

Human Behaviour
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Lecture – 16
Emotion – II

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Theory of Emotion	Basic Assumptions
Cannon-Bard Theory	Emotion-provoking events induce simultaneously the subjective experiences we label as emotions and the physiological reactions that accompany them.
James-Lange Theory	Subjective emotional experiences result from physiological changes within our bodies (e.g. feel sorry because we cry, frightened because we run away from something, etc.).
Schachter-Singer (Two-Factor) Theory	Emotion-provoking events produce increased arousal; in response to the arousal, we search the external environment in order to identify the causes behind it. The factors we identify then determine the label we place on our arousal and the emotion we experience.
Opponent-Process Theory	Emotional reactions to a stimulus are followed automatically by an opposite reaction; repeated exposure to a stimulus causes the initial reaction to weaken and the opponent process (opposite reaction) to strengthen.

Friends, welcome back to this lecture number 16 in our series on a Human Behavior, as you have been doing throughout the other lectures I will do a quick recap of what we have done up till now and how they all linked together into the study of human behavior. So, to start with the study of human behavior is necessary because we as humans are unpredictable, we behave differently or react differently in different situation.

So, studying human behavior gives an insight how to work with humans, how to interact with humans and there may be other reasons of studying human behavior, why do human beings do, what they do, how do they do it and several other reasons. So, we started off by looking at and explaining the science or psychology which is the study of human behavior, we started off by defining what is the meaning of the term psychology and how does the science actually come into being.

We looked at how philosophy and physiology played major roles into the coming of psychology, into the developing on the field of psychology. We further look that how psychology started as an experimental field and then moved out of its Reldom of

experimental field and grew in 18 19 and the 19th and 20th century. We have look at some primary schools of psychology and some recent schools of psychology, we also look at some problems basic problems of psychology and the study of human behavior.

Not only this, we also evaluated experimental methodologies, co related methodologies and other methodologies for doing psychology. So, this was to introduce to you to the science of psychology or to the science which does human behavior. Now, as I said behavior is a reaction and this reaction has to come or as to get initiated by some kinds of action, by some kind of change in situations whether this change by a situation person or event a changes has to happened, if things do not change then a response would not come.

So, we started off the second section by looking that how changes in the external world is coded into the psychological delirium and there we saw things like sincere receptors, the characteristics and parameters of sincere receptors and we also took a model system which is the human eye and study that as a full functioning system of sensation. So, sensory processes are processes and systems which code the external world into the psychological delirium which provides us information in the psychological delirium in the mind.

So, how does the mind understand information? The mind understand the information through the process of sensation which encodes external information into the language that the mind can understand. Now, once the mind has this information, the human brain has this information it makes meaning out of it and the process which makes meaning is called perception. So, we looked at what is perception, we started off by defining the various theories of perception and then we focused on to the five perceptual processes.

Starting with the idea of attention how things are localized in the external environment, how pattern recognition happens so the three basic process of recognition and two other features of the human brain which I used for perception to happen for example, abstraction and constancy. These are two constants or two fixed values which the brain uses to make meaning of the sensory stimulus which has being coded by the sensory apparatus.

Once meaning is generated by the brain once meaning is generated out of the incoming stimuli this has to be safe somewhere, even before that this has to be learned, this as to

be this knowledge has to be kept. Now the process of learning is what we did next, we looked at what is learning and we looked at different kinds of learning not amounting only to the associative form, but also the non associative form. Within the non associative form we looked at sensitization and habituation and within the associative form we focused on to the idea of classical conditioning operant conditioning and observational learning.

We looked at the parameters, the characteristics, the nature, the principles and all other associative facts with learning. Once a knowledge has been learnt, once the knowledge has been gathered this knowledge has to be stored somewhere and exactly that is where we started looking at what is memory? We described the process of memory which is encoding storage and retrieval, we also looked at various theories of memory, we looked at the idea of working memory which is a newer version of what the older theories would have said. And further through that we also looked at the idea of long term memory, what is long term memory and what kind of information's are stored into it and what kind of manipulations are done into memory.

Once we have information stored into the memory this information is manipulated, is used or is passed on from one person to another for certain decisions to be taken, for certain kind of acts to be done. It is also used by our own brain to understand what kind of actions are possible and there we studied the idea of what is language and what is thought, as it is said that the language of the mind is thought and so we studied thinking process, even before that we started understanding what is language.

We use the English model language system, we looked at how language and communication differ and how does language pass information between people and how this information is not only produced, but also accepted and meaning generated out of it. So, how is any thinking process, how is any thought or how is any information knowledge passed on from people to people? And the idea here was in terms of language.

Then we looked at what is thinking thought process, then we looked at the idea of inductive and deductive reasoning which is the underlying processes which make you help in thinking, we looked at the idea of reasoning which is an inherent part in thinking.

How reasoning helps us in developing thinking and based on this thinking make decision making, make decisions about certain kind of responses.

So, given the fact that the certain kind of situation arises and with the knowledge that you have gathered through sensation perception and memory now you need to act. So, decision making is a process which decides, based on your past experiences what kind of act are you going to do. We also looked at what is problem solving which is another interesting fact because most of time people are actually solving problems, whether it is a genuine problem, whether it is an imaginary problem or any problem for that matter. So, we will look at the how the process of problem solving works.

The last two sections which is 13 and 14 were dedicated to intelligence; intelligence as it is said is a property which makes human beings perceive things quickly. So, we looked at what is intelligence and we looked at the various theories of intelligence, not only that we also moved ahead and looked at how to measure intelligence, what are the various procedures of measuring intelligence. And once we have done that we looked at a model system of intelligence which is called emotional intelligence and so how it actually functions and the whole creative process and emotional intelligence interact.

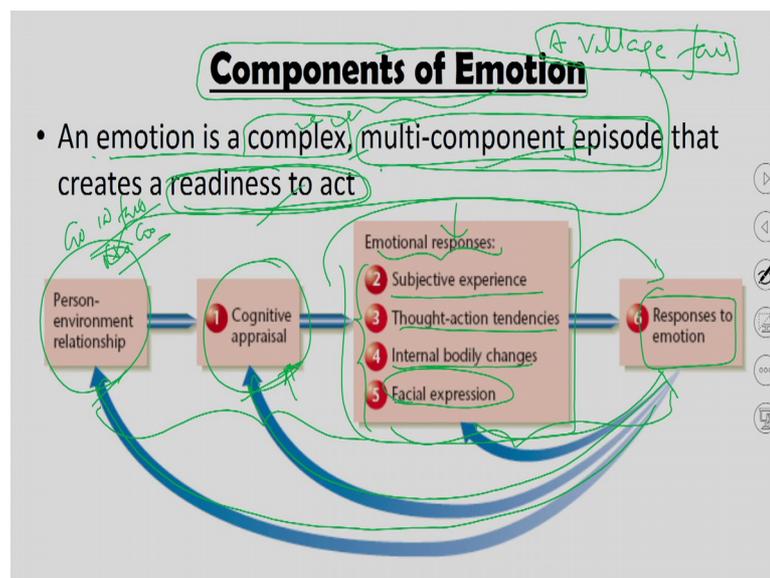
Last lecture we looked at another interesting fact, higher order cognitive process which is called emotion. Now as I discussed in the last class emotions actually help you make decisions, actually help you in responding to certain situations. Emotions are by its own self or by inherently help to shape your actions, shape your acts towards certain situations. So, last class what we did was we looked at what is emotions? The definition of it and we looked at a combined model of emotion that is right now in a minute I will be showing you that that is called a multi component model.

