

Introduction to Psychology
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Lab Session - 04
Emotion

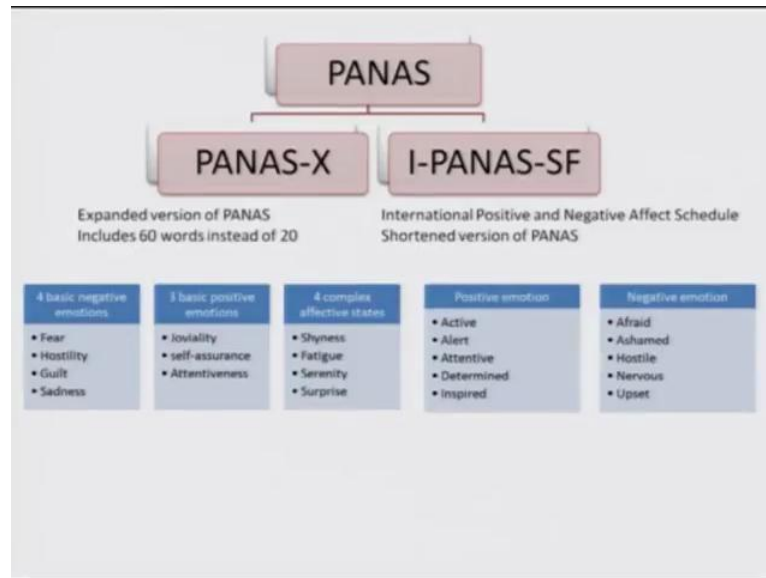
As we discussed during our discussion on Emotion, Emotion is basically multi faceted process which involves physiological reaction, behavioural reaction, expressive reactions, and subjective experiences. So, now, that we are here to now look at the lab session based on understanding of emotions, you can imagine that one way of doing a lab session on emotion could be that you look at the physiological reaction corresponding to a particular type of emotional experience.

So, physiological reaction say for instance you can look the changes in the autonomic nervous system functions - the heart beat, blood pressure, pulse rate, GSR, the skin conductance, you can look at now the blood volume. So, these are the physiological reactions that have to do with certain emotional state. The other could be the behavioural reaction in terms of the manifested behaviour in a given type of a scenario. The expressive reactions where you look at the facial expressions and then you give your judgement and then one can also look at the subjective experience, you ask the individual who has a inter gone a particular type of an emotional state to narrate his or her experience and this would subjective experience of the individual.

So, you can look at any one of them or you can take two or more, to study emotion in a lab setup; I have just trying to help you (Refer Time: 01:56) some of the dominant tool that have been used - one is the positive and negative affect schedule PANAS.

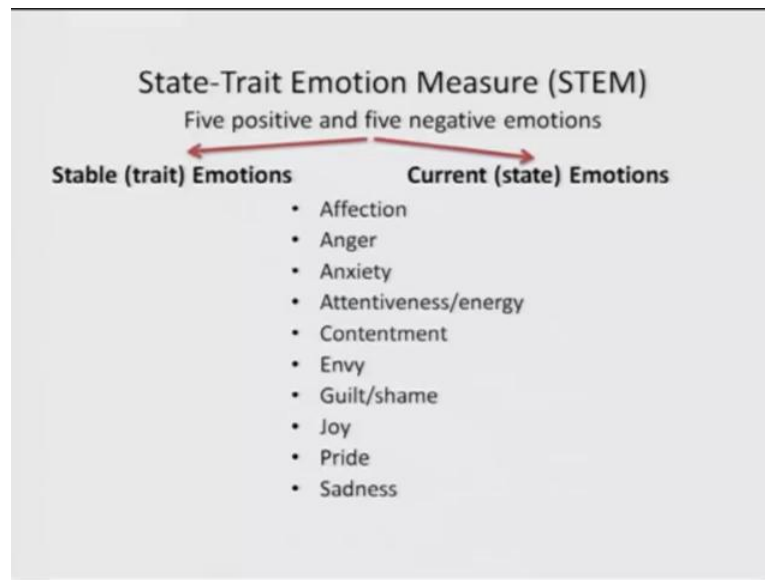
jittery, scared and afraid. So, you have to say right now, just now or you can may even given extended time period, you would be ask how much do you experience these things on a 5-point scale you have to write where one is very slightly and five is very much. The emotional words that concern the positive affect they are interested, alert, attentive, excited, enthusiastic, inspired, proud, determined, strong and active.

