



# APPROACHABILITY BASED OFF BODY LANGUAGE



# Research Question

Does a person's body language affect their approachability?

# Introduction

The experiment being tested is whether or not body language can affect the approachability of a person. This will be tested by setting up a quiz using different pictures of body language poses. After this is set up participants will take the quiz and select who is most approachable. Then the results will be tallied to see if they are consistent or have no consistency. This will be quantified by grading participants responses and the positioning with the highest number of choices is the most approachable and the positioning with the lowest number of choices is least approachable.

# Variables

**Independent Variable:** Body language positions (Relaxed, Formal, Guarded, Informal, Tense, Bored, Stubborn)

**Dependent Variable:** How approachable a person is based off a survey

**Control Variable(s):** Survey Participants, Similar Clothes (on people in pictures), Same Background, Lighting for Pictures

# Background Research

Surveys done show people don't only perceive emotion based off body language, they pair it with other things like facial expressions and voice. Non-verbal communication is based off of many things including the way people sit, how they place their arms, how open or closed their stance is, how much they make eye contact, and many other things. Body language often varies depending on personality, gender, and culture so the better a person knows someone the easier it is to read their body language.

Research shows people often judge someone on how they present themselves when they don't know them. If they present themselves in a specific way, they could unintentionally construe that they are rude, inviting, shy, or even threatening.

# Background Research

“The effect of happy expressions was shown to differ for faces and bodies, with happy faces judged more approachable than neutral faces, whereas neutral bodies were considered more approachable than happy bodies”

Willis, M. L., Palermo, R, & Burke, D (2011). This study shows that facial expression does have an effect and neutral bodies are more approachable. The results of there experiment also revealed that angry facial expressions and angry body language was least approachable.

# Hypothesis

If I test how body language affects how approachable a person is then people with tense positioning will end up being least approachable and people with relaxed positioning will be most approachable because based on research people are more inviting when in neutral positioning

# Materials

- Laptop
- Pictures of different body positions
- Printer
- Survey participants

# Procedures

1. Pick at least 7 different body language positions (Relaxed, Formal, Guarded, Informal, Tense, Bored, Stubborn)
2. Find at least 4 participants to take pictures of (try to limit as many biases as possible age, gender, height, ethnicity etc.)
3. Take pictures of each participant in chosen positions
4. Make questions for the survey that ask who's most approachable in a non direct way
5. Add the pictures taken to the quiz as multiple choice questions and also a line for the explanation of the participants choice
6. Print out survey
7. Have the participants take the quiz
8. Tally the choices

# Data

Key



Pictures  
that were  
not a  
choice for  
that  
question

Data  
based off  
of 21 of  
the  
surveys

	Formal	Guarded	Relaxed	Tense	Bored	Informal	Stubborn
Q1	6	5		7			6
Q2	8		6	6	0		
Q3			4		5		12
Q4			11	2	8	1	
Q5	7	2				8	5
Q6	0	7			8	4	
Q7		2	9	3		6	
Total	21	16	30	18	21	19	23

# Observations

1. On question number 2 of the surveys formal positioning was chosen many times over the other options

2. Question number 4 on the survey was almost fully dominated by female

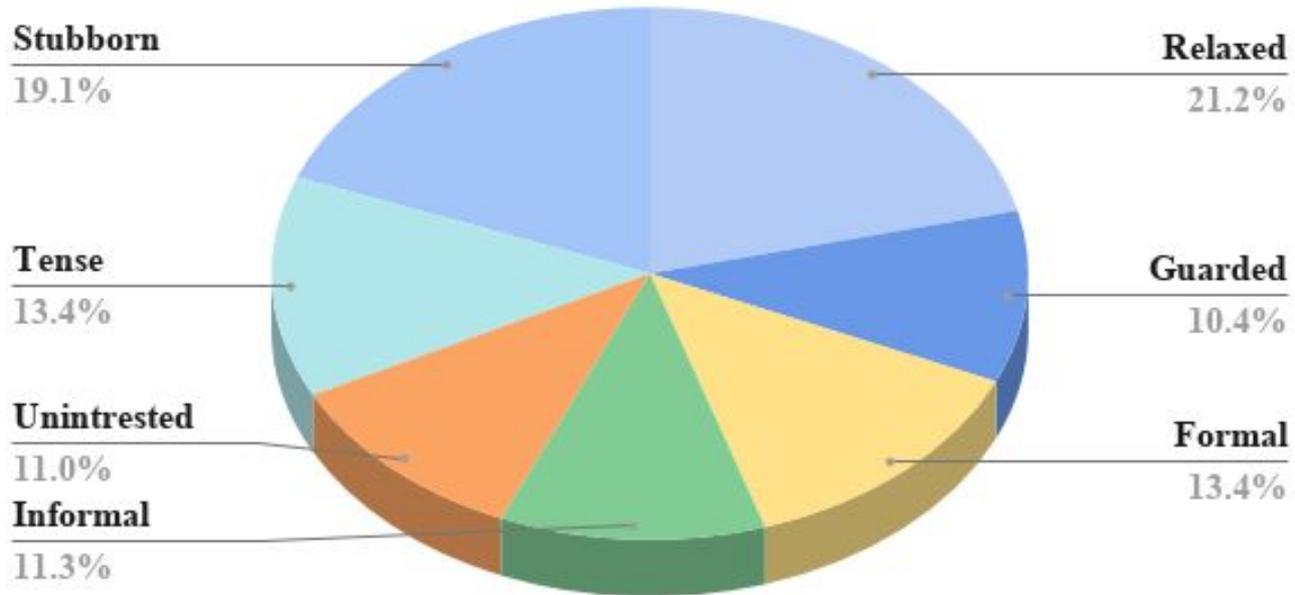
3. A majority of the females chose for females to be their teacher