We looked at how emotions differ from mood and carried our discussion further by looking at the various theories of emotion. We not only looked at emotion from the James Lange view point, which says that emotions sets in after a physiological process or a physiological process or physiological arousal sets in the feeling, but we also looked at the cannon bard approach which basically says that emotion and the physiological arousal happen at the same time.

We moved ahead and evaluated another theory of emotion which is called the theory of Schechter singer or the two process theory which looked appraisals or cognitive appraisal as a basic process of how emotions actually develop. And finally, we looked at something called the opponent process theory, what we are going to do today is to continue from here and understand the whole multi component process of emotion and how these processes integrate together to generate emotion and how these emotions actually shape behavior.

So, this is where I left you in the last class, where we were actually looking at the various theories of emotion and how this theories of emotion, what definitions are of these theories of emotion?

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Let us go back to the idea of how emotion really starts or the multi component process of emotion, there I explain to you that emotion is a complex multi component episode that makes you act.

So, the behaviour is controlled by emotion, what we did their was I took the example of a village fair and I showed to you how emotion is generated, as I said emotion is not a single process system, emotion is not a one process system. It generates through a cascade of processes one following the other leading to a final response.

So, the first step that we did was explain something called the person, interaction and environment relationship. So, there I describe to you how if you do not decide to enter the fair you will not feel any emotion as such, there is no emotion that you are going to feel. but once you are passing through a village fair and you decide not to enter the village fair you will not feel any emotions, you will not feel any kind of change in your all then they might be some change in a physiological arousal, but you will have no feelings as such.

But the moment you decide or you interact with the fair the process of cognitive appraisal starts, which starts a series, a cascade of processes which lead to the final emotional response and a related behaviour to it. So, what we going to do is start by looking at what is cognitive appraisal and all other processes which are related to the coming up of emotion or the development of a emotion and the development of a behavior or the following of a behavior from that.

(Refer Slide Time: 13:23)

Cognitive Appraisal & Emotion

- **Cognitive appraisal**
 - It is the *interpretation of the personal meaning of current circumstances (person-environment relationship)* that results in emotion
 - Cognitive appraisal is *largely responsible for differentiating emotions*.

So, the first step that we saw in any emotion process is cognitive appraisal. So, what is cognitive appraisal, what do we mean by cognitive appraisal? Cognitive appraisal is defined as a interpretation of the personal meaning of a current circumstances, person environment relationship that results in an emotion. Two people would have gone to the fair, one person would have a very bad experience with a fair, the other person would have very good experience with the fair now when both of these people come to the

same fair they interpret the fair in different ways in different personal meanings that is what we are describing the interpretation of the personal meaning of the current circumstances.

So, the current circumstances is the fair and the way we interpret the fair based on our past experience is what is called cognitive appraisal, is the process of assigning meaning to any person environment interaction. And this interpretation then leads a series of processes which cascading to one another leading to the final emotion behavior; leading to the final emotion act that comes up which further connects to a particular behaviour related to it.

It has been known that cognitive appraisals is largely responsible for differentiating emotions. Psychologist suggest that it is cognitive appraisal which actually leads to people giving different labels to different emotions. How do people differentiate between two emotions? The same fair is happy for someone, the same fair is sad for someone. Giving a gift to somebody who is needy is satisfying, but somebody who is not needy a may result in a different emotions altogether depending on is interpretation of the situation, somebody who needs it would be very thankful and will have more thankful emotion. But a person who does not need a gift and you are forcing up to him might respond in a different way and so this is how different emotions are looked at.

So, how do we get these two different emotions? One person becomes sad by giving gift and the other person become happy by giving gift is dependent on what kind of appraisal both these people are doing, how are these two people interpreting the same situation? The needy person when he gets a gift that gift is particularly solving one of his problems he actually feels happy and so he displays a happy emotion.

On the other hand a person who might take your gift giving as a personal insult will not feel happy and for him the same emotion will not be happy after gift giving, he may see it is an insult and then he may feel sad or maybe angry because of you or because of the very fact that you are given him a gift.

(Refer Slide Time: 16:21)

Discovery of appraisals Arousal + Appraisal
unexplained Meaning Cognitive

Two-factor theory of emotions – emotions are the result of a combination of an initial state of unexplained arousal & cognitive appraisal for that arousal – mixed support

Misattribution of arousal – physiological arousal can be erroneously attributed to subsequent event

And so it is this cognitive appraisal which actually makes us differentiate between emotions. Now, the question is how did appraisal start, who started the idea of appraisal, where was the discovery of appraisal actually started? The first instance of appraisal comes from the two factor theory which is Schechter singer theory. Now of course, we had done this theory before so I will just quickly go over it. So, what the two factor theory actually says, emotions are the result of a combination of initial states of unexplained arousal and cognitive appraisal for that arousal which is provide mix support.

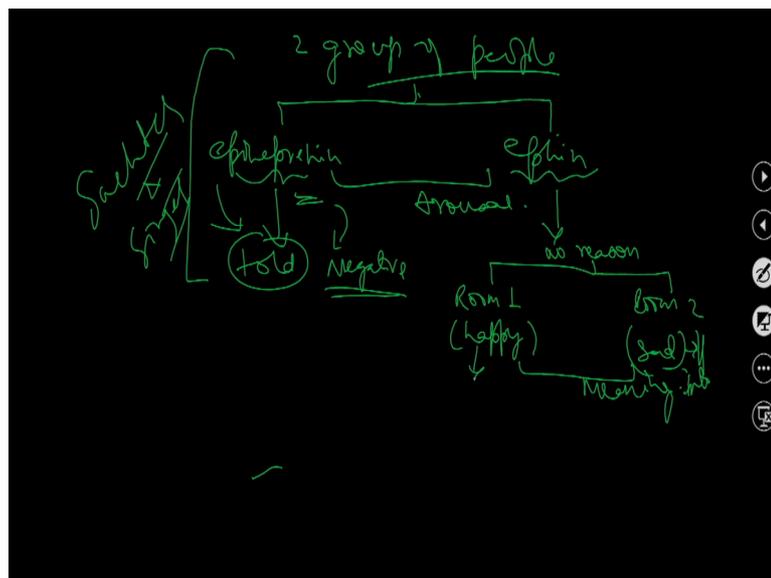
So, generally there is arousal and unexplained arousal and this unexplained arousal leads to a appraisal or meaning a cognitive meaning attached to it and this cognitive meaning with this unexplained arousal will actually lead to the appraisal process or the emotion been generated.

