

Indian Institute of Technology Kanpur

National Programme on Technology Enhanced Learning (NPTEL)

**Course Title
Cognition, Transformation & Lives**

**Lecture –20
Transformation and Society**

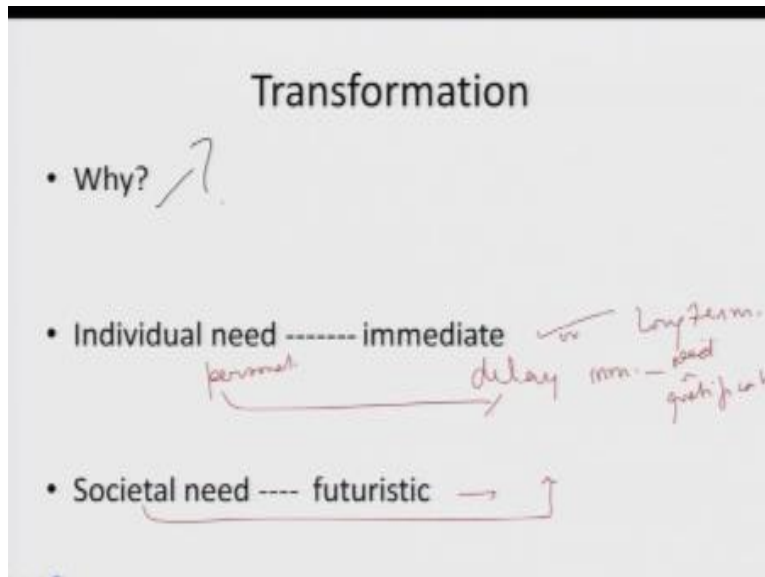
**by
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So summing it up in this last lecture, you would have asked by now that what is the need for this transformation, I tried to answer it partly in the last lecture, and gave you an example of, how ethics driven world is important with the growing complexity and with the growing multiple dynamics emerging from various sectors of life? But there is another reason because it is most of you who would have been attending this course would be possibly somewhere between 25 to 40 or maybe less.

So the future belongs to you, you are the people who are going to run this country and the world in another 15, 20 years. So there will be many points which will push you to change yourself, sometimes willingly, sometimes unwillingly, and there would be need for transforming the systems and there are lot of transformative talk which goes on in cooperative sectors, in leadership and all.

So it is worthwhile to ponder over it, so I will try to just consolidate the whole idea, why do we need transformation after all we now know the process how cognition, emotion, biology everything why in first place.

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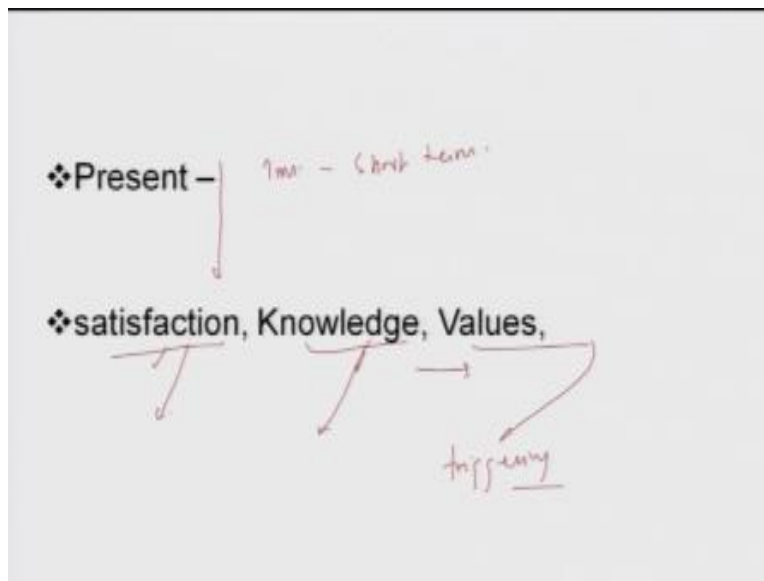
So why do you want to do it, there could be reasons which are personal, immediate or long term one of the practical situation would be like somebody who has a struggle to come up to study engineering from a middle class, economically middle class family. And maybe he is very good in academics and the heart is that you want to perceive your studies in the sense want to do a PhD and all.