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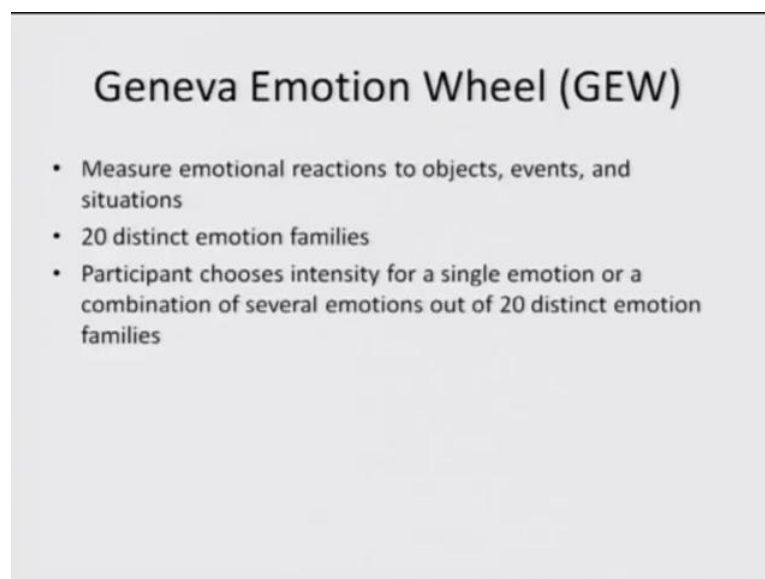
Now, two versions of PANAS is available one is PANAS-X and the other one is I-PANAS-SF. PANAS-X is basically the extended version of PANAS which includes 60 words instead of 20, whereas I-PANAS-SF is the international positive and negative affect schedule which is the shortened version of PANAS. Now basically it looks at four negative emotions that is fear, hostility, guilt and sadness; three basic positive emotions that are joviality, self assurance and attentiveness; four complex affective states that includes shyness, fatigue, serenity and surprise; five positive emotions that are active, alert, attentive, determined and inspired and then further five negative emotions that are afraid, ashamed, hostile, nervous and upset, this is about PANAS.

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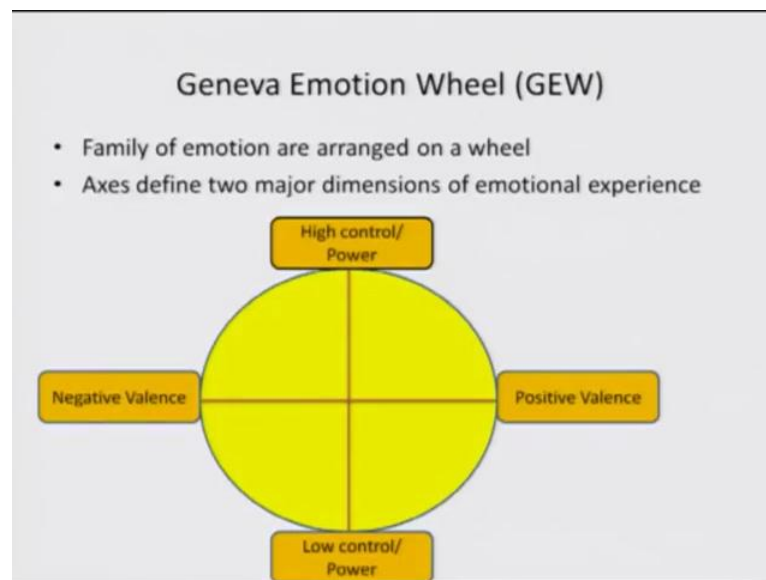
Little later we will have one session where you would see the usage of PANAS. The other one is the straight creative emotion measure stem, now stem basically now has five positive and five negative emotions and you look at the stable emotions that is the trait emotions and then the state emotion that is the current emotions. Then we come to personality there also we will be talking about the state trait factor. So, the state trait emotion measure, the emotion that it looks at are affection, anger, anxiety, attentiveness or energy, containment, envy, guilt or shame, joy, pride and sadness.

