

The Science of Happiness and Wellbeing
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Lecture - 09
Evolution of Happiness

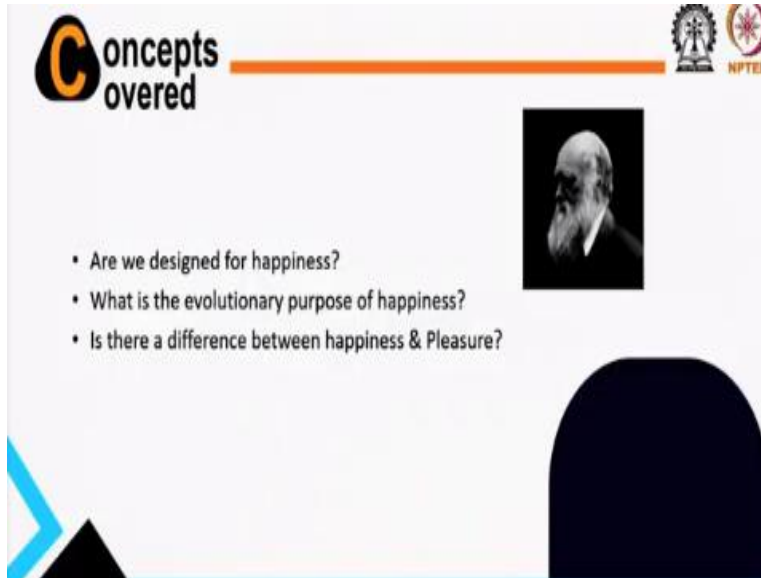
Welcome to this unit of the science of happiness and well-being. And as we have already noted that happiness is a science through which we understand ourselves better and we also understand others reasonably better. But in the process one of the major question that comes to us that how do we understand others and how do we understand ourselves. The fundamental question is about human behaviour.

And in this context scientist often raise the issue how the functional architecture of our behaviour has developed over the years. The science of evolution has started understanding for the last three centuries about the origin of human behaviour. When we look at the human behaviour two particular facets of human behaviour come to our mind. One is called cognition that is how we reason and the other is the feeling that what are the emotional components of our thought process.

In that process the scientist often argue that well our cognition has come first and emotion has come later. Some other scientists suggest that no, that is not probably true our emotions have come first our cognition have come later. So, the temporal priority of cognition and emotion of our behaviour is a big question. Today we are not going to discuss about the cognitive aspect of our human evolution, probably that has come through a gradual process over the years.

We are interested in knowing today how our affective life our feeling our emotions that have evolved over the years and that is a question which will answer certain mysteries of human behaviour.

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So, our topic today will deal these questions. Are we designed for happiness? Since we are dealing with emotion of happiness one fundamental question people often ask are we designed for unhappiness or are we designed for happiness. Some scientists believe that probably human behaviour is primarily a unhappy domain. We are designed more for unhappiness. Some people suggest, no probably we are designed for happiness too and that may have come at a later point of time.

The question therefore what is the evolutionary purpose of happiness. We cannot deny that happiness has come to us but at what point there are controversies at what point of time it has originated there are issues. But we know that human being has an emotion of happiness. So, there must be then a purpose an evolutionary purpose we will discuss about and then we will try to understand the difference between happiness and pleasure because happiness has got many connotations.


Lot of ways people actually talk about happiness containment, joy, happiness, smile, pleasure. We would like to know certain differences and the fundamental difference of happiness and pleasure we would be interested in this talk.

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Keywords



- Evolution of happiness
- Jealousy, distress, horror
- Pleasure & happiness




Some of the concepts that we will be dealing with of course is evolution of happiness. We will also deal with concepts involving the Darwinian idea of the origin of species, the expression of emotions in man and animal one of his greatest books and then we will try to understand the spectrum of emotion which involves jealousy, distress, horror, those negative emotions. They are also supposed to be understood in the context of happiness.

The reason being that happiness probably has got a orthogonal relationship with unhappiness and unless we do not understand both probably the science of happiness would not be understood and of course we will also deal with pleasure and happiness.


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Keywords



Evolutionary theory of emotion

- According to the evolutionary theory of emotion, our emotions exist because they serve an adaptive role
- Emotions motivate people to respond quickly to stimuli in the environment, which helps improve the chances of success & survival



Therefore, we would first ask the question that is there a evolutionary basis for our emotion. What could be the purpose of it? We understand that our intellectual component is very very important. Our cognitive component how we perceive, how we learn, how we memorize, how we solve problem, how we attend these are all cognitive component of our mind and they have our adaptive value as well.

