

Introduction to Biomimicry
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Lecture – 36
The Need for Creativity in Our Lives

Hello, good morning, good evening, good afternoon depending on where you are, what time you are looking at this. Can you see a sort of sadness on my face? That is because we are on week 8, unbelievable. The nice thing about a journey is that when we start the journey, we want the journey to end. But when the journey actually ends, we are not very happy. So, what a contradiction in thinking, right?

So we are on week 8, and I am sure you enjoyed week 7 the project by Shakuntala. There is so much of passion that she put into it. I am sure every one of you is going to be as passionate as she was in expressing her project. Many times, we talk about the word passion, but I am not very sure where that word really comes from, I think passion really comes from self-belief, saying what I am doing, I do not know whether it is right or wrong, but whatever I am doing I put my entire heart into it.

I think that could be definition of passion and all that. We also started learning about creative thinking. We learned to understand that creativity is deliberate. In a sense, you cannot expect to be creative when you are walking, when you are talking to somebody, when you are sleeping, creativity is not like that. Creativity is a very definite set of deliberate activities that you do, you go from problem definition to solution of the problem. We saw all the steps.

We said you define the problem, you look for information on the problem which is critical, we redefine the problem, we try and generate as many ideas as we can. We choose one or two ideas and then we look at the difficulty in the idea and then we try to overcome the difficulty by what is called shaping the idea and then we finally go towards implementing the idea. And we now understand that you cannot call yourself creative unless you have actually implemented the idea.

Which is one of the angst that I have as far as the biomimicry course is concerned because I am saying that many of these ideas that you are going to come up with have to be implemented.

So, I am working with my colleagues at IIT Madras to find out if we can create some sort of a lab in which the promising ideas can we actually start prototyping them and all that because the joy of creating something actually is in seeing that creative endeavour result in something, something really tangible that you can touch, feel, and all that.

Otherwise, ideas are always so easy to do. So that is what we saw in week 7. Week 8 is concluding week, so which means that we will do all the necessary things to conclude this. I have lots of more stuff to talk about on creativity and we will also give you some tools for trying to help you understand how you can take your thoughts further. So, I am happy that we have come this far. I am happy that over the last 7 weeks we have met each other.

We have befriended each other and we are hoping that we will go on to biomimicry 2.0 and 3.0 and 4.0 and more and more biomimic, I forgot to tell you, at the end of week 8 many of you should just go ahead and start teaching biomimicry and write to us if you need any help, saying that just call up your school that you studied in or your children's school and talk to the principal and say can I come and lecture the students on biomimicry.

Just ask for permission, 99 out of 100 times the principal is going to be overjoyed in hearing that someone wants to come and actually speak to the kids on biomimicry. And when you speak to the kids on biomimicry, what will you speak? You do not have to make it complicated and things like that. You can talk to them about the spirit of biomimicry as to what it really is which is about the future, about transformative innovation, about designing the way nature designs, about sustainability, about environmental care.

If you can make every one of those children listen to you, and at the end of your session if every one of those kids can actually start to say after I listened to this person, I have started to respect nature as my teacher, every time I look at a tree I am learning something and therefore what I have found is a new teacher called nature. If you can do this much, then I think you probably have started on your life's purpose.

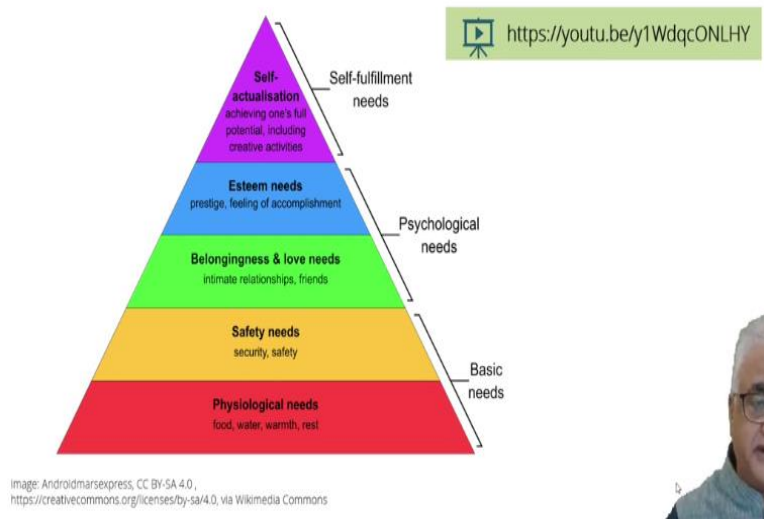
So, this is what it is week 8, with a lot of interesting things for you. But I just thought I will start it off on a happy stroke, sad note because of course our paths will meet. But it is nice that we spent so much of time together with each other, did the purpose of something, right. Why

we do, what we do is always something that we must examine. So, I have for you something that most of you would already have seen.

