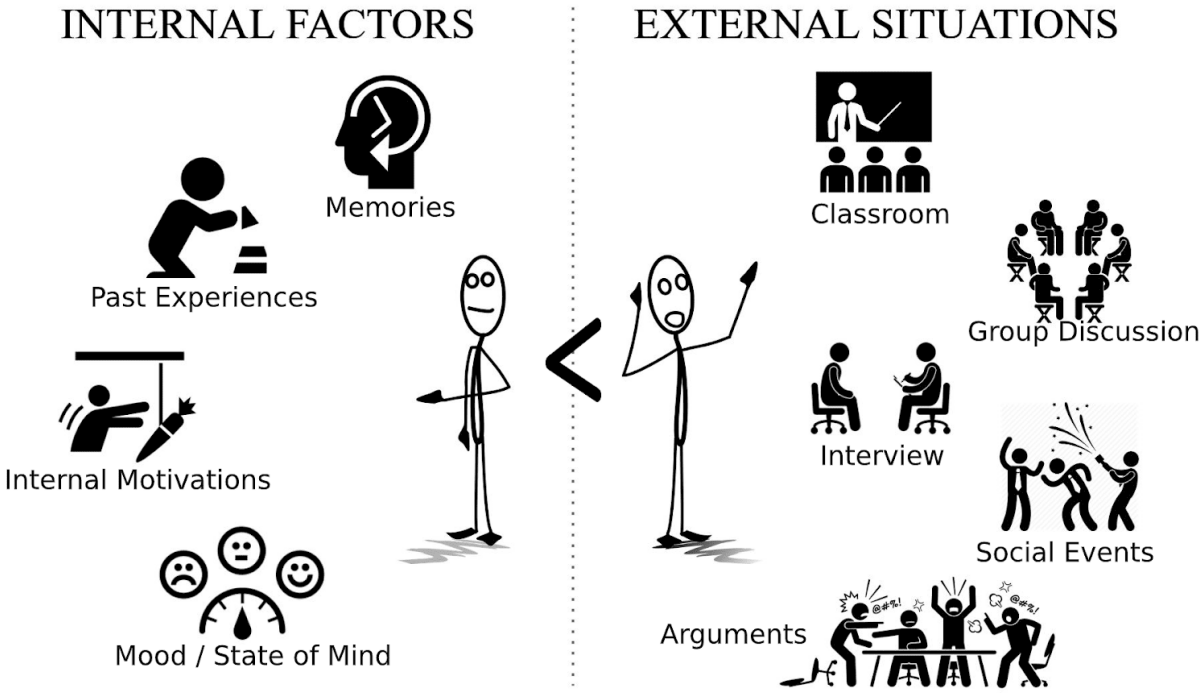
1. INTRODUCTION

The study of Social Psychology is the study of the interplay of various social factors, how they originate and their effect on a person's thoughts, feelings and behaviours. It tries to find the reasons for people's reaction in the presence of other people, their environment, and due to their own internal thoughts and feelings. A subset of that is Situational Psychology, that deals with effects that different situations can have on individual behaviour and reactions.

Popularly known as *Situationism*, situational psychology states that changes in human behavior are factors of the situation rather than the traits a person possesses. Behavior is believed to be influenced by external, situational factors rather than internal traits or motivations.[1] There have been many arguments between those that believe in trait theory (Hans Eysenck or Raymond B. Cattell) and those that believe in situationism, with enough evidence to substantiate the claims made by both the groups.

The main idea behind Situationism is that the reaction of an individual in response to any situation presented to that individual is not determined by his/her thoughts, feelings, dispositions, and past experiences and behaviors but rather on the situation itself. Situationism is also influenced by culture, in that the extent to which people believe that situations impact behaviors varies between cultures.[2]



Many studies have found evidence supporting situationism. One notable situationist study is Zimbardo's Stanford prison experiment.[3] In the study, volunteers were randomly assigned to be

either "guards" or "prisoners" in a mock prison, with Zimbardo himself serving as the superintendent. They quickly adapted to their situational roles, even so far as resolving to psychological (and at times, physical) torture to keep playing their role, even though they were not evil. The results and claims of the experiment have become a huge controversial topic, with many investigations being led that state that the experiment was conducted under questionable conditions and criticized it for unscientific methodology and possible fraud.

However, despite attempts to support or negate the influence of situations on individual behaviour, it has been observed that certain situations do affect the way we think and decide. The experiment we have conducted during this project is to test the hypothesis of situational variance and to check if there is any correlation with the change in response with respect to the change in severity (a metric we will define further in this report) of the situation. We have also extensively studied the variation in responses between male and female respondents. The observations and inferences obtained at the end of this project do point toward the fact that the severity of the situation does account for a fraction of variation observed in respondents answers.

