

Innovation, Business Models and Entrepreneurship
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Lecture – 09
Divergent Versus Convergent Thinking

Yeah hello again, I have tried to explain business models and business scenario a with a larger perspective. Before we go ahead with as far as innovation and, strategic perspective related to innovation, which we will be more enduring in terms of you know the thought process assimilated from all over the world as far as thinkers and, even the consumer insights or organizational insights go.

But before that one has to ponder upon that how to look at these things actually, how to look at innovation how to look at strategic thinking and so on.

And to start with one has to deliberate upon divergent and convergent thinking, why I will I will tell you in a moment and, then while pondering upon divergent and convergent thinking one always has to keep innovation besides.

And then automatically our thought would go towards slower and faster thinking as demonstrated by Daniel Kahneman. And then definitely we would have experienced or we experienced in daily lives micro versus macro macro versus micro, are subjects and many of the disciplines they focus on these two sides simultaneously and they work upon that.

And then in general terms we may say this or that as a matter of choice. So, before I go into the aspect of divergence and convergence slower or faster, I should slightly ponder upon what thinking is, thinking can be referred to with the perspective of assimilation of thoughts, rationality also irrationality also when we think in terms of rationality irrationality also, and analysis also and so, on.

There are several larger definitions associated with thinking which are available all over our point of discussion is not precisely looking into the definitions of thinking, or process of thinking, but thinking is related to these kind of keywords.

And it is many a times it is almost imbibed in our system it comes automatically many a times it is deliberate as Daniel Kahneman suggests in thinking fast and slow, wherein he tries to demonstrate that how system one and system two works, as far as our thought process goes and, what are the responsibilities of both the systems and, how these systems they can work in coherence and, how we can actually master these systems and utilize these systems for our own benefit.

And then it is a very you know enlarged or let us say even at micro levels also, it is a great perspective to understand, I would definitely recommend this book, or the papers written by Daniel Kahneman and other authors on the subject.

So, now when we think in these kind of aspects, we realize that why should be deliberate upon slow and faster thinking, or let us say divergent and convergent thinking, micro and macro elements why should be do that, my take on this is and then you would also agree, if you will go with the literature. And also according to the imbibed knowledge, which you have you would have gained up till this stage of your careers and lives, is that most of the times we think in terms of finding out solutions solution finding is an important objective.

But before that I would suggest and recommend that have we mastered the art of identifying problems actually. On the lighter side many of us would have heard, at some part of life our lives, someone saying to us that what is your problem, many people have been asking me this question.

In fact, in fact all almost all the people who have been related to me have been asking me this question and, I have not found the answer as yet, in the childhood parents they ask their children most of the times and what is your problem like, children they ask their parents what is the problem like at a particular stage, friends they ask each other what is your problem like.

And after marriage or you know when you meet someone people do ask each other what is your problem like. So, but I personally have not been able to answer this question at all; so, but I have been thinking what is my problem like. Sometimes you feel that you yourself are a problem. So, to deliberate upon this kind of thing one finds that problem identification is more prominent and, specially when we look at innovation and business

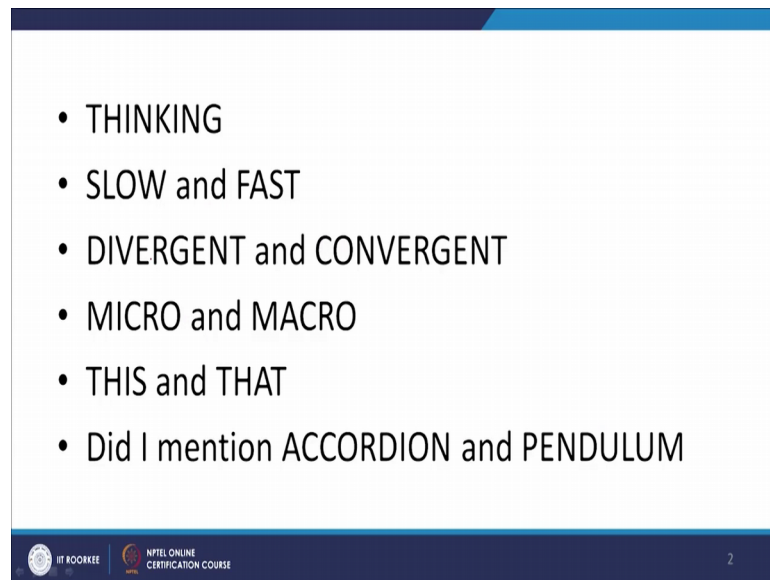
problem identification is the key, if you have the right problem in front of you can find the right solution as well.

