Research Paper

Impact of Perceived Similarity on Likability

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ABSTRACT

The research aims to understand to what extent perceived similarity affects likability or positive perception of a person. An experiment was conducted on twelve people in the age group of 18-24. A null hypothesis stating, 'Perceived Similarity Affects Likeability', was formulated. The participants were divided into two groups and one group was led to believe that other members among the group present are similar to them, whereas the other group wasn't told anything. Following this interaction, both the groups were clubbed and asked to interact with each other. A score sheet was given to every participant at the end to rate all the people on the parameters of likability and compatibility. Statistical analysis was done on the data generated and it was found that the difference between in-group and general scores of the experimental group is 2.274, which was considerably higher than the difference found in the scores of the control group. Thus, Null hypothesis was retained, as it was seen that that perceived similarity does play some role in likeability.

Keywords: *Perceived Similarity, Likability, Experimental Research, Social Psychology*

Т he study on **'The Impact of Perceived Similarity and Likability'** discusses how a person's perception of another person being similar to them (in this case, having similar tastes and general attitudes) affects their sense of regard for the other person and that of fitting together or getting along with them.

The basic aim of our research is to determine to what extent perceived similarity affects the likeability or positive perception of a person. Our operational definition of likeability for the conduction of this experiment involves how comfortable one feels or how easy it is to interact with the participant, which in turn translates to rating them on a scale of 1-10. One group is led to believe that two other members among the people present are similar to them, whereas the other group isn't told anything about their being similar or dissimilar. The following in-group interaction among both groups either builds or reduces their sense of similarity and brotherhood. Later, they are given an opportunity to interact and get to know everyone present. This can either confirm or break the previous perception of similarity and the likeability that comes with it.

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Here, our motive was to investigate the phenomena which is similar to what is often referred to as "*birds of a feather flock together*", or to see if we really find it comforting to be surrounded by people who we believe are similar to us, or hold similar views, as many earlier researches have suggested. However, in this case the "similar" people are not really similar to us. If so, is this illusion broken after interacting with others who might be more similar to us in real life? If indeed true, this phenomenon can have lasting impacts on society as a whole as can be seen through instances of communalism and casteism, wherein people perceived to be dissimilar can be excluded, ostracized, and even victimised at worst.

Many researches have been done on perceived similarity and the role it plays in a societal structure. One such study is in terms of perceived similarity and liking in a romantic setting. This was first in its kind to examine the effects of actual and perceived similarity simultaneously during a face-to-face initial romantic encounter. Participants attended a speed-dating event interacted with 12 members of the opposite sex for 4 min each. In a speed dating session, participants interacted with one another in a sequence of short, one-on-one dates. Speed dating shares many similarities with other natural settings in which individuals meet and evaluate potential romantic partners (Eastwick & Finkel, 2008; Finkel, Eastwick, & Matthews, 2007). 187 participants were taken for this study. Out of them, 93 were females. The participants, on voluntarily basis, participated in one of the eight speed dating sessions of meet and "match" with opposite sex partners. They were made to take a 30-min questionnaire approximately 11 days before their speed dating session. The questionnaire was used to assess their person-level traits and demographics. Actual and Perceived similarity for each pair were calculated from questionnaire responses assessed before the event and after each date. The effect of perceived similarity on participants' reports of romantic liking for each other was examined. It was found out that there was a strong positive association between the two variables, B = 0.75 t (1985) = 54.21 p < .001, demonstrating that participants who generally perceived similarity with their speed dating partners reported greater romantic liking for them as well. This literature is relevant for our research, since it attempts to provide key insight into how perceived similarity does have effects on liking in a romantic setting. We wish to study the effects of perceived similarity like done in this research but we would like to go beyond the romantic setting and study the effects of perceived similarity in a wider social context.

In a similar research, "The Liking-Similarity Effect: Perceptions of Similarity as a Function of Liking", Brian Collisson and Jennifer Howell attempted to infer the liking-similarity effect with addressing the limitations posed by the earlier studies and extending the research to understand the role of individual differences as well. The premise of this study was its relation to the balance theory, which explains the need for people to keep their cognitions in balance by regulating their attitudes and adjusting perception as 'similar' or 'dissimilar'. The research included two studies in an attempt to provide for the limitations of the previous studies. In first study, 99 participants were asked about their political views, personality traits, adjustment styles etc. They were then depicted interviews of a target person whose non-verbal behavior was depicted as likeable or unlikeable, and they were asked to make inferences about how they think the target person would answer questions of political views, traits etc. which they were asked before. Profile correlation analyses were applied to analyze their responses through three distinctive profiles. Results revealed that participants inferred that likeable target was more similar to themselves (M = 9.6, SD =1.2) and dislikeable target comparatively dissimilar (M = 3.7 SD = 1.9). The second study in the research was similar to this one for liking similarity effects. In addition, it attempted to correlate individual differences of self-concept clarity, preference for consistency, self-esteem to the effect.