2. EXPERIMENTAL DESIGN

Methodology:-

A survey (created in Google form, the number of responses were restricted to 1 per account) was circulated among students of IIT Madras. This survey had 4 situations and all of the situations were based on the different phases a student could possibly experience throughout his/her journey as a student in IIT Madras.

The 4 situations are related to :

1. Classroom Attendance	2. Group Discussion
3. Placement Interview	4. Disciplinary Action

As is evident, all these situations are relatable to the respondents (here, the students of IIT Madras). This was done so that the respondent could easily put himself/herself into the shoes of the person in question and answer the question accordingly.

A large differentiating factor among each of these situations is the severity associated with each situation. Think of “severity” in terms of impact or consequences each of the respondent’s decision could possibly cause. The survey is designed in such a way that as a respondent fills the form and progresses to the next situation, the severity of the situation increases accordingly. Each situation consists of a person with an alphabet as a name (from A to E). This was to ensure participants are not biased due to the names while answering.

[However, we have included a question for each situation which asks what might be the most appropriate name for the subject in question. We provided 2 Male Indian names and 2 Female Indian names, to gauge who the respondents would perceive the person in question to be.]

The type of questions asked for each situation provided could be broadly classified into the following 3 categories:-

Type of Question	Information Acquired
1. Situational Opinion	To what degree does the respondent think that the verdict or conclusion given in the situation is correct.
2. Contradicting Opinions	To what degree do the respondents choose a contradictory position with respect to their previous answers, in light of new evidence
3. Self-Swapping	To what degree would the respondent agree with the conclusion if they, or their friends, were affected

The questions are carefully designed so as to ensure that the introduction of a new element in each question is clearly visible.

Following are the 4 situations used in the survey:

Situation A [Classroom Attendance]**:**
This was the 12th time A had missed the morning slot. It had become a rather regular occurrence. Normally, this happens because of late-night team meetings. Recently, though, A had been watching YouTube videos the entire night.
A was a bright student and did amazingly well in quizzes.

However, due to low attendance, A was given a W (withdrawn) grade in one of the courses.

Situation B [Group Discussion]**:**
B was shortlisted for a placement GD (group discussion) but arrived 15 minutes late. The other candidates in the group and the company representatives were waiting for B. On arriving, B apologized profusely for being late.

The GD started, and B was able to make coherent points and valid arguments during the allotted time.

Situation C [Placement Interview]**:** C and D applied for a full-time position at company X. Both had a great academic profile. However, Company X was C's dream company. All of C's academic courses and project were aligned towards the work done at X. D had a good professional experience, given D's internships. D got selected for the job while C did not.	
Situation D (E?) [Disciplinary Action]**:** E had a great academic record, with E's transcript consisting of mostly S grades and occasional A grades. E got an admit to an Ivy League college, but in the final year, E was caught by vigilance in the possession of drugs in E's hostel room. If E is proven guilty, a negative decision by the disciplinary committee can withhold E's degree.	

Now that all the 4 situations were formulated, we provided severity scores to each situation. These scores were heuristically selected, based on the impact the situation might have on the person in question.

We assigned the Severity Index to be lie in the range [0,1], 0 being trivial (or of no consequence) and 1 being really serious (or of immense consequence).

Social Situations	Severity Index Score
Classroom Attendance	0.25
Group Discussion	0.50
Placement Interview	0.50
Disciplinary Action	0.75

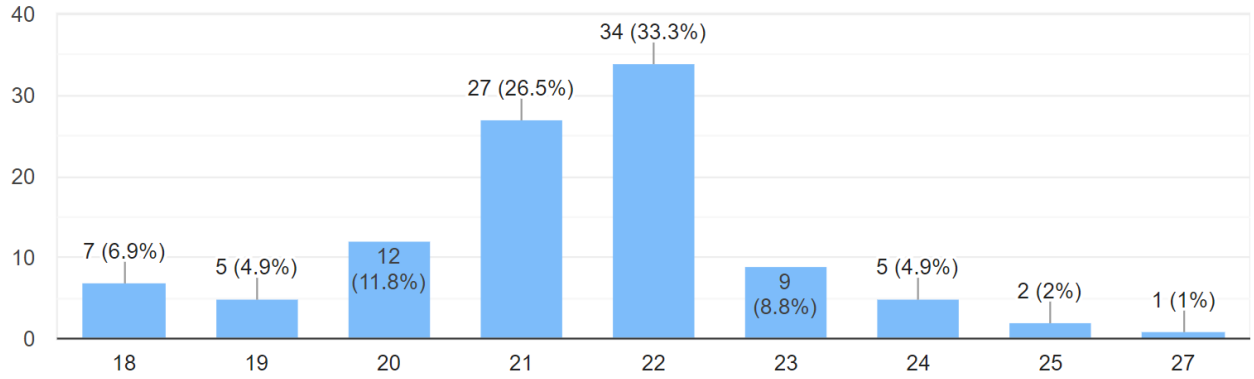
Severity Index Scoring of each situation:-

