

MODES IN BRAIN

Srinivasan N

Saveetha School of Engineering, Poonamallee, Chennai

Abstract: Learning may be defined as the relatively permanent change in behaviour that occurs as a result of practice. As of growing ages we nurture ourselves according to our surrounding. The goal shows that how the stimulus (The term stimulus is anything in the environment that can be detected by the senses) of the brain works. On how the attentions are grabbed it depends upon the stimulus conditions. This research reveals about the brain system uses information about the surrounding environment (in combination with other sorts of information, such as emotional reactions and the need for food or drink) to figure out which goals to try to achieve. This needs learn how to process the visual information and how we recognize an object. This mode may perceptually based on the personal historical case study.

Keywords: Learning, nurturing our self, objective & subjective condition, attention, motivation, decision-making, planning, emotion, experience, examples, perception, brain comparisons with objects.

I. INTRODUCTION

Learning may be defined as the relatively permanent change in behaviour that occurs as a result of practice. As of growing ages we nurture ourselves according to our surrounding. The goal shows that how the stimulus (The term stimulus is anything in the environment that can be detected by the senses) of the brain works. On how the attentions are grabbed it depends upon the stimulus conditions. These are the some of the basic concept that are to be known before we enter into the topic.

These stimulus conditions may be divided into two main groups.

1. Objective Condition and
2. Subjective Condition.

These objective determinants are those which captures the attention or in which situation the peoples are in and in which way the brain identifies it.

II. SIZE

Attention depends upon the size of the stimulus objects bigger in size seek more attention than the smaller objects.

III. INTENSITY

Intensity denotes the nature of the stimulus which has more intensity seeks attention of the individual than the weaker stimulus. For example a brighter light easily attracts the individual than the dull one.

Movement or change: In our visual field moving object seeks more attention of the individuals than a non-moving object. Advertisers use this psychological factor in their advertisements.

Novelty or Striking Quality: A new or novel object or an event is more attractive than the usual one, higher the novelty it gets attention.

VI. REPETITION

Discrete stimulus has more effect than the continuous one. Stimulating the sense organs again and again produces more sensitivity than the continuous stimulation.

V. DURATION

For an individual to be more attentive the duration of the stimulus should be short. If the duration of the stimulus is longer than it will have no effect. Duration of the stimulus depends on the intensity of the stimulus. If the intensity is more the duration of the stimulus is short. A weaker stimulus should exist for long time to seek attention.

Contrast or Difference: A stimulus which has contrast or difference with its background is more powerful in seeking attention. A picture which has different colour of its background tends to get more attention.

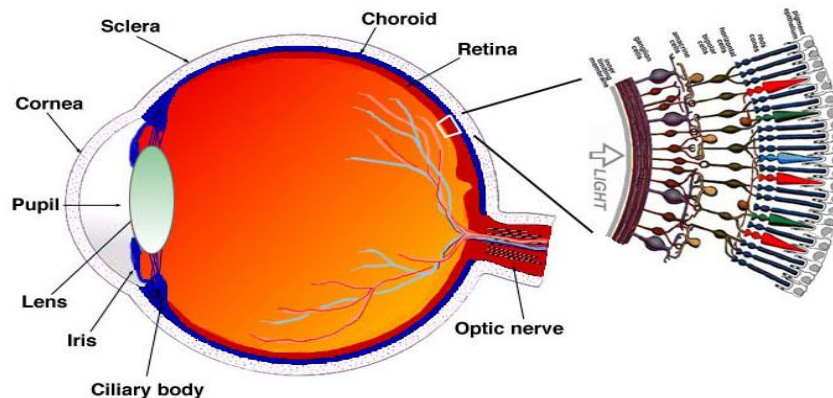


Fig. 1.1. A drawing of a section through the human eye with a schematic enlargement of the retina.

This retina act as input sensory organ. Subjective conditions are based on the individual characteristics. They are Motivation: We have several needs. These needs are to be fulfilled. We focus our attention on fulfilling our needs. Human needs are not equally strong. A need is powerful at some time and weak at some other time. A strong need motivates us towards certain goals and exhibits a kind of behaviour. We are more attentive to objects or events which are relevant to our basic motives.

