Body Language: Key to Professional Success
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Lecture - 09
Facial Expressions

Welcome dear participants to the fourth module of the second week. In this module, we would look at the facial expressions, what is their importance, what are the basic types of facial expressions, and also, what is the latest research which is going on in this direction. Our face is the most expressive part of our body. It is popularly known as an index of mind and normal perception is that our face displays our emotions, our feelings in a very expressive manner and therefore, our facial expressions serve a very significant social function of passing on exchanging and communicating social information. This is a fundamental function of human society without which we cannot exists.

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I would like to quote Rachael Jack here, who has commented that "facial expressions have been the source of fascination as well as empirical investigation amongst philosophers, anthropologist, psychologist and biologist for over a century". Our social interactions are dependent on the mutual understanding of emotions, without understanding the emotions we cannot interact with each other and coexist as a society. And this primary and fundamental function is performed with the help of our facial

expressions which are considered to be potent signals of our true ideas and information which we often want to pass on and sometimes, we want to hide from others.

As for as a scientific investigation in this area of facial expressions was concerned, we have to acknowledge that Darwin was the first person to suggest the idea of the universality of human emotions. In a treatise, *The Expression of the Emotions in Man and Animals* which was published in 1872, he had propounded this idea that the expression of emotions and feelings on human face is universal in different societies. However, this idea was soon rejected by various other scientists.

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This idea was presented by Darwin in his third major work of evolutionary theory. The first book was *On the Origin of a Species* which was published in 1859, the second book was *The Descent of Man* which was published in 1871. In this book the expression of the emotions in man and animals which was published in 1872, Darwin explored the animal origins of certain human characteristics and behaviors. For example, the lifting of the eye brows in moments of surprise and the mental confusion which typically accompanies blushing. It is interesting to note that for the preparation of this book Darwin had experimented technique in terms of publication and verifying the psychological facts. He had circulated a questionnaire, during his preparatory research which had preceded the publication of this book.

Another interesting aspect which is related with the publication of this book is the fact that he had insisted on putting certain photographs in the book. It is interesting to note that the art of photography was in its nascent face at the time when Darwin was working. It was only in some preceding decades that people were experimenting with the basics of what we today consider as photography art.

The publication house as well as the publishers had insisted that people may not receive the inclusion of photographs in the text and had requested Darwin to avoid it. However, Darwin had insisted on including these photographs. The photographs which you can see on this slide are the illustration of grief from this book by Darwin. They are the original photographs which he had used in this book.

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The crucial argument which Darwin had proposed in this book was that the mental states are connected to the neurological organization of physical movement. And I quote, "the young in the old of widely different races, both with man and animals, express the same state of mind by the same movements". However, we find that not only the contemporary scientist, but also the anthropologist who were working in the 20th century had rejected this idea. Among the prominent people who had rejected this idea we also have to mention the name of Margaret Mead who is also known for otherwise path breaking research in the field of human behavior.

However, this idea was taken up in the late 20th century by Paul Ekman and his team. Paul Ekman found support for the universality of a variety of facial expressions and found that these facial expressions which can be considered as universal are tied to particular emotions which include the emotions of joy, anger, fear, surprise, sadness, disgust and contempt. He also looked into the reasons of cultural variations and mentioned that several apparent differences in facial expressions among different cultures have to be considered as contextual.