- We tried to assign the severity scores for each situation, which would help us in making a statistical comparison between situations.
- We considered classroom situation as not that severe and assigned a score of 0.25, while the GD and Interview situation had similar consequences so we assigned the same score of 0.5 to each of them
- We considered the situation of Disciplinary Action as severe and assigned it a score of 0.75
- All the scores assigned are purely based and aforementioned heuristics and group consensus among the contributors of this experimental study.

3. DATA ACQUISITION AND ANALYSIS

Demography of the data gathered:-

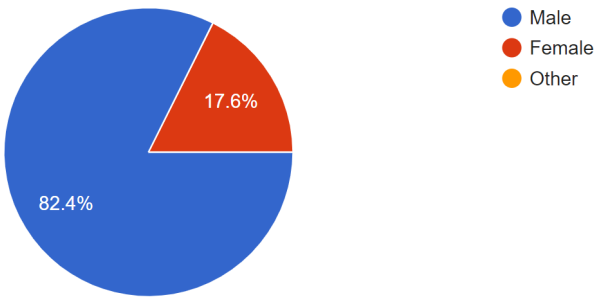
1. Distribution by Age



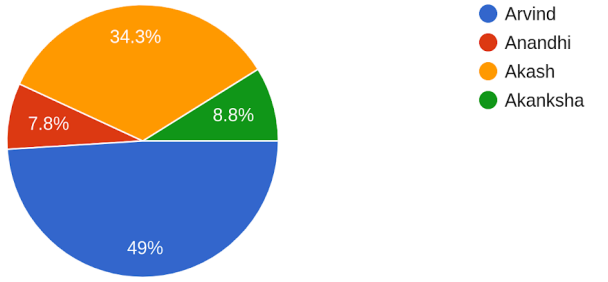
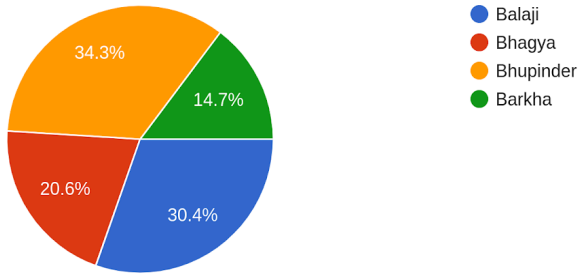
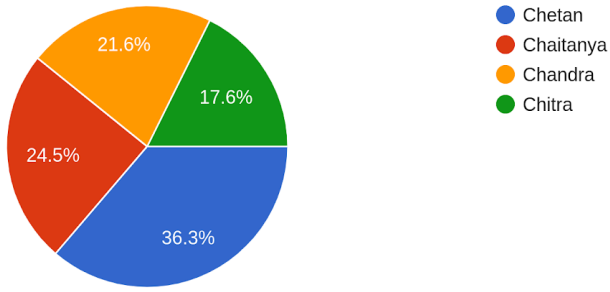
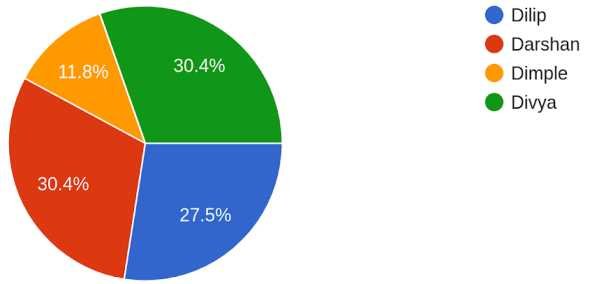
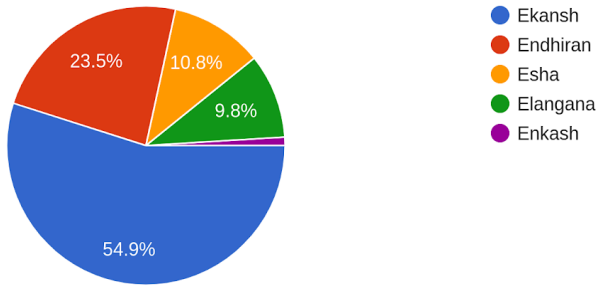
- Most respondents belonged to the age group of 21-22 years (Final year Dual/B.tech students)
- A total of 101 responses were obtained spanning a range between age 18 years to age 27 years
- All the respondents who filled out the survey were students from IIT Madras.