But your life situation is not allowing it, maybe you have to support family people, maybe you have to learn to delay your immediate need or gratification. If you just do it in a pressured way unwillingly and do not alter your thought process and do not adjust to the new emerging situations of your life. It may lead to lot of conflict and anxiety and depression and unhappiness which will affect both your potential as well as the results of your work.

So this could be a need to transform, there could be a societal need as I said, if you want to see the world differently which I am sure everybody wants to see, we are not happy with the way we are, we may have been great in the past, but over last post independence, there have been good things and like suppose we talk of India, India is really emerged strong lot of things have happened is no more that same India which was delivered to us by Britishers and lot of stuff –has

happened we are technologically advanced we have huge amount man power at over disposal in science and art but something is missing we still not the world leaders, we want to be so maybe we just need some transformation. At a societal level these are few question I am I will pose and leave I do not have the full answer we can discuss it on the forum or some other time.

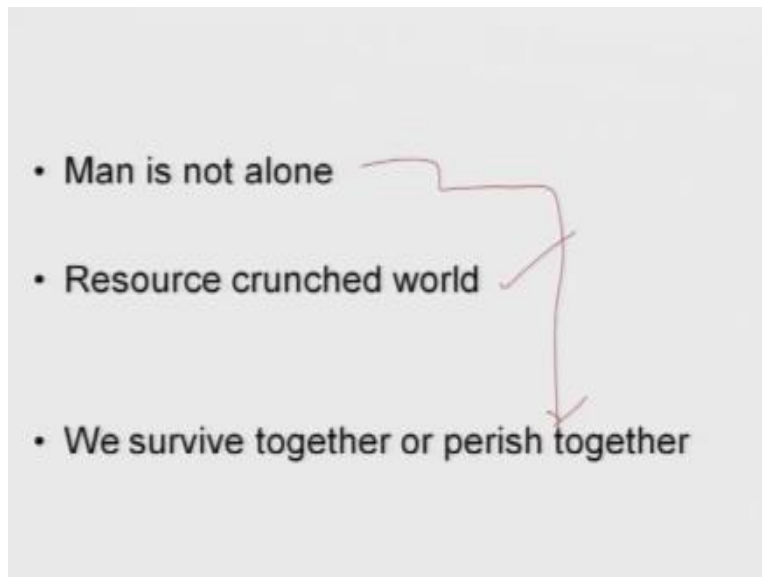
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So what pushes you would be these thing whether you are satisfied in the present time is the immediate life immediate or short term life is working fine for you, you are not bothered about it may be you do not want to change that is all right may be the knowledge that something is going wrong in a system or in your life the knowledge of this may push you to change or transform your value system may possibly we have pushed into a world which gives a high premium on networking and manipulation and material pursuit.

And your value system come into direct conflict that could be the triggering point so it transformative needs does not necessarily come as a shock where you have to change constantly questioning we talked about questioning previously can also bring you to a point of transformation even while you are satisfied you may not be satisfied in further the knowledge getting in conflict is value systems again push you to change.

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Because we are living in a resourced crunched world. we were 7 billion and as somebody said once we become 10 billion no scheme of plane will work it will be earth will be crowded and in fact if we look at the population the way population has increased in the last 200 years 200, 300 years is exponential growth and it is still growing man is not alone we all know so the big question which will be phasing us it is already phasing us in the form of energy and that is transforming the whole though process for example if you want to think technologically in the fuel the petrol.

The number of wars the number of conflicts it has created in the last 100 years is not funny and we know this is the one resource which is going to vanish in our lifetime if not in our life at least in coming may be 100 years the earth we already absorbed up a lot agriculture land and with concert buildings and all which is going to may be some day create a food crisis the crowded roads and the search for alternative mechanisms because we cannot stop.