Likability and dislike ability was rated through political views, traits, attachment styles and behavioral intentions. In a counterbalanced order, participants attempted to complete measures of their preference of consistency, self-esteem and self-concept clarity. Results were consistent with the first study. It depicted that people rated likable others more similar to themselves than they rated dislikable others. Furthermore, testing the individual differences hypothesis suggested that only self-concept clarity had significant correlations with the liking similarity effect. Self-esteem and preference for consistency did not show evidence of its impact on the same. The research was an attempt to understand the impact of perceived similarity on likeability and provide for evidence for balance theory and its role in predicting likeability. Likeability and similarity has been a multi directional causal mechanism. This research was an attempt to detangle this mechanism by understanding one directional impact of perceived similarity by individuals.

In another study titled "Is actual similarity necessary for attraction?" a meta-analysis of actual and perceived similarity", the author (Montoya et al.) attempted to conduct an overarching analysis of 313 studies concerning the correlation between actual or perceived similarity and attraction. Their motive to conduct the study was primarily to test the generally accepted knowledge that people tend to view those similar to themselves more favourably. The huge variety of factors involved in such studies made the results hard to generalise. For the purpose of the study the defined similarity solely in terms of that of attitude and personality and likeability was described as "interpersonal attraction". Out of the total sample size of 35,747 participants, only about one-eighth were from studies concerning perceived similarity and the rest were about actual similarity. Individually, the studies had sample sizes of 10-614. The analysis skillfully differentiated between Lab and Field studies. This was integral because lab studies could only measure personal interactions that lasted a short span of time, as opposed to field studies that dealt with longer terms of interaction. As a means of distinction, the time of interaction of all the studies was divided into three categories- No interaction (as in only description of the person and an image was given), Short interaction (a few minutes to hours), and Long term (existing relationships). The resulting statistical analysis was done via Random-effects model. The result showed that actual similarity played a key role in no-interaction and short-interaction studies. However, there was a significant reduction in the effect size of actual similarity beyond no-interaction studies, and the effect of actual similarity in existing relationships was not significant. In contrast, perceived similarity predicted attraction in all three scenarios, i.e. no-interaction, short-interaction, and existing relationship studies., and was especially significant in case of the latter. This provides concrete evidence that perceived similarity appears to play a key role in attractiveness, which is the crux of our research as well. Since our study was a combination of both lab and field aspects, we attempted to use our insights from this study to understand our findings better.

METHODOLOGY
Sample
The participants consisted of 12 individuals, in the age group 18-25 who did not know each other in any way. Purposive Sampling was used to select these participants, so that they have minimal prior experience and are not of psychology background in case they have prior knowledge on how experiments are conducted and interpreted. They were randomly divided into 4 groups of three members each. Out of these two were experimental groups and two were controlled groups.

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Participant	Age	Gender
Participant A	20	Male
Participant B	23	Female
Participant C	18	Female
Participant D	23	Male
Participant E	18	Female
Participant F	23	Female
Participant G	21	Female
Participant H	19	Female
Participant I	20	Female
Participant J	22	Female
Participant K	19	Male
Participant L	24	Female

Hypothesis
Null Hypothesis: Perceived similarity affects likability.
Alternative Hypothesis: Perceived similarity does not affect likability.

Variables
Independent variable: Perceived similarity Perceived similarity within participants is manipulated by the experimenter in experimental and control groups. In the experimental group, participants were made to believe that they are similar to the members of their group which is actually randomly made (deception) while the control group was not told anything.

Dependent variable: Likability Participants were asked to score all other participants on the parameters of likability and compatibility, after which the averages of their scores were calculated.