VI. PREVIOUS EXPERIENCE

All of us possess some previous experience with objects or events. We are more experienced in something and less experienced in some other things. These past experiences determine the selection of objects or events to attend to. Hence the process of attention and perception are based on our previous experience.

VII. PERCEPTUAL SET

Expectancy plays a vital role in attention and perception. Expectancy is much related to previous experience. Expectancy and previous experiences motivates individuals to encounter the stimulus situation in a particular way. Hence the individuals is more attention to what he expect and less attentive to other things.

Perception can be defined as the process of immediate apprehension of sensory experiences through past experiences. I have become a nonexistent thing for her. I love you though running away from you.

The Brain Comparator and Real Motion Perception: If we hold our eyes steady and stimulation moves across the retina, we perceive movement. Sometimes, retinal images also move when we move our eyes, head and body. We must be able to tell whether the retinal images moved or because something out there moved.

The concept of brain comparator has been postulated to explain how it is possible for us to differentiate between the real motion of an object and motion caused by our movement. The brain comparator is a system which compares information about muscle movements with information about movements of the retinal image.

The brain comparator “evaluates” the moving retinal image as due to muscle movements and cancels the perception of movement. On the other hand, if the comparator has no information about muscle movements, the perception of movement is not cancelled.

Nurture refers to learning and in general the effects of the environment on behaviour and perception. Theorists who argue for nurture are known as Empiricists. As more experiments are done, it seems likely that there will be many more answers to the nature –nurture question in perception. The importance of nature or nurture, as well as the ways in which they interact, will probably turn out to depend on what aspect of perception is being studied, on the part of the brain that is under investigation, and on the species of animal being studied.

Eleanor Gibson had defined perceptual learning as “an increase in the ability to extract information from the environment as a result of experience or practice with the stimulation coming from it”.

Gibson gives many examples that show perception that show how perception can be moulded by learning. She cites the competence of people trained in various occupations to make perceptual distinctions that untrained people cannot make. Skill or artistry in many professions is based upon the ability to make these subtle distinctions. Experience is the best teacher for these perceptual skills. Usually, they cannot be learned from books. Distinguishing the calls of birds is one Gibson’s example. A trained ornithologist can do it, but most of us have great difficulty.

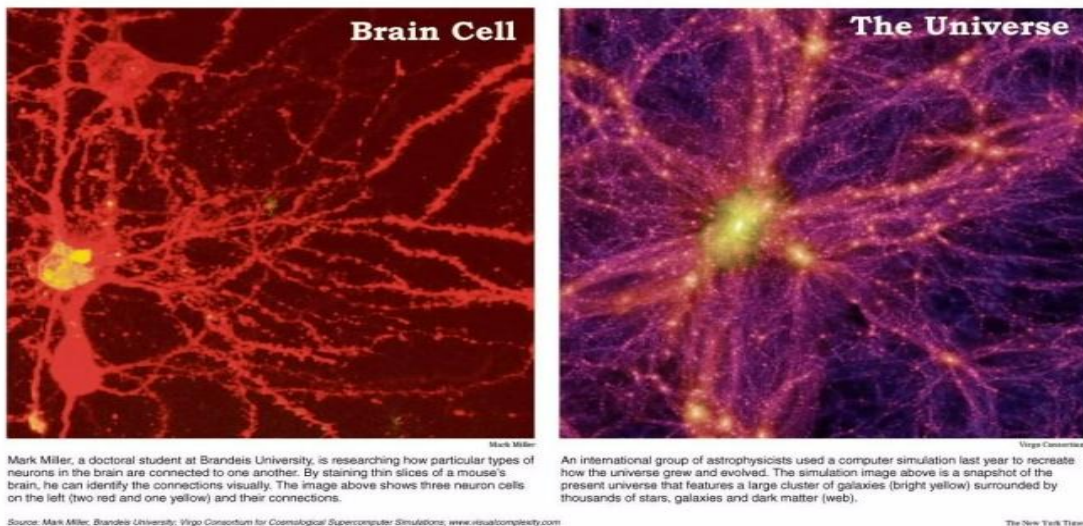
As Gibson also points out, the remarkable feats of blind people are often matters of perceptual learning. It is not that their sensitivity to non-visual stimulation is greater than that of sighted people. Instead blind people learn to extract from the environment information not ordinarily used by sighted people.