So, any unexplained arousal when it combines with a particular meaning that leads to particular kind of a emotion and this process of providing meaning to this unexplained arousal is what is called the appraisal. No when Schechter singer they actually gave the theory of arousal, so, how did they discover it? What Schechter singer did and they wanted to study whether appraisal actually works this giving meaning to situations giving meaning to arousal will it lead to different kind of emotions?

So, what they did was they took two group of people and to this two group of people they give the injection of epinephrine, now epinephrine as you know is an injection which leads to heightened arousal. Now one group of people who were given epinephrine they were told that the unaccounted arousal that they are seeing the jittery feeling that they are having is because of the epinephrine.

So, these people knew the cause of arousal that they were having these people knew the real reason why this appraisal is happening, why this arousal is happening. The other group of people who were not told the reason that why you are feeling the arousal where then actually taken into a different room a different chamber. So, how was arousal then started?

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So, what happened is two group of people were taken and this two group of people were given epinephrine injection. So, epinephrine injection and this epinephrine injection actually leads to heightened arousal. Now one group was said were actually told the reason, so they were told that the arousal is happening because of the epinephrine. The other group of people were not told no reason was given and then later on this group of people were then taken to two different rooms; one room was a happy room and the another room was a sad room.

So, in the happy room what actually happened is there were confederates of this experimenter who were laughing, cheering, doing happy thoughts, making paper planes, flying the paper planes and doing all kind of acts and so when these people who are given epinephrine we are pushed into this room. Later on when they talked to them the experimenter talk to them and asked how you feel they felt happy and they explained the arousal because of the happiness that they were feeling.

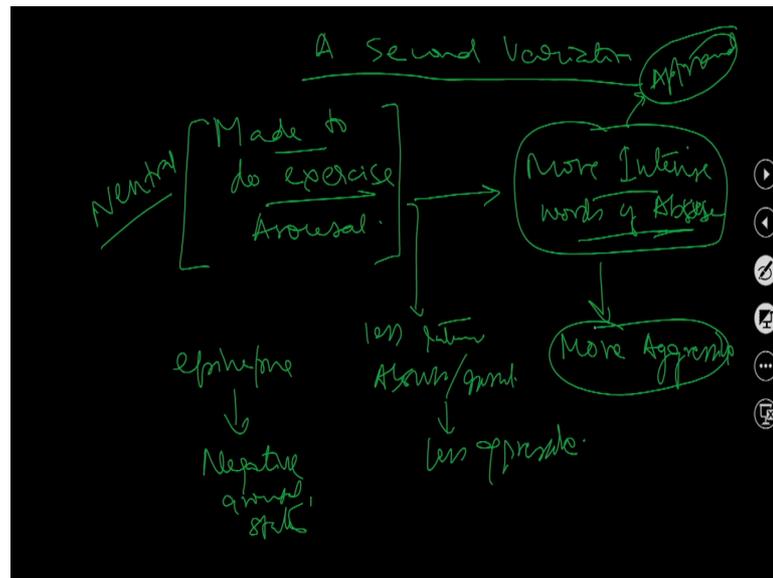
On the other hand the people who are taken to the sad room, when they were asked how are you feeling, they said they were feeling sad because people in the sad room were actually cursing each other, they were depressed they were sitting at somewhere crying, somewhere wailing and all kinds of acts were there. So, when people went into this room and a reason was asked to them why do they think they are feeling excited? They said they are not feeling excited the arousal is because they were feeling sad and so basically this was one of the first experiments which actually proved; which actually proved the fact that appraisal the meaning that you give these are the meaning.

So, the meaning that you give to situations actually leave to the interpretations of the arousal. So, the question was one of the points that were criticized in this experiment was, that epinephrine actually is it gives you negative arousal. Epinephrine is actually a activating hormone and because of that people feel highly aroused and so epinephrine giving someone injection or knowing that they were given injection or epinephrine actually create some kind of jittery feeling into you.

So, the question was since epinephrine to start with created a jittery feeling and so people in the sad were showing more intense sadness, then people in the happy room was it that only epinephrine it could be that on epinephrine was the reason for this arousal, for this change in feeling. It was the bad or it was a negative conation related to epinephrine which was actually leading to the more intense or the more aggressive feeling that the people were having.

And to prove that it was not the conation the idea that epinephrine is a more negative drug or it is a drug that was not the reason why people were for feeling more aggressive in one group and the other group. A variation of this experiment was actually done and so what was the variation of this experiment?

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In the variation of this experiment, so a second variation people were made to do exercise and this exercise lead to arousal right so people were made to exercise and they were feeling more aroused. Now, when this people who are made to do exercise they where abused, more abusive words, more intense abusive words where use these people felt more aggressive, but the same people when a less intense abuse or insult was done they were feeling less aggressive.

Now, as you can see in this case what is happened in the arousal is neutral. So, the arousal that the people are having is neutral, as in the case of epinephrine which leads to more negative arousal states the exercise leads to a more neutral arousal state and this neutral arousal states as you can see the more intense abuse you give, the appraisal, the meaning, the more intensive abuse that you give the more aggressive people feel.

And this is the definitive answer to the question that people on their own they feel emotion by upraising the situation, it is not arousal alone which leads them to giving different names to emotion, but it is the appraisal that they provide which is which place a central role to the emotion that is generated in people. So, one of the reasons, one of the primary reasons for emotion generation different emotions generation is because of the different appraisals.

Misattribution of arousal, physiological arousals can be erroneously attributed to subsequent events and so in both these cases whether it is an exercise problem or whether it was the neutral the epinephrine problem, what happened is people erroneously put the reason for the arousal to be either the happy in sad room or to be the words that were spoken to them. And this basically fact of using appraisal to define arousal is what is called a misattribution of arousal.

(Refer Slide Time: 25:47)

Cognitive Appraisal & Emotion

- **Themes & dimensions of appraisals** *Appraisal / Meaning*
 - People's appraisals of situations lead to subjective experience of emotions, associated arousal & other components of emotional response *Core factors*
 - **Minimalist appraisal theories** - reduce number of appraisal dimensions to a minimum, often based on fundamental themes - emphasises importance of emotion-specific, core relational themes (e.g. irrevocable loss for sadness) *Core factors*

Now, this arousal this appraisal process, the process of appraisal or giving meaning to arousals they studied using certain things. How is appraisal studied? Now it is studied using certain things or the question is what causes how do we study appraisal, what causes appraisal for that matter? So, one of the reasons that appraisal is caused is call there are certain themes which are used for defining appraisal, there are certain theories which are there which define how appraisal really works or how appraisal causes.

