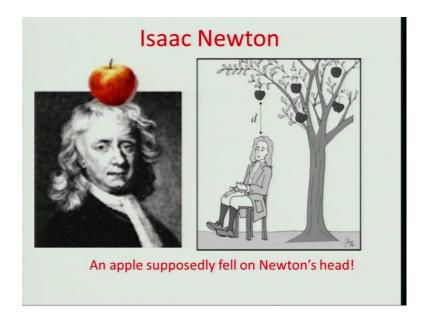
Selected Topics in Psychology Prof. Ramadhar Singh Department of Humanities and Social Sciences Indian Institute of Technology, Kanpur

Lecture - 10 How Do Similar Attitudes Determine Attraction?

I am just going to share my experience or knowledge of what we called how similar attitudes determine attraction. Let us see, why I became interested in it. So, in my high school, I became little curious about things. So, that curiosity, I am sharing with you, at how, I search for meaning it.

(Refer Slide Time: 00:39)



And that first curiosity was this in everyday science. That Newton's law apple falling down. And this experience, led Newton to explore or explain, what happens.

(Refer Slide Time: 00:53)



And he came with this, that law of universal gravitation. So, what this law is, like from everyday science, we are taking from physics not from psychology. Any two objects in the universe exert gravitational attraction and each other. Now, this is happening in the matter.

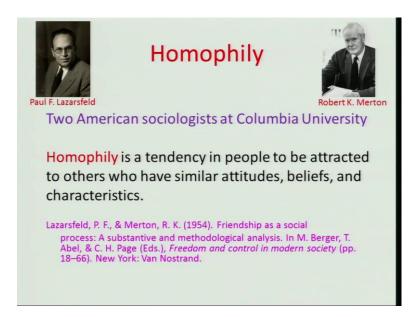
(Refer Slide Time: 01:15)



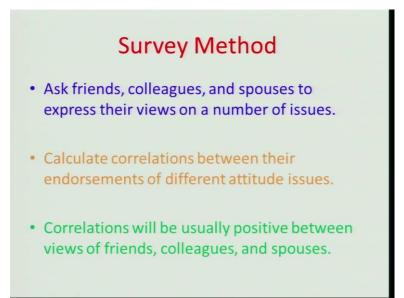
Then, in social study, I read something like this, in high school. Aristotle says, birds of a feather flock together. And apparently, you can see pictures of so many dogs here, not

birds, where it says that, nothing replaces having a friend. So, when we have friend, there must be some kind force of attraction. Let us go back to the literature.

(Refer Slide Time: 01:40)

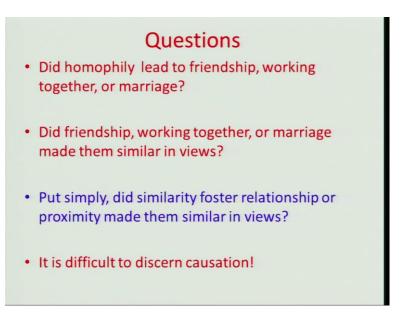


So, when we go to the sociology, not in psychology, sociology, two famous psychologists, Paul F. Lazarsfeld and Robert Merton. Both of Colombia University, they quant this term called Homophily. By which, we mean that, we all have a tendency to be attracted to others, who have similar attitudes, values, beliefs, opinions. So, you see the background, Newton talking about gravitational force. Sociologist, talking about, how people become friends.



What was their method, typically for sociologist; they would ask people, friends, colleagues, wives, so on and so forth. What are your views about different things? ((Refer Time: 02:30)) money, institution, society. And when, you would correlate the two opinions, usually, the correlation would be positive and high. So, on that basis, one would say that, friends, colleagues, ((Refer Time: 02:45)) husband and wife, they are similar. You see that, traditional sociological method or approach.

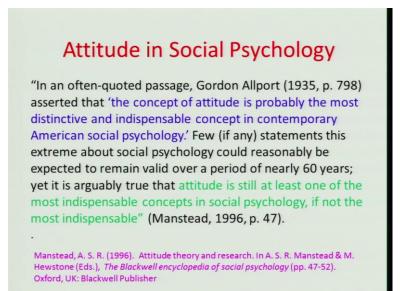
(Refer Slide Time: 02:52)



Here are some problems. If we do research like this and we do most of the time. Did Homophily lead to friendship, working together or marriage. Or did friendship working together or marriage made them similar in views. If two strangers get married, live together, they can become similar. That is also possibility, which is not that similarity brought together, living together, made them similar. This is the issue, we have here.

So, for Jision could not be known, what he got and what is the effect. So, it was the big problem for sociologist, to determine, which one he's got and which one is effect. So, we have philosopher, we have sociologist and now psychologists are coming. So, let us see, what psychologists lead. So, the lesson, we are learning from philosophy and sociology; that attitude similarity leads to attraction. And to us ((Refer Time: 03:57)) psychologist, we have a challenge, how do we test this hypothesis.

(Refer Slide Time: 04:06)



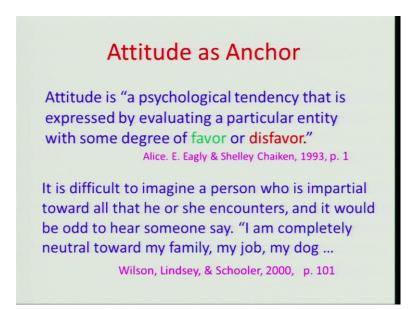
Let us back to the history. Now, for this, let us look at this quotation, Allport in 1935, he said, the concept of attitude is probably, the most distinctive and indispensable concept in contemporary American social psychology. In 1996 quotation, I have brought from Manstead, who wrote in Blackwell encyclopedia of psychology. In an often quoted passage, Gordon Allport asserted that, the concept of attitude to the probably, the most distinctive and indispensable concept in contemporary American social psychology.

Few, if any statements, this extreme about social psychology, could reasonably be expected to remain valid over a period of nearly 60 years, because he is talking about 96.

Yet, it is arguably true, that attitude just still at least one of the most indispensable concepts in social psychology, if not the most indispensable one. So, apparently, philosophers, sociologist talked about attitude. And attitude is, so distinctive constructing social psychology.

So, we have to see, how attitude similarity leads to attraction. And this is the theme of the first lecture, I am dealing with it.

(Refer Slide Time: 05:38)



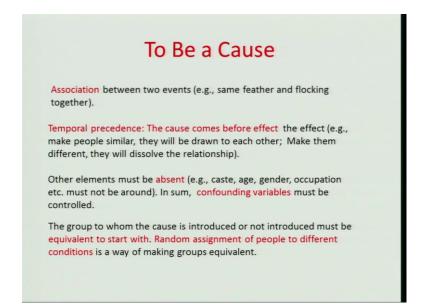
So, let us come back, what is our attitude, how do we conceptualize attitude. And here, I would liked to present two quotations, which I liked very much. One, this is taken from page one of a book on attitude. Look at it, what definition, he said, attitude is a psychological tendency. That is expressed by evaluating a particular entity with some degree of favor or disfavor.

This is the first sentence of this book, from which I have taken this. That means, we have a tendency to favor some objects. This favor some objects, the moment, we are doing it we are expressing our attitudes. This is the way. Now, if it is so, then this is taken from saik review 2000. Please, pay attention to this quotation. It is difficult to imagine a person, who is impartial toward all that, he or she encounters.

And it would be odd to hear someone say, I am completely natural toward my family, my job, my dog, so on and so forth. And you know the latest literature is, that we

develop attitude toward any new thing within one-tenth of a second, which is so powerful. That is why; he said, it is an anchor and once, you form the attitude, we start processing information based on that attitude. This is the point, we have ((Refer Time: 07:22)).