And here comes the role of divergence and convergence. If you think and appropriately analyze and focus upon the central problem, central problem is I mean that that contains symptoms and causes and, and you are able to coin or you know a scenario around it, or structure a scenario around it, that this is the problem for example, general example where in for example, a product is not selling.

Now, product is not selling is not the problem, there can be a distribution related problem, there can be a price related problem, there can be a product related problem itself there can be a process related problem, there can be an expectation related problem, there can be that pre market research or market research, but should have been done to structure the sales of that product did not work appropriately, because that research was not done.

You know you know precise, or required fashion more of the hunches have been incorporated with the conclusions, or designing of the product. So, if you identify the right problem with the right perspective it is slightly beyond the domain of discussing how to identify the problem in the process of identification of a problem actually, but still if problem is identified rightly, then comes in divergent and convergent thinking, or even simultaneously along with that wherein divergence is associated with finding multiple ways of addressing things actually.

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- THINKING
- SLOW and FAST
- DIVERGENT and CONVERGENT
- MICRO and MACRO
- THIS and THAT
- Did I mention ACCORDION and PENDULUM

And multiple solutions one may say a problem is there and, convergence is convergence is associated with analyzing kind of you know one single solution, or a very precise solution if problem is already identified and so on.

So, the perspective here is that one has to think in terms of looking at convergence and divergence with singularity, or polarity of reaching to a problem or finding solutions of a problem actually. So, that is where one has to focus upon and, that is where divergent and convergent thinking comes in, it can be as simple as that that I have to reach somewhere. And I have multiple choices and modes, which mode would be best for me with respect to time or the cost, which I want to spend or my purpose of going there if I am in a hurry and so on.

So, they there are elements to it. So, one can one can look at with a divergent view and one view is converging on a single precise element, or precise solution, I will slightly focus more on this in later part of this discussion, then comes in simultaneously when we are thinking in terms of divergence and convergence micro and macro comes in.

You cannot look at things with a microscopic perspective, you tend to do that for example, thing is very large for you or let us say a process, or all the aspects of a process cannot be seen simultaneously even if it is in the physical form, or let us say a virtual form, or let us say you want to visualize the complete market scenario, you cannot do it, you do it piece by piece, or pit by bit you for example, you tend to look at larger objects

in a microscopic view, or let us say microscopic objects in a macroscopic view, because you want to enlarge and look at them.

And this is a simultaneous kind of a process and, that happens in the as far as thought process good it happens very frequently. We just elaborate or extrapolate and elaborate things simultaneously and, then we converge back and focus on one thing for example, you want to think about your careers, you just keep on extrapolating and elaborating things that after 2 years, this would happen after 5 years.

This happened and then there on the lighter side usually people ask and introduce that, how where do you look at yourself after 5 years, I could not find any particular answer to this question, because there are so, many elements which have to be silent, when you are answering this kind of a question especially in an interview.

But when on the lighter side you are discussing with one of your friends, that where do you look at yourself after 5 years from now; there can be very large answer. So, microscopic and macroscopic economics also behave like that understanding of economics discipline of economics, it look at micro view of economics and macro view of economics and so, on.

So, every everywhere it exists actually micro and macro thinking and, when we talk of business decisions or decision making at large, but I would focus the focus largely on business decisions, when we talk of business decisions. So, generally we have this or that and did I mention accordion, or pendulum last time it happens almost automatically, the art is that if we can manage that transition, which happens with organizations or with us.

So, that is where our focus should be managing that blow in blow out, process or the transition of blow in blow out precisely and, when pendulum is moving then managing that transition, or managing the time within that transition that that will try to look upon.

So, now comes in thinking and innovation, you see innovation whether incremental largely it is so, or radically oriented is affected by a divergence and convergence. There are so, many elements which we have to cater, cater to when we talk of let us say market innovation for example, I will I will start from there, then I will come to process and product innovation and similarly you know at large with business innovation.

So, for example, we are talking of innovation in terms of marketing. Now, you want to have newer ways of getting associated with the customer, or let us say you want to associate larger number of customers with you know with similar set of products which you have, but in a different mode for example, a tyre company says that they would be charging you as per your usage, which couple of tyre companies are doing for example, insurance companies they say that they would be charging premium on the basis of how well you maintain your health.

And they will be in touch with you in real time. So, that you know they can communicate with you as far as your health maintenance plan or procedure is going on.

So, that is where you know how you want to actually innovate upon this marketing process, there can be a pre aspect to it as well, that how do you want to get in touch with your customer as far as how innovative you can be at that part of your marketing process. For example, you want to address your customer or let us say you have conventionally been addressing your customer through conventional modes of advertising integrated marketing communication and, now you want to be more innovative.

