other” response; this suggests a tendency towards abstract thinking in this sample. This possibly could be due to males trying to give more masculine answers or possibly because females tried to keep their answers simple and to the point. Either way, there is a great difference between attributing the stimuli to symbols or objects for males, while females kept it to just the color and shape.

As we predicted, there were significant differences between the responses given by men and women when describing the stimuli. Two of the most statistically significant results came from the descriptions of the pink hexagon and green trapezoid, both of which were not outlined in black. This is interesting because not only are these the two colors that were found to be overwhelmingly used by women but these were the two most complex shapes, as opposed to circle and triangle.

The results from this study show that there is a difference in the descriptions given by men and women to certain stimuli. Factors such as outline, color, and shape all seem to be prioritized differently between the genders.

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Table 1

Stimulus	Computed $\chi^2$ Value	Statistical Significance; p = .05
B/W Hexagon	5.147	.076; p < .05
Red Triangle	8.015	.018; p < .05
Pink Hexagon W/ outline	8.178	.017; p < .05
B/W Trapezoid	3.623	.163; p > .05
Pink Hexagon	9.881	.007; p < .05
Orange Circle W/ outline	6.174	.046; p < .05
Green Trapezoid	10.163	.006; p < .05
B/W Circle	4.848	.028; p < .05
B/W Triangle	1.111	.574; p > .05
Green Trapezoid W/ outline	9.067	.011; p < .05
Red Triangle W/ outline	19.000	.000; p < .05
Orange Circle	8.222	.016; p < .05

Appendix A

Questionnaire

1. Are you?

Male

Female

2. Are you colorblind?

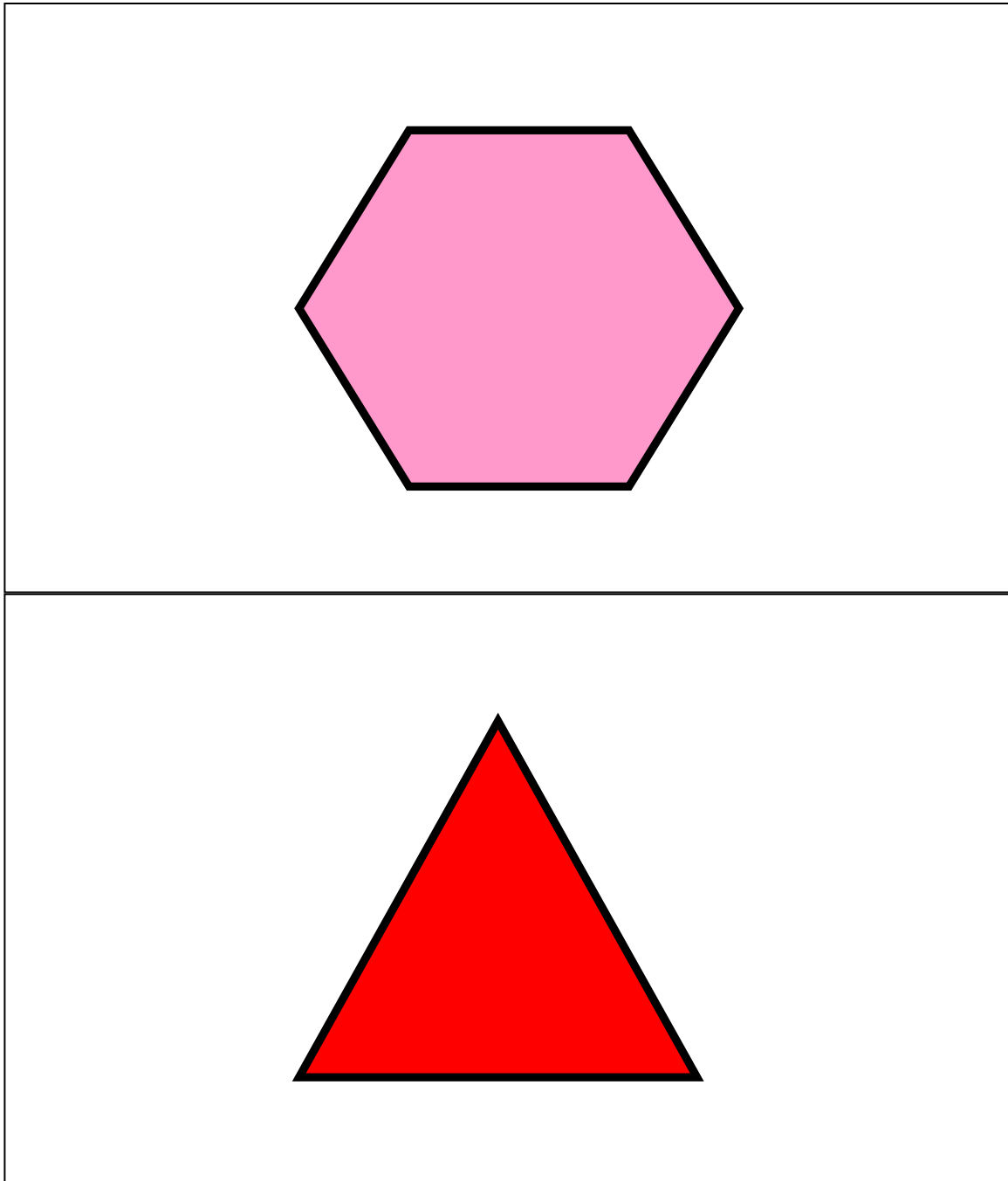
3. Do you have a favorite color?