They have got their role as well as in our survival but is it true for emotion as well. Evolutionary theorists suggest that every component of human mind has got an adaptive value otherwise it will extinct. So, they say that our emotions exist because they solve an adaptive role. And if there is no adaptive role, we cannot link it with any evolutionary root of our human behaviour. They believe that emotions motivate people to respond quickly.

If you do not have emotions suppose if you are very angry you will fight if you are very afraid you will flee so you have to react to situations. So, intellectually you try to understand a situation and then accordingly you have to react to it. And this reaction is very important because unless we react, we will not survive. So, probably emotions have horizon to improve of our chances of success and survival.



With success probably we have got happiness and with survival instinct probably we have got certain negative emotions which are called fight and flight. We will explain it slightly more.

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Keywords

Evolutionary root of happiness

- Humans are not designed to be happy, or even content. Instead, we are designed primarily to survive and reproduce, like every other creature in the natural world
- A state of contentment is discouraged by nature because it would lower our guard against possible threats to our survival






The idea of having an evolutionary route of happiness is not new. Some people say that happiness probably has come much later. We are not designed for happiness or even content because the purpose of our evolution is to survive and reproduce like any other animals every other animal in this world have got these two components survival and reproduction. Human beings cannot be an exception from that.

And if you are happy always if there is a state of contentment then probably you will lower your guard against the possible threat or survival. So, if you are happy if you are content then in such case you will not try to keep yourself ready for any imminent danger. And imminent dangers are met either with fight or with flight. Therefore, generally people say that we have developed emotion only to survive effectively and towards that end probably happiness may have come much later.

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Theory of Evolution : *Charles Darwin*

- C. Darwin & A. Wallace proposed that evolution occurs because of a phenomenon called natural selection
- 'Organisms arise & develop through the natural selection of small, inherited variations that increase the individual's ability to compete, survive, & reproduce' (wiki)




We will discuss this matter slightly better by going back to the original theory of Charles Darwin. Alfred Wallace and Alfred Russell Wallace and Charles Darwin therefore proposed theory in 19th century on theory of evolution. We will not learn in great deal about the theory of evolution because that is probably not the context of today's talk. We would refer about them just to understand how they have viewed it.

The view that everything that occurs is through a phenomenon called natural selections. They say that organisms arise and develop through natural selection of small inherited variations that increase the individual's ability to compete survive and reproduce. Suggestion is that they suggest that there are small variations they call it in terms of the language of genetics. The mutations take place in order to effectively survive in this hostile world.


And that mutation takes place over a period of time in order to increase the likelihood of our survival and reproduction. To understand it slightly better we must understand what is the theory of natural selection, what do we mean by adaptation and what do we mean by survival of the fittest.

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Theory of Evolution : *Charles Darwin*

- Traits that help organisms to survive is passed to the offspring (survival of the fittest)
- The mechanism by which this evolution takes place is natural selection
- Organisms that possess heritable traits that enable them to better adapt will be more likely to survive



The three main propositions from Darwinian viewpoint is that the traits human traits the behavioural traits is generally passed to the offspring. I mean if it remains with one particular generation then probably the species will not survive. Therefore, survival of the fittest as a theory had come in his original book of origin of species. He says that traits that help organism to survive is passed to the next generation so, it is survival of the fittest.

Then it says that it is possible through natural selection because if you are fit to survive then only you will pass on those threads to the next generation and this is what he called as natural selection. And the organisms possess these heritable traits because that helped them adapt better. So, adaptation is the fundamental concept that you have to adapt to the environment, you make changes in your genetic system through mutations.




And those small changes over a generation ultimately becomes your trait and those traits help you survive in the environment in the best possible manner. So, Charles Darwin have spoken about these three things very importantly. Sir Charles Darwin has written several books in fact over 40 monographs and books two of his main books which are relevant for our purpose of understanding is of course I have shown you the origin of species.

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Happiness...an evolutionary perspective

- Survival in early days was binary; one person's gain was to other person's loss (e.g., finding mate)
- Happiness is a proximate goal (success) while anxiety is a distant goal (failure) to achieve adaptation
- While happiness has benefits, so does discontent; both are necessary for survival

<https://www.cambridge.org/9780521623063/subjects/bio-sciences/for-what-depression-emotions-man-and-animal?format=PB>

But the other one is called the expression of emotions in man and animal. In fact, in 1872 the book was written, he was thoroughly thoughtful about the notion of emotion because his view was that all animals have got emotions and those emotions actually only help us survive effectively. And there is a strange similarity between the human emotions as well as the animalistic emotions as well.

