

**Indian Institute of Technology Kanpur**

**National Programme on Technology Enhanced Learning (NPTEL)**

**Course Title  
Cognition, Transformation & Lives**

**Lecture-15  
Process of Transformation**

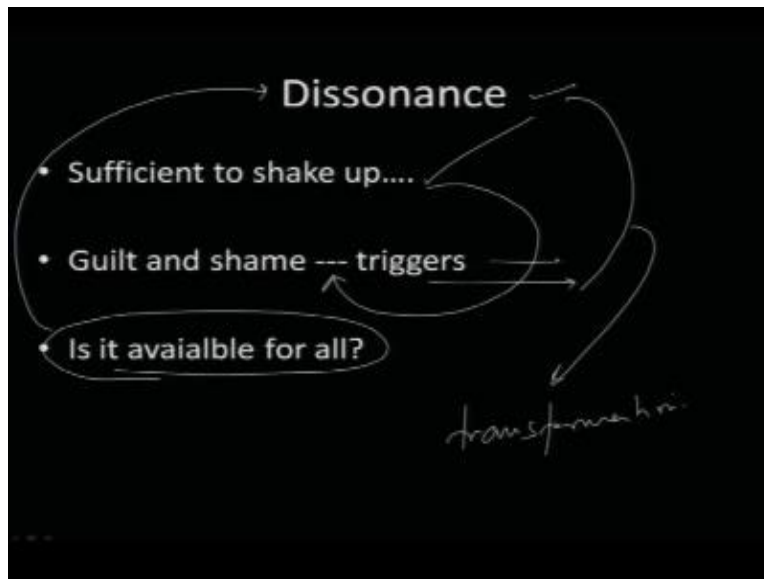
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So, continue from the last lecture we were talking about the complex dynamics of the need which are conscious, the external pressures which are from outside we keep changing the need and the need changes the requirement to fit in into the need of survival and which throws challenges to the conscious mind which has to give meaning and then put in some will or intent to decided how to do certain thing or not do certain thing.

Which gives in feedback again creates a behavior which gets into sort of feedback loop and again alters the need and also and also this type of continues changes are going on. The will may not be totally free as we were talking but the basic requirement as we talked was need for harmony and need to achieve whatever probably the mass log in thing, but no change can happen a sustain change less there is a dissonance which is the mess fit of your various cognitive and affective states.

In between we talked of how the need for empathy can bring in some changes but that was slight detour so dissonance as been to should be sufficient to shake up for a certain change which is transformation. The transformation as I said is not only just a change but it requires a continues hammering and so guilt and shame the example which I gave.

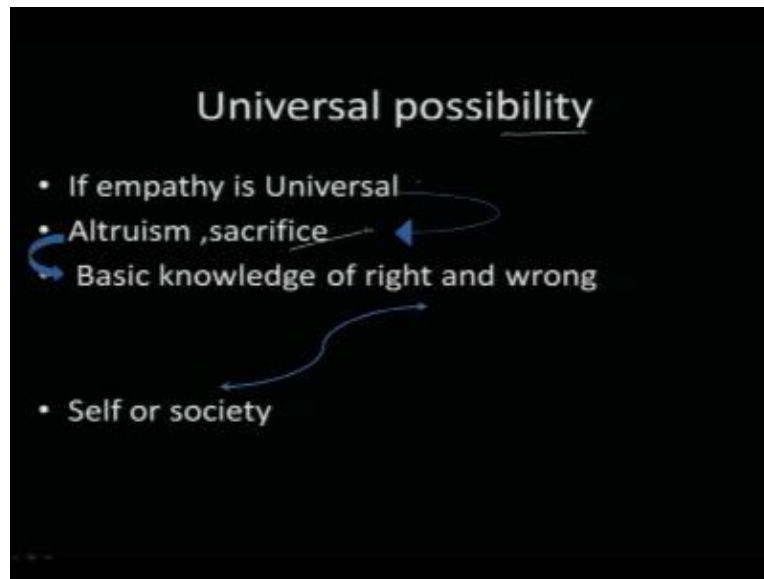
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Should not happen but still that triggers transformations and interestingly I am just bringing in a story here you if you examine the way it has been depicted in our epics, the characters who have guilt and shame and the characters who do not have a guilt and shame, so maybe even they were thinking about all the changes which people can bring in their life and the way people can move along in life they were aware of these type of feelings.