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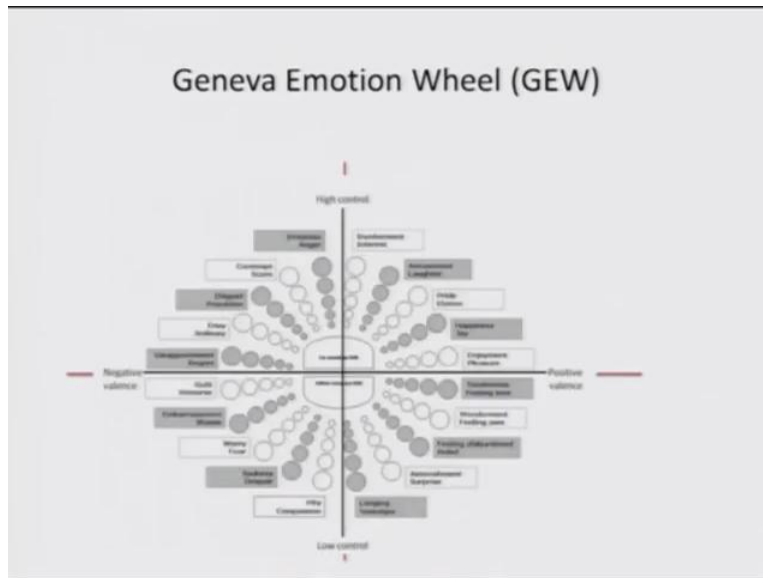
Another interesting tool that one can use is Geneva Emotion Wheel GEW, this measures emotional reactions to objects events and situations; 20 distinct emotion families are put here and participant is basically ask to choose the intensity for a single emotion or a combination of several emotions out of the 20 distinct emotion families.

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Now in Geneva Emotion Wheel the family of emotion are basically arranged on a wheel as you see on your screen right now, the axes define the two major dimensions of emotional experience. So, negative valence, positive valence that is one axis and the other one is high control and low control.

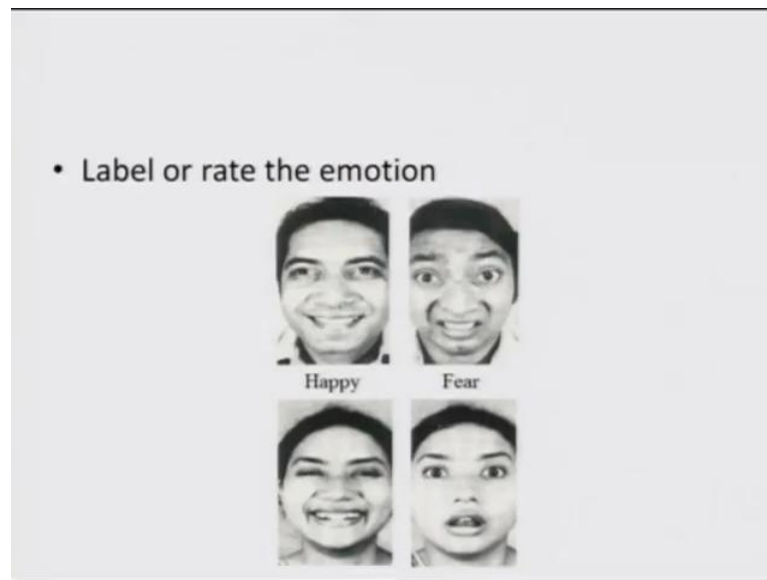
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Now, what happens in the case of Geneva Emotion Wheel? Basically now you have the emotions and as you can see on your screen, you have involvement interest, amusement laughter, pride relation, happiness joy, enjoyment pleasure, tenderness, feeling love, wonderment, feeling wow, feeling disburdened, relief, astonishment, surprise, nostalgic, petty or compassion, sadness despair, worry fear, embarrassment in shame, guilt in the most disappointment and regret, envy jealousy, disgusted repulsion, contempt and irritation and anger.

So, now what happens here? You have as you can see you have five different circles. So, what you do you? Basically know select one of the circles or you can go for a combination and then you are mapped on valance that is negative positive and again on control high versus low, this is what the Geneva Emotion Wheel does.

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The most commonly used test also in the lab setup as far as expressive reactions are concerned is when you ask somebody to either label the emotion we was the individual to rate the emotion. So, the images that you see here the upper image is of happy male, the next which is the scared male, again happy female and the scared female. So, happiness and fear these are the two emotions being expressed.