VIII. BRAIN

The brain is moreover like a hard disk in which programs are already encrypted in it. In order to act as an intermediary and it also manages the memory storage, which is designed to be work convenient and efficient manner.

The sensory organ act as an input unit, such as ENT. The human brain is estimated to contain at least 150 billion nerve cells called neurons.

One is only micrometers wide. The other is billions of light-years across. One shows neurons in a mouse brain. The other is a simulated image of the universe. Together they suggest the surprisingly similar patterns found in vastly different natural phenomena. DAVID CONSTANTINE



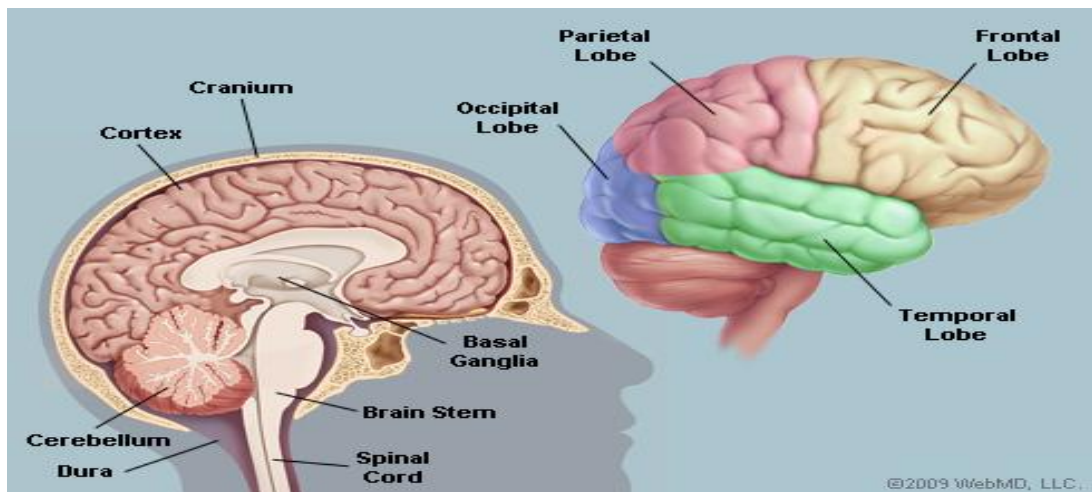
These nerve cells are those which are more likely equivalent to the universal grew and evolved. This shows how the electric impulses are spread with the help of neurons. These neurons are connected to the CNS (central nervous system), which is the interface between the body parts and brain. These nerve impulses are connected to process information according to the psychological need of our body.

These neurons and nerve impulses are like cache memory (made up of chemicals), which can be erased or registered at the threshold limit reaches. We shall see that information passed from one neuron to another neuron with the help of chemical known as neurotransmitters. The name of some of the best known neurotransmitters are Acetylcholine (ACH), Dopamine (DA), Epinephrine (E) (Adrenaline), Nor epinephrine (NE) (Noradrenalin), and so on.

These neurotransmitters are nothing more than that of chemicals, which we are in taking in the day today life from simpler molecules derived from the foods we eat and the other sources. The combination of neurotransmitter and receptor initiates changes in the receiving neuron that lead to excitation or inhibition.

These neurons play a vital role in modes which are all present in our brain. For example if a person is stuck out in an emergency on that situation they had to run as fast as possible they could be. On that time adrenaline rushes through our body in order to give extra power to the organs.

And also the peripheral nervous system which are likely to carry the information inwards to the brain and central nervous system is used to take the nerve impulses outside the brain.



Generally these brains are divided into two major categories according to the role which it plays. They are

- Top brain and
- Bottom brain

The brain has different areas that do different things these brains area working together in order to produce the output. Like a system these major categories contains units which has some specific functionality to be done, each of will characterize of its own. We are characterizing these brain according to the process of information it is done.

These two sides of the brain are interconnected by the corpus callosum, the massive bundle of nerve fibre these shares the information from the one part of the brain to the other. These nerve fibre also act as a decision making device according to the data which it get, it distinctively deviates the data to the particular part of the brain to manipulate them. According to the brains manipulation we do our routines, our brain can make our timer go fast or slower. Indeed these things have a distinctive cognitive mode.