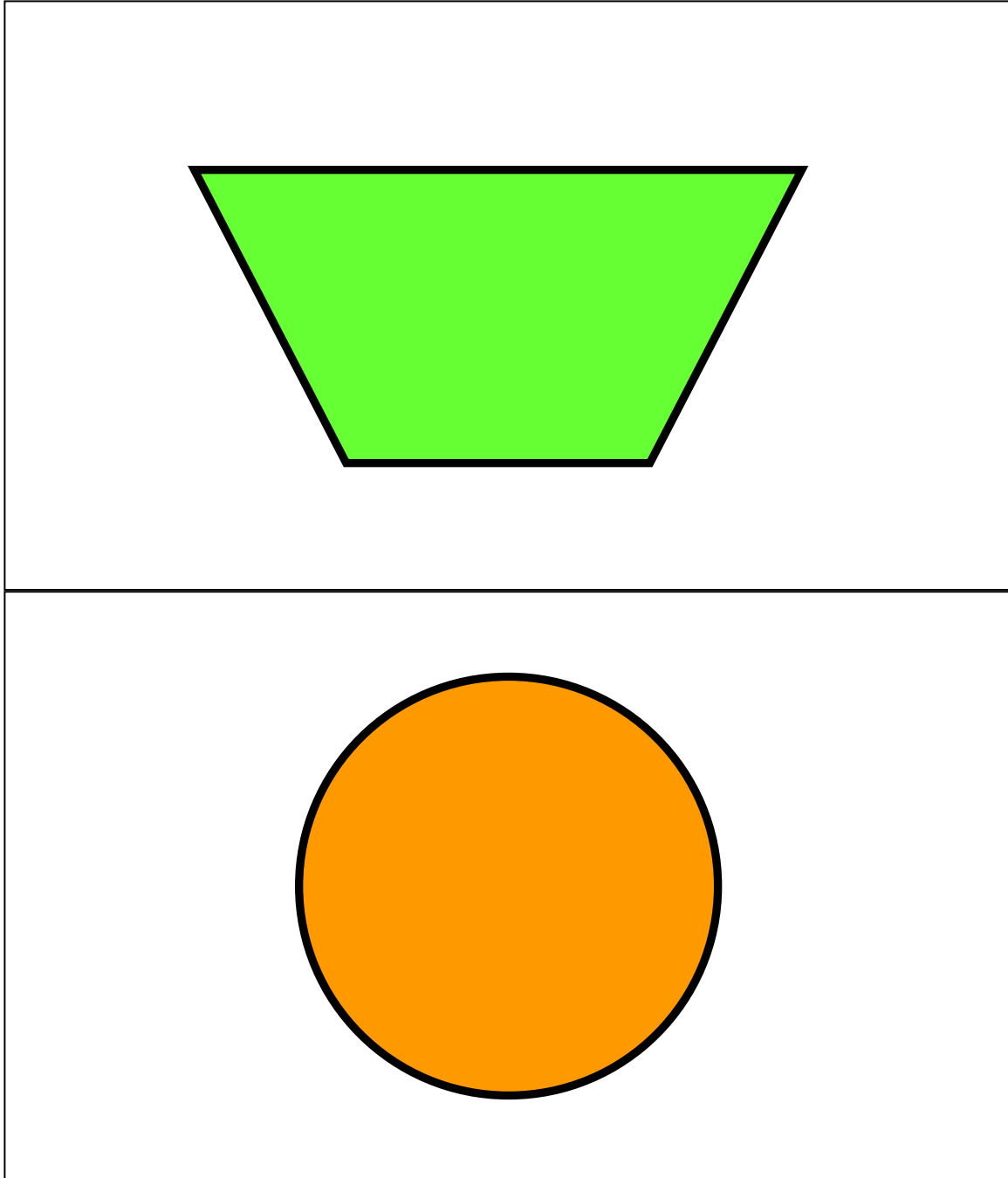
4. If yes to number 3, what color?