(Refer Slide Time: 07:22)



So, we understand, what is attitude. Now, how do, I test that attitude similarity can be cause. In psychology, typically we follow the philosopher's idea or scientist idea, they say to be a cause, four conditions should be satisfied. A first condition is, there should be association between two things. Two things must go together, fire and birds on the flocking together, fire and the smoke. So, this is the first requirement. There should be association between the two.

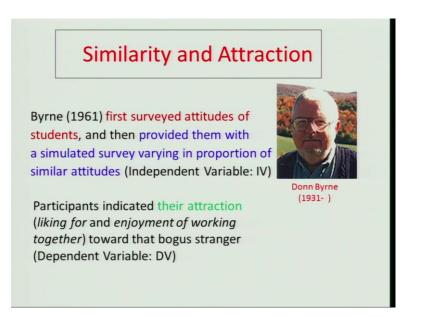
The second, we say, temporal precedence. By temporal precedence, we mean, cause comes before effect. So, temporal order is important. Third one, we say, there should not be anything other than the cause. All other things should be absent, just the fire, just the attitude, only, then we can say they are become friends. So, all other things should be controlled and only one thing should be different.

And that, I had also learnt in my high school text book by Arun Kumar Data, when he said, how do, we performance an experiment. And finally, to achieve these, we take group of people different many ways. So, we randomly assign to two different groups

and we believe, that my randomly assign to two different groups. The two groups become equivalent to a start with.

So, these are four conditions, we need to satisfy. One association, two temporal sequence. Number 3; all other things are constant and 4th group people different many ways. So, we randomly assigned them to two conditions, one, where, there is a cause. Another, where, there is a no cause. If there is a difference, then we say, this must be the effect.

(Refer Slide Time: 09:30)



Now, let us come back to, the first experimental similarity and attraction. In 61, one article appeared. So, this study must have been done in 59, 58. At the same time, when Lazarsfeld and Maton, Quinta Termofili. So, see, what he did, Donn Byrne, he surveyed opinions of students on campus. Later on, he made some artificial surveys, where opinions should be similar to the students, this similar to the students.

When, a student came to participate, he randomly assigned them to two different groups. And to some, he gave survey, which has similar attitudes, an another, who had a similar attitude. And asked them to indicate, their attraction, you are going to meet a person. So, two things, you tell me, how much you would like this person, who has expressed views on this survey, like as you had done before. And number 2; how much you would enjoy working together with that person. So, he manipulated similarity and dissimilarity and measured attraction. And his finding was, that, yes and number of things, I would like to draw your attention here.

(Refer Slide Time: 10:56)

	onceptualization of an Attitude
Env	ironmental Protection
	I am very much against environmental protection.
	I am against environmental protection.
	I am mildly against environmental protection.
	I am mildly in favor of environmental protection.
	I am in favor of environmental protection.
_	I am very much in favor of environmental protection.
he to	p three statements are contra environmental protection, but
he bo	ttom three statements are pro environmental protection.
	nents of both sides differ in the magnitude of opposition or sement.

Let us look at, how he conceptualized attitude and you can go back to definition, I had given favor or disfavor. So, he did precisely like that. Let us look at this, environmental protection. Let us look at the six statements, we have derived. I am very much against in environmental protection, I am against environmental protection, I am mildly against environmental protection.

At the bottom, you see, I mildly in favor of environmental protection. I am in favor of environmental protection. I am very much in favor of environmental protection. Do you see a difference here; first, we have divided 6 into for and against, like favor and disfavor. Then, we have manipulated the degree. Neutral point is missing here fine. So, his method was, you see here, we have contra and we have for, top three statements and bottom three statements are oppose.

So, we have, you know, pro and con two different positions and they differ in the magnitude. So, when we conceptualize attitude we have for and against and how much.

(Refer Slide Time: 12:19)



How do we manipulates similarity, let us look at the trick here. If I survey your attitudes and give you back, exactly like this, you would suspect that, you have given my own. So, we have to use something. So, that, participants take them as credible. So, Byrne also devise the method. Let us suppose on environmental protection, participant response is here at number 2; I am against environmental protection.

So, how would you manipulate similarity now, we have two options now, either we can go one step up and one step down, same side. It would be similarity. This is the method we use, got it, because if we tick on the same, you would not believe me; that you have given back my own and asking me, whether, I am attracted toward myself or not.

(Refer Slide Time: 13:21)



So, we have to make it credible, how do, we manipulate dissimilarity. Again, go back to the same statement, if we are putting here, then, what would you do. Dissimilarity means, it must go on right hand side. Similarity should be on the same side, dissimilarity must be on other side. So, the trick, we used, he said, always go three steps apart. So, two becomes 5, three becomes 6, one becomes 4, something like this. This is the tricky.

So, neither similarity nor dissimilarity would be exactly like yours. So, you believe in somebody else opinion. So, this is the manipulate. We conceptualize the attitude; we are manipulating it in a realistic manner.

(Refer Slide Time: 14:08)



And how did he measure attraction, he developed a scale called interpersonal judgment scale. In which, four items are taken for you. First, two one measures intelligent, another measures general knowledge. He said knowledge of current event, but later on I modify that general knowledge. So, it is 7 point scale. Earlier, was 6 point scale, remember attitude. Here, we have continuous rating scales.

(Refer Slide Time: 14:40)

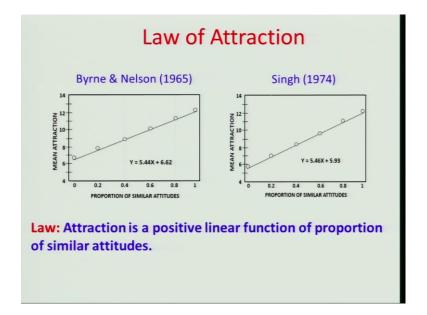
ers	onal Feelings
	I feel I would probably dislike this person very much.
	I feel I would probably person would probably dislike this person.
	I feel I would probably dislike this person to a slight degree.
	I feel I would neither particularly like nor dislike this person.
	I feel I would probably like this person to a slight degree.
	I feel I would probably like this person.
	I feel I would probably like this person very much.
-	king Together on the Problem-Solving Task
01	I believe that I would very much enjoy working with this person on the task.
-	I believe that I would enjoy working with this person on the task to a slight degree.
-	I believe that I would neither particularly enjoy nor dislike working with this person
-	on the task.
	I believe that I would dislike working with this person on the task to a slight degree
_	I believe that I would dislike working with this person on the task.
-	I believe that I would very much dislike working with this person on the task.
_	

In which the attraction items were the last two items, one personal feeling, how do you feel, how much you like. Dislike, you see continuous scale, we have. And how much,

you would enjoy working together with this person. Original was in a psychological experiment. Later on, I converted into a problem solving task, fine, because the students are doing.

So, we have a continuous scale here and participant could make tick mark. So, that is all, I find out your opinion, manipulates similar dissimilar attitudes, give you back. And ask you, that before I give you a chance to meet or work with this person. You form an opinion and make few judgments about it, fine, I simplify this experiment.

(Refer Slide Time: 15:33)



And, when he collected data, so if we manipulate proportion of similar attitudes from 0 to 1, he got this linear line and thought like Newton. Think, he so much attached with physics equation. Every time, we correspond he says, that my question works, you know. In my thesis, in 74, we got very closer. At the same produce, this was Texas data, this is produce university data. So, lines easily linear fine.

So, Newton has law of universal gravitation. We have a law nowhere, we say, attraction toward a person is a positive linear function of proportion of similar attitudes. So, greater the similarity, more the attractions, so this becomes law of attraction. By simplifies, you see, how simple experiment we do in the psychology, neat and clean, nothing, no confusion. (Refer Slide Time: 16:39)

Attitude Similarity-Attraction Effect

The attitude similarity-attraction effect has been reported repeatedly (e.g., Montoya, Horton, & Kirchner, 2008; Montoya & Horton, 2013).