2. Distribution by Gender

- Among all the respondents of the survey, the ratio of Male Respondent to Female Respondents was 4.68:1 ~ 5:1
- The ratio of Male Students to Female Students at IIT Madras is also around 5:1
- The distribution in the survey can be considered to be approximately equal to the actual representation of IITM student population.



3. Perception of Names

Situation A	
Situation B	
Situation C	 
Situation D	 *[here, Enkash is the same as Ekansh, was a slight error in the naming at the beginning]

Observations Related to Perception through Names:

- The main intent of this question is to observe how different situations will create different perceptions of who the person is among the minds of respondents

- We tried to design the options as two north Indian and two south Indian names, with male and females for both categories (it was a bit tricky, as many names are common across regions)

- It was observed that few situations like missing classes (A), disciplinary committee (D), and non-punctual (A) respondents created the perception of the male candidate
- In the situation of missing classes made and non-punctual behaviour (A) created the perception of south Indian male among respondents (could be due to commonly known names)

- In the situation of disciplinary action (D), it was seen that the perception of north Indian male was created among the respondents for the subject in question

- In the situation of job opportunity where C and D were involved (C), respondents tried to associate it with equal opportunity case and created a perception of C as male and D as female.

For all the other questions, a Likert Scale[4] which goes from 1-7 was used.
Following are the associated meanings to each value on the scale

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree

- Now, the disadvantage of the 7-scale is that many respondents who are indecisive might put values around 4,5 and 6 (and most of the values were indeed concentrated around these values for many decisions)

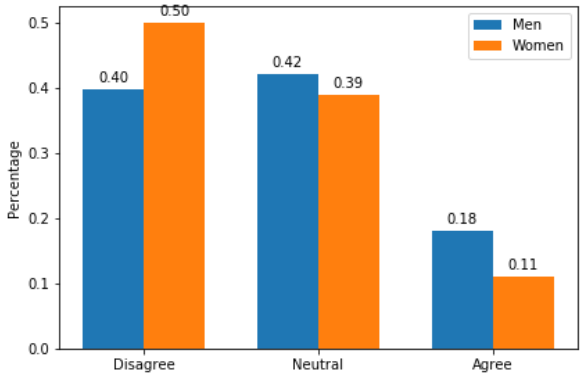
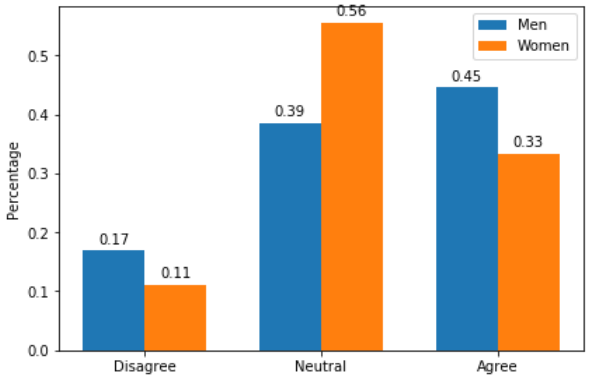
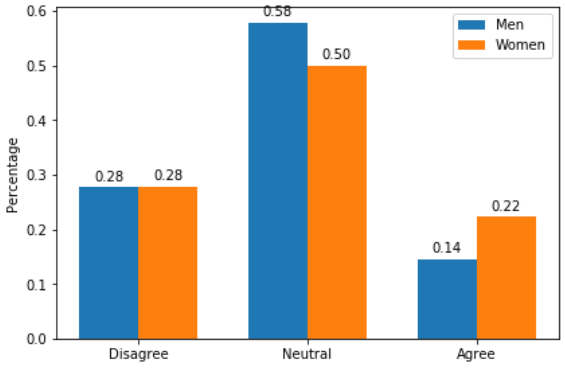
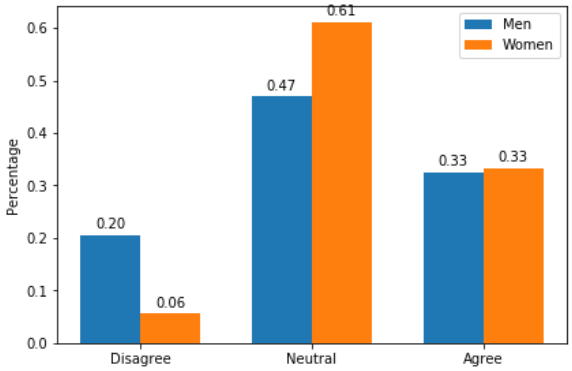
- The respondents who actually have a distinct opinion (or somewhat distinct) are the ones who select the corner values (1,2 or 6,7)