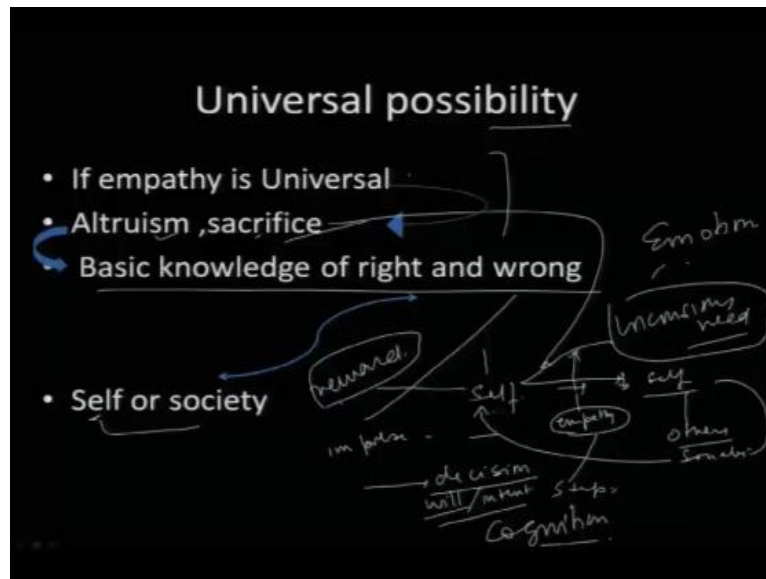
So now look at it if empathy and mirror neurons and everything is available for all is dissonance which is dependent on external or internal circumstances should be available for all. So, this process of transformation is also available to all so when you say that okay he was a great man she was great woman who transformed or we saying this person was different or are we saying that.

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Maybe he just decided so there is a universal possibility if empathy is universal altruism and sacrifice is also universal we all know however violent the human being may be may still human beings survive. they sacrifice for their family for the people they love when people reach a certain amount of wealth feel anxious which is not fall so most of them may be doing for other reasons I am just being sonically like the modern man modern critic but why even if you would have person is doing for power all is still sharing some of his wealth and knowledge and anybody who gets out of his bed leaves his comfort and goes onto share what he has may not necessarily be doing it with some motive there may be it may be that is the need to share so the altruism sacrifice is as valid a need in the human mind as violence.

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So that if these two are true then this is also naturally true and between the self and society because altruism and sacrifice is sacrificing a bit of self for the society and self will only sacrifice so self a little bit of decrease self, decrease self not necessary self esteem arises from empathy only when you sympathy you can just throw words and go, empathy have to as I said you have to really identify dissolve yourself.

Separate big order solution so decrease self so this decreasing self is for others, or society. occasionally it may happen in an impulse but because empathy has so many steps that it requires certain amount of decision and decision is other words is will or intensity how everything is falling up, now altruism and sacrifice let us take this these are unconscious need okay, falling in the purview of emotion largely.

This pushes to slight dissolution of self sacrifice in behavior which is monitored by empathy and which you do for society again it benefits self in some way may be reward system. You know all this things from different lectures but this to do this requires a will which is cognition so the journey between emotion to cognition is like this unconscious need in this case altruism and sacrifice arising out of empathy, the need for empathy which the mirror neurons are pushing.

So you sacrifice self for the other in behavior for the society which gives you certain benefits may be externally or internally as a reward what dopamine was managing and so you keep doing it again and again or may not do it depending on how much pleasure you have felt, again sacrifice can be an addiction you can ask me yeah for some people it is altruism charity so for some people it is a.