So, people's appraisal of situation leads to subjective experience of emotions associated arousal and other components of emotional response. The way people appraise a situation, the way people define a situation, the meaning that they provide to situation that meaning leads to the subjective experience of emotions. So, why different people feel different emotions from the same event is because they appraise the situation differently.

The meaning that they give two arousal are different because they appraise the situation differently and other components of emotion and emotion response is also affected by these arousals. So, there are two basic theories of appraisal; what are appraisals and what causes appraisals, how do we study appraisals? There are two approaches to studying appraisal.

The first approach is called a minimalistic approach of how appraisals are defined or the way in which meanings are generated from emotional situations or emotionally person environment interaction. One is called the minimalistic theory and the other is the dimensional theory, what is the minimalistic theory? The minimalistic appraisal theory what does it say? It says that this theory reduces the number of appraisal dimensions to a minimum often based on fundamental theme.

Now, the minimalistic appraisal theory what it suggest is that the way appraisal is done, the reason for appraisal can be expressed in the minimalistic form on minimum number of dimensions and this minimalistic theory basically explains appraisals in terms of just one dimension and these dimensions on which appraisals of situation or emotions can be named. So, appraisal of situation leads to the naming of the emotions the understanding the feeling of the emotion and so the minimalistic theory basically explain that there is one theme or as Richard Lazarus would say there is one definition that is given and if the situation that a person is feeling or experiencing matches this situation, the definition situation a particular motion is labeled.

So, in very clear or simple words the minimalist theory suggest that there is a definition which is given. Emotions are measured on one dimension and if the definition fits the definition that minimalistic theory gives you it fits to what to the appraisal, to the meaning that you are giving, to a particular emotional situation, to a particular emotional event you name that emotional event to the corresponding meaning that the minimalistic appraisal theory or the correlation it is also called the correlation factor.

I would say the core factor and if your definition matches this core factor you would say that this is the kind of emotion that I am feeling. So, minimalistic theory reduces the number of appraisal dimensions to minimum, often based on fundamental themes, emphasizes importance of emotion specific core relational themes and so this is what it is

emotional core relational themes. So, these things are emotional correlation themes example irreversible loss is for sadness.

So, there are certain themes, there are certain definitions which are given and so if this definitions actually match the situation that you are in you give that situation the name of the emotion which this equivalent to the core relational theme that that is defining it.

(Refer Slide Time: 30:06)

Table 11.1
Emotions and their cognitive causes *Fifteen emotions and their associated core relational themes (appraisal patterns).* (After Lazarus, 1991b)

Emotion	Core relational theme
Anger	A demeaning offense against me and mine
Anxiety	Facing uncertain, existential threat
Fright	Facing an immediate, concrete, and overwhelming physical danger
Guilt	Having transgressed a moral imperative
Shame	Having failed to live up to an ego ideal
Sadness	Having experienced an irrevocable loss
Envy	Wanting what someone else has
Jealousy	Resenting a third party for loss or threat to another's affection
Disgust	Taking in or being too close to an indigestible object or idea (metaphorically speaking)
Happiness	Making reasonable progress toward the realization of a goal
Pride	Enhancing our ego identity by taking credit for a valued object or achievement, either our own or that of some person or group with whom we identify
Relief	A distressing goal-incongruent condition has changed for the better or gone away
Hope	Fearing the worst but yearning for better
Love	Desiring or participating in affection, usually but not necessarily reciprocated
Compassion	Being moved by another's suffering and wanting to help

Let me give an example let say, so when we should say that we are feeling anger; anger the core relational theme for anger is a demeaning offence against me or mine. So, if you feel that a demeaning offence has been done against you or somebody related to you then you relate that particular emotional situation or you name that particular situation as anger, similarly anxiety. When should we call a situation anxiety? An anxiety is situation when facing uncertain existential threat. So, when a person faces an uncertain or existential threat he names that particular situation as anxiety.

Let us take one more guilt, so when should we say that we are having guilt or how do we define guilt? Guilt is said to be having transgressed a moral imperative, if you are in a situation which has lead to the transgression of a moral imperative we say we are feeling guilty. Jealousy when do we feel jealousy? When resenting a third party for the loss or threat to another affection and so what this theory basically explains is that there are certain definitions and in these definitions actually fit or is in line with the situation that

you are feeling you are in you basically say that this is the emotion that you are going to feel this is the emotion that you are feeling.

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Dimensional appraisal theories – identify a range of appraisal dimensions thought sufficient for differences among emotions (e.g. desirability of event & whether it occurs)

Table 11.2

Primary appraisal dimensions and their consequences
Combinations of two appraisal dimensions and their associated emotions. (After Roseman, 1984)

	Occur	Not occur
Desirable	Joy	Sorrow
Undesirable	Distress	Relief

There are some other theory or there is another theory of emotion which says that the appraisal of emotional situation cannot be done on just one dimensional, there are multiple dimensions and so people have come up with almost 15 dimensions of emotion. So, how does the theory work? Let us take one very simplistic example. Emotional situations can be explained or is explained in this situation on two dimensions, the appraisal to an emotional situation has been explained in two dimensions.

So, how does the theory really work identify a range of appraisal dimensions through sufficient for differences among emotions example desirability of event and whether it occurs or not. So, the typical kind of emotion that you feel is not only dependent on just one dimension or one definition it can be measured on multiple dimension; let us say take this example. Let say that you want something has happen to you; you got a gift right.

Now how do you interpret this gift with the idea of dimensional theory, a gift receiving is a good situation and you should be happy, but the dimensional situation theory or the dimension theory says that the emotion that you are feelled with gift giving or gift

receiving is dependent on multiple dimensions, what are the dimensions? We just taking two dimension.

One is whether you get a gift or you do not get a gift and whether the gift that you want is desirable or undesirable, if you get a gift and it is desirable by you, you feel joy. So, you get a gift and you wanted the gift you feel joy, you wanted a gift and you do not get a gift what happens is you feel sorrow. So, the same situation whether you get a gift or not and whether this gift is desirable or not will lead to four different emotions you wanted a gift, you got a gift it is joy.

You wanted to gift you did not get a gift it is sorrow, you did not want a gift, but you get it; it creates a distress and you did not want a gift and it never came to you it is actually a relief. So, the same idea of getting a gift or not getting a gift can be also mapped onto a dimension of whether you want that gift or not and that together these four situations together can create four different emotions. So, this is what the dimensional approach to emotion is.