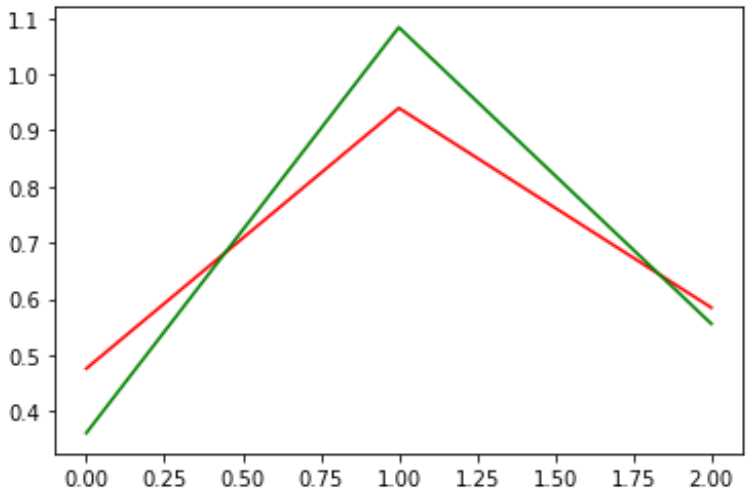
- Hence, we will club together {1,2} into a Disagree Basket, {6,7} into an Agree Basket and finally {4,5,6} into a neutral basket. This step is just for visualization and information analysis

- All the responses are then normalized (separately for boys and girls) and displayed as a double-bar graph, with one bar for males and another for females

- The responses for each situation are analysis for a similar type of questions, and the variations of male and female responses are seen with the variation in situational severity index

4. Situational Opinion

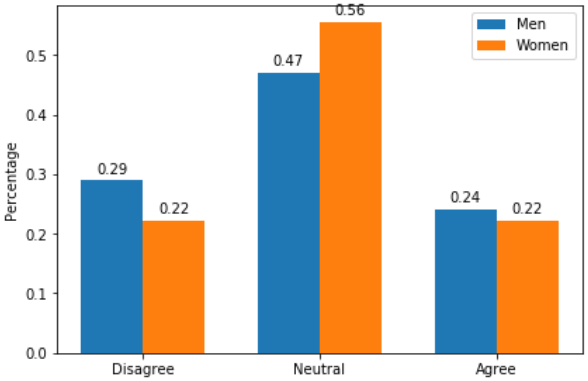
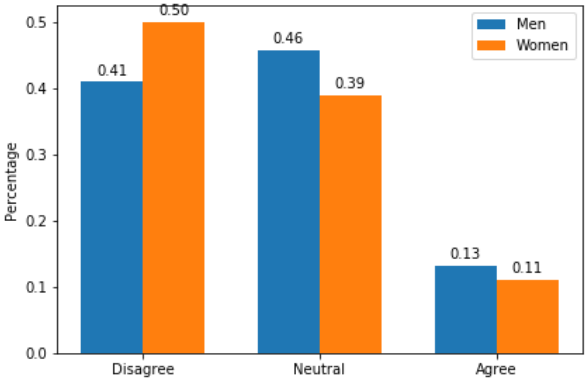
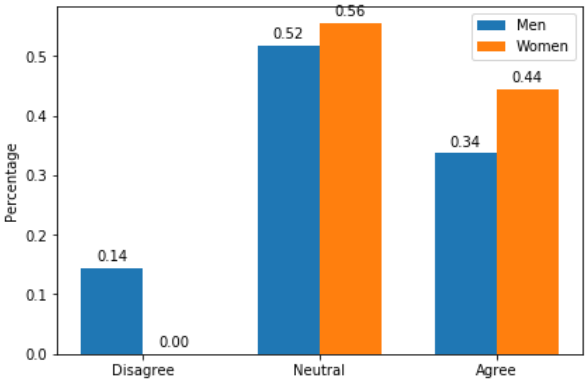
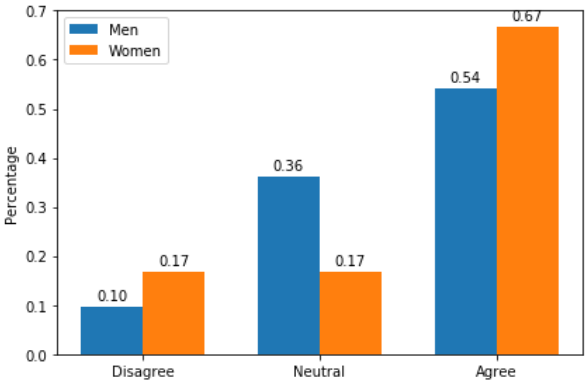
Situation A	
Situation B	
Situation C	
Situation D	