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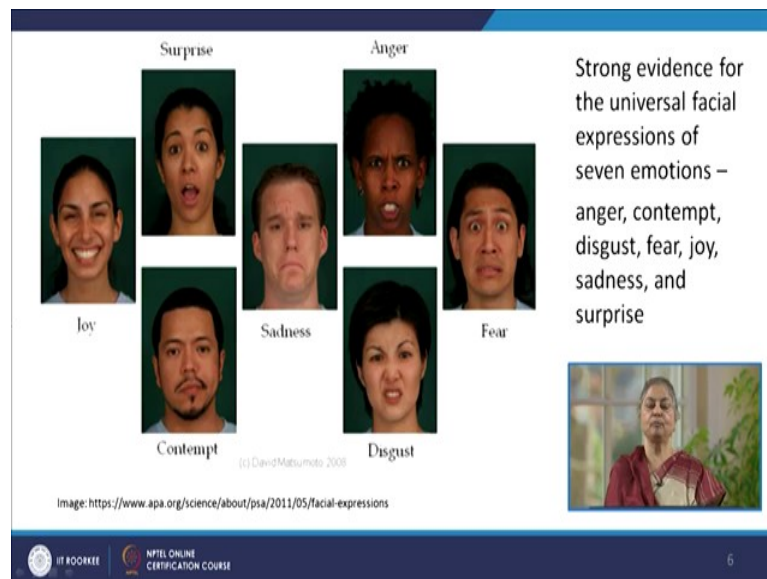
Paul Ekman had initially referred to six basic emotions. However, later on he revised his previous research and suggested that there are seven common universal facial expressions. And he had incorporated the idea of contempt in this list later on.

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The confusion whether the universal basic emotions are six or seven continued for some time, but we find that this initial research was revised by Paul Ekman himself. And these basic expressions are associated with distinguishable patterns of muscular activity. Researchers have also suggested that our facial expressions often match with the tonality of our voice. In his studies Ekman and his team, had showed a series of photographs to various people who belong to different cultures and these photos depicted six basic emotions. And the researchers later on found that people who lived in different societies in Western, Asian and Tribal cultures were very accurate in recognizing these basic emotions. It led him to believe that there is a universality in our facial expressions. However, there also has been a continued debate about the justification and validation of this universality argument which we would touch upon in our later discussions.

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University studies by Paul Ekman and his team and also by Crroll Izard have demonstrated high cross cultural agreement in judgments of emotions in faces by people in both literate and preliterate cultures. David Matsumoto and Hyi Sung Hwang have summarize history of critical developments which it is started in 1970s and supported the universalities studies by Ekman and his group.

They have quoted Friesen, who has documented that the same facial expression of emotions were produced spontaneously by members of very different cultures in reaction to emotion-eliciting films. And I quote from this study by David Matsumoto and Hyi Sung Hwang. Since, "then more than 30 studies examining judgments for facial expressions have replicated the universal recognition of emotion in the face."

A meta analysis of 168 data sets examining judgments of emotions in the face and other nonverbal stimuli indicated universal emotion recognition well above chance levels. Over 75 studies have demonstrated that these very same facial expressions are produced when emotions are elicited spontaneously. So, these studies validate the initial suggestions and findings by Paul Ekman and his group.

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Let's look at what are these basic emotions and what type of muscular activity takes place when our face expresses them. The first universal emotion which has been mentioned by Ekman is happiness. It is an individual's, self-reported evaluation of feelings of love or joy or pleasure and contentment and it comes from several positive interactions within environmental stimuli.

The research which is often cited in this context is by Wolf and Mass which is identified various facial expressions which convey a happy face. And these are a smile, wide eyes, lifted eyebrows; however, we would find that these physical features even though indicate what is normally perceived is happiness.
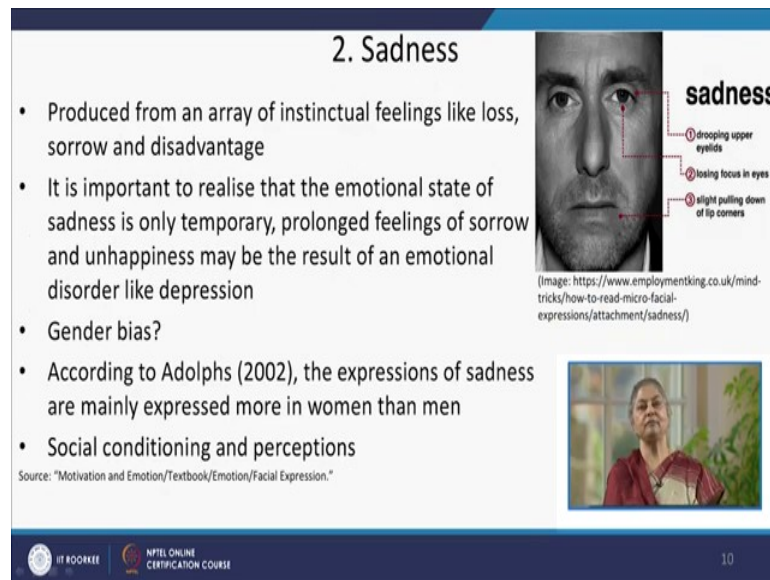
Realities of what truly constitutes and contributes to happiness are much more complex and at the same time they are also highly subjective. For example, for some people it is the materialistic positions which can create happiness whereas, for some other people it may be a non-materialistic achievement which would generate true happiness. So, the emotion of happiness is contextual; however, the expression of this emotion on our face can be easily recognized with the help of these physical features.