But can we connect what we are going to learn to creativity and can we discuss creativity in the context of what we are going to learn? Any guesses on what we are going to learn? It is shaped like a triangle, anyone? It is called the dash hierarchy of needs. Yes, I think most of you are guessing it.

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Maslow's Hierarchy of Needs



It is called the Maslow's hierarchy of needs, so that is what it is Maslow's hierarchy of needs? If you are wondering why I have brought in Maslow in a biomimicry program where we are speaking about creativity, then I think many of you have probably started to understand why. Let us just look at Maslow. I am not going to get deep into Maslow, I am using Maslow's hierarchy of needs in order for us to understand the purpose of creativity and when we use creativity that is the reason.

There is also a lovely video that you must watch. It really brings into focus whatever we are learning because the video enhances your learning that is it. So, let us look at this triangle. What are we asking? We are asking the purpose of creativity. We are asking one more very important question, we are asking when do we use creativity or why do we use creativity? But at the outset I want to say that biomimicry is also an aspect of creativity.

If you had the canvas of creativity, then you will naturally include biomimicry because anything that takes you from problem definition to problem solution has to have an aspect of

creativity. And the biomimicry process is a brilliant way to go from problem definition to problem solution. Now, the question is when? When do we use creativity? Not when do we use biomimicry. When do we use creativity in the Maslow's hierarchy of needs?

But what is the Maslow's hierarchy of needs, very simply explained. Maslow says that all of us have five needs. The first need is the physiological need. The food, water, clothing, rest and all that. And I am sure every one of us will agree with that because none of you will be here listening to me now if you are hungry or if you are not rested enough. And if you are very hungry now, you will probably pause the video, go eat and come back.

So, it is well established that the physiological need is at the bottom of the pyramid and we all need to satisfy that need. Now, the question for us is, is creativity necessary for that? Of course, it is necessary. I mean even at the basis needs of our needs we need to create ways to look for food, look for warmth, look for rest. All animals do that, all organisms do that, there is no difference at all. And most of the time in our lives we do several things, we even get a job and things like that because we want to satisfy that need, so physiological need.

Safety needs, security and safety that is the second need, very important need. I still remember when I was working in TCS, several times I used to get frustrated by the work and I wanted to resign, I wanted to leave, but immediately the question of security will come in my mind in saying what will happen to my family if I leave? So, there is this security that we hold on to and safety of course, we keep telling each other be careful, do not get into trouble, why do we do that?

Because there is this need to be safe. And is creativity needed for these two? Of course, it is. So, I will use all my creativity to see to it that I remain in the job because I do not want to lose my job. And therefore, I will do everything possible, I will use all the creativity I have in order to remain in that job. Safety naturally, when I am going out in a dark road, when I am coming back from the airport sometimes, I will call my friend and tell her.

Therefore, I will think of creative ways of being safe. I will not speak too much to the driver or I will speak, I do not know, so many things we do in order to remain safe. Belongingness and love, I do not need to talk to you about this, every one of us needs to be loved, every one

of us needs to have someone to love. So, we get onto LinkedIn, we get onto Facebook, we make friends.

We join clubs and again we use creativity there, we try to find out how we can use our creativity in order to be loved. Many times, we feel that we are not being loved and we use all our creativity to remain in love and that is very powerful need for all of us. Esteem needs; prestige, feeling of accomplishment, is creativity needed? Of course, yes because once you have accomplished something you want to stay there and you do not want to keep on sliding down.

And finally, of course, self-actualization which is achieving one's potential, that is not so much a popular need because most people I do not know whether they even go up to that, but I am sure those people like Einstein and all that who have actually reached that stage surely must have used creativity. Yes, for me personally the Maslow's hierarchy of needs helps me understand the power, the need for creativity which is why I wanted to share this with you.

One of the insights I got while I was doing Maslow some time ago was that if you look at biomimicry, I am giving you some hints now and this is my opinion, the need for biomimicry in the context of where the earth is heading right now, which need do you think biomimicry is satisfying? According to me biomimicry is going back to physiological needs because 30, 40, 50 years from now we are going to be really looking for food because food is getting destroyed in floods and things like that.

Water is not going to be available, already there is so much of scarcity of water. Warmth, countries are getting colder and colder and colder. And suddenly you find if you will go back to what we learned about the purpose of biomimicry, you will find biomimicry leads to transformative innovation that if you look at the Namib beetle, you know that there is a way nature makes water.

Which means that if we do not have water today because of the way we are making water today, then we probably look at nature to find out how we can get water, sounds simplistic, but if you really look at it the logic is, you cannot beat the logic because right now many times we are afraid that our physiological needs are not being met because the way we have treated the earth.

So, look at the Maslow's hierarchy of needs, write to us about your opinions. I just wanted to introduce the Maslow's hierarchy of needs to help you understand how important it is to keep your creativity at a high level constantly and tell yourself that there is use for your creativity at every one of these needs.