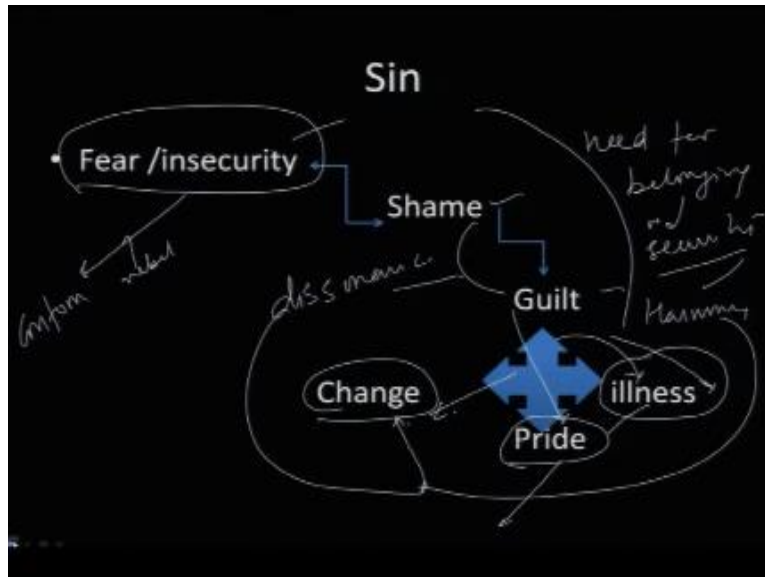
So now you can answer why are people going out of the way to help people and maybe it is a kick may be the dopamine was every time they sacrifice or they giving something dopamine that pumps could be but empathy the part of empathy comes into the emotional purview and part of it once you decide to separate and act and really do the behavior comes into the purview of will and intent which is again a purview of cognition, so it is all fitting into place a process a societal is institutions and.

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Rules are there and they have asked us over years and conditioned us to invest sense of power in certain situations like religion, politics, marriage people either rebel or confirm depending on their level of guilt and shame.

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Again we if we remember we talked about this in the psychobiology of vices this seems to be the basic emotion depending on the level of this people decide to confirm or rebel both may require transformations, what is the biggest fear the biggest fear which induces shame and guilt is again at the need for belonging which gives rise to security, and obviously when you belong there is a harmony. So and these things create dissonance so when these two compile it can lead to anything it can lead to change.

It can lead to inner reaction to a pride in a very, very unconscious way illness and I can give you examples change we all know transformation we are going to talk about Buddha transformed Gandhi transformed. There are lots of stories in the world where people transformed we know of pride we can visit mythology or we can visit history and, and why go far we can examine life around us then people who doing wondering why are they behaving in a certain way, even if they are doing something which is not.

Making the life comfortable which is bringing them into direct conflict with others they would still being on and on that the brain, for some of the point will the brain could have gone into giving in or transforming the behavior has actually switched on to a different mode, and that

mode is like pride, so survival strategy it may work not work depends in lot of other variables will not go into the, they just interested in the basic process what is going in the mind. The important part is this hidden part lot of illness is if you look into this branch which is call psycho neuroimmunology it actually turns down this deficiency in the human mind.

Of being able to fight diseases. In depression your immunity lowers, and you are not able to resists so this can manifest, this is a totally unconscious process this is totally run conscious process and this requires some amount of conscious effort.

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So what you are doing you are acting and you are defending yourself so remember that I was talking of dissonance, dissonance is a felt misfitting and the discomfort arising out of the friction between your various components when people have dissonance they as I told you they have a fear insecurity of being separated of being left alone of the basic violation of the need for harmony so they have guilt and shame then they can react, they can ill, they can do all this things consciously, unconsciously but largely what are the mechanisms. When you are not feeling okay about something what do you normally do because I want you to involve into this things process otherwise it would just surround as some sermon or theory.

And that is how the examples are from our life, when we are dis-comfortable when you are uncomfortable so then what you do, you talk to, you try to sort of within yourself or when you in a dilemma whether you should do this or not do this you talk to people family, friends may be talk to god at times and suppose you have done something which was ideally by your own culture and conditioning should not have been right, say an exclamatory affair which is a taboo all over.

Slightly around it, the different issue but look at it, and then you know that is cheating or cheating for anything at telling a lie as a student, taking something which is does not belong to you anything which so many wrongs which we indulge into societal wrongs, somebody will be justifying it dacoit would say the money the old time dacoits and the looters several says and at the here money I have taken it.

But otherwise middle class man would not go and do all that, so that has created a dissonance in you, so your almost tone between the guilt and shame which of the act what do you do, you there are many ways you go confess right from your spouse to your father, to mother, to church anywhere you can go and confess. If you do not want to confess for some social repercussions you look for may be a doctor or psychotherapist or go to a temple to god you would leave to destiny to religion.