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The second emotion which they have identified as being universal is that of sadness of sorrow. It is produced from an array of instinctual feelings. For example, when somebody undergoes some type of a loss, personal grief, suffering etcetera. However, it is also important to realize that the emotional state which is identified with it should be only temporary.

A prolonged feeling of sorrow and unhappiness can also be a result of an emotional disorder like depression and may require a different approach. By this emotion of sadness we normally interpret a particular emotion within a given context. It is also interesting to find that in various researches which have been conducted certain type of gender bias and a reflection of social conditioning about understanding appropriateness of gender roles is also visible.

For example, I would refer to a particular study by Adolphs, which was conducted in 2002 and which suggest that the expressions of sadness are mainly expressed more in women than men. In these type of researches we would find that the true situation of gender roles, the stereotypes etcetera have not been objectively viewed.

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Ekman, Friesen and Tomkins have listed main facial features of sadness as being. For example, dropping eyelids, lowered lips and cheeks, formation of tears and corners of the mouth dropping downwards. These expressions which are portrayed for being sad are assisted through the contraction of the muscles around eyes and mouth. And the orbicularis oculi muscle forces the eyelids to drop and closed in response to the formation of tears.
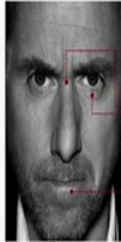
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The third universal emotion is that of fear. And as all of us understand it is one of the most distressing emotions. It is a response to a sense of thread danger or pain which may be either real or an imagined one. It results into various physical responses on our face. For example, it can be same in wide open mouth which is formed by the raising of the upper lip which may indicate a desire either to escape or to have some more oxygen. Then forehead and eyebrows are wrinkled and pull towards the center of the face and lips are also is stretched. However, the sense of fear which is reflected in our face is often associated with certain other physical symptoms. For example, increased rate of heart.

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Fourth universal emotion is anger, which is known as an ugly emotion and which can range anywhere from annoyance to an intense feeling of rage. And this is also associated with many negative feelings. For example, of being frustrated, feeling hurt, being disappointed in certain situation, feeling worried or feeling some type of an embarrassment. The main way a person communicates this emotion is through external expressions of the face. And there are prominent facial changes when a person feels anger. The eyebrows are lowered, the forehead is also creased, there is a wide exaggerated mouth and the chain is also tight.