Now we all have this need of pushing to transport and doing whatever we are talking of already talking of electric cars power will surplus Tesla you all know about it how by 20, 30 we are planning to really shift the whole thing to electricity but this is a I say transformation it may be

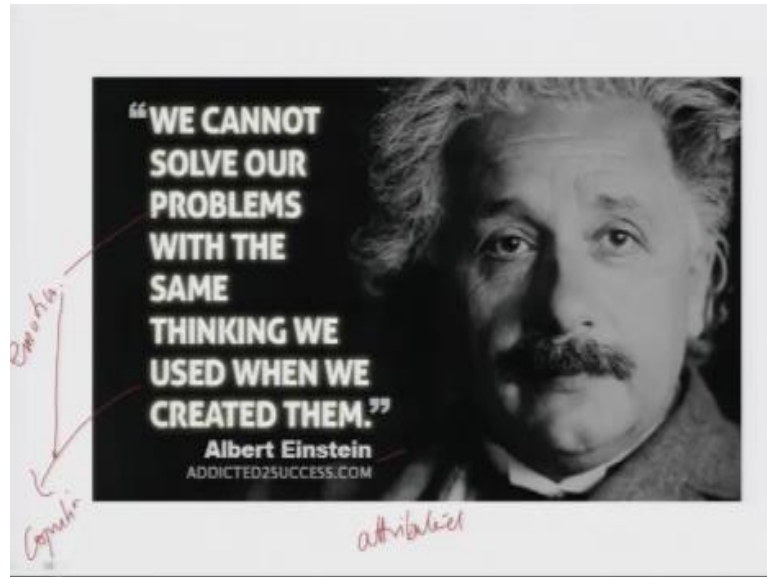
very, very utilitarian materialistic transformation but it is still a transformation at a very, very collective societal level. Telephony what was the luxury in 80's and 90's is the mobile and internet the communication has changed that is the big transformation is irreversible.

So now you know what transformations are, somebody would have thought of it Steve Jobs would have thought of it or internet whoever invented internet would have thought of it every day they are incremental innovations are happening from a personal inter office mode of communication it has become a mode of communication into a world wide web where information is at your finger tips these are also transformations.

So when we talked of transformations we do not always talk of human becoming human being becoming a moral being these all transformation but whoever did it whoever does it whoever is trying to make a artificial intelligence whoever is trying to make a brain computer interface where people who are disable or having stroke or weakness can be held this is again a empathy.

Somebody would have thought of stepping out of this self and helping the others Rattan Tata probably saw four people in a middle class family going on a scooter and that pressed him to make a nano car whether it is successful or not it is a different issue altogether, so what is the basis whether you want to do it for yourself for society for future whether you are triggered by your own conflict and value systems or knowledge or you want to do it or purely innovative engineering issue or a medical thing.

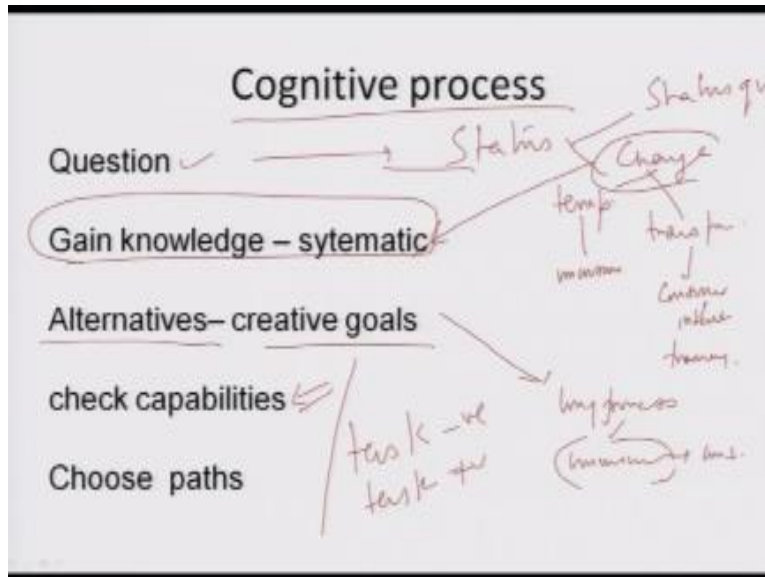
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This is attributed to we do not know whether he spoke but it is attributed to this man Albert Einstein the basic again is we cannot solve our problems with the same thinking we used when we created them so you are living in a certain framework of knowledge and information with the certain input which leads to certain results it may be keep making life good for somebody not and you feel that there is something more which is required.

Which is not actually say I want to do something, so whether Einstein said it or not this sentence has a lot of power in it if you have a problem with the same level of thinking we cannot find the solution so obviously you have to really change or go up in the complexity and hierarchy or your thought process so problem could have been perceived as an emotion, the solution has to come through cognition. This provides the impetus to change this provides the process to change.