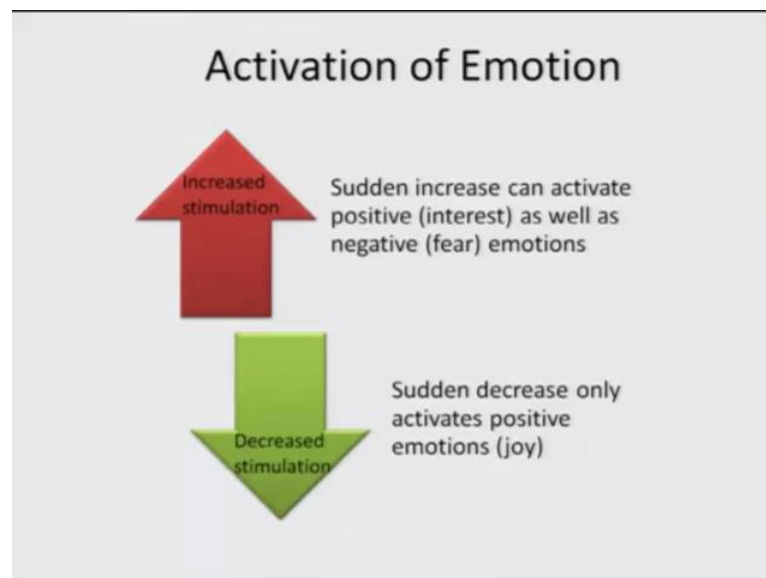
Now if you go for a labelling task what you can do is that you can simply show the image and you can ask the individual the name of expression. Again you can choose you can simply ask what emotion is being expressed which can lead to other type of consequences so the good thing is perhaps to give a list, say for instance you can give the six basic emotions or enact neutral (Refer Time: 08:07) to it. So, basically you propose happiness, sadness, fear, anger, surprise, disgust, as well as neutral and you say that you look at the image and you label the emotion. So, it could be either one of the six basic emotions or the neutral expression.

The other one is that you go for rating of the emotion, if you say the first top image is happiness then how happy is this expression and you can know again use a scale. So, if you use a 5-point Likert scale then say one is minimum, three is average, and five is maximum. So, that is labelling in the rating task that as to do with our expressions. You can even go for matching task now you show one expression, say for example, fear of a different expression and then there is the mix of various emotions of other expresses. So,

the target image belongs to say for example, me and then that the test stimuli has photographs of you expressing other emotions as well as the emotion at I am exhibiting and then you match it. So, that would be the matching task as far as expressive reactions are concerned.

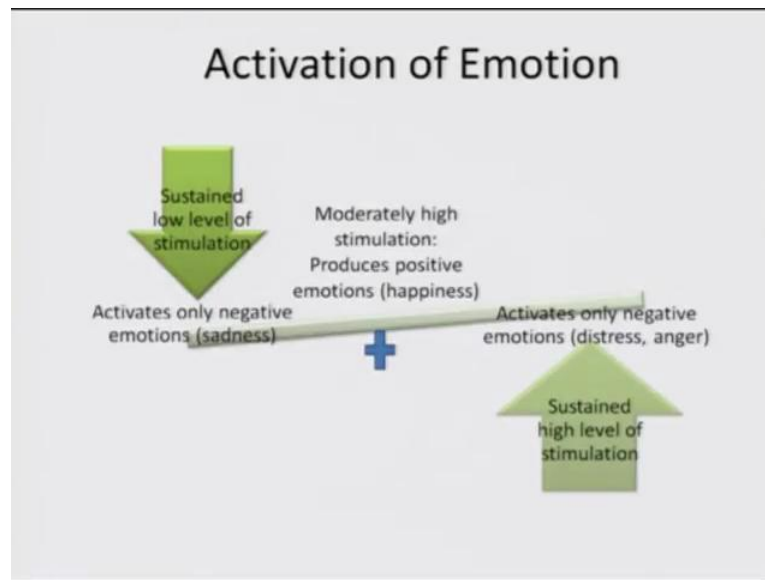
If you are interested know combining the two subjective experience and you want to map it in terms of the physiological activation. Remember one thing that if you go for increased stimulation there would be a sudden increase and then finally, it will activate certain positive as well as negative emotions.

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Say for instance, if you have a sudden activation of stimulation then you realise that they could lead to something like interest or it could also even lead to something like fear, whereas if you go for decrease in the stimulation and that to it is a sudden decrease then only positive emotions are possible.