The fifth universal emotion is that of surprise, which is a sudden feeling of astonishment. The facial expressions which are associated with this emotion reflect the unexpectedness of this emotion and therefore, we find that the facial features associated with the expression of this particular emotion are perhaps the most dramatic and instantaneous.
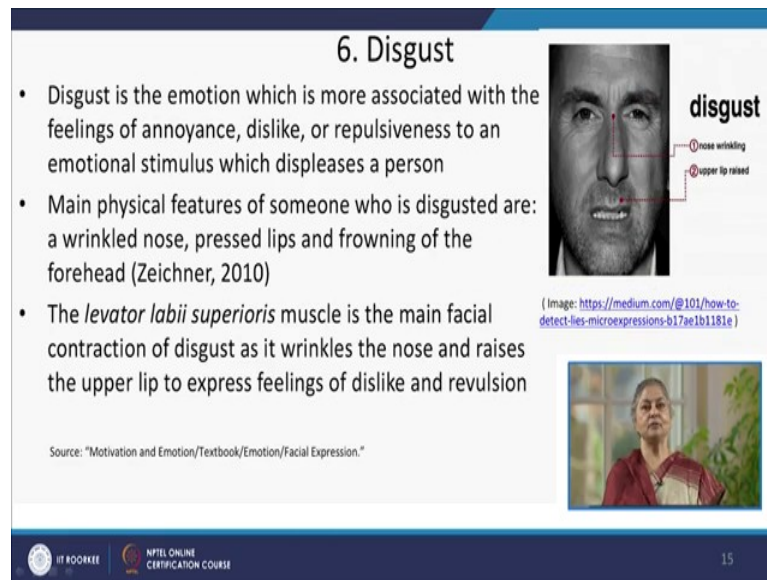
As it is an exaggerated emotion, we find that there are many ways in which it is expressed in an exaggerated manner by our facial features. Eyebrows are high and curved, on our forehead wrinkles may be formed and a wide open mouth is also formed by a dropped jaw.

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The sixth universally recognized emotion is disgust. It is more associated with the feelings of disliking somebody or something getting repulsed by an idea by a physical feature, by our surroundings etcetera or by being annoyed and it is a response to the emotional stimulus which displeases a person in an intense manner. Main physical features are listed as a wrinkled nose, pressed lips and frowning of the forehead. The levator labii superioris muscle is the main facial contraction of disgust as it wrinkles the nose and raises the upper lip to express feelings of dislike and revulsion.

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The seventh emotion which was added to the list of universally acknowledged emotions by Paul Ekman was contempt. And we find that it is often reflected in what is popularly known as a smirk or one sided raise in the mouth. We find that contempt is also an important micro expression.

Recent studies which are being conducted now have extended the view to combinations of facial expression and body posture and they have found evidence for cross culturally a stable patterns of pride and shame as well. So, it is quite possible that we may also get evidence of some more emotions which may be considered universal very shortly.

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In this list we find that there are cues for facial expressions as suggested by Ekman and Friesen. In the three columns, we find that after having listed the expression and the motion cues, the number of muscles which have been used for producing a particular motion on our face are also listed.

This is a very significant research by Ekman and Friesen, because we find that the latest technological developments in the area of robotics etcetera are also using this basic finding by Ekman and Friesen. Later on, we would refer to this slide again.

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This is a very interesting video which looks at the seven types of universal facial expression and explains them in a succinct manner.

Field, there are over 10,000 micro expressions, but today we are only going to be talking about the seven major ones.

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So, number 1 is anger; the anger micro expression is found when someone pulls their eyebrows down and also purses their lip into a hard line. If you take a look at two people right before they enter a fight, like a bar fight or something, you will see this micro

expression. Sometimes, you will even see them pull their chin up to display confidence, but pulling your chin up is also a cue for aggression. The best way to read anger and someone else is to look for vertical lines between their eyebrows. It is good to look for this if you are giving someone orders or asking their opinions.