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Cognitive Appraisal & Emotion

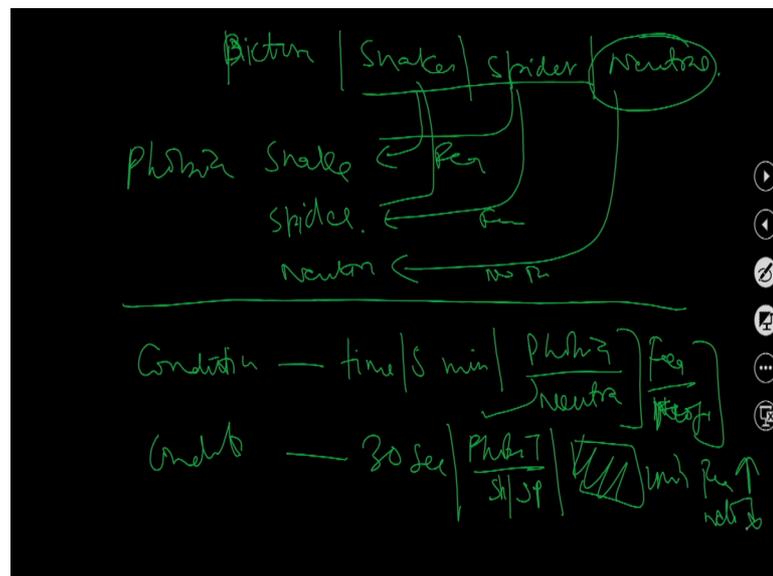
- **Conscious & unconscious appraisals**
 - Appraisals can *occur at unconscious levels* - people experience emotion without understanding why
 - Cognitive appraisals in emotion processes similar to other types of cognition - *resulting in part from automatic processing & in part from controlled processing*

Now, there is an idea of appraisal there is a question that whether appraisals are conscious or unconscious, is it possible to have an appraisal which is non conscious. So, whether appraisals are conscious or unconscious. Appraisals can occur at unconscious levels also, people experience emotions without understanding why they are feeling

emotions and so to prove that this appraisal process is not only cognitive it's not only overt it is a covert process as well several experiments where actually done.

Now, one interesting experiment which was done in which people were shown pictures of snakes and spiders. So, three group of people were taken, one group which is phobic with snakes, the other group which is phobic with spiders and a third of neutral group and all these people where actually given or shown this pictures, so picture of a snake.

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So, how was experiment actually done? We have pictures of snakes, spiders and neutral picture and this where given to phobic's people who have phobia. So, we have snake phobic's we have spider phobic's and we have the neutral people who are not phobic to this. So, when snake phobic picture were given to people who phobic to snake they felt fear. Similarly, spider phobic people and neutral picture given to neutral people no fear.

Similarly, when cross also was done so this kind of a thing was there. Now there were two single condition, in condition one enough time 5 minutes was given to both the groups the phobic group and the neutral group to look at the pictures; obviously, what happened is the phobic group felt fear and the neutral group did not feel fear. So, no fear to the neutral group for this snakes and spiders, neutral picture did not raise any arousal.

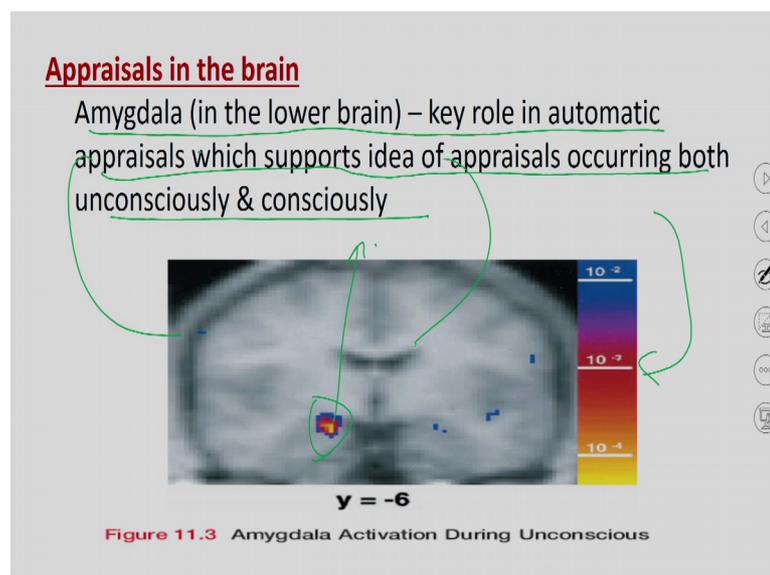
The interesting thing was a second condition was used in which 30 second this pictures of phobic pictures which is the snake picture and the spider picture where shown to

people both phobic's and neutral and later on a mask was used for 1 minute a mask is, so picture was shown for the snake picture was shown to people who are phobic as well as neutral and then a blank screen was presented for 1 second.

It was found out that even when the exposure of the picture was 30 seconds phobic's had high fear, phobic showed high fear in comparison to neutral people which basically proves what? That even if pictures are not shown to you at the conscious level people feel phobia, people felt afraid which basically means that people were able to make meaning or provide meaning at the unconscious level.

So, appraisal can also be done at the unconscious level, also cognitive in emotion processes are similar to other types of cognition resulting in part from automatic processing and in part from controlled processing.

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So, the way people make meaning to these appraisals is not only in automatic process it is also happening at a control process so where does this appraisal happen? So, amygdala is a lower brain and which has a key role in automatic processing which support the idea that appraisal occurring both unconsciously and consciously. And so appraisals have been track to this area of amygdala this is the region of the amygdala and this shows activity which basically means, that amygdala activity in terms of an unconscious and

conscious appraisal shows that appraisals can be done both at the unconscious and conscious level.

(Refer Slide Time: 38:04)

Subjective Experiences & Emotion

- **Subjective experience of emotion**
 - This feeling component is, by definition, within awareness
 - One output of the appraisal process is change in subjective experience
- **Feelings modify attention & learning**
 - Current feelings direct attention to events that match our feelings, as a result we learn more about those events
 - Feelings influence which memories are more accessible & those memories influence what is easy to learn at the moment

The next step in the emotion chain is subjective experience, so subjective experience of emotion when you have appraised situation when appraisal of the situation has been done what next happens is people feel that emotion people get different feelings depending on their past experiences and that is called as subjective experience of people.

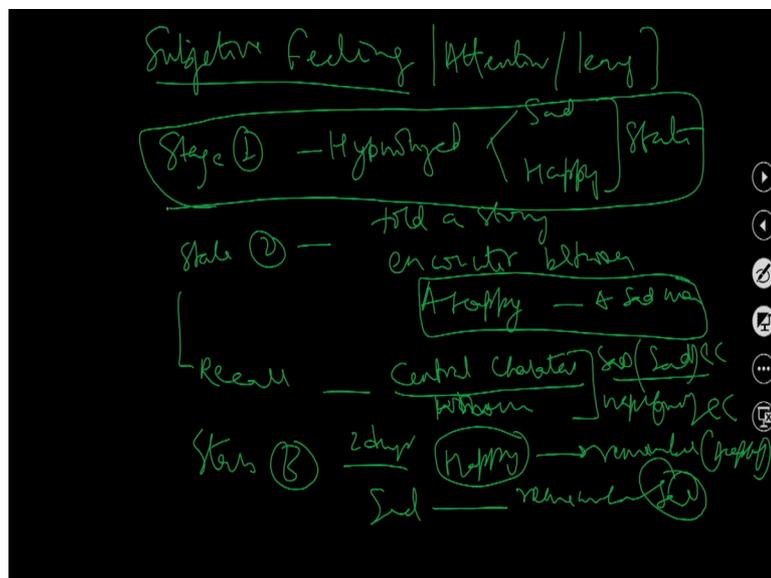
Now, this feeling component is by definition, within awareness. Once you appraise the situation in a particular way, once you give meaning to a situation in a particular way you start feeling that way. So, when you rate the fair as happy you start feeling happiness and that is what is subjective experience. One output of the appraisal process is change in subjective experience.