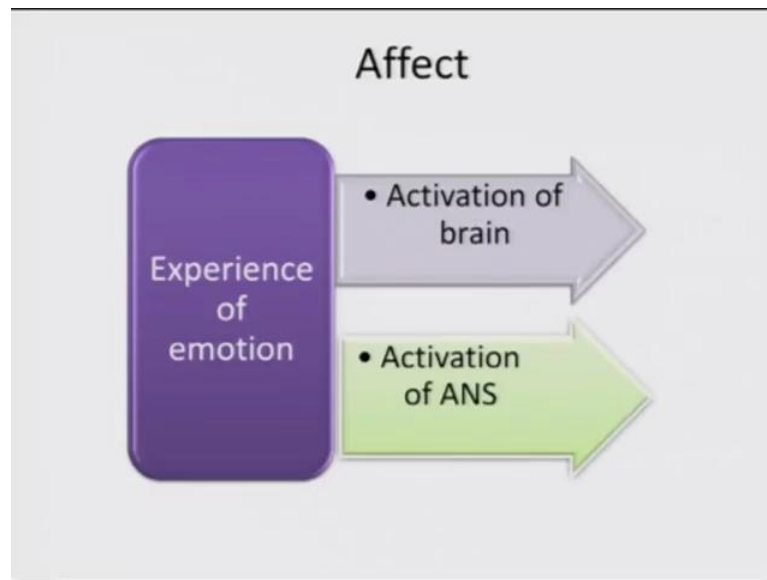
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If you go for sustained low level of stimulation or sustained high level of stimulation again negative emotions you will find.

So, if you go for sustained low level of stimulation then it will activate only negative emotions such as sadness, whereas if you go for sustained high level of stimulation that it then also it will activate negative emotions, but not sadness rather it would be anger and distress. But if you go for moderately high stimulation then you will have positive experiences like happiness. So, you will have to look at this when you are trying to use physiological indicators for studying emotions and of course, if you are interested besides looking at the activation of the autonomic nervous system you can also try to look at the activation of the brain and then correlate it with the subjective experience at you have already collected.

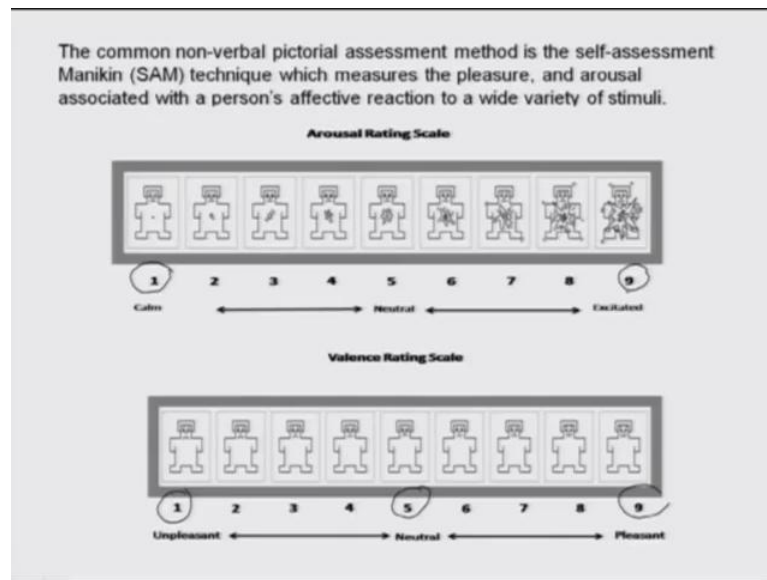
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The self assessment manikin Sam scale was developed long back by Bradley and lane, this is the self assessment tool for rating once experienced emotions in a pectoral structure on three dimensions of affective valence dominance and (Refer Time: 11:12) both paper pencil as well as the computer assisted version of Sam is available. The valence dimension describes the positive or negative feeling induced by their stimuli, they are also dimension describes the perceived vigilance as a psychological and physiological condition of a person that ranges from excitement to boredom and the dominance dimension describes the feeling of control of the person concerned.

Let us see a lab session where the participant does arousal and valance rating of pictures and words using Sam.

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This session is to test human emotion, it is a very simple paper pencil test you will be shown some pictures and some words you just go through those words and pictures and you will be shown a scale, those rating scales are been from 1 to 9. But there will be two different scales one scale is arousal scale another is valence scale which explain you as we move further.

Yeah.

So, these are two different scales one is arousal scale another is valence scale. Arousal scale depicts the calm and the excited (Refer Time: 12:24). So, one is the very calm state.

Hm.

When a particular stimulus as nothing and it is not exciting you then you can read one, but as at arouse assume then you write accordingly; now 9 is a very excited state.

So, the arousal is it negative arousal that you are referring to.

Absolutely, so this will be negative arousal and positive arousal.

So, if I see a stimulus which is pleasant would I be giving a calm rating?

So, if you see a positive stimulus.

yeah

Like a boy playing with the ball that is a pleasant picture that arouse you. So, it has arousing effect then it will be also highly.