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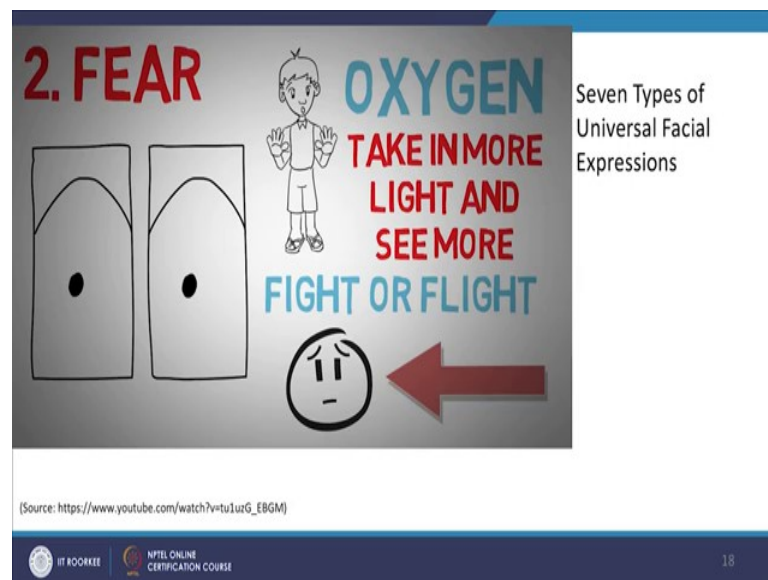
Number 2, fear; for fear more of the whites of the eyes will be shown. Someone will raise their eyebrows, but their mouth will also be in a neutral position to either scream or taking a big breath of oxygen. So, this all makes sense from an evolutionary perspective. Your eyes go up to take in more light and see more and your mouth is ready to set up your body for the fight or flight response, either to scream or to breath. So, if you scare someone or tell someone something that scares them, they will usually make this face.

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Number 3 is happiness; happiness is a great micro expression nerine. So, basically happiness is just a big old smile. You can tell if it is a real smile if there are wrinkles around their eyes. Some people actually call these crows feet. Actually only 1 in about 10 people can cause these wrinkles on purpose. So, this is the best way to tell if someone is actually faking a smile or if they are genuinely happy.

So, if you tell someone good news, it is important to read their reaction; are they actually happy that you beat your personal record or are they just in it to make you feel good. Also, this is a great sign if you are using a pick up line on a girl. By the way I give you 9 great unsaturated pick up lines as a bonus and the psychology of attraction video course I just released. Link in the description.

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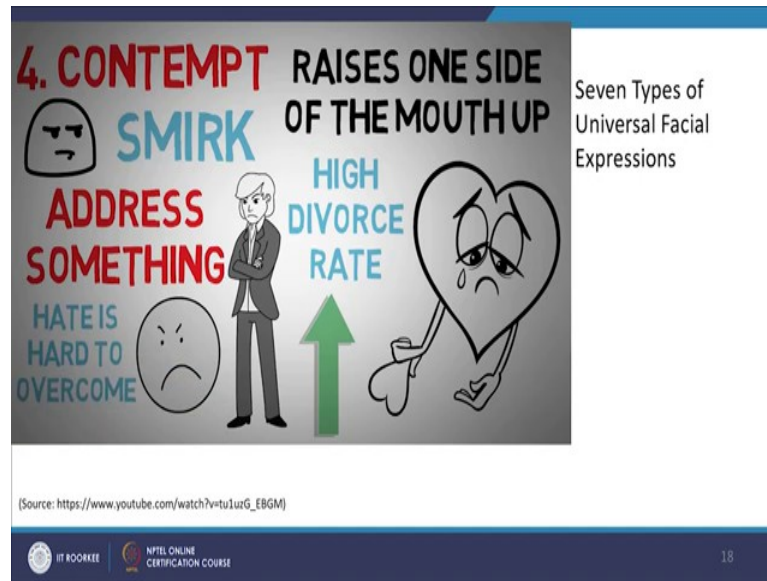
Number 4 is contempt; so, contempt which basically means hatred or guilt or unhappiness with something, is also a pretty easy read. It is basically just a smirk, when someone raises one side of their mouth up. Doctor John Gottman studied couples and he has found that when he sees the contempt micro expression in his therapy office there is a very high rate of divorce.

If you see that one sided mouth raise and someone else near you, it is very important that you need to address something before its snowballs. Hate towards someone is something that is very hard to overcome, especially if it is between an intimate relationship.