This effect is robust across age and cultural groups (Byrne et al., 1971; Michinov & Michinov, 2001; Tan & Singh, 1995) and diverse measures of attraction (Montoya & Horton, 2004; Singh, Ng, Ong, & Lin, 2008).

Attitude similarity also serves as a heuristic cue for kinship (Park & Schaller, 2005).

So, this effect is so powerful. We have not come across anyone, who said that, this finding is not a replicable, it is so powerful. And so, I give a number of in different country, this, that. And in fact, in 2005 Park and Schaller said, that if somebody agrees with view you, start believing that, this fellow also shares some jinee with me. Either, this much is the believe in the power of this attitude.

In 71, this much was research, I wrote my thesis came back to IIT, Kanpur, we were distracted. Started doing research in other area, I bring you to a second part now. First, part we have concluded, attraction is a positive linear function of proportion of similar attitudes, fine. We all thought this paradigm is death; nothing would happen to it, all of a sudden.

(Refer Slide Time: 17:42)

Repulsion Hypothesis

The linear relationship between proportion of similar attitudes and attraction implies that **similarity leads to attraction** but that dissimilarity leads to repulsion.

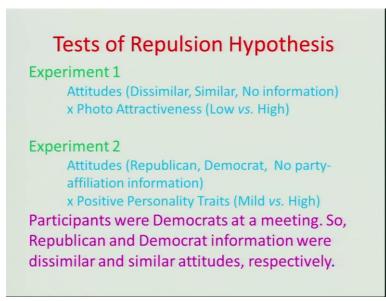
"I argue that ... attitude similarity does not lead to liking, but dissimilarity does indeed lead to repulsion." Milton E. Rosenbaum, 1986, p. 1156

Stated simply, finding that someone shares our views does not make us like the person but finding that he or she disagrees with us does lead us to shun him or her.

In 86, one article appears in JPSP and three things, I would like to say, that linear relationship implies. That similar and dissimilar attitude have equal and opposite effects on attraction. This is an implication. Rosenbaum, Milton Rosenbaum, he said, I argue, that similar attitude does not lead to liking. But, dissimilar attitude does indeed lead to repulsion.

So, if you have similar dissimilar attitudes and similarity mean is having dissimilarity. We say attraction effect, he said, no, it is repulsion effect. Now, how he did test it. So, this one, so repulsion hypothesis simply said, finding someone shares our views, does not make us like that person. But, finding that, he or she disagree with us, does lead us to shun him or avoiding him or her. That became repulsion hypothesis. By that time, I had moved to Singapore and I was teaching social psychology. So, it brought me back and see, what we did.

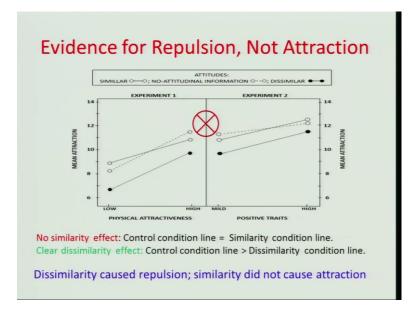
(Refer Slide Time: 19:04)



So, first let us come back his two experiments of Rosenbaum. What he did, in experiment 1; he manipulated similar dissimilar attitudes. And also, gave photographs of the person, you are going to interact. And there is one condition in which he gave only just photographs. So, we have similar attitudes, dissimilar attitudes, given with attractive, unattractive photographs four conditions.

And then, we have two conditions, where we give just photographs, no attitude information. On other experiment, he did with democratic and republican delegates in America. And said, these are the positive personality characteristics, mild or positive. And they give similar and dissimilar attitudes. That means, he created a control condition.

Byrne heard, dissimilar, similar. He never had a condition of no attitude. Sarojini Nan said, let me give a photograph, let me give personality characteristics. And then, see whether similar attitude adds something to it and dissimilar subtracts something to it. You got a very simple experiment like this. let us look at graph; that would make the things clearer.



This is, his finding from the first experiment; maybe, I come back and show you here then. So, you see the lines here, this line and this line, this is based on similar attitudes. This is based on; we have photo not so attractive and attractive photographs. Then, we have similar attitudes and dissimilar attitudes. And this line is based on, when we give only photographs.

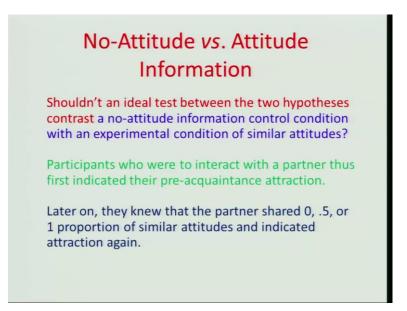
Similarly, this is mildly positive, mildly negative personality characteristics. This is dissimilar attitude, this is similar attitudes. This is based only personality characteristics. What do you notice here? Similar and personality lines do not differ. However, dissimilar attitude line is lower. So, he said, similar attitudes do not lead to attraction. In contrast, dissimilar attitudes do lead to repulsion. You see, somebody's entire work is demolished by two experiments. This is the way we have scientific process here.

Now, question is, is it true, that is why; I put no entry sign. He say, that is similar attitudes, do not produce attraction. How do, we solve the problem now. So, I suggested to my one undergraduate student, Lintan, like this is a summary, I have given, no similarity effect, why control condition line, similar to similarity condition line. Why repulsion, because control line is higher than dissimilarity line.

You see like, how we test in a simple way, how much statistics is required, no more than 2, 3 tests. When, we reach the conclusion to my students, I said, this is not right test of

this hypothesis. So, his hypothesis was this similarity leads repulsion, similarity does not lead to attraction and that became repulsion hypothesis.

(Refer Slide Time: 22:40)

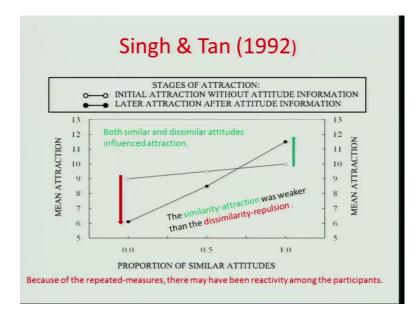


So, I advise my student to conduct a new experiment. And this is what you see; let us look at the criticism. Any ideal test would compare, no attitude be attitude, not photographs, because photograph is also leading to some kind of assumptions. So, attitude versus attitudes. So, that led me to advise, we said, student come and I have already done the survey, using his method.

And say, you are going to interact with a person. And at the moment, I am not going to tell you anything, you tell me, what is your opinion of this person? How this person could look like you, what do you think his or her attitudes should be? So, you are inferring the attitudes of your peers. Then, I said, after that, this is the second time. These are his attitudes now I give them. So, I have two kinds of ratings now.

Dissimilar, similar, half similar, half dissimilar, three conditions I create. First stage, no information, second stage, three kinds of information and say, how attracted, you would be toward this person. So, I created a condition, which is of no attitude information. Let us look at findings now.

(Refer Slide Time: 24:04)



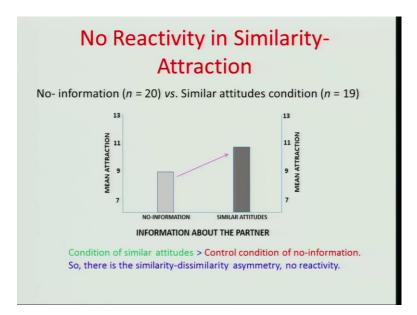
See, this graph, can you interpret this. This is the pre acquaintance line. This is, when similar attitude. This is half similar, similar, this is all dissimilar one, got it. How would you interpret it, there is similarity effect, there is dissimilarity effect. So, both similar and dissimilar attitudes are operating fine.