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Ultimately what you are doing is your accepting that fine it is happen and I am sorry you need to say sorry to somebody even to god and once you have said it god you said okay, fine that is not bothered too much, does not recover head into all this, and you accept and divert your mind that is what psychotherapist will tell you, even if you go to a psychotherapist they would say fine it is done, is done and now let me teach you some mechanisms by which you can divert your mind and control and do all the stuff.

Because if a psychotherapist does not tell you and your spouse takes you to the court then the court will given you punishment even punishment is a trigger, so depending on the intensity of consequences and what I call society is buffers they decrease the dissonance, as the dissonance decreases the pressure to transform also decreases, it doesn't make sense.

If I am having intense problem intense guilt and shame that is the point where I can trigger a sustain change a sustain transformation and this is not mythology or history this is how the brain works because if the brain because that point is the intense disharmony which is going on in the brain within it maybe a disharmony with the environment also it may be a disharmony within itself but if at that point the mind get some buffered which can just take of the pressure.

Okay it is somebody will tell do not worry it is all in India may believe all this what India when I think the whole human race believes at in the core they believe and that is where whether say there is science may say there is no God and people may talk differently or people may say there is no religion, religion and god are going to stay because they are in built in to your system because they are your buffer mechanisms.

Even when complex organize religion was not there, there was still some sort of religion of worshiping some stone or anthropomorphic gods because that is how the brain has evolved that is the story of the brain you cannot say no to that. That is the first buffer okay; oh I have done this you cannot say this public, because even if you tell it to public all your image will be gone so what they do?

They will pray to god. God I have done a mistake go to the church infest come back take a deep breath diversify except okay what has been done is done. In India we have astrology, so lot of people who cannot explain the dissonances of their life of things what are not going wrong so marriage gone wrong some carrier going wrong somebody falling ill astrologers come and what are they doing their just giving a buffer and buffer they gave it is not your mistake you cannot do it because obviously they are not explain neuroscience the neuroscience also tell if it is not your mistake it was your unconscious impulse switch pushed it.

So if the somebody take should the code you say what can I do it was my unconscious impulse and that is why will is being capitalize we have boss you have a responsibility of also and that is the trigger, the astrologer say it is not it is all in the stars and he will make a chart and tell you and so you may not believe it cognitively you may be more evolved person to believe all this.

But at that moment when your mind is looking for some place or some point where you can just offload you will say Haa! Maybe, it is possible and then move on move on life so you dissonance is immediately gone, but they imagine if you do not have a buffer the mind cannot remain in that stained state of tension.

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Otherwise mind has to create an illness some people who cannot sustain this dissonance they fall ill, that is possibly one of the origins of some of the adjustment disorder and psychiatric illnesses. They just cannot, so the mind just gives way it just creates some different mechanism goes in to some different registry altogether it can be it manifest in physical illness also with the very well known triggers of cardiac or diabetes or anything.

But that intense pain also for some people can bring them to the point where they think now enough this package I have and let me change or let me transform so all this what we read in history and all that, that was the moment when this person change and every success story if you read lot of self-help books and read all this people motivational people and anybody may be in your life your parents and people around you.

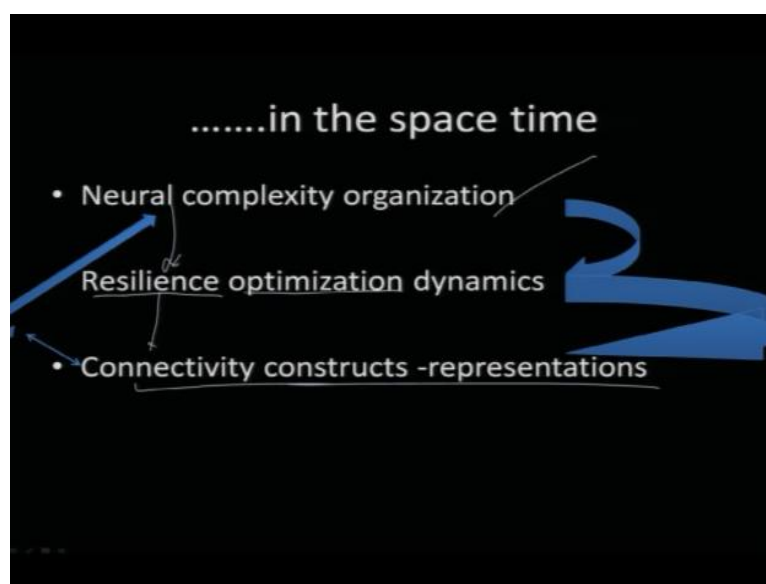
When are they looking for what is the movement of turnaround what is the movement of transformation what is the movement of change that is the intense pressure I think this, this something which we all are capable of and we all aware also we all felt this in some situation some of you very younger a lot may be have not gone into a tsunami of life so much.