Confounding variables:
- Individual differences- Personality and individual differences among the participants including Introversion, extroversion, social boldness, openness, reasoning, sensitivity, dominance etc. might affect the experiment. For example, an outspoken person might be able to project their personality better to others and thus appear friendlier than a shy person. We tried to minimize the effect of individual differences on the experiment by building interpersonal connections through conversation and rapport formation done at multiple levels in the experiment.
- Group differences- In addition to this, how one group's conversation differed from the next as a result of the individual personality differences, which actually can lead to differences among the groups is an extraneous variable. This variable was tried to be controlled by administering similar facilitation to all groups by the experimenter. The facilitators were pre-instructed of the idea of including similar nonverbal gestures to make participants comfortable during rapport formation.
- Demand characteristics- There is a fair chance that participants could have formed an interpretation about the experiment's purpose and would have modified their responses and behaviour to fit or stand out from that interpretation. Deliberately choosing participants that are from non-psychology backgrounds and have not participated in any experimental tests or research helped control this factor to a great extent.

- Perception of the group and Skewed Time Distribution- In the second phase of the experiment, when all of the 12 participants were brought together and made to interact and perform the group activity collectively, participants can perceive themselves to be still a part of the in-group rather than the entire group. The confounding factor here is their perception of themselves to be a representative of the in-group instead of the collective group. This is emphasized by the fact that the participants spend double the total time (throughout the experiment) with their in-group members as compared to the other participants. This can result in them getting to know those two people on a deeper level than the rest of the participants in the study. Efforts were made to control this by dividing both the groups, i.e., control and experiment into groups such that group differences would not show for only one of them, thus, compromising the difference in scores.

- Facilitation by experimenter in different groups might be different- As the facilitation is done by separate facilitators in different groups, this could be one of the confounding variables. It was made sure that facilitators are given same instructions and topics so that conversations go about in the same direction by including non-verbal gestures in the conversation.

Instruments

The following materials were used during the experiment:

1. **Box of chits with names of all participants:** method was used to ensure random selection of participants for distribution to 4 in-groups (2 experimental groups consisting of 3 participants each and similarly 2 control groups consisting of 3 participants each).

2. **Questionnaire** consisting of 12 general questions about likes and dislikes of the participants – This was a part of deception. The questionnaire was administered just to the experimental group to make them believe that the in-grouping was done on the basis of their similarity to other members while actually it was randomly conducted. This was done to minimize the chance of demand characteristics among the participants.

3. **Cue cards** for the experimenters facilitating the subjects to ensure similar Facilitation-This was done so that all 4 facilitators are directing the discussion in a similar manner and are giving each participant fair opportunity to engage in the conversation. The rapport formation is done very precisely in a semi-structured manner through these cue cards.

4. **Score sheet** - This was administered to measure our dependent variable. The participants were not asked to write their names to maintain their privacy but were identified later by the alphabets on the top of the sheets that were provided to them.

5. **Feedback form** - Feedback forms were given to ensure that whether the participant was comfortable or not during the experiment and what improvements needed to be done for future conduction of the experiment.

Setting

The experiment was conducted in two separate rooms, CR1 and CR2. The rooms were big enough to accommodate 12 people. Both the rooms have single flap desk chairs, a whiteboard and a table. For rapport formation in the beginning of the experiment, 6 chairs were arranged in a semi-circle in each room on which participants were comfortably seated so that each one of them could listen to each other. The 2 experimenters were standing in the middle of the semi-circle in both the rooms at this time. One of the experimenters was communicating between the rooms to ensure that discussion is going similar and will end at

the same time in both the rooms. She also had an alarm clock to report time. Then in the same setting, participants of the experimental group were administered questionnaires. Enough distance was kept between the chairs to make participants feel comfortable. For the first phase of experiment, arrangement of chairs was redesigned such that there are two groups of three participants each in both rooms. One facilitator was standing at some distance from all the 4 in-groups formed (Based on random chit method). For the second phase of the experiment, 12 chairs of room CR1 were redesigned in a semicircular manner and the subjects were seated comfortably. Then final discussion was conducted with all the experimenters standing by the table. In the same setting they were asked to come by the side table, where no other participant or experimenter was standing, and were asked to give scores on the score sheets. For the third phase of the experiment, the subjects were debriefed 4 at a time by one experimenter each in one of the rooms, while other participants were seated in another room.

