Thinking : Ants to Ego-lessness

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This was a talk given to students of NID in 1985+

Before we start getting confused about ‘thinking’ as there is so much written and talked about it I will put a question :

“Is intelligence unique to human beings?

Don’t all living things, beings have some kind of intelligence ? we can see that all of them take care of themselves very well and many of them perform unique operations. As you all know there are plants which close their leaves immediately as you touch them called ‘ touch me not’ and insects like ‘bees which ‘dance’ to tell others where the flowers are, and aquatic animals like ‘ dolphins’ which act as ' spies’ for U.S. Navy.

In fact, we can observe varying degrees of intelligence in the animal world. It cannot be always brushed away as unknown but, obvious quality -’instinct’. I will tell you an interesting incident. You all know ants follow each other. In fact they even leave a chemical, which other ants perceive tofollow the same track. That is why if you rub their way with your finger, they have difficulty to cut accross.

Somebody pointed out that if you make these ants go around in a circle, each would keep following the ant in the front and will never know that they are in a ‘circle’. So due to their ‘limited’ intelligence or ‘instinct’ they will go on till they die. I thought this could be a novel ‘non-voilent’ way of killing ants. But I have to tell you ‘ants’ are not so ‘unintelligent’. Once, in a round vessel in which I some times heat milk, I saw to my ‘delight’ small red-ants going in circles at the bottom of the vessel. I watched them for an hour or so. They were going on and on. I got fed up. It was late in the night and they were going on in circles. So I thought I will find them all dead in the morning. To my surprise in the morning none of the ants were there in the vessel. The ants somehow managed to escape from the so-called instinctive behavior.

I shall cite another interesting example from Kenneth E. Boulding. Talking of certain kind of amoeba he tells us about their astonishing behavior. These amoeba ‘ as long as the food supply is abundant eat, grow, divide, and so multiply. If, however, food becomes scarce an extraordinary change in their behavior occurs. Thousands of separate cells move together to form a small worm like object. By means of concerted movements among the cells this object moves forward somewhat on the principle of the inch-worm. After this has moved a certain distance it begins to erect itself into a plant- like object. Differentiation takes place with the separate cells, depending on their position in the object. Those in the stalk become hard and rigid and die. Those in the “flower‘ eventually transform themselves into a seed like spore which is then scattered and may remain dormant for a long time until conditions become favorable again. Here is exhibited, in most dramatic form the mystery of the plant, that is, the cell society’. We can see again ‘intelligence' operating at a society level.

we can even see how our society operates on very similar lines.

now let us‘ look at another example from the observations done on monkeys on the Japanese island of Koshima.

In 1953, a female macaque monkey called Imo, a genius amongst monkeys invented a method for cleaning unpalatable sand from the sweet potatoes according to the group of scientists observing the monkeys. They had been scattering on the beach since the previous year. She dipped each potato into the water of a brook with one hand and brushed away the sand with the other. During the following two years this habit of washing potatoes spread to 90 % of the members of Imo’s troop: only the youngest infants did not know it, and the oldest males stead-fastly refused to adopt it.

In 1955, Imo made an even more remarkable discovery. The biologists had also been spreading ‘wheat on the beach for the monkeys. but picking it, grain by grain,, from the sand was a tedious business. Imo invented a method of sifting the wheat by flotation. She threw handfuls of it into the sea, the sand sank and she skimmed the grains from the surface. Again within a few years this difficult skill had been mastered by a majority of the juvenile monkeys. In this example we can see

how one ‘enlightened’ or ‘extra intelligent’ individual, contributes to the society. We no more can dub this ' intelligence of Imo, as instinctive. In fact studies on chimpanzees in captivation amply proves that chimpanzees can even learn and use a ‘symbolic’ language to an extent. Then what is the difference? We jump to another interesting Experiment quoted by Polanyi from Kellogg’s experiment

”Ghua the chimpanzee was born in captivity on Nov.15th 1930, in Cuba. When she reached the age of seven months and a half she was adopted by Mr. and Mrs Kellogg of Bloomington, Indiana, to become a companion to their baby Donald, who had just completed the fifth month of his life. During the following 9 months the two infants were brought up in exactly the same way and their development was recorded by identical tests. A graph comparing the number of successful intelligence tests passed by them shows a striking parallelism in the development of the two. It is time that the child, though the younger, soon took the lead over the chimpanzee and retained this throughout, but the advantage was slight compared with the child's prospective intellectual superiority which was presently to become apparent. At the age of 15 to 18 months the mental development of the chimpanzee is nearing completion, that of the child is only about the start. By responding to people who talk to it, the child soon begins to understand speech and to speak itself. By this one single trick in which -it surpasses the animal, the child acquires the capacity for sustained thought and enters on the whole cultural heritage of its ancestors”

So we may say that ‘intelligence’ of human beings has much in common with other living beings. But the ability to speak and use ‘symbols’ or ‘words’ in a language makes man a ‘Thinking animal’. The ‘word has been so important for the man that it is equated with God. Ernst Cassirer, in his book on ‘language and Myth’, described how words might have come into existence. Comparing the process of creation of Gods to that of words, he hypotheses an intensive, consolidating act of - creation, of sudden implosion of a ‘word’ to comprise a whole set of experiences, which certainly seems to be mystic. ‘Vedas’ the earliest known ‘text’ is equated to God by Hindus.