So, this is what both similar and dissimilar influence attraction, initial attraction. But, you can calculate something now. This minus this and this minus this, if you do so, what do you notice. That is why; I have two vertical lines now. It is dissimilarity repulsion effect is a stronger than similarity attraction or similarity attraction effect is weaker than dissimilarity repulsion effect.

So, Rosenbaum is right. Something else, we are getting it, something else, we are get. You see, that this is difference, we are making. Now, can you make a criticism of this? Here, is a criticism, we say, reactive method. What is a reactive here; first you indicate how attractive you are toward me. Then, I tell you something. So, you believe that in the light of this information, I must give higher or lower response. This is called reactive method.

I can defend it, how can I define it, if it is so. Then, how come difference is small in one case and more in another case. It is could have been equally apart, but less similarity effect and stronger dissimilarity means, in a spite of reactivity something is operative. Now, so we said that, we accepted this criticism reactivity, but rule did out.

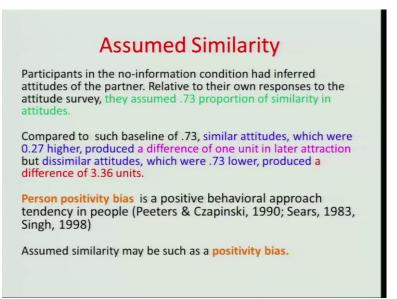
(Refer Slide Time: 26:27)



How I did it very simple experiment, I divide you into two groups, no information and similar attitudes. And say, how attracted, you are toward this person. So, no too judgments on you and when, we did it is very clear cut. No, information 20 participant's similar attitude 19 participants. Look at the two means, this is similar attitude mean, this is dissimilar one.

And apparently, you can see similarity means is higher, even though I take one judgment. So, it is not reactivity. Similarity, it does produce and effect, but that effect was smaller. So, that was the beginning here. That has both similarity and dissimilarity make a difference, but there is a departure now. Original idea was similar and dissimilar attitudes have equivalent, opposite effect.

Then, it became similar, attitudes have no effect. Now, I am demonstrating both similar and dissimilar have effects. And similar have a less effect than dissimilar, a new issue is coming like in the research. You see like, my topic is that how attitudes determine and this is what I am caring you, one by one. (Refer Slide Time: 27:48)



So, here is another thing. I had ask experiment in the first time, can you guess, what would the attitudes of this person. Based on that, I know your attitudes. And then, you have informed, what would your partner attitude. So, we calculated and we came up with the idea of assumed similarity. And we found out, that they had assumed similarity around 0.73. So, 73 and 1 differencing 0.27, 73 and 0 is a difference of 0.73 and this is what, we got 1 unit similarity and 3 units dissimilarity.

So, one hypothesis became that, there is a person positivity bias. Anyone, you are going to meet, we go with positivity, positive orientation. Against, that anchor, that similarity and dissimilarity make adjustments. So, one hypothesis became, that person positivity bias operates. This is the one possibility. There are some other possibilities, which I will share you.

(Refer Slide Time: 29:02)

Age Differences in Attraction and Repulsion

Participants aged 7, 11, 15, and 21 years indicated attraction toward a partner with

- dissimilar,

- similar, or

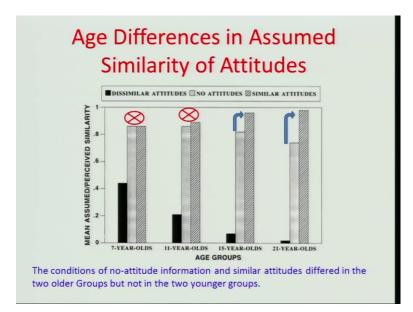
- no-attitude information.

They also inferred attitudes of the partner.

Tan, D. T. Y., & Singh, R. (1995). Attitudes and attraction: A developmental study of the similarity–attraction and dissimilarity–repulsion hypotheses. *Personality and Social Psychology Bulletin*, 21, 975-986.

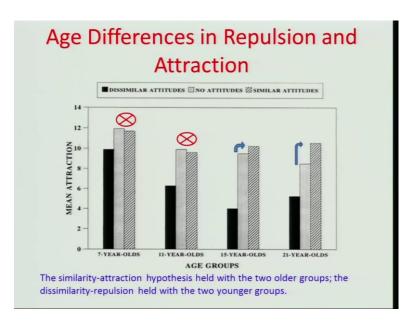
So, to handle this, I ask another honor student to do a developmental study. And what is she did, she asks children of 7, 11, 15 and 21 years and just like 3 bit been subject occurred similar attitude, dissimilar attitudes, and no information, about the partner. His one of the newest students and two measures, we took. One measure of assumed similarity, like when I do not give you attitude information, I ask can you, inform.

When I give attitude similarity, take you back and say, can you recall her, whatever the responses. So, that, we make perceived similarity, assumed similarity. So, let us look at this graph now.



You can see that, a two younger age, there is no difference between no information and similarity, very similar to Rosenbaum. But, as we come to 15 and 21 year old, we do have differences here. See, this difference is significant. This difference is significant. What would be the consequence of this on attraction? So, this one is mean perceived or assumed similarity, you see, there is difference here.

(Refer Slide Time: 30:36)

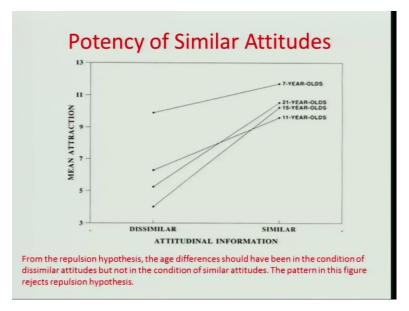


Now, let us come back to attraction difference here. When, you come to attraction, see precisely the same kind of thing, we are finding. These two differ from this similarity, these two differ from similarity. And they do not differ. In contrast, when we come to 15 year old they differ. When, we come to 21 year old, they differ. And effectively, all three are different.

So, what are seen that, dissimilarity, similarity, asymmetry, earlier. I am able to get bit 15 and 21 year olds. At younger children, we do not get it, because, they are very positive for other people. So, that was it. So but at that time, I did not know, mediation analysis had entered the literature. But, I did not know, how to relate assumed similarity with attraction measure.

So, we just raised age a hypothesis. Do it, went to personality, social bulleting, but we did not know reviewers, did not know deters, did not know at that time, how to relate these things. So, it went like this. But, one issue remains same. Each effect of similarity attitude, weaker than that of dissimilar; because of this bias or because of something else. That is something else should be importance or weight, how much importance, you give to similarity and how much you give to dissimilarity. Somebody would disagree with you, on that basis, you say, no more relationship. So, maybe, it is not the difference. It is the importance, you assign that became the issue here. So, at this stage then.

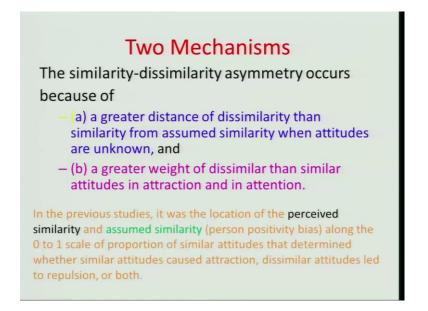
(Refer Slide Time: 32:25)



Now, in that developmental study, there is another interesting thing, we got. According to Rosenbaum, dissimilarity is most important. But, how come age difference you find in similar condition and dissimilar condition also. If similarities of no use, there should be no differencing in that condition, everyone should react like, another point I made developmentally.