They need some more time to realize but now or less we know when we tell a lie to our parents first time and we are rebuffed for it all the amount of guilt which we feel oh, it is killer. at that point of time you can decide you don't want to speak a lie but largely something happens same parents who has rebuffed and all scolded you in day time and in evening they will do some pampering and say ok the child let it go.

But this let it go will let it go so what I am saying this brain has a huge capacity it has its own mechanisms of it's like physics is like quantum probabilities and there is an observer it takes a dimension within then it becomes a deterministic thing Schrodinger vice or all nonlinear think where initial change is sensitive the change in a initial condition it take on to different dimension altogether.

That obviously in larger behavior issues and combining may be that physics is working who knows it just that in that movement if something would have happen life would have change we all look back to the life why did I take this decision so I should have done this at that movement what buffers were they were think in mind is the million dollar question in that is like that sensitivity to initial condition.

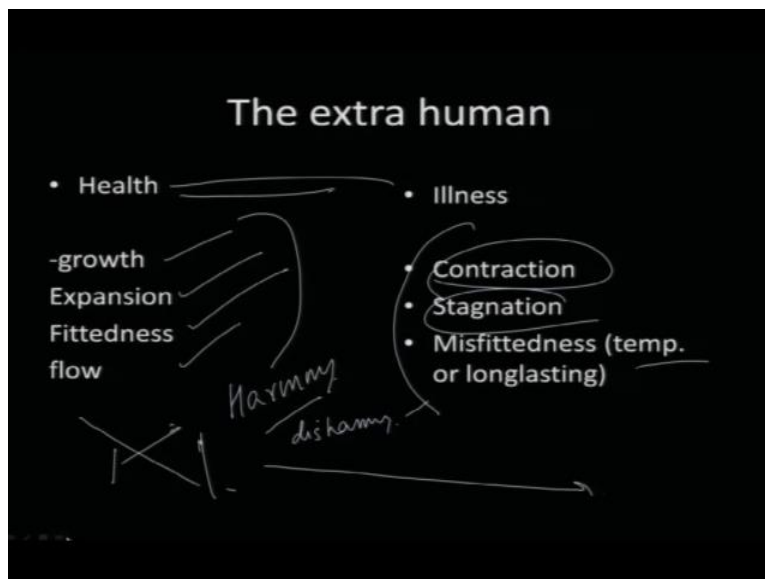
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So all this happening in space time so what all is going what is going on neural complexity is already there as we have talked about it the capability of brain of resilience and optimize with this conflictual dynamics of the connectivity of brain to the capability of resilience and optimization and this constructs what you are going to actually represent to your mind later on but as I said this also a trigger whether it is genetic or who will actually transform and who will fall ill and who will not able be to sustained the pressure what decides it is it genetics is it the conditioning is it the intensively of the shock which the brain cells have gone into and that determines we all know we all love to hear this story of great people.

We all love to hear the story of even villains great villains in the history Hitler people are being portrayed Genghis khan, Laden then may have been good to some people obviously, they would not have been totally bad nobody is totally good or bad but they all extra humans and all face in time even now a prime minister they appear extra human because that the movement of transformation who will change and who will not is a big question.