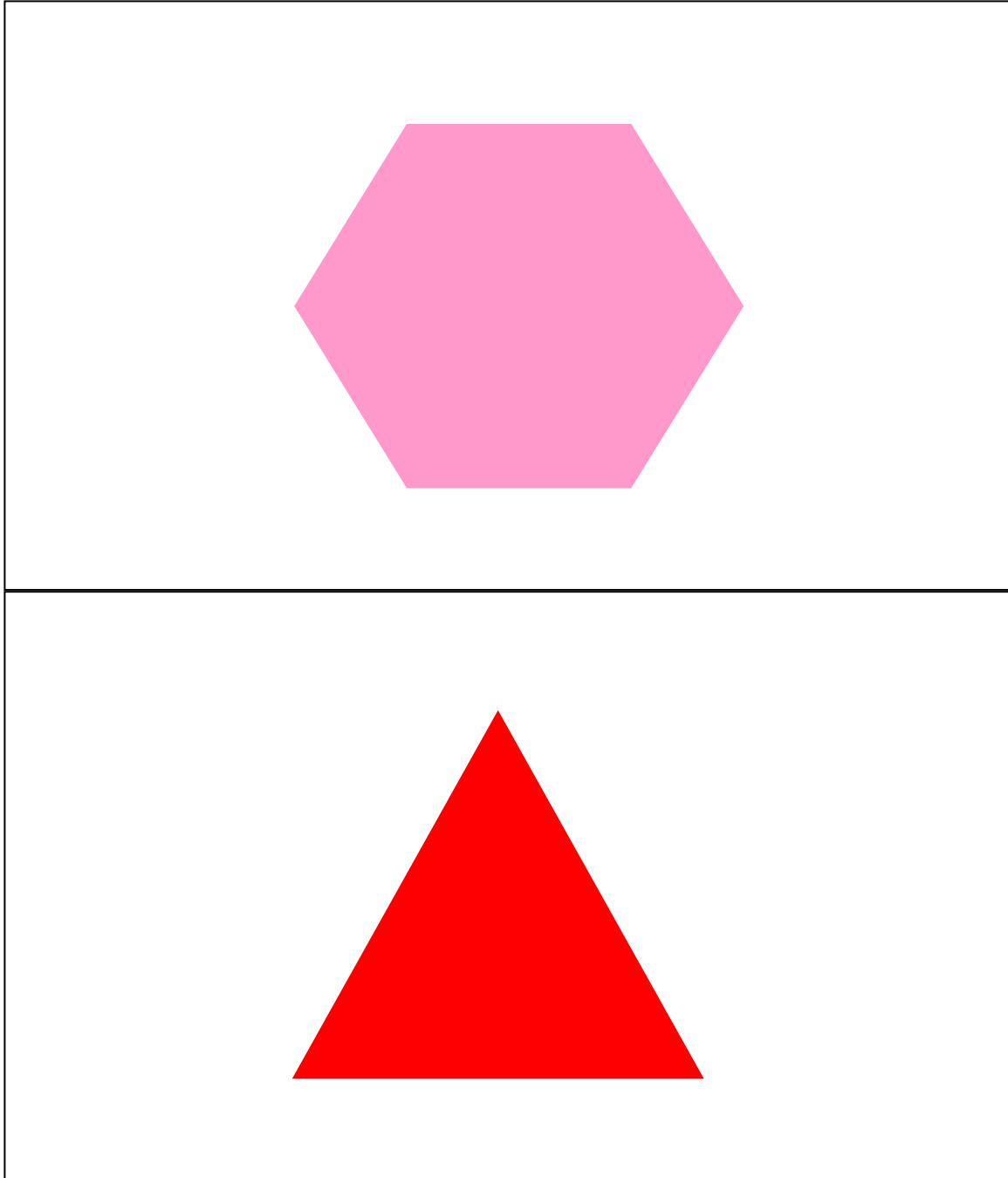
5. Do you have a preference for a shape?