Procedure

The experiment consisted of 12 participants who were divided into 4 groups of three members each. This was done in advance through random sampling wherein a box with chits of paper containing names of all participants was placed and chits were withdrawn at random to form the four groups. Two groups each were allotted as Experimental and Control groups. The members of the experimental groups were administered a small Questionnaire(attached) containing 12 general questions about their likes and dislikes and common attitudes, etc. (such as, "Are you an animal Lover?"). All the participants were summoned at a specific time during morning hours when it was convenient for all. Upon reaching the control groups and the experiment groups were taken into two different rooms where they were seated comfortably. Their Right to Withdraw at any point or time was emphasised. Both rooms had two experimenters present in each. Next, an introduction session took place in both the rooms, where each member spoke about themselves and the experimenters facilitated this. This establishes rapport between the participants and the experimenter. Until this point, all participants are made to interact naturally without imposing any group division. After this introductory session, began the –

First Phase of the experiment: In the room where the control groups were seated, the six participants were divided into two groups of three persons each, as was decided before. They are not told anything about why they are divided, or on what basis. Next the two groups are made to interact among themselves with one experimenter acting as a facilitator for each group. The topic set for discussion among the members of both the groups was "Childhood games and TV shows that one no longer hears about". The topic was chosen such that given the similar age group of the participants, everyone could relate to and feel nostalgic about. Soon, a vibrant chatter develops in both the groups. This is continued for about 15-20 minutes.

In the room where the experimental groups were seated, the two experimenters announced that as per the scoring of the questionnaire administered to the participants earlier, they have been divided into two groups based on similarity. The participants are then randomly divided into two groups as decided before, but are deceived to believe that the distribution is according to similarity in views and attitudes. Next, the same interactive session is carried out as was done with the two control groups.

Second Phase of the Experiment: After the in-group interaction in the four groups, all of the 12 participants are brought together in the same room and arranged in a large circle.

Introductions are done once again, with the facilitation of the experimenters. Then, a group activity ensuring participation from all participants is undertaken. In a clockwise direction, one by one, each participant is asked to put forward any question, no matter how simple or complex and the rest of the participants are asked to answer it to any extent they feel comfortable. After this was done the participants were asked to come forward, one by one, to a table kept in the corner of the room where a pen and Scoring Sheet (attached) was kept. On this, they were asked to score each person on the basis of how much they liked them, and how compatible with them they think they are. This is done in total privacy and the participants are not asked to write their names, but were rather identified by an alphabet. They were assured that the other participants or anyone else won't be informed about their responses.

Third phase of the Experiment: After all the participants are done with their scoring, they were thoroughly debriefed and informed fully about the aims and hidden aspects of the study. Any confusion about the intentions of the experimenters is cleared and any questions that they had were answered. They were also informed about the irrelevance of the questionnaire and the group divisions. They were reassured about the confidentiality of the responses. Those who were interested in the findings of the study were informed that they would be mailed the end report as soon as it was completed. Finally, a Feedback Form (attached)containing 3 questions was handed out. Participants were asked to give their honest opinions about the study while maintaining full anonymity. The whole process of the experiment was completed in about an hour.

RESULTS

All the participants were asked to score all other participants after they interacted with each other on the basis of how much they enjoyed interacting with them and how much compatible they think the rest of the participants are. They were made to score on two scales, Likability and Compatibility.

Table No. 1 Scoring done by Participants A, B, C and D, E, F for other participants on Likability (Li) And Compatibility (Co) on a scale of 1-10.

Participant A			Participant B			Participant C			Participant D			Participant E			Participant F		
Li		Co	L		C	Li		Co	Li		Co	Li		Co	Li		Co
7	B	8	4	A	5	6	A	5.5	8	A	8	9	A	10	6	A	7
4	C	3	5	C	5	5	B	5	5	B	4	5	B	7	5	B	5
6	D	5	5	D	3	7	D	8	7	C	6	6	C	5	5	C	4
5	E	5	6	E	7	3	E	2	2	E	4	4	D	3	4	D	5
8	F	8	7.5	F	7	7	F	6	3	F	5	7	F	8	6.5	E	7
3	G	3	4	G	3	2	G	3	3	G	6	6	G	4	4	G	2
2	H	1	7	H	7	6	H	7	4	H	5	5	H	5	4	H	2
5	I	4	3	I	4	3	I	2	7	I	7	3	I	2	3	I	2
6	J	7	7	J	5	3	J	2.5	4	J	3	7	J	8	6	J	4
6	K	8	5.5	K	3	7	K	6	6	K	4	4	K	4	5	K	3
7	L	6	2	L	1	7	L	1	6	L	5	3	L	2	4	L	1

☐ First Controlled group

☐ Second Controlled group

Table No. 2 Scoring done by Participants G, H, I and J, K, L for other participants on Likability (Li) And Compatibility (Co) on a scale of 1-10.