(Refer Time: 13:06) positive or negative, OK fine I get it.

Yes, now the valance rating a scale is 1 is unpleasant state and 9 is pleasing the state and five is the neutral state. So, if a picture of a boy as we took an example is a please in picture.

Hm

Now, it can be 6 7 8 or 9 if it is very pleasing then you rate 9, but if it is less pleasing you write accordingly here.

Hm

Now, if a boy is kicking the dog or beating a dog then that is the negative picture. So, the negative balance will be this scale.

Hm.

So, 1 will be the very negative state, 2 will be a little less, 3 will be a little less and 4 will be little less

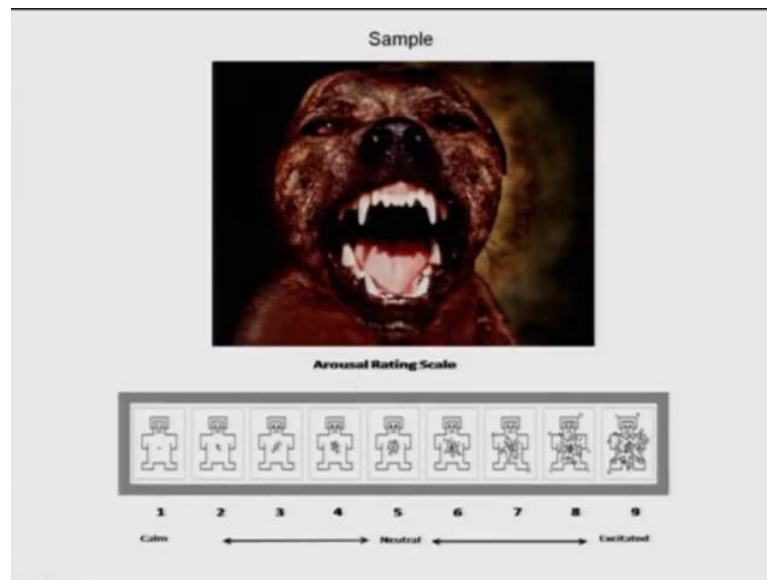
Yeah I am clear about the valance, but when it comes to the arousal rating scale.

Hm.

I have a doubt because could you tell me one stimulus that has calm like.

Yes. So, for example, this is the sample this is the arousal rating now.

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This is the negative picture.

Yeah.

Now, now it arouses you. So, then how much it arouses you can rate it here.

OK.

The same way if a pleasant picture is there it might excite you as well, so then you have to write it accordingly.

So, say for example, if it is a stimulus of a chair then I do not have any arousal

Arousal

So, then it becomes calm.

Yes.

OK.

So this is the sample for example.

Hm.

It is an arousing picture, so you can rate anything want you here, OK.

Hm.

Now after this we start the session, if you have any doubt any query you can ask.

OK.

But you will not intervene.

OK.

So, the other one is regarding pleasantness and is regarding.

Arousal.

Yeah sure, Sir I go ahead.

So, this is for the valance. Now these are the words. So, we finished one category which was the pictures but the words are different.

Hm.

Which has, which specific and then it brings mendacity of knowledge. So, you a very specific, but the words are having double meaning sometimes.

OK.

But still it has arousal and valance thing. So, the same way you do the word if you see a word and if it arouses you then you read accordingly and if that word has some balance in it then you rate accordingly.

One doubt is, when I do this should I do it with relevant to the picture or independently.

No. It is independent.

OK.

So, I will not have to do it as related know.

No.

So, I will just go ahead and do it.

Hm.

One should be the extreme unpleasant.

Extreme unpleasant. So, what you just weighted here, the same way we do the paper pencil test. So, see like the if you go to the arousal scale now here the word rape is very arousing word and it excides as because it is very negative in our context but the family also has some arousing effect because it induces positive arousing effect. So, that is why both have arousal level.

Hm.

But the meaning is different one is having positive arousal effect and then another has negative.

Hm.

But to understand better have we have these valance scales. So, that is why when you see a word rape then it is a negatively balance word which is extreme (Refer Time: 18:10) here and then we when we go for family then on the other side of these scale you go which is pleasant.

Pleasant.

So, that is how we do.

OK.

OK.

Thank you.

Thank you.

As already mentioned recording of autonomic nervous system activities is very much used to examine illustrate emotional states, you just need to connect the sensors and record changes in various (Refer Time: 18:37) indicators corresponding tools stimulate presented.

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Let us look at this very lab session - look at this screen, you can see the selected autonomic functions being recorded.