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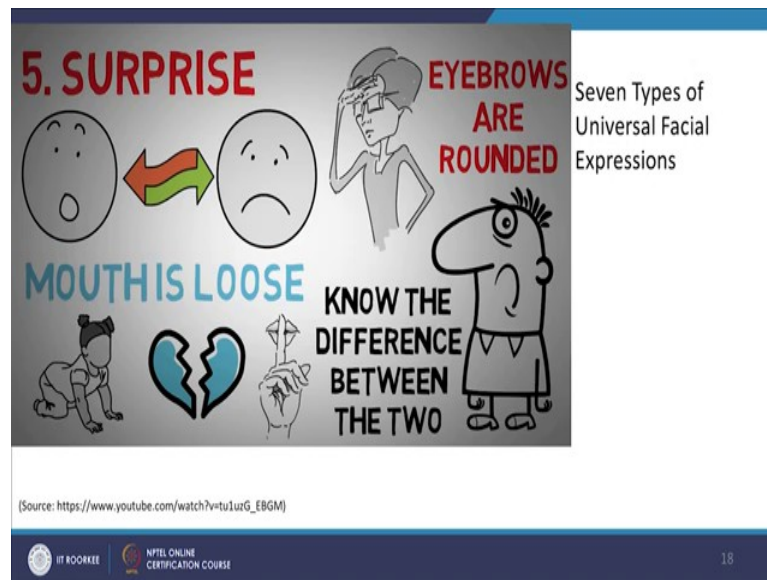
Number 5 is surprise. So, very similar to fear, but surprises when you drop your mouth down and your eyebrows raise. The biggest difference between this and fear is that surprise causes your mouth to be loose, while fear the mouth is tensed. But you know that is going to be hard to tell by looking. So, in surprise another thing to notice is that the eyebrows are rounded, unlike in fear when they are usually straight. Now, this is caused by using different muscles in the forehead.

It is very important to know the difference between these two. If you are asking someone about a secret and they show either one of these faces, you can find out if they already knew. Maybe they already knew that someone was cheating on them or maybe you do not want them to know you already knew a co-worker was pregnant.

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Number 6 is sadness; now, sadness is the hardest to micro expression to fake. It really does take more muscles to frown than it does to smile. This means when you see sadness as a micro expression it is almost always true.

If someone is sad the corner of their lips will curl down, which is where we get the frown from. Usually sadness is a longer facial expression. Sometimes lasting more than even a couple seconds. Also, the inner parts of the eyebrow will push together, forming those vertical lines again. Again, it is very difficult to fake this expression.

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Number 7 is disgust; disgust is when you smell poop or hear a really bad joke. The upper part of the lip will be pulled up, which basically causes your nose to flare out a little bit. Usually, someone's eyebrows are tensed up a bit. Disgust is important, and it shows up in places that you would least expect it. You could ask your opinion about someone and they might show disgust. You can actually find out if someone does not like an idea that you are proposing or even go as far as to say, if someone is thoughtfully racist, but they are not behaviorally racist. So, those are the seven major micro.

In the beginning of this discussion we had looked at how there had been some debate whether the expression on our face is universal or is it determined by our cultural backgrounds. So, this debate has continued.

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Notions of universality were initially suggested by Ekman and Friesen and later on there had been a large critical support for them. In the same manner we find that the idea that our facial expressions are socially learnt has been suggested by Margret Mead, Kleinberg and Labarre prominently. This idea has also received a lot of critical support.

We find that increasing documentation of human behavior as well as anthropological researches are creating awareness about those aspects of cultural behaviors which were previously considered to be instinctive, biological and common in humanity. Particularly, there are certain gestures which people have found. For example, the gestures indicating yes and no. Earlier it was thought that nodding a head is a universal

gesture of agreement. However, there are certain societal sections, as well as certain cultural groups in which this gesture means something opposite.

At the same time there are different greeting customs, some of them even violent and at the same time we find that the expression of negative emotions is also not universal. In Japan as well as in many African communities we find that the negative emotion is normally not expressed, rather people think that the negative expressions or negative feelings and emotions have to be masked with his smiles and laughters, so that the other person you are talking to does not get in inkling of the personal grief.