So, fight and flight are the emotions through which we have originated and he has narrated about his theories in this book of the expression of man and animal. This book was written in 1872 and since then there has been lot of researches going on based on his theoretical proposition. The proposition is that lot of later researchers suggest that survival probably in the early days was binary that you gain so others lose.

So, when you gain and others lose your gain gives you some kind of happiness. Probably from the point of view of survival or evolutionary theory this was called pleasure that is finding a mate there are lot of fights in terms of finding a mate. So, one person gets a mate so he or she gains and it becomes other person's loss. So, loss becomes a negative emotion and gain becomes a positive emotion.

Therefore, if you succeed it becomes your success in terms of a proximate goal and if you fail then you start developing anxiety whether you will gain something in future or not to achieve the


adaptation. Because unless you gain probably you will not be able to adapt you will not be able to survive. Therefore, the proximate goal was considered success and the distant goal was considered failure to achieve adaptation.

While happiness therefore has got benefits so has the discontent. The principal idea behind this talk or behind this slide is that it is not happiness which only helps us adapt. All emotions as per Paul Ekman there are six fundamental emotions happy, sad, fear, anger, surprise, disgust every emotion probably has got a survival value and therefore they become so basic and that is why it is called pan cultural.

In fact, researches have been conducted on expressions of emotions by a series of people most importantly by Paul Ekman, Robert Plutchik and Albus, Ellsworth lot of people have done research on this aspect. They found that these six emotions have been found universally in almost all countries 156 countries have been actually studied and they have found that these emotions can be recognized universally, they are expressed universally and they are experienced universally.


Therefore, the universal component of emotion is a very important feature to understand the roots of our happiness.

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Happiness...away from evolution

- Not all forms of happiness can be explained by evolution; culture, societies play a major role
- Societies viewed happiness differently, that helped to shape their culture & survival strategies
- While some cultures define happiness as a function of good fortune & prosperity, others define it as personal well-being & satisfaction



There are some theories of course go beyond it and they actually believe that evolution only and survival and adaptation only explains partially about our root of emotion. They believe that happiness can be explained but not always from evolution. The culture and societies also play a role. So, when we talk about universal is it universal in terms of cultural role or is it universal due to certain biological role or biological route.

There are controversies like Carol C. Izard in United States he suggest that well they may be universal but they are universal because the cultures, societies, communities they all get certain adaptive value through this process. So, culture is a very important role not only the mutation of our genetic system. So, they believe that societies viewed happiness differently that help them to shape their culture and survival strategies.



Each society has their own; way of looking at happiness. Some people see happiness as a process through which we adopted better and they express it through certain display rule. Some culture display it through intensification some culture display it through de-intensification, some others display it through neutralization, some others display with masking like some of the oriental countries.

They do not display negative emotions; they display it through masking and that masking has become a cultural role to express your fear and anger. Therefore, societies cultures also have got their role in understanding happiness. While some cultures define happiness as a function of good fortune prosperity, others define it as personal well-being and satisfaction. So, when it comes to a collective society like ours personal well-being and satisfaction becomes very important.


And when we talk about individualistic society like North America or European countries. They believe that good fortune and prosperity probably are the major important determinant of happiness. Therefore, culture also has its role to understand happiness.

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Happiness... Martin Seligman



- 'Happiness has a grand purpose in evolution. The emotion broadens our intellectual, social, physical resources'
- These resources we draw upon when a threat or opportunity presents itself



So, one of the greatest pioneer of happiness research is Martin Seligman who is in the university of Pennsylvania we call it UPenn. He has actually written extensively on happiness and his view is that happiness has a grand purpose in evolution. Without happiness probably will not the resources that are required for our survival. We need intellectual resource, we need social resource, we need physical resource.

And if you are not happy if you are not motivated you will not garner strength in order to acquire those resources. Therefore, unless there is happiness you will not be able to do that. So, he puts happiness in equal footing with the negative emotions. Although some other theories suggest that well happiness may have come much later simply because over the ages the negative emotions have come first to help us survive and adapt.

And thereafter since we started getting pleasure out of certain activities by having some success or gain by defeating others, we developed the notion of a binary called negative and positive emotions. So, Martin Seligman suggests that these resources we draw upon whenever there is a threat the moment there is a threatful situation in the environment we actually draw resources from this happiness issue.

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Happiness...Daniel Nettle


- 'We are not designed for happiness or unhappiness...but to strive for the goals that evolution has built us into'
- Happiness is not meant so much for an actual reward but as an imaginary goal that gives us direction & purpose



Daniel Nettle is another person who is diametrically opposite to Martin Seligman. He suggests that we are not designed for happiness or unhappiness. We strive for the goals so goal orientation is more important. And if the goal gives us satisfaction, we become happy, if the goal is achieved we become happy. So, it is the goal or the reward that becomes important. In terms of happiness, he is more interested in defining happiness as pleasure.