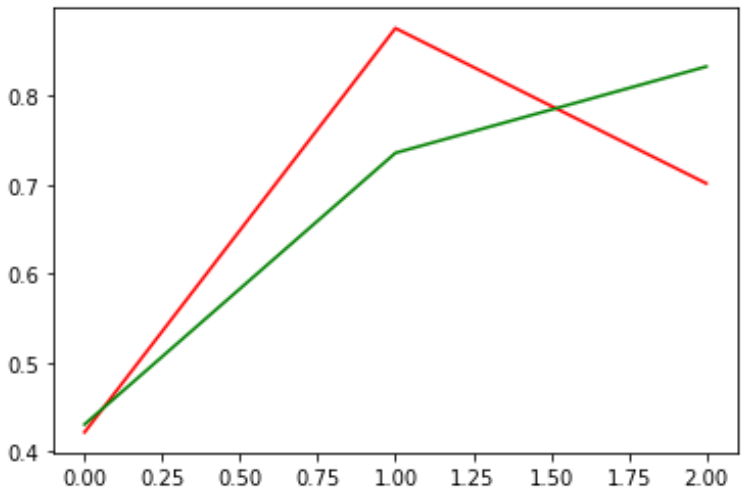
Variation of Situational Opinion with Situational Severity Index	 [Red - Male ; Green - Female]

Observations:

- The main intent of this question is to observe how respondents agree to the decision discussed in the situation
- We tried to analyse the degree of the agreeableness of respondents by using Likert scale index
- In situation A and B, more trait of agreeableness is observed among men, while in situation C and D more trait of agreeableness is observed among women
- On average women are less disagreeable (or more agreeable) as compared to men
- As the severity of the situation increases people tend to become more agreeable (or more empathetic towards the condition of the subject in the situation)
- According to severity index plot on an average people don't want to take any sides on this question

5. Contradicting Opinions

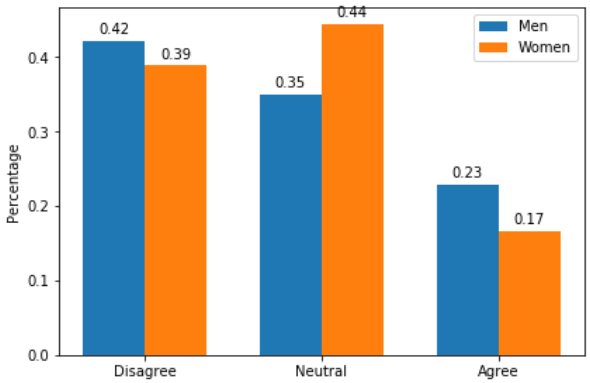
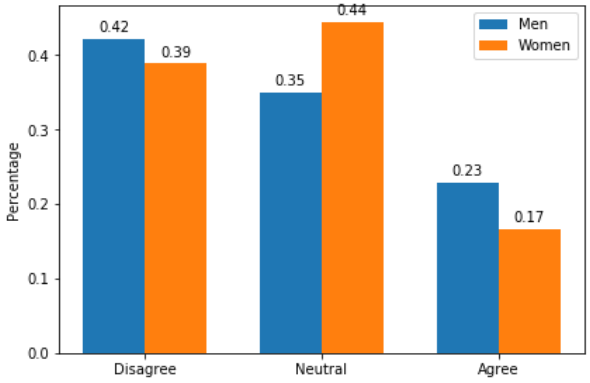
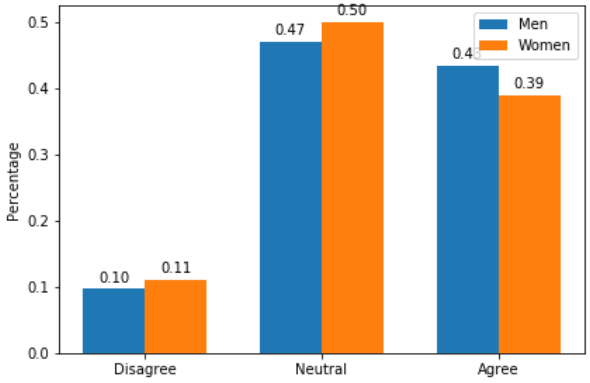
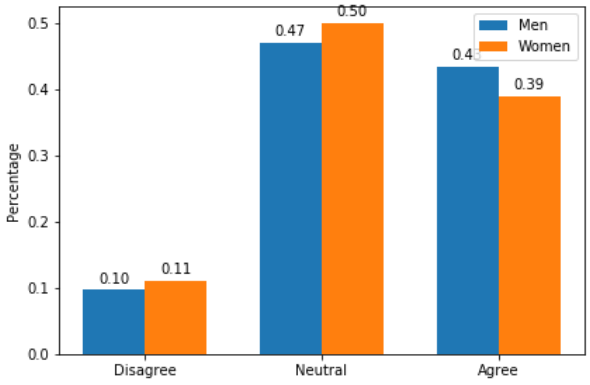
Situation A	
Situation B	
Situation C	
Situation D	