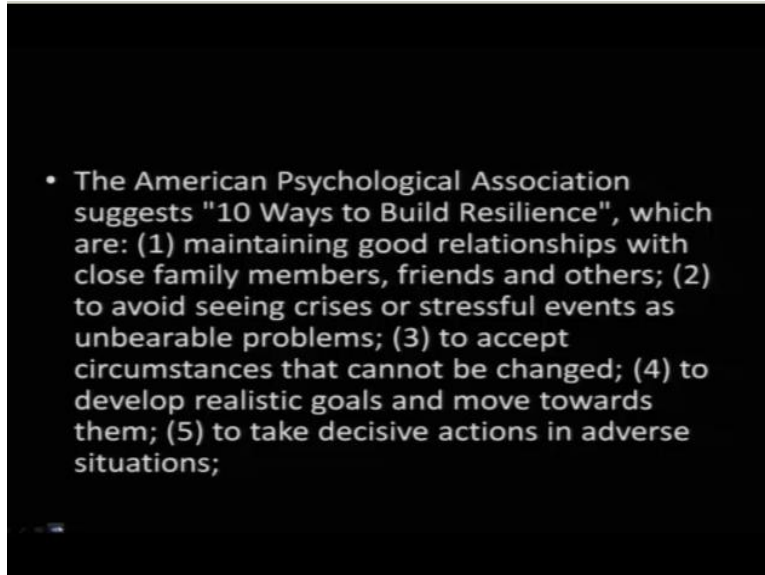
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But all this they determine difference between health and illness, illness is the two tragedies you go for transformation you go to the help and come down as illness is all about contraction

stagnation misfittedness whether it is temporary or long-lasting whereas health in broader terms is growth is expansion its fittedness its flow all this creates harmony which is the basic need.

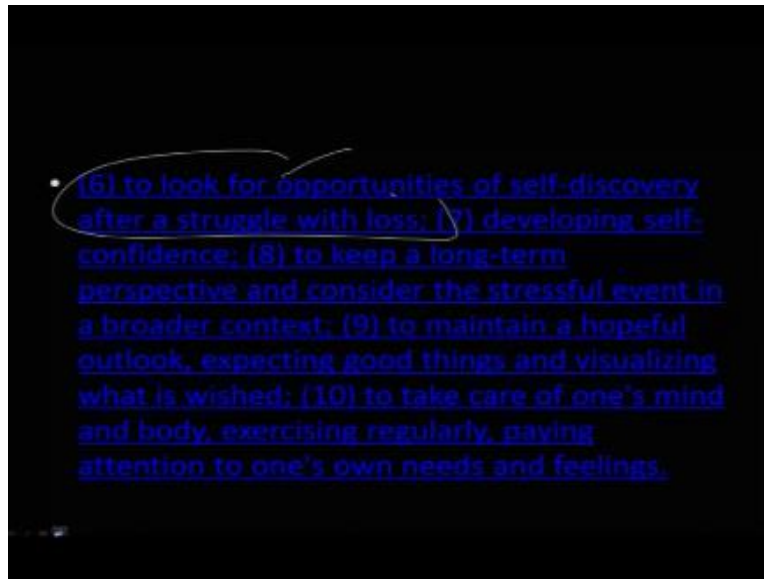
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Whether in hierarchy or given in a cross section or in a longer term and this is the summary illness in one way if we look at the broaderly is this harmony that extra human how can he pushed so the American psychological association suggest 10 ways of build Resilience, resilience is talked about one of the very important thing which sometimes help people to bounce back with normal see but at other times may be not conducive to transformation.

This maintaining a good relationship with close family members to avoid seeing crises or stressful events as unbearable problems, to accept circumstances that cannot be changed to develop realistic goals to move towards them to take decisive actions in adverse situations.

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To look to the opportunities of self discovery after a struggle with loss this I think the problem with color developing self confidence to keep a long term perspective and consider the stressful event in a broader context to maintain a hopeful outlook expecting good things and visualizing what is wished to take care one's mind and body exercising regularly, now this is from psychologies weather they obviously tell you the better way to adjust, to be resilience that you suffer a shock in you bounce back ,whether you bounce back and you transform is a different ballgame, you can bounce back to the same main stream and be jumping that .

Resilience that the capacity to sustain shocks in the border terms but the other ways ,so they are all come from, all of them have come from Asia.

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- Gandhi ,Buddha, Christ
  - Mythology— Greek  
Ramayana and Mahabharata
- ....Conversion of guilt and shame

Gandhi, Buddha, Christ they lot of them in mythology who have must and trick of conversion of guilt and shame we will stop at this and the try to think over before the next lecture whether resilience I want to do this exercise whether the resilience is actually useful for the transformation or not and also try to now look at the composite picture of the were the will is placed were the cognition is placed where emotion is placed in broadly you will know at the end of day you would have linked most of them ,so in the next lecture we will just briefly discuss it more and the last two lectures we will try and give you some examples of that thank you.

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