Now, the issue, two things be came, is this effect and outcome of adjustment with the anchor or is it because of the weight, we assigned to similar and dissimilar attitudes. Now, how do we test out, you know, as I know look at my career as a psychologist. Sometimes, simple ideas do not enter into your head. It takes years and years and decades to come across this.

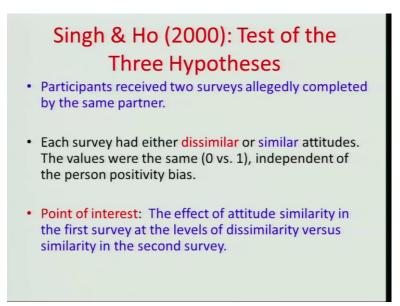
(Refer Slide Time: 33:30)



So, to honors student, we said, that here is a challenge. One possibility is this distance on anchoring time, greater distance of dissimilarity than similarity from assumed similarity, when attitudes are not known. Another possibility is, that dissimilar attitudes, they can greater weight than similar attitudes. How do we test it, let us control assumed similarity, like in age says, we varied assumed similarity.

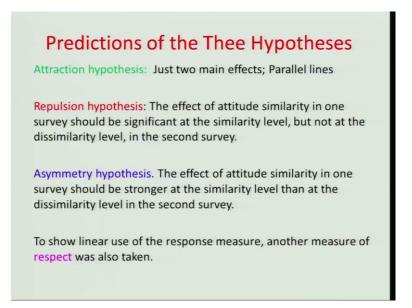
We said, let us hold assumed similarity constant and manipulate similarity dissimilarity. And I do not know, how this idea came, we said very simple, you designed two survey, survey a and survey b. Each one has six attitudes, manipulates similarity in first and second, manipulates similarity in and this similarity in second. So, it becomes a simple two by two design, just like the Rosenbaum, but no photograph can be saw, got it.

(Refer Slide Time: 34:44)



So, two survey, we said, manipulates similar dissimilar in the first survey, second survey, and look at, how the four means. So, would look like that became the point of interest. That effect of attitudes similarity in the first survey is it dependent upon level of the second survey.

(Refer Slide Time: 35:06)



And we generated three hypotheses, first hypothesis comes from Byrne. In which he said, there should be just two main effects, because similar and dissimilar have equivalent opposite effect, two parallel lines. Second one; Rosenbaum said in his

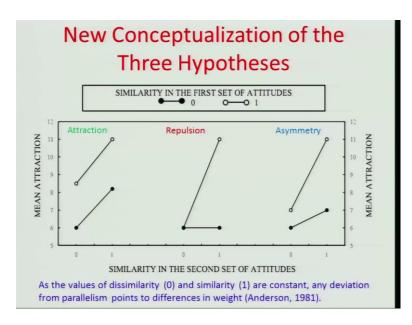
according to his hypothesis, what did he say; only dissimilar attitudes lead to repulsion. So, as long as somebody disagrees with you, would reject it.

So, when I am manipulating two by two, there is only one condition, where you have similar in all or two for many in we... In other conditions, we have both dissimilar, half dissimilar, half similar. So, we said, those three main should be different from similar condition. So, one means should be significantly greater than the other three, which should be equivalent. And third one, we said, which is my asymmetry hypothesis.

We said that no, both similar and dissimilar would produce. But, effect of similarity would be less at the dissimilar level of the others survey than on the similar level. Now, look at in the graph. So, we made, now here is a challenge, if you predict something which is not linear or which is non parallel. Then, it may be an artifact; that your response measure is not being used in linear way by the participant.

So, you also have to demonstrate that the scale is being used like 1, 2, 3, 4, 5, 6, 7 point must be used as continuous and not non-linear way.

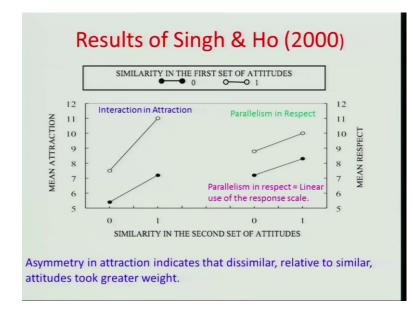
(Refer Slide Time: 36:49)



So, this is my prediction on attraction measure, attraction hypothesis would lead to the first graph. Rosenbaum would lead to the second graph and my hypothesis would lead to the third group asymmetry hypothesis. So, now, you see two graphs predict non-linear lines. So, here, I utilized the response to intelligent and general knowledge. If you look at

it, because, asymmetry should take place in attraction not in judgment of your competence. So, when I did the experiment now, see the findings.

(Refer Slide Time: 37:33)



This is the graph for attraction; this is the graph for respect. Later on, I have to termed you respect for the person, respect for the competence of the person. And this is attraction toward the person here. What do you notice here, interaction is in attraction, which I had predicted. There is no interaction in the respect. So, one thing I am ruling out. There is no problem in use of response measure.

So, now, the question becomes, if I test the simple effect, you would notice, see is a simple logic. When, you look at effect of similarity, this is similarity attitude, this is dissimilarity attitudes. And this is, that the level of dissimilar in the second set of survey. This difference is lower, why, because, if you go near Miktaison, you feel weak. But, if you go in front of a child, you feel very powerful.

So, when dissimilarity, you see in similar condition, it is more. So, this is the basis of judging, which one is more importance. So, you see here, effect of similar, dissimilar or difference is reduced, when there is dissimilarity in the second survey. Similarly, effect of similar, dissimilar in the second survey is less. When, dissimilarity is in the first survey.

Now, how this idea came, it came spontaneously somehow and we said, let us look like something this, what would happen. And this is what we demonstrated and we said, that asymmetry arises at the level of weighting of information. Weighting of information means, how much importance you attached to agreement and disagreement. That was the and in respect to, we demonstrated parallel line.

So, you remember reactivity, was the challenge in the first one. Then, we came to assumed similarity. Then, we have came to weight. And I do not know, whether you are noticing the change, thesis say 73 in 92 appears, pre acquaintance and attraction, 96, no 98 appears developmental, 2000 this one appears. So, look at the time lag, it is not that you do and next year, you get the idea, it takes sometime decades.

So, on the basis of parallelism, we said linear use is true. Now, we are saying this asymmetry indicates this dissimilar attitude, relative to similar attitudes, assumed greater weight to take on greater weight. This is the conclusion.

(Refer Slide Time: 40:34)

Weight is Necessary and Important

Both similar and dissimilar attitudes affected attraction but the former had less weight than the latter in promoting attraction.

The difference between the effect of similar and dissimilar attitudes in the first survey, albeit significant, was smaller at the level of more important dissimilar than similar attitudes in the second survey.

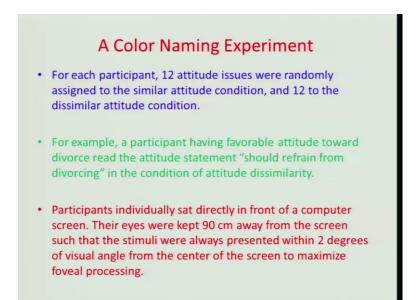
The slope of the line is shallower at the level of more important dissimilar than similar attitudes in the first survey.

Notably, the more important dissimilar attitudes reduce the difference between similar and dissimilar attitudes much more than do the less important similar attitudes.

We said, weight is necessary and important. We cannot ignore it, but still, there is a challenge now, is it at the level of response. So, it became important. Now, there is another challenge is this happening, this weight is taking place at the level of responding or at the level of paying attention. So, another Chinese student came to me and I said, can you test it and you can see, how what kind of patience students have. They said, sir there is something in cognitive psychology.

So, I said, can you design something, that attention gets caught by something? If something would capture my attention, then my responding would come slow. This is the idea, we design to say. And that Chinese student now, he has gone done PHD and he is now back at in US. What he designed you, weighting at attention level.