So, appraisal, the process of appraisal may change situation of fair situation from very positive to a very negative depending on past experience and the kind of appraisal that you do, if you go to a fair and its all happy and suddenly you see people rushing out and shouting. The situation appraisal would suggest that this fair is no more happy it is a sad fair and so the way you appraise situation leads to a following feeling which is you start feeling afraid of fear in that particular fair and so this appraisal leads to the subjective feeling.

Now, this subjective experiences can also do a lot of changes into our attention and learning. So, the way you feel changes your learning or changes your attention and learning. Now current feeling direct attention to events that match our feeling as a result we learn more about those events.

Basically the way you feel it changes your learning and attention, also feelings influence which memories are more accessible and those memories influence what is easy to learn for the moment.

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Now, just to prove or just to show you that feelings or subjective feelings can change your attention and learning and experiment was done and I will describe the experiment in very quickly, what happens is 3 phase of the experiment was done.

The experiment was taken place in three phases, in stage 1 people were hypnotized into as sad and happy state. So, people were first hypnotized into sad and happy stage, in stage 2 the same people were told a story of an encounter between a happy man and a sad man two character a sad man and a happy man is a part of the story and this story was said to people.

Later on within stage 2 only a recall was done and in this recall people were asked what is the central character of the story and whom they identify with? Now people who were sad they thought that the sad character was the central character and also people who

were happy they thought that the happy character was the central character. Also people who were sad they identified more with the sad character and people who are happy they identified more with the happy character.

In stage 3 people were put out of hypnosis and after 2 days they were called back to the lab and they were asked to relate the story back. Now people who were happy or put into the happy group during hypnosis they remembered more happy events or more happy details and people who were sad they remembered more sad details, which basically means that the way you feel the hypnosis actually worked and the way you feel about something, the way you feel about a situation will actually color, the way you or will actually define how much information will you remember about that particular situation.

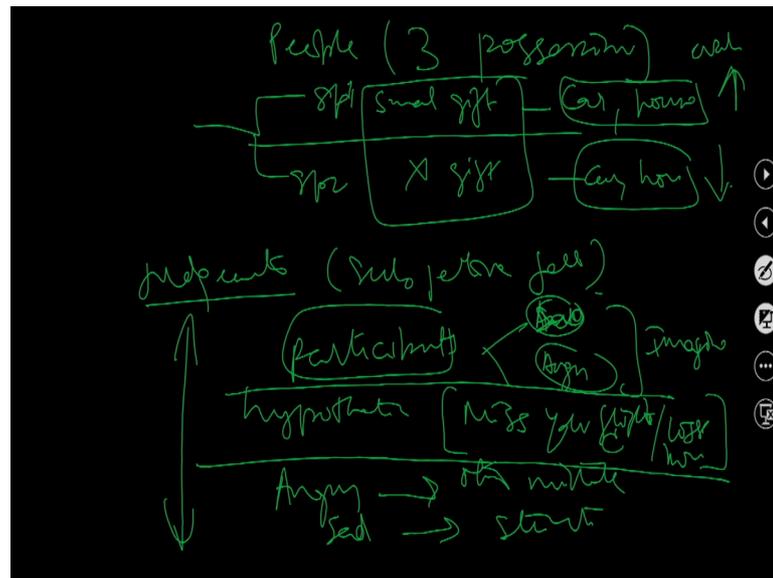
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Subjective Experiences & Emotion

- *Feelings modify evaluations & judgements*
- Our feelings can affect evaluations of other people, and of inanimate objects
- Feelings also affect our judgements of risk – if we are fearful, more likely to see world as uncertain & uncontrollable; if feeling angry/happy, more likely to see world as certain & controllable

Not only that feelings modify your learning and memory feelings also modify the judgments and evaluation that people do. Feelings can affect evaluations of other people and of inanimate objects, also feeling affect our judgment of risk and if we are fearful more likely to see the world as uncertain and uncontrollable, if feeling is angry happy more likely to see the world as certain controllable.

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And so here what happened is. So, people were asked to relate 3 possessions that people had.

Now, before the start of the experiment 2 group where done group 1 was given a small gift and group 2 was given no gift. So, no gift versus small gift group right, group 1, group 2. Now group 1 after receiving the gift they were asked how was the car or how was their house, these people evaluated very high very high evaluation for their car. But the second group was not given any gift they evaluated the car or the houses very poor, which basically means that the idea that the feeling that you are put into the feeling that you have actually colors the way you see things.

Another thing to prove that judgments are also affected by subjective feeling, people were first participants were first made sad or happy they were made sad or they were ask to imagine that they are sad or happy. Then they were given a hypothetical situation, miss your flight.

So you have missed your flight or you lose money. So, two situations were defined first people were asked to imagine that they are sad and happy and then they were given a situation that either you have missed your flight or you have lost money, later on they were asked whom do they blame?

Now, angry people it was angry and sad, so angry people believe that other peoples mistake made them lose the flight. Whereas, sad people believe that it is situations which have actually made me lose the flight and as you can see the judgment that people make is also colored by or is also affected by what kind of subjective feeling that you are having.

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Thought & Action Tendencies & Emotion

- **Thought-action tendencies**
 - Refers to urges - one way that feelings guide behaviour & information processing
 - With most negative emotions, people's thought-action tendencies become narrow & specific
 - With most positive emotions, people's thought-action tendencies become broad & more open to possibilities

Now, once the subjective feeling is mapped once you have a certain subjective feeling once you appraise a situation and you feel in a certain way, the next thing is that you start thinking and acting in that particular way. So, once you feel happy you start thinking happy and you also start acting happy. You start doing verbal poses, your face starts showing happiness and that is called the thought and action tendencies.

So, thought and action tendencies refers to urges one way that feelings guide behaviour and information processing. So, once you feel happy you also start shouting up and down, you start talking in loud voices, you start moving your hands a lot and so if you feel sad you start thinking in a sad way and so your body language and your face and all other nonverbal communication or your actions also start moving in that particular direction.

So, with most negative emotions people's thoughts and actions tendencies become narrow and specific. So, with negative emotions people start thinking in a negative way,

but with most positive emotions peoples thought and action tendencies became broad and more possibilities. And so here also an experiment a simple experiment was done were people were made to evaluate a picture which was either negative or positive with their palm down on a table and so certain electrodes were attached.