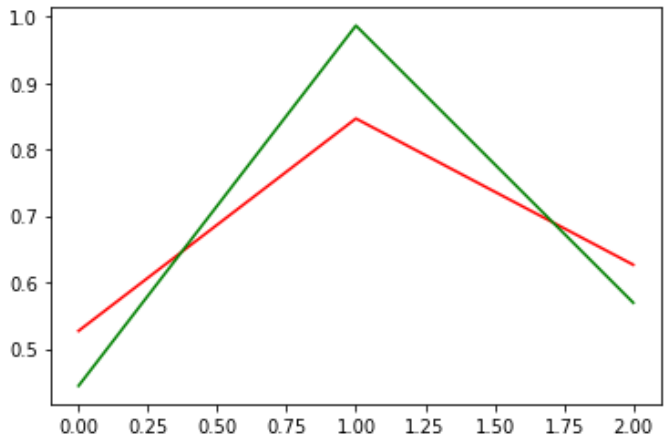
Variation of Contradicting Opinions with Situational Severity Index	 [Red - Male ; Green - Female]

Observations:

- The main intent of this question is to observe how respondents change their opinions (while contradicting their previous opinions) when conditioned to new evidence
- We tried to analyse the degree of the agreeableness of respondents by using Likert scale index
- In situation, A and B conditioning didn't help much but in situation C and D it did
- It was observed that female respondents switched their opinions more when compared to male (Agree: a shift of 45% of female responses, while a shift of only 15% of male responses was observed)
- As the severity of the situation increased the conditioning switched respondents opinion
- According to severity index plot on an average people try to agree to the situation when conditioned on new relevant evidence

6. Self-Swapping

Situation A	
Situation B	
Situation C	
Situation D	

Variation of Self-Swapping Option with Situational Severity Index	 [Red - Male ; Green - Female]

Observations:

- The main intent of this question is to observe how many respondents change their opinions when there are in decision-making positions
- We tried to analyse the degree of the agreeableness of respondents by using Likert scale index
- In severe situations, respondents tried to slide the issue and wish for the betterment of the victim, based on the credibility of the person
- According to severity index plot on an average people don't want to take any sides on this question

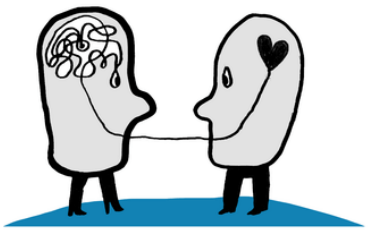
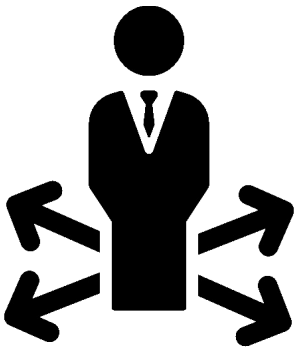
4. INFERENCES