Basically, we find that our facial expressions and quote a certain message and this message of a particular emotion has to be decoded by the other interact and so in a way they fulfill a basic need of human beings to communicate. So, facial expressions, our gestures, our postures these aspects of nonverbal communication. Signal and decode information to accurately communicate a message. In this particular video, we find that cultural variations in certain aspects of our behavior which was earlier considered to be universal are displayed in an interesting fashion.

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Every person on the planet feels emotions.

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You see emotions our feelings or thoughts that arise spontaneously instead of conscious thought.

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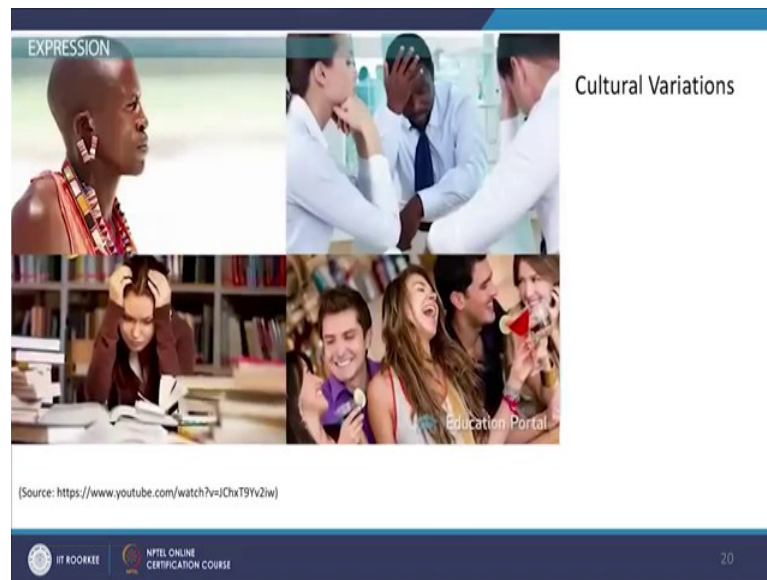
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We look at this from a global perspective, the differences in how we interpret the expression of emotions when they originate in other cultures.
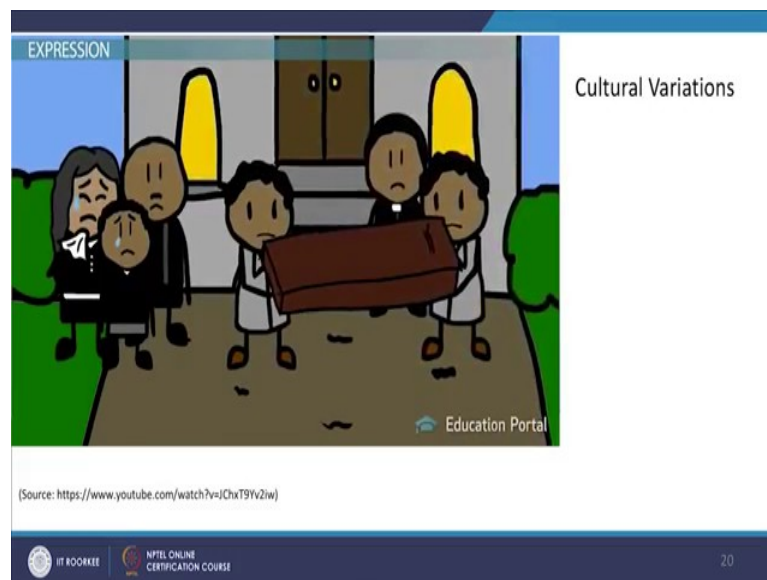
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While this might not seem like a large issue or one would think that if a person is happy in China, they will show it the same way as if Americans do.

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The fact is different cultures interpret express experience emotions, expression of emotion similar to the research discussed earlier is different from country to country.

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For example, in some countries when a person passes away it is common for individuals to attend a funeral and show grief.