So, you go for some innovative process their online procedures are no more in category of being innovative, they were innovative earlier. So, that was an incremental change in integrated marketing communication perspective, but then there can be as I remember someone told me that, if you have a musical instrument, where and you feed the name of your company and just played and, it has a sound wave with it which flows from one end to the other end of the earth that we would be the most innovative solution.

So, you have to find out that how innovative you can be, which part of newspaper you want to use which part of television, or which point of time you want to use for television, how you can reach to the customers physically for example, I remember a company advertising during [FL] earlier people, were not focusing on [FL] as a congregation to be utilized for addressing customers, or prospective customers or present customers.

But now people are doing that last [FL] which I visited, where in people companies, were addressing people with different kinds of messages for example, someone said that you know dettol advertise about that you know [FL] non or [FL] bath is periodical and dettol [FL], or dettol bath can be you know frequent.

And then there are kiosks, or let us say ATM's by several banks which are serving people and as well as advertising, if I remember correctly TATA tea distributed free tea to many people and, then there were organizations who were providing slippers and shoes at a minimal cost or free of charge so, that they can advertise their brand and products.

And several others who were trying to address those people so, [FL] is a large congregation, where people from all walks of life definitely belonging to a particular religion, but definitely very very large number they come. So, it is an opportunity to address future buyers as well, you see it is definitely representing an innovation as far as addressing this market course.

And when in the next stage of after you have initially communicated with your target market, how innovative you can be as far as other elements of marketing goes, how innovative you can be as far as product how innovative can be you can be as far as pricing goes, how innovative you can be as far as distribution goes for example.

So, for example, many cement companies they have been guiding their future customers, or customers how to utilize cement rationally, how to construct their houses rationally, how to maintain their houses rationally and so on. And many other companies, they have been coming along as far as you know giving product replacements, when they feel that this product would be borne out they are they are with the next generation product to be replaced by the old generation and without, any hassles to the customer, or without any much you know premium extra premium on the product buy back offers are there and so on.

So, for example, eureka force is continuously monitoring the usage of their products and, they to monitor that what other products of eureka force you are utilizing and why and, how well they can service all the products jointly and universally and so on. So, that is where innovation as far as marketing perspective goes, there can be a radical element to it, there can be an incremental element to it. Now, comes in product and process.

So, there have been elemental changes or vast changes far as processing at the production of several products goes, robotics has been introduced 3 d has been introduced, 4 d printing has also been introduced.

Now, and several other you know processes have come. So, there has been a incremental or there has been a radical change as far as the complete entire scenario in the process goes for example, medical sciences the equipment the kind of surgery, the kind of pharmaceutical discoveries, or let us say drug discoveries and molecule discoveries and that has been radical as far as it is approach goes.

Now, how is divergence and convergence thinking associated with incremental or radical, association is as I said that, once you are approaching said population target population with a product or a process, or you are trying to conceive any of these, you think in terms of what kind of problem this product or process would address. Now, when you are trying to focus upon the perceivable problem, and once that the divergence; and convergence thinking peeps in or creeps in.

And then you have multiple elements to it or singular elements to as far as identification or crystallization of problem goes and, simultaneously are thinking in terms of product or service as well. And once you go ahead with the situation after, you know post problem scenario you are trying to find out solutions to that particular problem in terms of focusing upon the features of the product, or you know other elements of the product, or process, or service. Then you definitely have divergence and convergence keeping in either you want to be very focused and straight and one solution, one product, one solution to one problem, or one product multiple solutions to one problem and so on.

So, for example, you know mobile phone, mobile phone was fundamentally associated with giving the mobility to as far as our communication with each other goes. And, the objective was that everyone should have a personalized phone and, you know the person can talk as per will and as per choice and, person can be conducted as per will as per choice.

But then music also came into being and other elements of being always connected came in and other features, they started coming in and today mobile phone is a complete unit of communication, entertainment, information and so, on. So, now, it is its it is it is a gamut of features, which are associated with mobile phones. So, they are in they are in again comes in divergence and convergence thinking and as far as you know providing products in solution they go.

So, computers have also reached to that kind of a situation. And now if you analyze some of the important sectors with this perspective you would realize that energy sector for example, as we all understand there is a crisis of energy as far as on one side, it is a crisis of energy it is we require lots and lots of energy and, on the other side we want to raise the level of per capita energy consumption as well.

So, we are trying to find multiple ways of addressing this kind of a situation and, then conventional energy measures are always there. And generation is always there and, non conventional energy generation has come with a very large kind of presence, where in solar wind and other modes have emerged and, evolved.

And if you would refer to earth the sequel, it is an important book and account of organizations, who are working in the field of energy generation with different perspectives, wherein someone is printing solar cells. Now, and someone is working on up and down motion of the sea waves, for generating energy someone is a working with sugar and yeast to you know generate energy and, someone is working on other modes and so, on.