So, happiness is not meant so much for an actual reward. He suggests that it is more of an imaginary goal that gives us direction and purpose. So, happiness cannot be considered as an entirely new construct. If we consider it as an entirely new construct then probably will not find an evolutionary route for that. It actually gives us a direction towards a fundamental motivation in order to strive for or attaining some of the goals for which we are destined to.

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Why unhappiness is important for survival?

- It is evolutionarily helpful since it gives rise to emotions like jealousy, distress, horror to develop, & the tendency to return to happiness
- Unhappiness & its cousins, misery, pain prevent starvation, & help us survive
- We are not hard-wired to stay happy all the time



Then therefore it is important for all of us to understand today is happiness is, is happiness important for survival or unhappiness is equally important. I have already mentioned that both emotions are equally important this set of emotions. In fact, if you go by the primary emotions, we have got happy, sad, fear, anger, surprise, disgust unless you take out one you that is happiness you will find all other emotions are negative emotions only.

So, why out of six emotions only one emotion is positive and rest are all negative because it has probably got a big role in evolution. So, in evolutionary terms it gives rise to emotion to jealousy distress, horror to develop and the tendency to return to happiness. Therefore, if there is no negative emotion will not have a tendency to return to happiness. To understand happiness therefore we must also understand the negative emotions as well.

So, unhappiness and its cousins like misery, pain prevent starvation help us survive much better. If there is no negative emotions probably will not happy at all and the human brain is not hard wired to stay happy all the time. In fact, lot of neuropsychological researches were done we did not find a very specific locus of happiness in the brain. Of course, we have found several loci or locus in the brain which are meant for negative emotions.

And it has been found that the right hemisphere of the brain probably is the locus for all kinds of emotions. But it is very difficult to find the locus or a particular region for which happiness is

responsible. Some people suggest that well it is probably not in the right hemisphere its more in the left hemisphere because the very purpose of happiness is to do communication. In fact, Darwin also says that the emotions have originated due to communication. So, communication is a very important issue and communication has a survival purpose.

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The slide is titled "Happiness vs Pleasure". It features two brain diagrams: the left one is labeled "Pleasure" and shows a red pathway (dopamine) in the brain; the right one is labeled "Happiness" and shows a blue pathway (serotonin) in the brain. Below the diagrams, there are two bullet points: "• Dopamine, associated with reward and motivation, is very different from serotonin, associated with contentment & happiness" and "• 'The language difference between "happiness" and "pleasure" is subtle, but the chemical difference is huge'. Neural pathways are different". In the top right corner, there are logos for a university and NPTEL. In the bottom right corner, there is a small video inset of a man in a green shirt speaking. Below the diagrams, the text "HILARY BRUCE, SAMANTHA LEE MAR 24, 2018" is visible.

Finally, we would like to develop on the concept of happiness and pleasure because people confuse between happiness and pleasure. Now pleasure is considered to be more related to reward and motivation. In fact, from evolutionary point of view we probably have started getting evolution. We started probably getting sorry about that we started getting the pleasure through in terms of reward and motivation.


And thereafter the finer emotions like love, empathy has started cropping in. So, containment and happiness is biologically related more to a neurochemical called serotonin. And dopamine is associated with the reward and motivation. Neuropsychological researches have found that whenever you are pleasantly surprised your dopamine is released. If you are eating a chocolate that you are already aware of that may not release dopamine for you.

Unless you are pleasantly surprised and probably billions of years ago when we were pleasantly surprised with something our brain started activating and the neurotransmitter like dopamine started releasing. So, dopamine is associated more with the pleasant surprise with the reward or

motivation and is different from serotonin which is associated with contentment and happiness. So, the language between happiness and pleasure is subtle but the chemical difference is huge.



The neural pathways are different. I have shown the pleasure and happiness pathways in to in one diagram of course and you will find that they are actually different pathways. So, we would like to understand happiness not exclusively from the point of view of pleasure probably happiness the science of happiness has got much more to explain from our neural structure biological understanding and the functional architecture of the brain.

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Why addictive pleasure is not same as happiness...