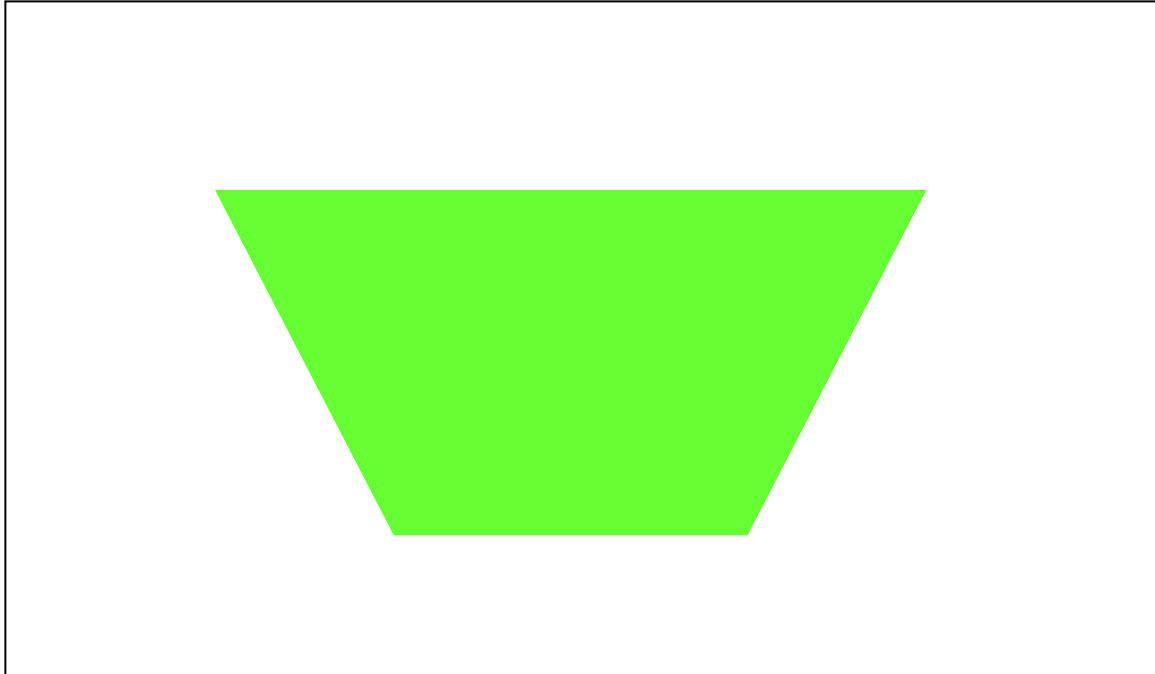
6. If yes to number 5, which shape?