(Refer Slide Time: 41:37)



And see, what kind of experiments, we do, he said, we are going to do a color naming experiment. Now, this paper appeared in 2009. First experiment, there are many challenges. Byrne said equivalent opposite effects, I also got in my thesis linear line. Then, came repulsion, then, we are saying asymmetry. So, if you understand something, you should be able to resolve all this contradictions; that became the challenge.

So, two tasks were involve is this happening at attention level, can we specify a condition, where both similar and dissimilar contained equal importance. This is what, we did. So, we did two experiments. Now, in the first one, you come to the lab, I have already found out your attitudes. And when you come, this is not attraction experiment. I am interested in finding out individual differences in color naming fine.

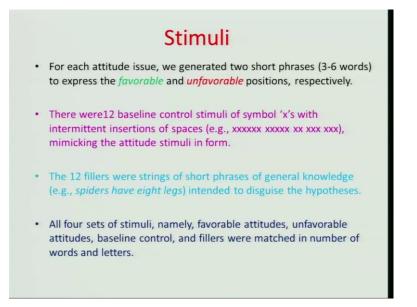
So, we selected your attitude, then, we generated some statements and example, I have given. That for example, attitude toward divorce should be. So, we will make should different from divorcee. We want to have favorable attitude like this. So, we have the sentences like this. An participant is sitting in front of the computer and we display a sentence, we say like Pandora, you do not have to read the statement.

You have to name the color of that word, blue, red, pink, something like this. This is the term, no attraction experiment, name the color do not read the statement. Because, if you say some words do not tell it, then you would go and tell to everyone. The same logic, we have and to do that to control, it takes your energy. That is the logic, we followed here.

And how, we created the stimuli from the survey, twelve statements were randomly, we make similar, 12 were, we randomly made the similar. Twelve, who we made, which bear general knowledge items, the spiders have 8 legs, India has 1.2 billion people, something like, general knowledge question. Some, we made x, x, x, x that became our baseline stimuli, which has no meaning 5, 8, 6, x 2, x and we have colored different x.

Now, when I display this statement, there is a challenge, how do I display it. So, we design a method here.

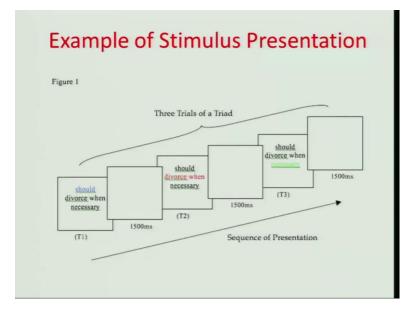
(Refer Slide Time: 44:29)



So, first I just remember this part. We have favorable, unfavorable statements. Then, we have created twelve base line control stimuli with x. You know like, you see, one example, I have given 6 x, 5 x, 3 x, 2 x, you know. Different things are appearing in screen. Twelve feelers, we have general knowledge. So, we have four set of stimuli. I am interesting in, how you respond to similar and dissimilar.

Task is to name the color on the computer screen. But, I am mixing exactly half number of stimuli, which are irrelevant type x, x, x or general knowledge type. And you sit in front of it and look at the keel, all these base line control, were matched in number of words and letters. Even, word frequency count we had considered, because if that differencing we can found it. I remember, I said all other things must be constant except one. So, we did that.

(Refer Slide Time: 45:35)



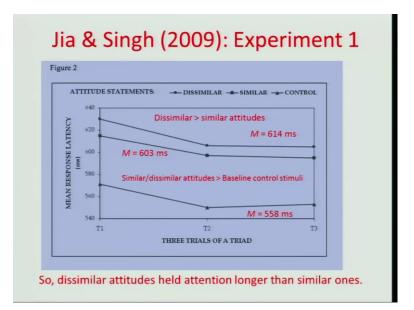
And this is our ingenuity on computer screen, you see and that is why; say why in India cannot be done. For a particular participant, we created three trials. So, on trial 1; he reads, should divorce when necessary, where should is has a color, rest is black. Then, we have a black screen. Then, the same should divorce, when necessary. Now, divorce is colored. Here, should divorce, when necessary, this one is colored.

So, the task is to name the color and press the key. The idea here is, if what are told them, not to read, name the color. So, if he distracted by the sentence, what would happen, responding would become slow. That is the logic. So, if we would see x, x, x responding should be faster, because it has no meaning to me. No, like if you are going, if you are a Hindu, temple can disrupt you. But, if you are crossing a mosque, you would not be. That is the logic, we have.

So, x, x, x should not disrupt you, similar, dissimilar should disrupt you. Dissimilar should catch your attention more, if it takes weight. That is the logic, we followed. Three

tails we created, because we wanted to paint different part. Because, one would say, no because of should, the difference you get is because of should or somebody would say, difference you are getting because of this to do lead out. And when we did it, this experiment worked out.

(Refer Slide Time: 47:07)



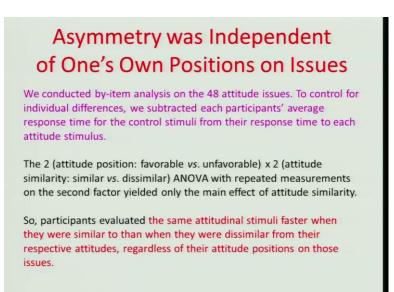
See, here, sometime things which you think it is so nonsensical, makes lot of sense. What you need to see here, average of these are the three trials you see. So, for x, x, x; this is the latency. Lower latency means faster responding. For similar, you find this, for dissimilar, you find this. And we are measuring in milliseconds. There is some trial effect, familiarity effect, but it is independent.

What we demonstrated, two things we be are interested in. First, similar, dissimilar, responding to those stimuli is slower than control, take x, x, x, x. Number 2; between dissimilar and similar, you see, dissimilar is catching you get more disrupted by dissimilar attitudes. It catches your attention automatically. So, that automatically literature, we had taken here.

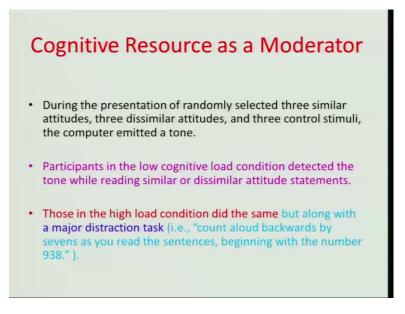
So, our first experiment demonstrated; the dissimilar attitudes to capture your attention more than similar attitudes. So, weighting hypothesis is supportive. Now, the challenge is why sometime equal attention, sometime unequal attention. You see in this globalized world with telephone, face book, computer, we are doing more work than we are supposed to do. So, our attention, our resources have depleted.

So, we have developed some default automatic responding type. So, response giving greater weight to dissimilar is automatic default device. At the same time, we say, we should be objective, fare, not biased, we must consider, take even sided approach something like this. For that, you have to have resources. So, we designed another experiment for this. Again, coming from cognitive psychology and look at the method of this.

(Refer Slide Time: 49:19)



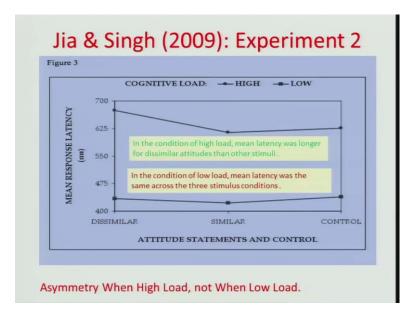
Now, another thing we did here, the twelve similar and dissimilar attitudes, we had selected. One may say, that how did you select your participant may have had some opinion on this. So, for each individual, we demonstrated that, this effect holds independent of Professor Mishra thinks about divorce or what I think about god. I said, it was because of similarity, dissimilarity, not because of my position, not whether I am favorable or unfavorable.