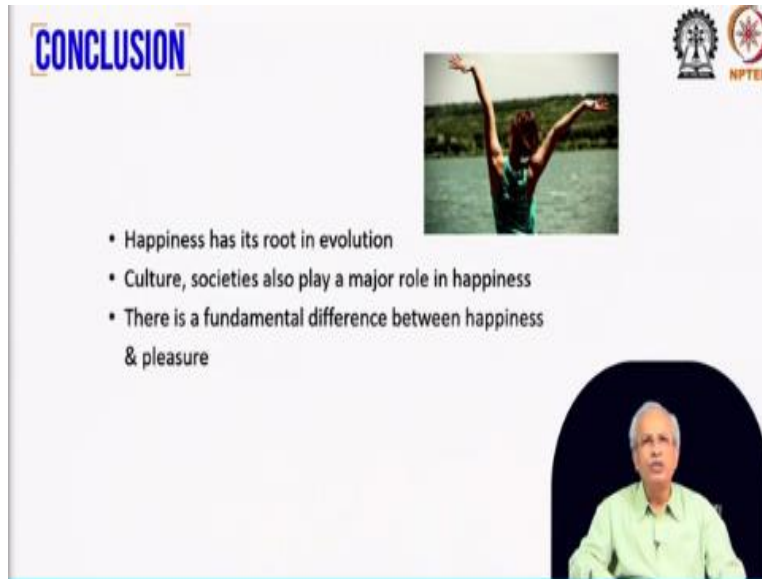
- Pleasure is
 - Addictive, Short-term, Visceral
 - Typically experienced alone
 - Makes the brain say 'I want more'
- Happiness is
 - Not addictive, long-term
 - Inspires giving, generally shared
 - Makes the brain say 'Its enough'



So, if we try to do why addictive pleasure is not same as their happiness because pleasure is addictive short term visceral, typically experienced alone makes the brain say that I want more, I want more. So, anything that gives you pleasure you want to get it more and more and more because it is generally experienced alone and you try to experience it in a short term manner in a visceral manner in addictive format.


But happiness is not addictive, it is long term, it inspires giving is generally shared. Happiness if you share with others your happiness goes up but your pleasure does not go up if you share with others. So, it inspires giving and brain say brain says that it is enough that is you want to share with others the happiness in a long term fashion and it does not fatigue you in terms of getting the pleasure what we understand in terms of visceral pleasure.


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CONCLUSION

- Happiness has its root in evolution
- Culture, societies also play a major role in happiness
- There is a fundamental difference between happiness & pleasure

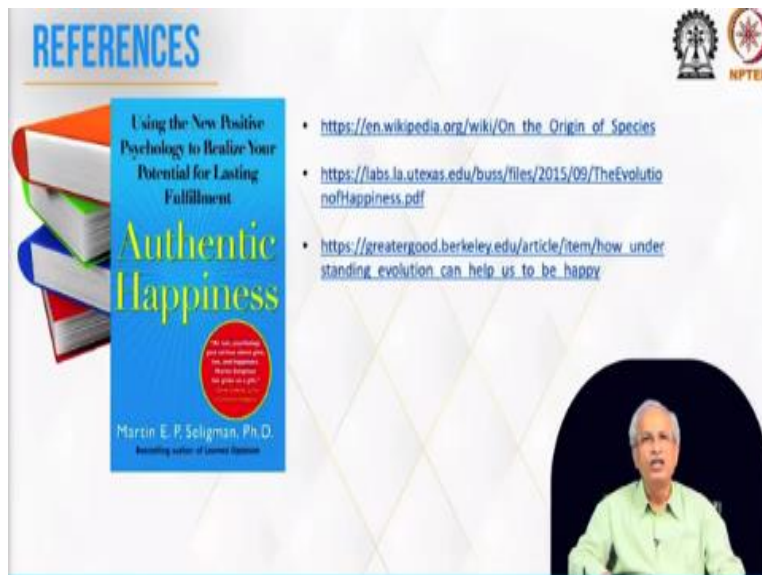




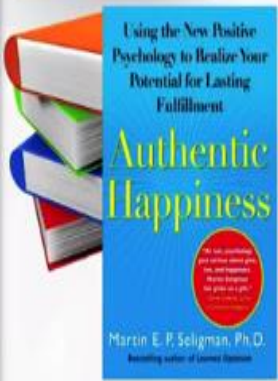


So, the conclusion is that happiness has its root in evolution, fine. But when we talk about evolution probably, we talk more about the biological evolution and the genetic variations through mutations but we also understood today that culture and societies also have a major role to play in happiness and there is a fundamental difference between happiness and pleasure. If we understand this probably, we will understand the origin of happiness slightly better.


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I would suggest to read a book of authentic happiness by Martin Seligman where he shared actually happiness as a grand purpose of evolution. Other than that, also there are references you can

actually look into such and at the same time you can also go for certain biological theory of evolution for the understanding of happiness. Thank you so much.