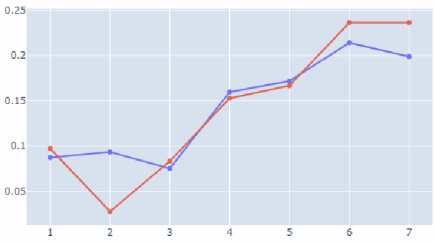
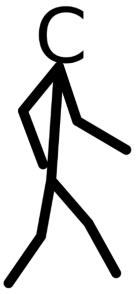
- The responses obtained from the 3 types of questions were able to ascertain the fact that the decision made by the respondents was affected by the reveal of new evidence or when the respondent had to imagine themselves at the receiving end (of any kind of loss) in most situations
- The situation did indeed affect the response and the associated degree of response, and there was a visible shift observed in responses when the situations were altered.
- This throws light on the fact that human behavior and actions are indeed dependant on the external situation to an extent, and cannot always depend on the internal thought, feelings and

motivations of a person

- However, it is good to note that there were marginal changes in responses. Moreover, this survey is not conducted first hand to see the respondents reactions, but the respondents themselves are telling us their reactions. Hence, there can be errors in the obtained data, and the data can be very sensitive to these changes due to the small sample set.

5. MISCELLANEOUS FINDINGS

Are people always empathetic? From the analysis, it was inferred that external factors affect the behaviour and decision making of an individual more than internal factors. But, to what extent it is true or whether it is true for empathy as well? To get an insight into whether empathy is affected by internal factors or external factors, in the survey, through Q16 and Q21, we asked the respondents to be either in favour or against the person in the given situation. The results came out to be pretty interesting. It was found that there was a strong correlation between the responses of Q16 and Q21, as calculated with the help of Cramer's V Statistical test for correlation(correlation coefficient = 0.89 out of 1), which implies "empathetic respondents" indicate responses favourable towards the person in question, regardless of the severity of the situation, hence inferring that **empathy, at least for the subset of respondents we have, is more dominated by internal factors.**	
Impact of Decision We wanted to know whether the impact of respondent's decision on the fate of the person in the situation, has an impact on the decision itself taken by the respondents. In the survey, through Q19 and Q21, we asked the respondents whether to punish person E, punishing will result in E not getting their degree certificate, hence hindering their future career. The only difference in Q19 and Q21 was that in Q21, the respondent's decision is the deciding vote on E's fate. There was a 40% increase among all the female respondents who strongly disagreed with punishment in Q19 to Q21. Correspondingly, a 10% increase for male respondents was observed, clearly implying that **respondents tend to favour the person in question when the impact of their decisions increases, so much so that it decides the fate of E.**	

Who is more agreeable? According to famous Clinical Psychologist from the University of Toronto, Dr Jordan Peterson, *"Near the extremes, all of the most agreeable people are women and all of the most disagreeable people are men"*. This was from one of his lectures available online. We wanted to test this hypothesis and know whether this holds true for our samples as well. In the survey, through Q5, Q10, Q16, Q21, we gave scenarios which might spark utilitarian (maximising happiness) mentality amongst the respondents, and the results were in line with what Dr Peterson stated. About 23% of female respondents have agreed in the aforementioned questions, which is about 8% more than male respondents, clearly inferencing that **in extreme cases, women tend to be more agreeable than men.**	 Percentage of Men (Blue) and of Women (Red) (on Y-Axis) vs Likert Scale [0-7 Scale] (on X-axis)
Who is C? In scenario 3, C and D are two candidates who applied for a job in company X. D got selected and C didn't, despite their entire academic career inclined towards the job profile of the company. We wanted to know, who is C, according to our survey respondents. The results showed that the majority of female respondents (about 56%) have chosen a female name for C and the majority of male respondents (about 65%) have chosen a male name for C. Hence, **respondents tended to associate C with their own gender.**	
Who Strongly Disagreed a lot? In the survey we conducted, about 17 questions out of total questions involved Likert scale. We wanted to know who, whether female respondents or male respondents have selected strongly disagree as their response. For 7 out of 17 questions which involve Likert scale, not even a single female respondent has strongly disagreed. Whereas, for all the 17 questions, there were always male respondents who have strongly disagreed.	

6. REFERENCES

1. Situationism [https://en.wikipedia.org/wiki/Situationism_(psychology)]
2. Cultural Similarities and Differences in Social Inference: Evidence from Behavioral Predictions and Lay Theories of Behavior [https://journals.sagepub.com/doi/10.1177/0146167202281010]
3. Stanford Prison Experiment [https://en.wikipedia.org/wiki/Stanford_prison_experiment]
4. Likert Scale: Explored and Explained [https://pdfs.semanticscholar.org/38a7/5a7cc366dd963113c6923ac4a73c3286ab22.pdf]