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So what is the cognitive process, you have to question this is about how you do it if you say me how Gandhi did it and Tesla did it how can I do it you have to question your status then either you remain once you question you can decide to be status co or change temporary or transformation this could be unconscious this has to be conscious intend, training so you have to once you decide question this and you want to come to this you have to really look at knowledge gain a systematic knowledge not only of the when I am talking systematic I am not saying about a company or a process or a mathematical theorem or a physical attributes of the system which you want to change, you have to go deeper even with the self you have to do a systematic knowledge.

And then you have to look at alternatives, like in quantum probabilities they are multiple probabilities one of which materializes with the measurement process, the brain also has multiple potentialities and probabilities of doing and achieving certain things, creative goals come out of a long process which is both unconscious and conscious, once you have an idea you put it into back of the mind keep churning it while you go on move into life ask any artist, any creative person they get into this task negative mode.

Task negative mode and task positive mode, task positive mode is when you are actually trying to do, but most of the artist who come up with great creations when I am saying artist are not necessarily painting and music that is the art form dialogue writing, film making not really art forms art forms plus lot of creative innovations which people do. Obviously somebody would have thought of mixing up the telephone with the fax machine or similarly a phone with a computer which is the smart phone.

So lot of this things do not come over night they can come over night but do not think that it is not there in the brain, it must be working at the back of the mind and deep and conscious like duck pedaling and suddenly it burst open, discoveries have happened so when do they manifest sometimes manifests sleep lot of ideas people get in dream but normally people do not remember their dreams so they do not note down.

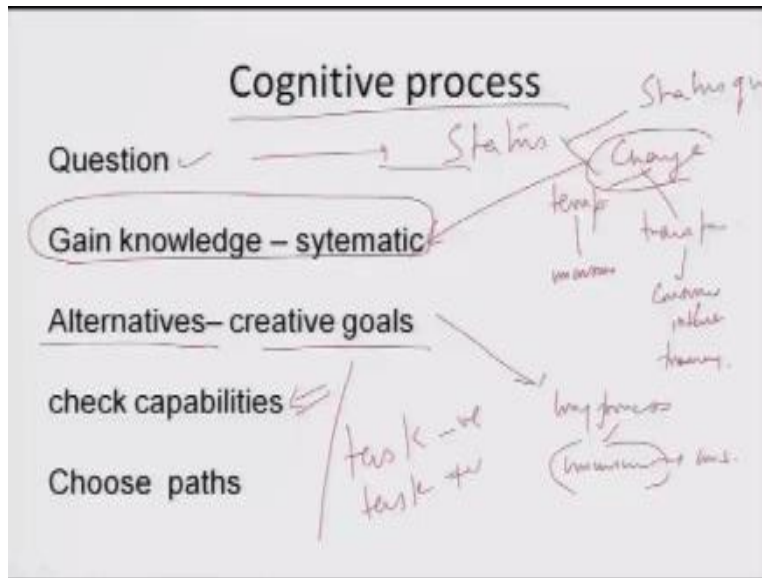
But if people ask anybody they will tell you and you would have experience that if you are not getting through something in the conscious brain just mull over it, sleep over it the vice men says sleep over it, so once you sleep over it sometimes this whole neurotransmitter business electricity turning into chemical signaling between two electrodes was came out in sleep water dripping suddenly I am forgetting the name he suddenly thought that okay, this maybe a chemical which is dropping in that was a acetylcholine was discovered like this.

Once you have a creative goal you should also check your capabilities not everybody can do everything I may be willing to transform into 100 meter dash runner yeah this is not my capability let me accept it. I maybe a good writer but it may not been my capacity to go and sell myself or I may be a moderate and average creative person but I have a huge capacity to sell myself that is how the world moves whether it is ethical right, wrong is not the question people have different talents even to sell a lie in the world you need talent Hitler.

And goggles they will know for the telling lies but they had this style of telling lies so many times that it became a truth we tend to believe lot of the stuff in our life by tending to believe what we say .

It may have some reality in the some fact some reality check with it but even if it is a just the belief system, later on it may turn out to be a true.

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Like a self fulfilling professed once you would check the capability and you are sure about what is happening then you can choose the path. This is again you look at this the process once we have chosen the path so where do the emotions come in as I said they can come in from the unconscious one it can come and discomfort so the discomfort is always not bad.