Participant G			Participant H			Participant I			Participant J			Participant K			Participant L		
Li		Co	Li		Co	Li	R	Co	Li		Co	Li		Co	Li		Co
4	A	5	5	A	5	6	A	4	5	A	4	5	A	4	6	A	6
6	B	8	6	B	7	4	B	3	4	B	4	3	B	4	7	B	7
6	C	7	4	C	3	5	C	5	7	C	4	2	C	5	5	C	6
5	D	5	5	D	6	4	D	5	6	D	3	5	D	5	4	D	4
7	E	6	7	E	7	4	E	4	5	E	4	6	E	3	6	E	4
9	F	9	6	F	5	5	F	6	5	F	5	5	F	3	6	F	3
7	H	7	6	G	7	9	G	8	4	G	5	5	G	5	5	J	2
8	I	6	8	I	6	8	H	8	6	H	5	6	H	3	4	H	1
2	J	2	5	J	6	6	J	6	7	I	6	5	I	3	3	I	1
6	K	5	6	K	5	7	K	6	6	K	8	6	J	7	5	J	4
7	L	6	7	L	7	5	L	4	7	L	8	8	L	8	6	K	4

☐ First Experimental group

☐ Second Experimental group

Table No. 3 Control Group Average scores

Participant	Average Total Score	Average Score for In-group Member
A	5.31	5.124
B	4.96	6.625
C	4.54	4.25
D	4.46	4
E	5.23	4.87
F	5.35	5.75

Table No. 4 Experiment Group Average scores

Participant	Average Total Score	Average Score for In-group Member
G	4.21	7.5
H	4.58	7.5
I	4.08	7
J	4.64	5.5
K	5.56	6
L	4.54	7.75

Final Average score for Control Group (Total) is 4.975
Final Average score for Control Group (In-group) is 5.10
Final Average score for Experimental Group (Total) is 4.601
Final Average score for Experimental Group (In-group) is 6.875

DISCUSSION

The applicability of this study ranges from cognitive level to the social level. At the cognitive level, this study can be applied to understand how our thought processes, behaviour and the tendency to like or dislike somebody is based on how similar or dissimilar to ourselves we assume them to be. Once we know how our similarity affects our likeability or our behaviour towards others, we can try to remove our biases or at least be conscious of them. At the social level, this study may be used to determine how we develop stereotypes and prejudices about certain people in a society. If our null hypothesis holds true for the larger sample, it will imply that what views we hold about certain sections of the society is

determined by how similar/dissimilar we think ourselves to the ideas and thought processes of that group. In other words, our prejudices are determined by whether we perceive that group to be in-group or out-group. Generally, among these groups, some are more privileged and some unprivileged, and they hold lopsided views about one another. This translates into discrimination.

The extent to which the conclusions of our research can be generalized to the settings and situations in which the phenomenon that we are studying would naturally occur is limited. There would be many other factors which would affect the study and can alter findings in a naturalistic situation (Confounding Variables, as listed in the beginning). This experiment was conducted in a college setting, among college students, which is a very different situation from what may exist in real life for interactions to take place. As the sample size was also very small, the final results were interpreted by calculating the average of the scores given by participants on score sheets. There is a possibility that the result is influenced by the conversion of scores into mean scores because the average scores are highly affected by the extreme scores (3 or 9, for instance) and it completely alters the findings of the study. In other words, one extreme score can shift distribution to maximum or minimum value. In addition to this, the sample size is not big enough to use statistical methods to predict whether there is a significant difference or not in control and experimental groups, which would make it practically applicable.

CONCLUSION

The difference between in group and general scores of the Control group is 0.125, which shows that there is a very slightly higher preference for one's in-group members over the other people present. Since this group wasn't suggesting anything regarding similarity, this could be a coincidence varying with the choice of participants present or it could be an effect of the larger time spent on the whole with one's group members.

The difference between the general and in-group scores of the Experiment group is 2.274, which is considerably higher than the difference found in the scores of the control group. Since the difference between the average scores of the two groups is about 18 times higher for the experiment group, it can be said with some confidence that perceived similarity does play some role in likeability. Thus, Null hypothesis is retained and Alternative hypothesis is rejected.

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Conflict of Interest
The author(s) declared no conflict of interest.