Then, next experiment we did, we said cognitive resource as a moderator. Just like our 15 and 21 year old and 7 to 4, 11 year old, we thought they were cognitively depleted fellow. With adult, we have more cognitive resources, we got idea from there. So, in this time, we said, this time, you are supposed to read best statement. This is not color naming. So, in one condition, you are suppose to read the statement and press the key and it would be recorded. So, no cognitive load.

To other half of the participant, we said, when you read computer would randomly emit a tone and your task is to detect the tone. So, the moments you hear the tone press the key. So, in high cognitive resource condition means low load, we said, you read it and detect the tone and randomly on three attitude statement of each participant. The tone would appear. To other half participant, we said, when the tone is detected, the moment you here a start counting backward bias difference of 7.

(Refer Slide Time: 51:14)



And number, we used was taken from a cognitive psychology experiment, like, let us suppose 1938. So, you have to remember 1931. So, your resources are now diverted. This is the logic, we followed. And when we did this, this is the finding you are getting. You see in the condition of low cognitive load means, high cognitive resources. You see, again the responding is faster and there is no effect, whether they saw three similar attitude, dissimilar attitude or x, x, x.

In contrast, when you go to the higher level, see here, when they had to count backward by 7, from 1938 means cognitive resource, you are loaded as paying at multi tasking type. In that case, responding became slower in detecting the tone and dissimilar took longer time than other two conditions. The discrepancy, we got, there is no difference between similar and control here.

So, how these experiments show, how did, I start, how do similar attitudes determine attraction. Look at history, both have equivalent opposite, only dissimilar have effect. Similar have less effect than dissimilar. Is it happening because of assumed similarity or is it happening because of the weight. Is it happening at the responding or is it happening at the level of attention.

Why did, we do all these, by doing all these, now we say asymmetry. When, there is a load means, lower resources, no asymmetry, when there is no load.

(Refer Slide Time: 53:00)

Cognitive Load and Attention Allocation

Asymmetrical attention allocation occurred when attention to attitude statements was unwanted (Expt.1) and when attention to them was wanted but diverted by a distracting requirement as in the high cognitive load condition (Expt. 2).

Attention to dissimilar and similar attitudes was equal when participants had sufficient cognitive capacity as in the low cognitive load condition (Expt. 2).

And cognitive load or cognitive capacity is a moderator. Now, how we pay attention to the weight of dissimilar and similar attitudes. This is what we have demonstrated.

(Refer Slide Time: 53:13)

Resolution of the Controversy

- In studies where dissimilar attitudes outweighed similar ones, the processing demands were typically high due to requirements of either anticipated interaction or processing the photograph or personality profile of the stranger (Rosenbaum, 1986; Singh & Ho, 2000. Singh & Tan, 1992; Tan & Singh, 1995).
- When these requirements were absent, consistent with our results at the attention allocation stage, an equal weighing of similar and dissimilar attitudes on attraction prevailed (Byrne & Nelson, 1965; Singh, 1974).

But, our importance in is resolving the controversy and here, I say in a studies, where similar attitudes outweighed similar ones. Dissimilar outweighed similar ones. Processing demands were typically high. And how, you know due to requirement of either, you have to interact with the person, you have to process photographs; you have to process personality profile.

In those cases, we find dissimilar attitudes more effective than similar attitudes. But, when there are no requirements, when you have ampoule cognitive resources. When, you are older in that condition, we do pay equal attention to similar and dissimilar attitudes. This is what we have understood.

(Refer Slide Time: 54:02)



So, here is the summary now. What we have learnt out of this research for so many years, those who think like us. Do observed gravitational force; go back to the Newton upon us. And we are automatically drawn to them. This is what, we have understood. Number 2; how much, we are drawn to them, depends upon our own person positivity bias, it does play a role. And also, the ways of weighting similarity over dissimilarity at a particular point of time. This much, we have understood.

And our default style is in this age of globalization, to give greater weight to dissimilarity over similarity. This is what, we have and given motivation and ability, however. We can pay equal attention to both. That requires out time; that requires our effort. And in the first lecture, this is what; I wanted to share with you.

Now, imagine one thing, 61, this is 2013, tomorrow I will tell you still we do not understand it. This is a full puzzle, here I have described, how they do it. Tomorrow, we talk about, why two similar attitudes determine, you know. And how simple task like this kind be how involving and completes. Another thing, I have realize in my life in no search parade, anything is never complete. In 1973, then we almost stop doing research, we went to another area. 90 again, we come back 92, 98, 2000, 2009. So, it comes like every decades. Something, you know, it is like a virus grow thing in your brain. But, it depends upon your patience, how you do this. So, ask something which

Student: ((Refer Time: 56:20))

Yes,

Student: Sir, I have a question, specially based on your developmental study, where, you said that, children who are young, they generally go out with a very positive attitude towards others. So, unknown application part, can this be used to reduce the feeling of a discrimination among the population.

You are saying that, that was the basis study children are more positive of outside world than the elders. So, can this be used to increase positivity in them? In all these experiments, what we tell the participant, you are going to interact with somebody. So, the moment, we say, you are going to interact with somebody. You would say that, we become very positive, we dress nicely and we hope this person would be nice in all kinds of thing. So, this is the temporary state.

But, age in initialed children are very frighten of others. But, when they become school going, one reason of positivity, which we discussed in this paper was, they have very rare occasion to discuss things. Because, most of that time they assumed we are similar. So, because of that, it appears that, they believe that all others hold opinions and views similar to mine.

So, it is not really some kind of chronic characteristics. And with adult, when we have a chance to discuss with all the people like, when we discuss on some issues, we agree or some, we do not agree. This we become aware much later. So, instead of saying this like a stable characteristics, we said, because they had a less chance to discuss different things. They take it for granted others are similar. So, that is why; dissimilar is making a difference in their case.

In other respect, they are assuming similar, he is my classmate, you know, we studied together. You know, he likes me care something. So, that why; the basis of say, but can

this be a basis of developing positivity. If it is so, then giving the right kind of information, it is possible. In the same way, I would also say by giving the wrong kind of information.

That do not drink water, do not eat food given by somebody else, what we are putting in their mind. That the world is unsafe, unkind people, can trick you. So, don accept it. So, we are reducing that bias, like some children, if you give they would take it. Means, they have positivity. To some say, no my parents have told me, not to accept anything. So, it can be used as a mechanism.

You know like, when I said attitude or that sikri view quotation, I said. Actually, once we form attitudes we become so bias, any further information processing is always against that anchor. Tell to somebody, you are going to meet be careful, his entire interaction would be finished. It is so powerful virus, you know and just like germ, it goes in the system. This is what, I have understood

Student: ((Refer Time: 60:04))

Yes,

Did you take into consideration, the prior attitude of the subject; that pro coming to the effect the man.

Yes,

Student: It means case

No, but you see like

Student: That it change with the information.

No, attitude change, we are not measuring here. All I am doing, I find out, how do you think about different issues of this country, your views. And I am manipulating similarity, and dissimilarity. But, each in case, for example, like in later experiments. You know, when we had manipulated. You maybe oppose to something, you may be supportive of something.

We demonstrated that regardless of your initial opinion. If it is similar, you feel attractive, if it is dissimilar, you feel repulsed. So, your initial anchor is even though, they are controlled, similarity works. That we have demonstrated. But, does it change the attitude; that we have not measured, because, that was not my issue.

Student: Because this is work of steely teller, we have seen that, where, there are, if your initial attitude is very negative about somebody. And you give the positive information; that your attitude similarity, it leads to more disliking, rather than liking.