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The slide is titled "emotion" and contains the following text:

- Listen to your call
- Unconscious – even dreams
- Your natural behaviour

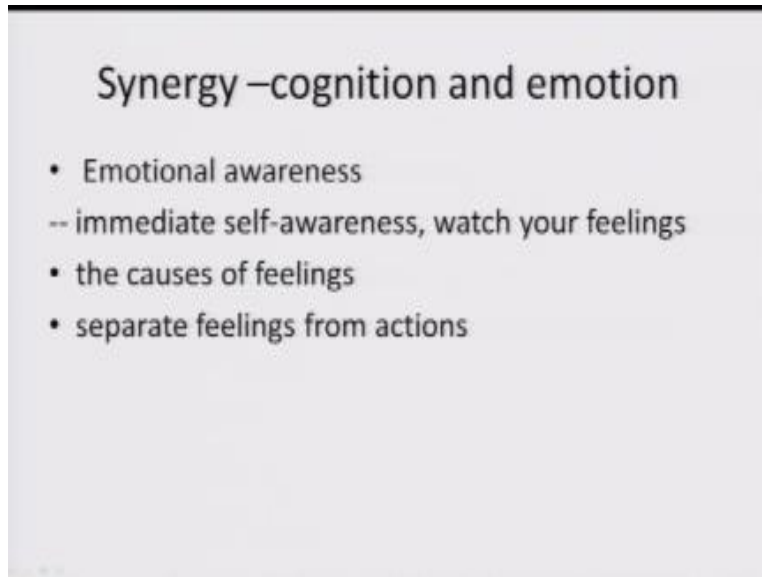
Below the list, it says "develop an ear for your emotions".

Handwritten in red ink is a diagram consisting of a horizontal line with an arrow pointing to the right. From the tip of the arrow, two lines branch out upwards and to the right, labeled "win concern" and "dis comfort".

A little bit of depression and anxiety is not always bad that may be a call you are forced in to a situation where you are doing things you don't like and then your mind may be sad at it. don't reject that sadness look at the discomfort apply this cognitive process to deal discomfort .discomfort if you do a cognitive check as I call it question then have knowledge about it find alternative check the capability and the change so even the dreams can answer and you should the biggest think is that you should know what is your natural behavior.

We all don't behave the naturally time because we keep altering our mood our political correctness and pose that stuff so you have to learn to believe your natural behavior develop an ear for your emotion so unless you develop an ear for your emotion.

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The slide is a light gray rectangle with a black border. It contains the following text:

Synergy –cognition and emotion

- Emotional awareness
- immediate self-awareness, watch your feelings
- the causes of feelings
- separate feelings from actions

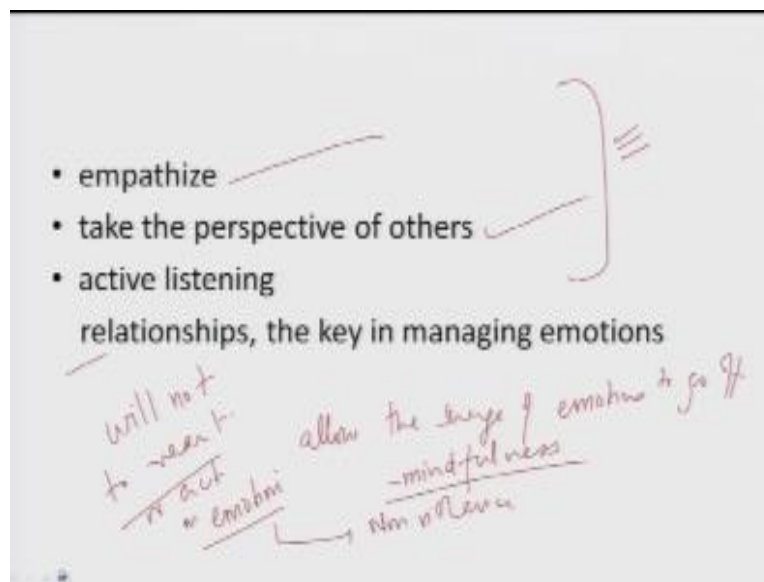
It will not change it something but the emotional literacy emotional literacy is a word which the people used literacy, people used this to the develop the emotional skills you would have heard of EQ emotional quotient that he is very intelligent and very low EQ that means is the person cannot create a harmony between cognition and emotion that is what we are discussing so what we require is emotional awareness how do you do it this is the practice which you can do even in the this moment while I am talking to you just take a brief cut off from the whatever you are doing and observe the emotion which you are feeling.