Appendix B

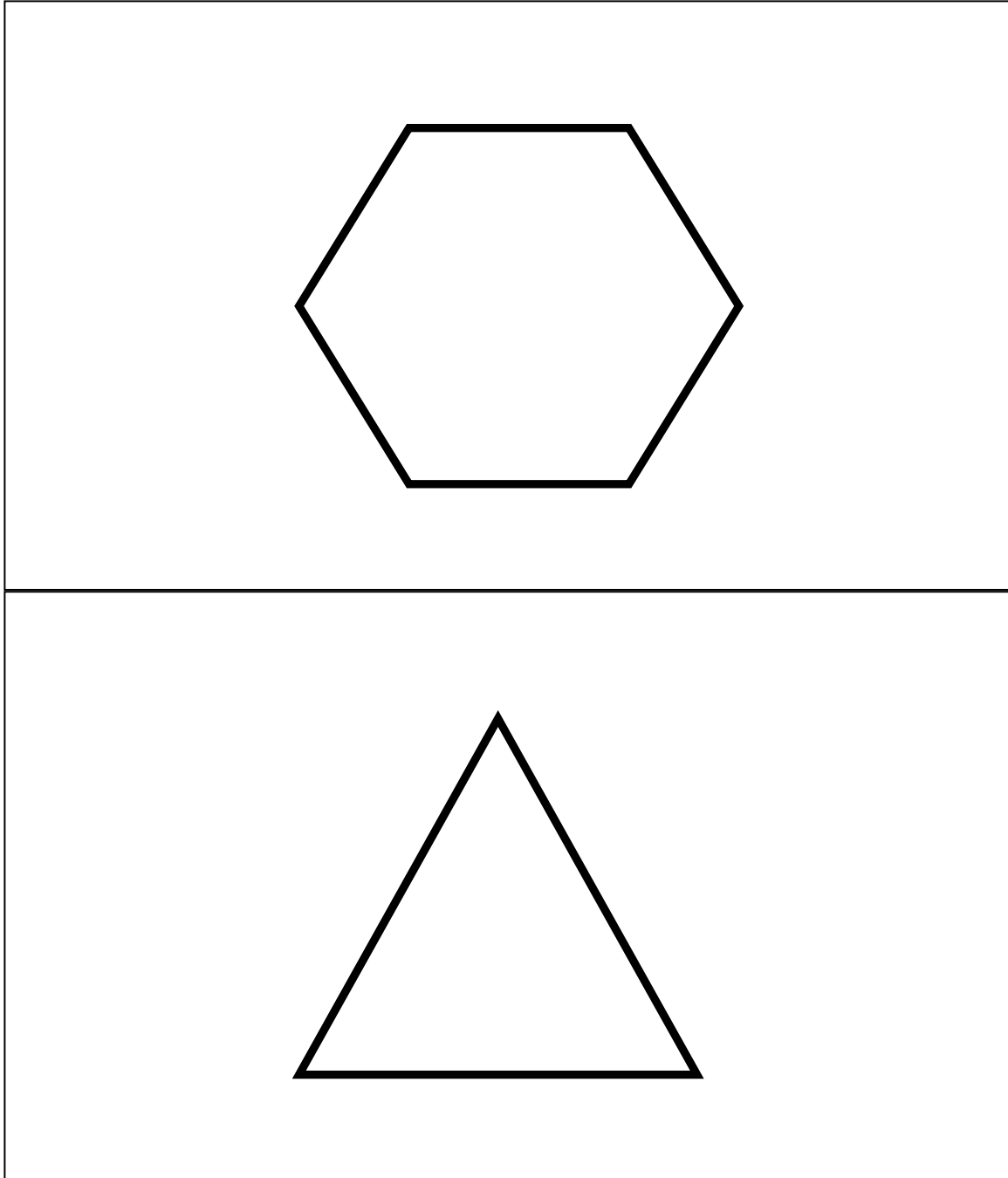


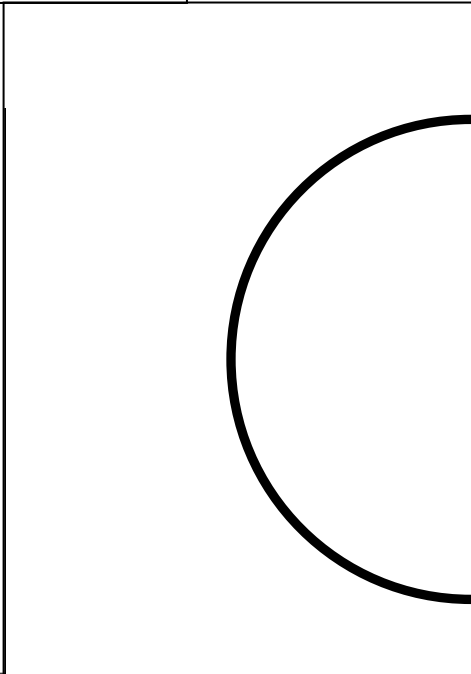