And these experiments are now a commercial reality as this account suggests. And, it is very interesting to understand that the future of energy generation is continuously changing and, it is an exciting log. So, energy is one sector which is being catered to with lots of divergence and convergence as far, as the requirement of various people go. There are several organizations which are working with rice husk as the mode of energy generation. And similarly we look at waste management for example.

Now, it is a huge area to be addressed with so, much of divergence and for example, if we talk in terms of cleaning the rivers. If you look at Ganges as a project which government is very keen government of India is very keen to address and, they are they have been trying very hard, IITs have been involved at a very large level as far as this project goes so, many types of solutions with so, many perspectives have been provided, to only one problem how to clean Ganges and, how to manage that situation after once we are able to clean it actually.

And then there are socio cultural elements related to that, there are you know hydro projects which are associated with this river which are related to that, there is a waste disposal system which has to be addressed and, it is a huge and big problem industrial

wastes system has to be generated. And then there are multiple aspects which have to be manage.

So, so one river we require so, much of concentration look at the other waste management aspects which we have to cater to for example, we are generating hardware waste on the other side. We are generating plastic waste on the other side, we are generating industrial waste on the other side, we are generating iron junk on the other side.

Now, this is a complete gamete which has to be addressed and in an industrial fashion, or let us say in an a large business fashion it has to be addressed, because we have to now find economic solution wherein so, many people can be associated on some business basis basically and people are doing that, we have several examples on that.

So, but again the point is hair also comes divergence and convergence, health there are 2 or 3 larger views on you maintain your health, or let us say post ailment scenario, then after post ailment scenario or once a person is ill, there are several ways to address that illness there are surgical procedures there are non surgical procedures. And, there there are you know several modes of medicine also there is allopathy, there is ayurvedic medicine there is homeopathy medicine and, you know that there are several procedures there is there are allopathy drugs ayurvedic medicines and so on.

So, there are procedures and there are modes and ways to address one single, just to coat a scenario for example, you know in rheumatoid arthritis there are allopathy solutions as well as ayurvedic solutions. So, I have personally seen patients getting, well through both of the solutions. So, you see the point is how to address that and, when to a when to utilize a particular kind of a solution for one kind of a problem. Then health provision itself is a big area, basically there is a huge gap of doctors between number of doctors and large number of patients, there is a there is a huge gap as far as you know bed and patient ratio and so on.

So, so there is a shortage there is a huge shortage and, then there is money which has which is required for as far as addressing ailments which many patients do not have out of pocket expenses are very high, which patients cant bear. So, what to do how to bring a solution to healthcare provision can there be one solution, or can there be an integrated

model, can there be a larger you know several part basis, or piece basis solutions which can be utilized for this.

Then comes in education how to address primary education, how to address college education and how to bring in all the students under the domain of education, how to fulfill the short supply of teachers and how to conduct larger, research how to involve larger number of people in research so, that they can you know further that research for the usage of students and also the benefits benefit of the society and country.

So, information technology area has multiple aspects to be catered to consumer goods also has transportation, which mode of transportation or how many modes of transportation. So, all these are elements which go through divergence and convergence and be see, after a particular stage of time after a particular state, wherein sometimes many solutions are there sometimes one single solution is there and that is when we realize that divergence and convergence has occurred.

But what happens between divergence and convergence, what actually is the scenario because, you see when divergence and convergence is taking place actually, when solutions are emerging and involving, when multiple solutions are to come and convergence when single solution, has to evolve what is happening between.

So, there is a transition a stage which is very interesting to note and, it is a very testing kind of a stage it is a difficult stage though it brings hope, but it incurs lot of cost because, experimentation is going on and success and failure is you know simultaneous as far as until unless one of those establishes itself.

So, here one has to establish that innovation though is related with micro and macro thinking divergence and convergence thinking can be incremental or can be radical, but fundamentally the transition within that process transition of that process is always difficult and it incurs costs. So, and one more element is that change management comes in due course of time because, human resource and humans as providers as well as consumers or customers are involved.

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• CHANGE MANAGEMENT COMES IN
BUT
• WHETHER CHANGE is MANAGED
or
PASSED THROUGH
or
THE CHANGE MANAGES is the QUESTION?

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So, change management automatically comes in because, they have to cope up with the change they have to manage the transition, they have to manage the time they have to manage the situation. But whether changes managed, or is passed through or the change manages people is always a question.

So, one has to see that you know who manages whom is an important aspect, sometimes people feel that they just passed through times and change comes by itself and establishes itself. And sometimes people say that change can be managed and so, on. But do they mean that change is to be adopted with, or one can actually manage the change is a point to be discussed and deliberated upon. So, that is where I end this session.

Thank you.