4. On question number 6 people gravitated less towards the picture of the oldest participant

5. On a handful of questions people chose an option because it reminded them of a family member

6. Based off of my data the surveys were mainly female dominated

# Results



# Discussion

The significance of this experiment is it can help people better understand what body language to use in specific scenarios. This experiment had a fair amount of biases that could have affected people's choices including age, gender, and height difference in there choices of people. There were also mistakes on the surveys like when the survey participants didn't put a reasoning for their choice or their gender and also on question 1 where the answer bubbles weren't underneath the questions they were supposed to be. Next time I would make sure that everyone knew what to do on the survey to make my results more accurate.

# Conclusion

The hypothesis was that relaxed positioning would be most approachable and tense positioning would be least approachable. Based on 50 surveys taken by 3rd, 4th, and 6th, graders the conclusion was both rejected and accepted. It was true that relaxed positioning was most approachable but was not true that tense positioning was the least. The actual positioning that chosen the least was guarded positioning. In order from least to greatest the results were Guarded: 35 Uninterested: 37, Informal: 38, Formal: 45, Tense: 45, Stubborn: 65, and Relaxed: 71. Some improvements to the experiment would have been eliminating biases by getting more similar people and fixing my survey mistakes. If I were to redo this experiment than I would make those improvements

# References

Sinke, C., Kret, M. E., & de Gelder, B. (2012). Body language: Embodied perception of emotion.

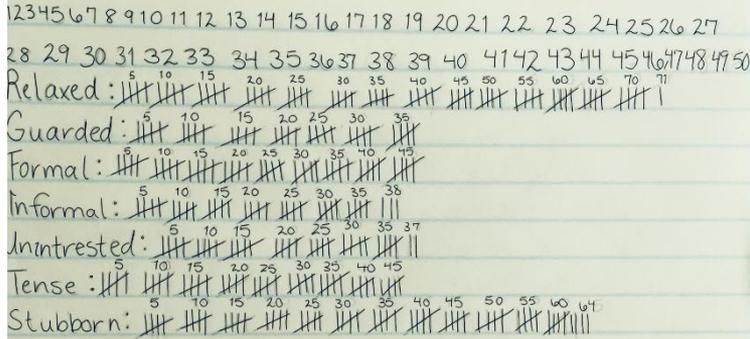
Meeren, H. K., van Heijnsbergen, C. C., & de Gelder, B. (2005). Rapid perceptual integration of facial expression and emotional body language. *Proceedings of the National Academy of Sciences*, *102*(45), 16518-16523.

Segal, J., Smith, M., Boose, G., & Jaffe, J. (2016). Nonverbal communication. *Help Guide*. URL: <https://www.helpguide.org/articles/relationships-communication/nonverbalcommunication.htm> [in English].

Willis, M. L., Palermo, R., & Burke, D. (2011). Judging approachability on the face of it: The influence of face and body expressions on the perception of approachability. *Emotion*, *11*(3), 514.

# Lab Journal

## Experiment Results



$$\begin{array}{r}
 71 \\
 +35 \\
 \hline
 106 \\
 -45 \\
 \hline
 151 \\
 +38 \\
 \hline
 189 \\
 +37 \\
 \hline
 226 \\
 +45 \\
 \hline
 271 \\
 +64 \\
 \hline
 335
 \end{array}$$

335 50 surveys

Circle which you are: Boy or Girl      Age: 9 Grade: 3rd

1. If you were lost who would be the first person you would ask for directions

○ ○ ○ ○

Why: Because the first one looks nice.

2. If you were struggling with homework, who would you ask for help?

○ ○ ○ ●

Why: He looks like he knows math.

Circle which you are: Boy or Girl

Age: 10 Grade: 4

1. If you were lost who would be the first person you would ask for directions



Why: because i am lost

2. If you were struggling with homework, who would you ask for help?



Why: because he is older and has been in class. i think.

Circle which you are: Boy or Girl

Age: 11 Grade: 6th

1. If you were lost who would be the first person you would ask for directions



Why:

He looks like he hunts hopefully not humans.

2. If you were struggling with homework, who would you ask for help?



Why:

she looks smart.