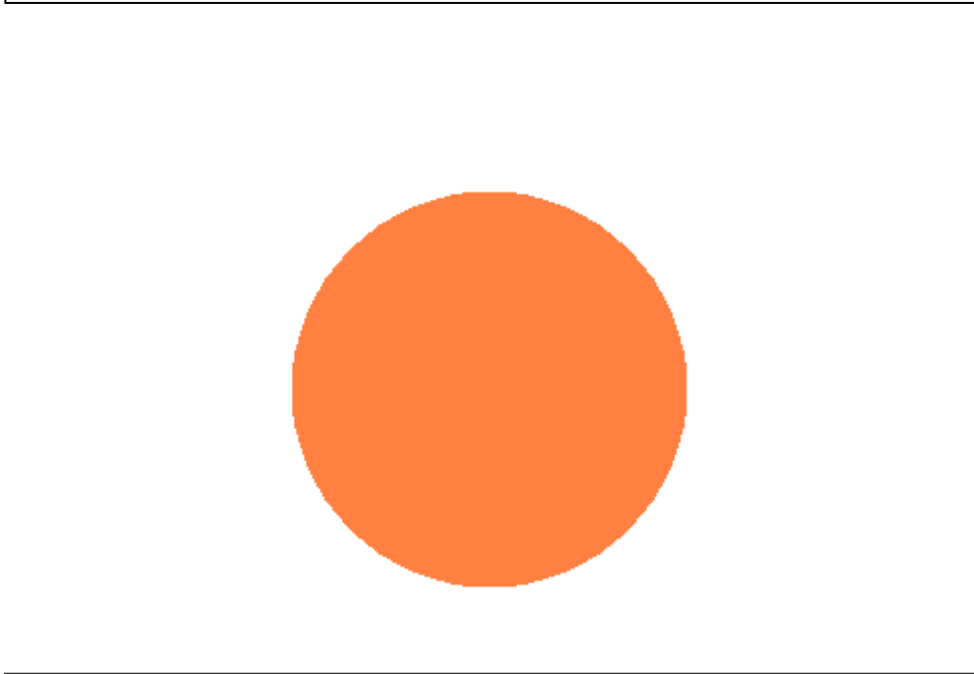
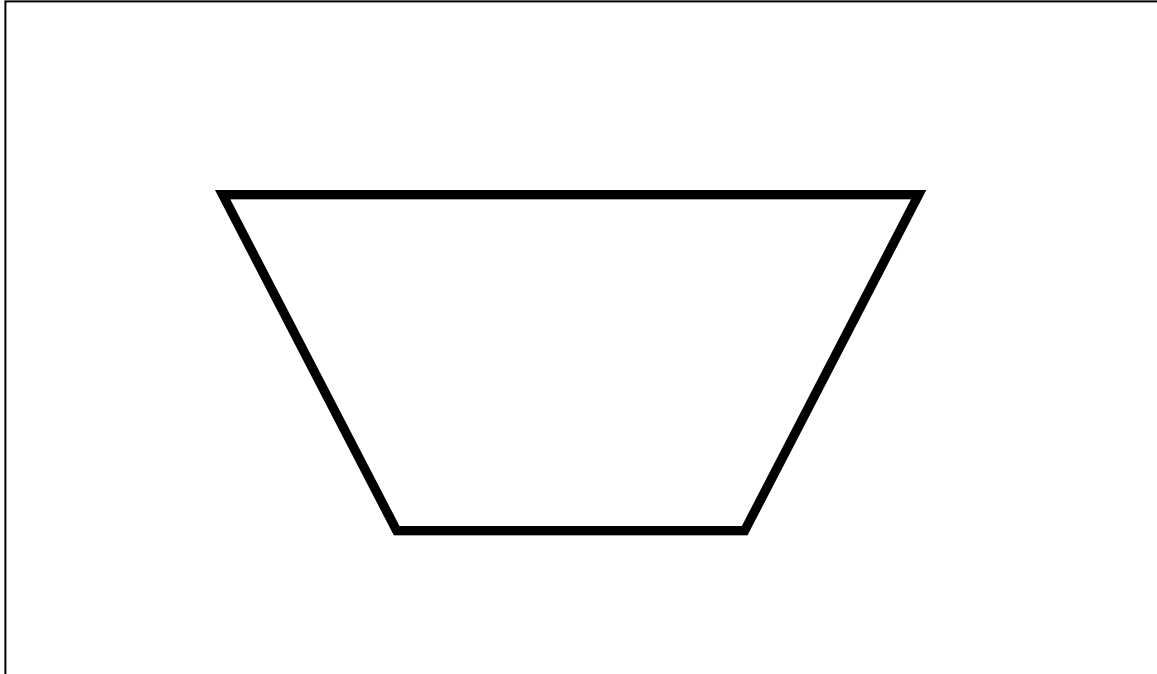
