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However, in other countries it is expected that a person will be dispassionate and not show grief. In this cultural setting, the emotion or the lack of it is how that culture expresses emotion when a person passes away.

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In Tahiti, if you are trying to tell a Tahitian that you are sad and ask a translator to translate that into Tahitian, they will not be able to do so, as there is no word for sadness in the Tahitian language. This absence of a word reflects that Tahitians do not typically express sadness. It is difficult for some united states to comprehend not expressing

sadness at one point or another, but the absence of the word and the Tahitian symbolizes that emotion is not expressed in that culture.

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The absence of words, and thus the absence of emotional expression of those words, is found in many other cultures.

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In Japan there is a word for someone who is worthy of praise overcoming a challenge. In the US there is no such single word for that.

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Another example is that Eskimos and the Chinese do not have a word their culture for anxiety. Thus, would be a challenge for Eskimos or the Chinese to express anxiety or interpret it in other.
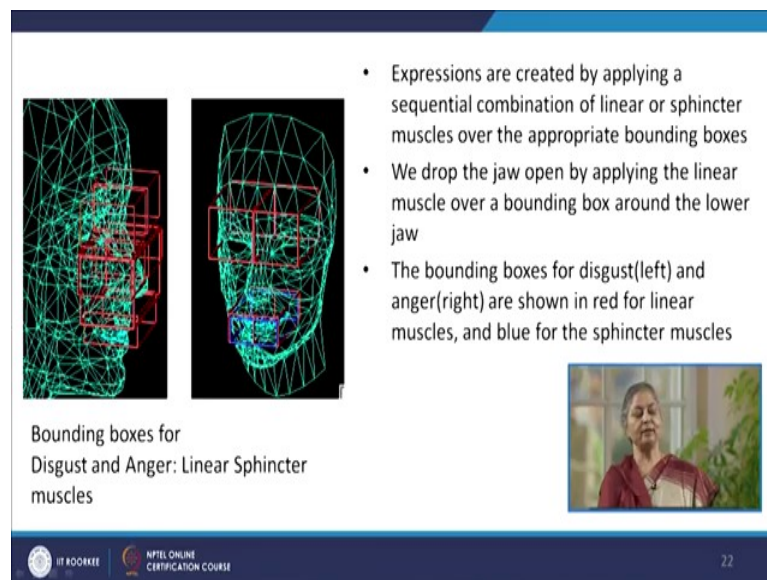
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I would like to sum up the discussion of facial expressions by quoting again from Rachel Jack. In the article entitled *Culture and Facial Expressions of Emotion* which was published in 2013, a very valid point has been made. And I quote, "it is important at this

stage to a step back from this specific debate and examine facial expressions in a broader context".

 So, we find that the idea of emotion communication has recently expended to those disciplines which were traditionally considered to be distinct from each other. For example, disciplines like engineering, robotics, as well as computer science are studying facial expressions. As a result, the modern approaches to an examination of emotion communication using human face are characterized by increasingly sophisticated methods that combine not only the knowledge, but also the techniques which have been imported from diverse feels.

Ekman and Friesen have suggested cues for recognition of facial expressions, which I have listed in a previous slide. And these cues have become an important basis for creating convincing visuals as well as creating animations in our contemporary world. In this very interesting research, we find that the basic findings of Paul Ekman etcetera have been used and bounding boxes for disgust and anger have been created.

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And it is an understanding of these bounding boxes that different facial features are created to visually express this idea in our animations as well as in our visuals.

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The questions which nowadays we have to grapple as far as the expression of human emotions on our face is concerned are more rated with contemporary technological developments. Should companion robots and digital avatars be designed in such a fashion that they display a set of facial expressions that are universally recognized.

Or should they be tailored to express emotions in such a manner which are a specific to a particular culture. Since such questions require a diverse knowledge from human communication and social interaction, as well as information processing and learning, we find that research in the field of nonverbal aspects of communication has become a rich source.

In our next module we would continue this discussion by looking at micro and macro expressions on our facial features.

Thank you.