No,

Student: That was her finding a very propam clearly got out. That prior attitude is very negative than similar attitude will lead to

Further negative

Student: Distraction disliking

No, if the prior attitude is negative

Student: Very negative

And then, we give positive, then it becomes more negative

Student: Yes.

No, because you discounted that

Student: That is right.

No, many times like, if you do not like somebody and if somebody saying good thing about it, you know look at, how we react we discreet it

Student: Yes

No, that information, even the person, who is saying that, but these are different possibilities. You see, like in all these experiments, we select one issue and try to see, whether we are able to answer it or not. At in I am Ambhadin 93, I was giving a seminar

on fair allocation of workload and norm, which appeared in organizational behavior paper.

So, after the seminar, I said to the audience, that I know this is my management institute and some of you, would ask me how my research to solve poverty problem of India. So, my research was not directed solving poverty problem. It was directed solving my poverty problem and it has solved it, you know, so, nothing about dislike. So, in any of these research, you do or you should be doing. You have one particular goal, which you are seeking.

Have you been able to solve it; that should be the no research is intended to solve all problem, many times people asked this that. But, see somebody wanted to do this, easy able to do it competently has analyzed drawn the conclusion rolled out alternative hypothesis. You see like a series of objections we had here, one hypothesis came, another hypothesis came, the large question, their own opinion, how the.

We dealt with those which were directly relevant to them. It would be like, how did we start with the sociology idea. People get married and they are similar, is it because of similarity or marriage. Marriage leads to the similarity to we learn that looks, this is the way we can get along well, in that case attitude changes or somewhere, we say familiarity breeds contempt. Gaink said family more you sit, more you like it.

So, these contradictions exist and we have to see, conditions in which one holds an another. And in this presentation, what I have demonstrated, that, yes, there are conditions were similar and dissimilarity attitudes can be attendant equally. There are conditions, when they would not be attendant. And what is the default device, default is, to get swayed more by dissimilarity than similarity. And I think that seems to be the fact of life, one disagreement is enough to finish relationship.

So, that is the default, but, when you think, how do we disagreed we quarrel on a silly. So, this realization comes when we are motivated, we analyze, we say, it was not the correct position. And many times, we hear that two opponents of different views, they discussed. And after the discussion they start they change their views to each other. Those possibilities exist, if people pick up Student: There is one aspect of the whole series of experiments, which draws a rotation and that leads with the motion of attitude itself. I think the earlier view was more in terms of disposition. Now, gradually it moves to the level of responding to situations stimuli in positive or negative way. And then, now you have demonstrated that, the cognitive mediators are there. How attention is paid, how available attention is divided. Now, I would liked to understand that, all these theories, have used different notions of attitude too, there is some

No,

Student: Some change in the nature of conceptualization of the phenomenon of attitude

No,

Student: I just want you

No, way, Girishwar, here still we are saying, it is a tendency to favor and disfavor. So, this disposition part is there. Even, the Allport definition, it is a predisposition to act on he made tendency actually, we tent to you see. So, that, we are retaining, what we are dealing with here is not on attitude per say, we are dealing with. Once, we have an attitude, how it influences relationship. That part I am dealing with it.

So, original definition attitude like a predisposition, like I am disposed to favor, oppose deposed to oppose you that attitude I have. But, how this disposition leads to relationship; that part I am dealing with. So, we have not challenged that.

Student: And another aspect is that, it is a neat designed to addressed this issue. But, when we go to real life interactions, like in family. There are contradictions. There are occasions, when people have differences. Still, they maintained the relationship. Now, is that any possibility of

No,

Student: Incorporating such a situation, because if you follow this line of argument; that it is very neat and clean, how dissimilarity will lead to weakening the relationship.

You see like in this research, which I am presenting, I am interested in acquaintance attraction type. You know, how attract, when you how attract, when you come to close

relationship and some literature, I have taken for next lecture, where I took the idea of transformed close relationship. And then, I have developed the underlying mechanisms, you see.

So, for this session it was package with just one idea. We manipulate similar dissimilar attitudes and how it determines, you see. So, it became equal opposite, it became more, it became more or less and it.

Student: It is like very systematic analysis

So, that way, we have taken like this. Now, tomorrow when we come to I have changed one word between the two sessions, why, there I have taken ideas from close relationship. That how without some of those things, a relationship cannot be formed, but, that is a different. But, these research or these studies, we are not intended to solve, like all problems.

They had a particular issue and they were address to tact issue. And we are saying are you able to deal, but strength you would see, how one problem leads to another. And when you think about it, leads to and keep you busy, just like you are playing and with your musical instrument. So, this is the logic and see, like in my high school, this Newton think, whenever I teach research method I start with Newton.

Because, I got so, I believe it to observe something and starting thinking and doing, each good skill for a researcher. And his gravitational idea is the basis of relationship, objects oppose in general repel each other is. So, powerful same thing happens in human beings. Now, why it happens, we talk tomorrow.

Student: This another, you are referring to Giank, but very difficult

No, tomorrow I come to Giank

Student: Then, I was just different that, he was his very famous paper that in reference

Dealing no

Student: Differences lead

No, 1980, American psychologists stares

Student: And they, you are saying effective age is ones. Say, I am not convenient on the condition

No, ((Refer Time: 70:05)) and tomorrow, I come back to that

Student: Ok

His affect primacy versus affect enters; tomorrow is the issue, I have read all those literature and that has later on.

Student: Any other question

Ask something, because sometime when you ask

Student: Sir, I wanted to share an idea. In the experiment, where you change the color of the words and then, you asked that, can you have named that color? And whole response was based on the fact, that if you engage yourself in reading the statement. Then, your response time increases.

Yes, there is another

Student: If the same thing is conducted using eye tracking device

It can be done, same thing

Student: And say, if initially my response is, if my eye movement is dietary. This means I am searching for that color. So, is it that the instruction; that was given by the experimental was a complied by the subject or not that can be very easily be tapped. And in case, you are reading the sentence. Then of course, you know the tracker will see, how do, you select the word.

Student: Identification of color is too easy. If one pays attention to that. Similarly, say is it that dependent on your reaction time, dependent on your tracking style and also on say, color versus the non color part of it, which actually determines that issued. Possibly, a new interpretation can be given.

It is possible, you see, what we did from so far we were doing only paper pencil experiment, am I give you survey, you make a trick mark. Here, we said instruction, we gave to the participants. This is a study of individual differences in color naming. When,

you see a color, how fast you detect it. And your speed, I am measuring. So, I am couraging them to respond as fast as possible, you remember.

But, I am telling do not read, like control yours there we manipulated the load. It is a high load controlling you not reading it. Like, I am cooking very nice dish and I tell you cannot it. So, that control color naming you do. But, manipulation I am doing that stimuli are a four different types something, which are similar to your views. Some are dissimilar to your views, some are general knowledge question, some are x, x, x.

So, when x, x, x which has no meaning, you did not read it, it is a very fast. When you start reading, then it becomes slower. And it becomes slowest, when you are reading something dissimilar. Because, that is catching your some fellow, this is against me, you know. So, that was logic here, but you cannot take it, is it at the time of reading, is it at the time of responding. That would be the next stages, which I do not think I can do now.

But, with an eye tracking or mapping, it is also possible to see, which region of the brain is activated, while doing these thing responding to similar and dissimilar attitudes. Like positive effect and negative effect. These are the challenges for fiche youngsters. Anything is possible, but you know, see how something can keep you engaged in solving it. But, so far, you have seen it tomorrow.

Some of the other thing, like some time having something, like the two measures, which I used as a measure of respect. Do you think, that kind be a source of problem for bird, somebody attacked him, based on that, two measures. Tomorrow, you would see the implication of it. Many times, we do in a study, many things randomly without thinking, without realizing, how it may be changing the process.

Student: Yes sir.

Thank you.