## Appendix C

### Informed Consent Form

I, \_\_\_\_\_ (print name), understand that I will be taking part in a research project that requires me to complete a short questionnaire asking about my gender and color preferences and participate in an experiment requiring me to describe objects on flashcards. To the best of my knowledge, I do not have any disabilities that may hinder my ability to see color or objects on flashcards. I understand that I should be able to complete this project within 20 minutes. I am aware that my participation in this study is strictly voluntary and that I may choose to withdraw from the study at any time without any penalty or prejudice. I should not incur any penalty or prejudice because I cannot complete the study. I understand that the information obtained from my responses will be analyzed only as part of aggregate data and that all identifying information will be absent from the data in order to ensure anonymity. I am also aware that my responses will be kept confidential and that data obtained from this study will only be available for research and educational purposes. I understand that any questions I may have regarding this study shall be answered by the researcher(s) involved to my satisfaction. Finally, I verify that I am at least 18 years of age and am legally able to give consent or that I am under the age of 18 but have on file with the HSP office, a completed parental consent form that allows me to give consent as a minor.

\_\_\_\_\_ Date: \_\_\_\_\_  
(Signature of participant)

\_\_\_\_\_ Date: \_\_\_\_\_  
(Signature of researcher obtaining consent)

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Appendix D

Feedback Letter

Thank you for participating in our study. The questionnaire was used in order to determine people's beliefs about whether or not objects and color play a gender specific role. We hypothesized that men and women would describe shapes and pictures differently. The flashcards were used in order to determine people's priorities based on color and shapes. We think our study could result in more effective advertisements for companies.

Please note that we are not interested in your individual results; rather, we are only interested in the results of a large group of consumers, of which you are now a part of. No identifying information about you will be associated with any of the findings.

If you have any questions or concerns regarding any portion of this study, please do not hesitate to bring them up now or in the future. Our contact information is found at the bottom of this letter. If you are interested in obtaining a summary of the findings of this study at a later date, please contact us and we will make it available to you at the completion of this project.

Thank you again for your valuable contribution to this study.

Sincerely,

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