We talked about this small snap shots of reality which keep coming from the unconscious mind to the conscious mind, so if you have immediately in this second yourself aware you can watch your feelings suppose I am get irritated however unconscious push it may be but something in me can always watch that sense of irritability and feeling coming up I not talking of thought I am talking of feeling if you do not really act on it even if you act so if you learn to do this you will also know what is the cause of the feeling.

Especially with things like anger or things like jealousy, lust, primary emotions, you act on it. And then you forget it, then what happens if you do not separate action is your behavior. So people react to it or point out it, maybe you feel bad about it. So you want to change, okay.

What do you want to change? You say this is my behavior I shouted okay? I shouted felt back change. You take a vow I will not shout, how long does it last. You will again shout, again the same cycle. This is because what you are wanting to alter is an action. Do not bother about this, action is coming from this is not a tempered by cognition. This is the issue, whether your will and cognition can really so if you learn to you get a surge of anger. A shouting is act which follow sequentially you separate it.

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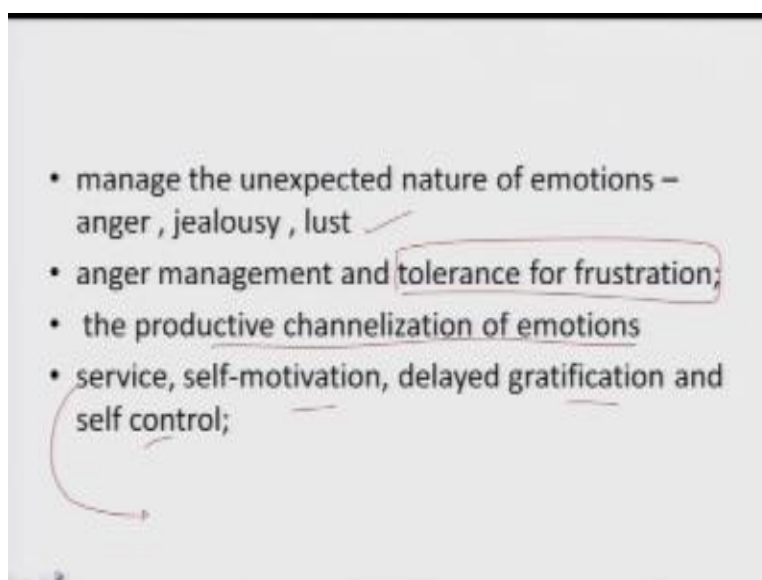
You allow your anger allow the surge of emotions to go off. This is what is being thought in mindfulness the oldest Buddhist technique of that you initially train your mind allow it to come and go. It is like your inner camera of attention even if it is focused on this surge, it is not doing anything else. Just watching like a cinema scene. If you allow the thing slowly and gradually your mind will at that is why Gandhi probably without knowing that so much of psychology was doing.

He watched his surges of emotions and instead of acting on them allowed them to pass, he applied his will and not to act on that. It is very unlikely that he would not be having anger and lust and all that. But the will not to react or act on emotion. Source of all nonviolence, violence is after all in the gap. So in the gap he watched by along his mind not to anger.

And then slowly and gradually every time this emotional surge comes does not get conversion into action and mind will finally give upend. This can be trained by empathize – empathizing taking the perspective others which should be done, if you want to transform in that relationship thing in conscious mind. Because I have start empathizing with you and I start understanding that you are like me.

Whom will I get angry at so this maybe a right approach and you may say Gandhi was a big man and this is like all social leadership and all but it is not a question of whether it was a great thing or a small thing this is what is required to survive together, so even if you train your mind even 30 40 50 60 % you are able to control it, it is all right it is wonderful because that you will have a better life active listening in relationships this is I am talking in the perspective of relationships but you can also put the same process anywhere.