When people saw sad picture or people saw angry picture they clutched their hand and that reaction was taken in. So, when people saw angry picture they clutch their hand that basically means that the anger also related to their action tendencies of putting the clenching their hand to make a fist to fight someone. Whereas, when it was a happy situation then they loose their hand much and so no reaction was taken up from the electrode, which basically means that this though and action tendencies are in line with what you are feeling.

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Table 11.3

Emotions and their associated thought-action tendencies *Twelve emotions and the urges they spark.*
 (After Fredrickson, 1998, 2002; Fredrickson & Branigan, 2001; Frijda, 1986; Lazarus, 1991b)

<i>Emotion</i>	<i>Thought-action tendency</i>
Anger	Attack
Fear	Escape
Disgust	Expel
Guilt	Make amends
Shame	Disappear
Sadness	Withdraw
Joy	Play
Interest	Explore
Contentment	Savor and integrate
Pride	Dream big
Gratitude	Be prosocial
Elevation	Become a better person

And so popular thoughts and action tendencies are with anger, the attack tendency is there with fear the tendency to escape is there with disgust, the tendency to expel is there with guilt, the tendency to make amends is there and so these are the popular thoughts and action tendencies is related to particular emotions.

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Bodily Changes & Emotion

- ***Bodily changes & emotion***
 - Intense negative emotions involve physiological arousal caused by activation of sympathetic division of autonomic nervous system
 - Positive emotions have undoing effect on lingering arousal from negative emotions
- ***Intensity of emotions***
 - People with spinal chord injuries (limit feedback from autonomic nervous system) report less intense emotions
 - Visceral perception plays a role in intensity of emotions

Once the actions tendencies have been mapped the body also changes or certain bodily changes also happen, when you feel a certain emotion and have a feeling about it and your action tendencies and thoughts are also shaped according to it your bodily changes also happen. And so what are these bodily changes? It is more blood is pumped to your sympathetic system and your heartbeat increases your pulse increases pupils dilate and that kind of bodily changes happens.

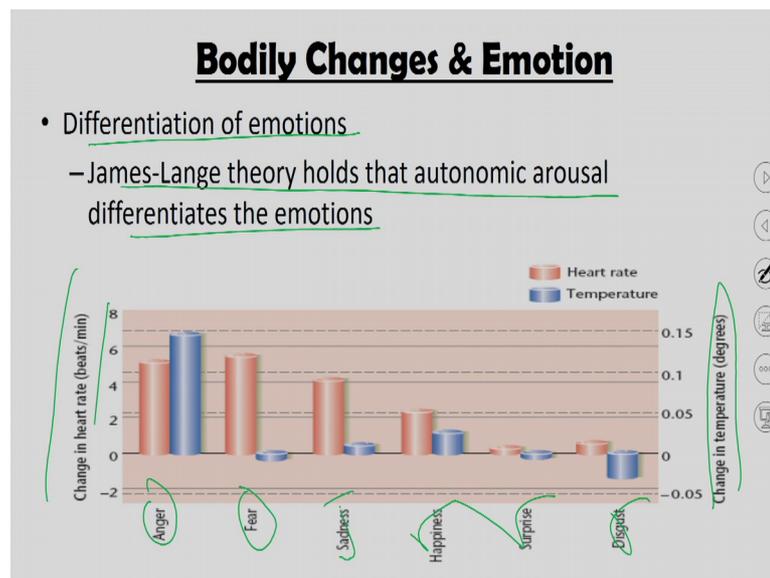
So, intense negative emotions evoke physiological arousal caused by activation of sympathetic division of the autonomic nervous system. Positive emotions have undoing effect on lingering arousal from negative emotions. So, one of the thing that happens is that once you feel a certain emotion and you appraise a situation and you start feeling that emotion and your thoughts and action tendencies also get shaped with that particular emotion your body also responds in a certain way and it has been proved that certain positive emotions can have a undoing effect.

Now, whether intensity of emotion have any role to play with this kind of bodily action? So, people with spinal cord injuries limited feedback from the autonomic nervous system report less intense emotions. So, what happened here is that war veterans were taken who had spinal cord injuries and the injury started right from the neck below the attachment of the final cord to the brain stem.

So, at this level and another at the bottom bottomest level of the spinal cord and so different five different groups were taken which has spinal injury at different places. The most intense emotion were felt with people who had injury at the lowest level of the spin, but people who had injury at the highest level is spine where the spine get connected to the brainstem they felt the least emotion, they said that we do not feel motion, but they we have we pretend accordingly and so that basically says that the intensity of a emotion is also varied by your bodily actions your body also has a role to play in the kind of emotion that you have, feeling.

Now, visceral perception plays a role in intensity of emotion, so this perception of whether your body is feeling anything or not defines how your body will respond to a particular emotion.

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Differentiation of emotions and so James Lange theory holds that autonomic arousal differentiates with the emotion and so this is a chart which actually says you that how the heart rate and the skin temperature varies with different kind of emotion.

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Facial Expression & Emotion

- Communications of emotion through facial expressions
 - Certain facial expressions seem to be universal in meaning, regardless of culture
 - Facial expressions of one person can change behavior of another (e.g. mother/child & visual cliff)
 - Certain aspects of facial expression are learned – display rules specify types of emotions people should express in certain situations and appropriate behavior for particular emotions

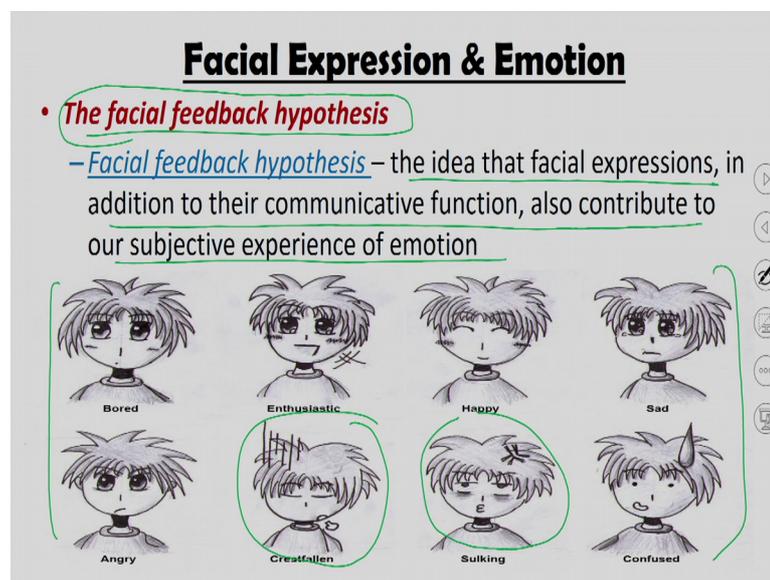
Facial expressions: the last step that we look at is the change in facial expressions, so certain facial expressions also signal emotion, communications of emotions through facial expressions. Now certain facial expression seems to be universal and meanings regardless of cultural. So, there are certain the expression of faces has a lot role to play in emotion.