Words, or ‘symbols’ are important for man as they give him power to remember and comprehend entities that were otherwise mixed up. In fact Benjamin Worf points out that certain cultures do not distinguish between some colours because

they don’t have a word for it. Arabs are known to have 8 to 9 names for horses. Probably we will not be in a position to distinguish these horses at all.‘ In the picture, the cat looks different, not because it is differentiated visually but by the word - cat. The ‘word’ or ‘symbols’ are concepts and boundaries which encircle the ‘reality’. Thus we can take number of cross sections into the totality by these words which form different boundaries.

I look at this scene. It is a totality. I may say there are chairs and people, further there are boys and girls, ‘then there are blue, red, white colours. '

All these produce ‘boundaries’ or ‘concepts’ by which we can comprehend and communicate the external “world which enables us to dominate the material world. But these words or concepts which are boundaries are also problems to people. I will show you set of slides from De Bono’s book “Lateral thinking"

As you see we tend to look at the world through the ‘concepts’ or ‘symbols’ known to us and that becomes a limiting factor in our thinking. No creativity can take place unless these boundaries are broken. Dr. De Bono calls this process of seeing ‘L’s instead of ‘T's as lateral thinking. A new way of looking which makes sense creates a" new concept or new boundary. Later this very new boundary may become a hindrance to newer ways of looking.

Why do we tend to think in set boundaries? The answer is very simple, it offers physical security. That is why all animals do not change their set pattern unless they are threatened. Logically, using the same path, offers a tremendous physical security in the world of unknown. '

Animal and human beings get into playful acts only when they are physically secure. Human beings who have developed ‘Thinking in symbols‘ have an additional problem. We also look for psychological security. We want to protect our self image. In some stage in our development of the ego, I, (so and so) formation which becomes independent of physical ‘I’. It becomes a ‘Centre’ or- symbol by itself. The psychological security of this entity ‘I’ becomes dominant factor in our thinking. This becomes a new boundary comprising of person's ambition, jealousy, fear, envy, dominance, etc., which continuously interferes with the other boundaries. In a sense the society around controls and creates this ‘I’ boundary. We are continuously rewarded or punished to preserve an image ‘suitable’ to the society.

Particularly in our society, we are educated not to question but to accept what the teacher says, what the authorities say and what the Government says or religious gurus say.

How does ‘I’ factor affect our creative endeavors? You might. have heard of Darwin’s story. Charles Darwin after 20 years of collection of biological samples started formulating the theory of evolution. The evidence was so strong he had to reach that ‘creative act’. But he was terribly frightened of the implications of his theory. The exposition of theory would mean challenging the Christianity, which his ‘self image’ could not dare to. So he gave the papers to his wife and asked her to open them only after his death. But a young man who had a very different value system than Darwin, called Alfred Russel Wallace came to same conclusion as Darwin, in a delirium, suffering with fever on an island after loosing all his 'biological samples' due to a fire on the ship. He sent his paper to Darwin, who was shocked to see it. Both the papers were read at the Royal Society at the same time.

T.H. Huxley, who was a professional Biologist remarked, “Oh, this was so obvious, why didn’t I think of it before”. In fact he became the ardent defender of Darwin’s theory of evolution.

Recently Prof. Howard Gruber of Rutgers University, discovered that all the contents of the theory of evolution were written by a person just before Darwin as an annexure in a book on ‘Forest Trees’. This man never realized the importance or the implication of his finding. So his findings were ignored.

This shows knowledge can become a boundary like in case of Huxley. Lack of knowledge is not a sufficient condition for a creative act. And ‘self image’ can come in the way of creation.

So we are left with a problem to learn to unlearn, question our learning. Education based on questioning and freedom and a ‘self’ that has crossed the narrow limits of ‘fear, ambition, jealousy’, are the roots of creativity.

I will show you some drawings from a village school where drawing is not taught. We asked them to draw the incident of ‘wolf’ coming to the village which they experienced but had not seen. The expression is so clear as they were not taught how to draw a wolf. Now this needs to be developed. We can see very original images depicted by children. None of them look like a photographic picture of wolf!

these children need to be taught drawing without destroying this originality. That is the challenge of education!

I end with the famous painting ‘The Scream’ by Edward Munch. His statement shows how he was one with his experience completely.

'I was walking along the road with two friends. The sun set. I felt a tinge of melancholy. Suddenly the sky became a bloody red. I stopped and leaned against the railing dead tired, and looked at the flaming clouds that hung like blood and a sword over the blue-black fjord and the city. My friends walked on. I stood there, trembling with fright. And I felt a loud, understanding of scream piercing nature.'

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