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- manage the unexpected nature of emotions – anger , jealousy , lust ✓
 - anger management and tolerance for frustration;
 - the productive channelization of emotions
 - service, self-motivation, delayed gratification and self control;

So as I said one of this for station tolerance something which seems to be going down that is the rush actually the rush is that if you do not have anything, if you suppose you are not able get it after repeating it that gap of what could have been and what is that one has to develop everybody has some basic capacity for frustration tolerance but largely in situation where we do not perceive a threat we express our emotion where we are, so you are not going to hit a police man on the road for not doing his duty but you can shout at your servant for not doing his duty why not we should shouted the police man also you know you will get beat in up or put behind the bars.

Here you can survive so that means your mind is not that emotional at all your mind knows what is right and wrong for survival, so when it knows in one situation it should know in other situations also that is the truth we have to cultivate.

Similarly as I said the productive channelization of emotion do not feel too bad about depression anxiety little bit of them that may with this too long you should have to get treated but look at the cause of it what is it causing the discomfort and then maybe you can this is the big thing, Gandhi said if you are troubled the best way to remove your trouble is looked at the troubles of others and serve them.

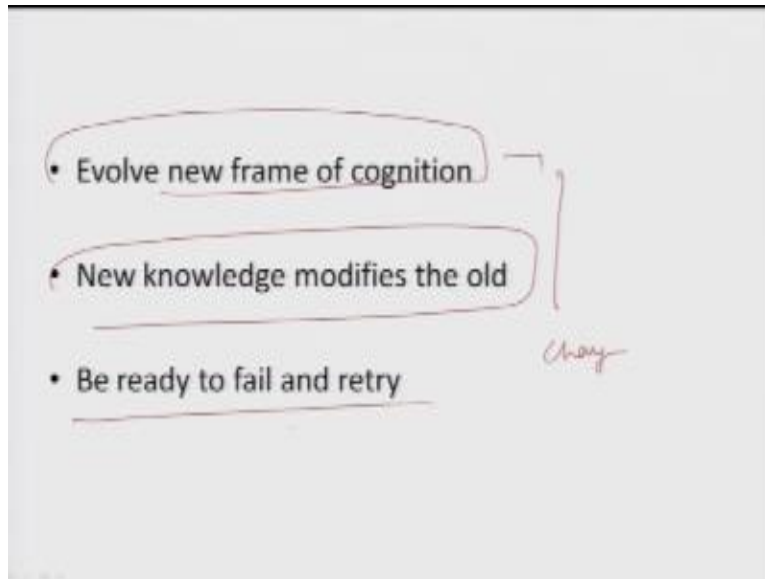
Service is self motivation delayed gratification we have talked about and self-control obviously so all this things require a very fine balance between emotion and cognition which was basic theme.

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- Experiment ✓
- Review the process ✓
- Train your mind ✓
- persevere ✓

Experiment once you have decided okay fine I will watch my emotion experiment it do not be afraid of failing it is all right to fail review the process strain the mind persevere well keep doing it do not give up so easily.

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It is new frame of cognition is the new knowledge I was talking about the knowledge modifies the old that brings in change and we ready to fail and try retry.

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Social and interpersonal

- Apply your new frame of knowledge in interaction →
- Non egoistic manner
- Accept alternative views → Conflicts
- Demonstrate the efficacy and long term benefits
- Non judgemental -- to unite
- Common vision of future

The same process if you apply in the social and inter personal you have to put the whole thing in interaction in a non egoistic manner you have to accept alternative views that other people are also has violent it requires certain amount of empathy but if you have a view which you think is right you have to demonstrate the efficacy and long term benefits to others in a non judgmental view.

That this is how Mahatma Gandhi whole experiment of non violence was he want re-demonstrate the efficacy even to his detractors without being judgmentally he said by this is what I want to do violence is bad, so I will not endorse violence which brought even to conflict the lot of things but at the end of it let people have their point of view I have, so this is others this is me let us compare and see what happens but at the end both will have to evolve to a common vision of future if there is no common vision of future obviously it all fails.

This is how we should interact so I will wrap up my course at this and may be will find out time to 30 40 minutes we can may be have of a interactive session I hope will be able have an online

thing and but the whole things boils down to that if you have a need for change and if you feel the change is something so you have to look whether the change is involuntary it is just pushing you through the external pressures or it is something which is more personal for you and once you decide it is as it is the personal thing for me then you have to really go on in to finding out alternatives let it work it and then transform. So thank you hope you enjoy the course thanks very much.

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