Primary emotions like sadness, happiness and disgust or anger these are accepted by the world over and people are familiar with this kind of emotions. Also facial expressions of one person can change the behavior of another for example, the mother, child visual cliffs. So, here what happened is that a child was put on a visual cliff so we have done this experiment in the perception chapter, but we will again go back into it and so a child was put into a visual cliff and the child actually came to the point that the visual cliff was going down.

Now, the most children have when they are born they have this 3D perception third dimensional perception or depth perception and they would not actually move down the cliff, but they saw their mothers face when they came to the point of the cliff where they can fall. Now when the mothers were assuring this children actually surpass the cliff or moved ahead of the cliff, but when the mothers face so angry, then children actually never move ahead of the cliff which basically says that facial expressions were decoded by the children of their mother and they acted accordingly.

Now, certain aspects of facial expressions are learned, display rules specific types of emotion people should express in certain situations and appropriate behaviors for particular emotions. And so there are certain experiments which was done with Japanese people and people from other the western world and it was found out that when in the presence of authority Japanese people showed less disgust or less sadness in comparison to western people they are more expressive and so this display rules of how you display emotion or in presence of others how you display emotion for that matter is also varying or it varies from person to person and people to people.

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Now, there is something for the facial feedback hypothesis which basically means that the facial feedback. The feedback from the faces also has a role to play in the kind of emotion and so in this experiment what was done is a pencil was given to people and this pencil they were asked to either put on the lips or push it down so that it reaches the teeth and then later on they were asked to rate certain funny cartoons.

Now, people who rated the funny cartoons by pushing the pencil deep into the teeth actually rated the cartoon as more funnier, the reason that was provided was that since the pencil goes down into that or inside the teeth, it makes you laugh it creates a smiley face, it creates a mouth to smile. And that makes you feel that you are happy and you rated the cartoons to be more happier in comparison to the other case in which you were holding the pencil into a lips and so you are not creating a happy face.

Now, facial feedback hypothesis: this is the idea that facial expressions in addition to their communicative function also contribute to our subjective experience of emotions. So, as you can see these are the facial expressions which are there and so beside the crestfallen and sulking most emotions are universal in nature.

(Refer Slide Time: 52:41)

Responses to Emotion: Emotion Regulation

- **Emotion regulation**
 - Refers to people's responses to their own emotions
 - Sometimes people have goal of intensifying emotion while other times people want to minimise emotion – ability to do so predicts social success
 - Suppressing facial expression increases autonomic arousal & amygdala activation, & also impairs memory

Now, response to emotions once an emotion sets in how do we respond to it, how do we respond to as I said through all the process that we have defined from thought and action tendencies to subjective feeling to the bodily responses and facial feedback an emotion sets in and this emotion actually leads to a response. Now how do we give the response, can we control this response is what we are going to study, can we actually control the response from the emotion? Now emotion regulation yes we can control our emotions and the process we do through it is called emotion regulation.

It refers to people's responses to their own emotions, sometimes people have goal of intensifying emotions while other times people want to minimise their emotion ability to do so predicts the social success. If your boss is shouting at you and it is a payday you will not respond to him in a very bad manner or in a very intense manner, but then if ascertain the situation where it does not really matter to you, you may respond to him in a bad manner and so how you control emotion is what is called emotion regulation? So, suppressing facial expressions increases autonomic arousal and amygdala activation and also impairs memory.

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Responses to Emotion: Emotion Regulation

- People develop different strategies to control/regulate emotions

Table 11.5
Classification of emotion regulation strategies People use different cognitive and behavioral strategies to make themselves feel better. (After Parkinson & Totterdell, 1999)

	Cognitive	Behavioral
Disengagement Distraction Engagement Affect-directed Situation-directed	Avoid thinking about the problem Think about something pleasant or absorbing Reappraise Think about how to solve the problem	Avoid the problematic situation Do something pleasant or demanding Vent feelings; seek comfort Take action to solve the problem

So, how do we actually respond to this emotions the people develop different strategies to control and regulate emotion and what we are going to do is we are going to discuss just two strategies here, one is called the cognitive strategy and the other is called the behavioral strategy.

So, you can use this strategies to control your emotion or regulate your emotion and the strategies are called diversion and engagement. Now the first popular strategy is using diversion I can control my emotions so one is the first popular strategy is call disengagement, I can disengage from the situation in a cognitive way.

So, what I can do is I can stop avoiding thinking about the problem, this is in the cognitive way I have started disengaging myself or diverting myself in the situation and I feel less emotional. In a behavioral way what I can do is disengaging is avoid the problematic situation and move out of the situation, I can use also something called the distraction situation. I can do it cognitively by thinking about something pleasant or absorbing and that will move away from the particular situation or I will do something pleasant or demanding and that will actually lead to me getting distracted.

One way of lowering the emotional response is diverging myself; diverging myself from the situation, another way is engaging and what I can do is I can use effect directed engagement in which that the cognitive way, I can reappraise the situation, I can start

thinking about the situation and rethinking about the situation why the situation happened, why this emotional event happened, I can reappraise the situation should I be responding in this way or not and that is called reappraisal or I can vent my feeling and seek comfort. I can start beating someone else or start playing a game and vent my feeling that way and that will lead to giving me comfort.

I can use a situation directed approach of engagement and the cognitive manner how I can do I can think about to solve the problem, what I can do I can also start about thinking about that particular problem which is causing emotion and that can lead to an engagement technique of lowering my emotion or I can take action to solve the problem. One way is to I can think about solving the problem the other way is to I actually go there and solve the particular problem.

So, four different strategies and this four different strategies actually one is diversion moving away another is engagement moving within and I can do it in the cognitive and behavioral aspect and so basically these are how you actually use the emotional response mechanism or how you can control your emotional response. So, summing up what we did today is we carried on from what we left off in the last lecture.

We looked at the multiple component model, we looked at how appraisal are done, we looked at the basis of appraisal what is cognitive appraisal and the basics of it and we looked at how this appraisals lead to the generation of something called subjective feeling. We also looked at how this subjective feeling changes our evaluation and judgments and then we looked at how this feeling lead us to thinking and acting in particular ways, which lead to changes in bodily responses and which are supported by the facial feedback which generally leads to the emotion that you are feeling.

Once the emotion is set in that leads to a particular response and then we saw certain strategies of how to control this response, it could be a divergent technique where I can move away from the situation I can move away from the problem or it can be an engagement technique where I can actually get into the problem and solve it. I can do this problem solving either using a cognitive manner or using a behavioral manner and so in both ways I can control the emotions. So, this chart guys will actually help you in your own emotional problems or in solving most of your emotional problems.

So, in the next section what we are going to do is study another interesting factor which is called personality which shapes human behavior. So, till we do that it is goodbye from here.