IX. THEORY OF COGNITIVE MODES

It offers a new way of viewing thoughts and behaviour that may help us understand action of people as diverse. Higher cognitive functioning is seated in the cerebral cortex, the rind-like outer layer of the brain that consists of four lobes. Illustrations of this wrinkled outer brain regularly show a top-down view of the two hemispheres, which are connected by thick bundles of neuronal tissue, notably the corpus callosum, an impressive structure consisting of some 250 million nerve fibers.

This research reveals that the top-brain system uses information about the surrounding environment (in combination with other sorts of information, such as emotional reactions and the need for food or drink) to figure out which goals to try to achieve.

The bottom-brain system organizes signals from the senses, simultaneously comparing what is being perceived with all the information previously stored in memory. It then uses the results of such comparisons to classify and interpret the object or event, allowing us to confer meaning on the world. These brains work together, just as the hemisphere always do. But people are not using them in an equal degree.

There are four cognitive modes which are present in our brain according to the usage of top-bottom of the brain. This can be measured by the degree of usage of the brain like image processing, information processing, arithmetic and logical thinking of the particular person. According to the usage of the particular brain we can identify their passion in a particular field. These brains contains different parts like spinal cord, brain stem, cerebellum, reticular formation, thalamus, hypothalamus, pituitary gland, cerebrum, limbic system which are all together to form a common system in order to get result. Nevertheless, for our purpose it is useful to divide the continuum into “high” and “low” categories.

There are four cognitive mode based on how the top and bottom brain interact. They are

- Movers mode
- Perceiver mode
- Adaptor mode
- Stimulator mode.

The degree to which you tend to use each system will affect your thoughts, feelings, and behaviour in profound ways. On this journal we are particularly going to look at movers’ mode.

X. MOVERS’ MODE

This results when the top and bottom brain system work typically in an optional ways. According to cognitive modes theory people who habitually rely on this mode are most comfortable in positions to plan, act and see the consequences of the actions. They are well suitable to be leaders.

This needs learn how to process the visual information and how we recognize an object. This mode may perceptually based on the personal historical case study.

The scientists trained monkeys to perform two tasks. In the first task, the monkeys had to learn to recognize which of two shapes concealed a bit of food. The shapes were three-dimensional objects (such as a striped prismatic block) that concealed small cups, one of which contained a tasty morsel. The objects were shuffled randomly each time they were presented, but the same object covered the food every time, so the animals needed to learn to recognize it in order to find the food. In the second task, both objects were identical gray placards; both placards concealed small cups, one of which contained food. Now, a small cylindrical block was placed closer to whichever placard concealed the food. The location of the cylinder was shuffled randomly each time the choice was presented, so that it was closer to one of the placards than the other—but the food was always under the placard that was closest to the cylinder. The monkeys needed to learn to recognize which placard was closest to the cylinder in order to find the food.

In short, one task required learning to recognize *shape*, whereas the other required learning to recognize relative *location*. After each monkeys had mastered the both job, the part of brain are surgically removed. Some monkeys had a portion of the bottom brain taken out (the bottom part of the temporal lobe), whereas the others had a portion of the top brain taken out (the back part of the parietal lobe). The final result of this operations were animals that had a portion of the bottom

brain removed no longer could do the shape task and can't perform the same task again but they could still perform the location task good. The monkeys that had a portion of the top brain removed had exactly the opposite problem: They can't able to do the location task, and could not relearn how to perform it but they could still do the shape task well. The top and bottom brain play specialized roles in memory, attention, decision making, planning, and emotion.

This mover mode is also be stimulated with the help of inception by storing some sort of exercises into their subconscious mind. When we are in the inception the subconscious mind will act as fast as possible. There are many layers in our dream whereas each dream is distinctively separate from each one. If we make use of this dream with memory frequency we can change a person entirely into a different person with the help of idea planted into his subconscious mind.

These layers of the dream are very powerful they have the powers to change the modes in brain if we started to enter into its core.



The person who seems to typify the movers' mode includes the Wright brothers, who learned from their failure to design a successful plane model.

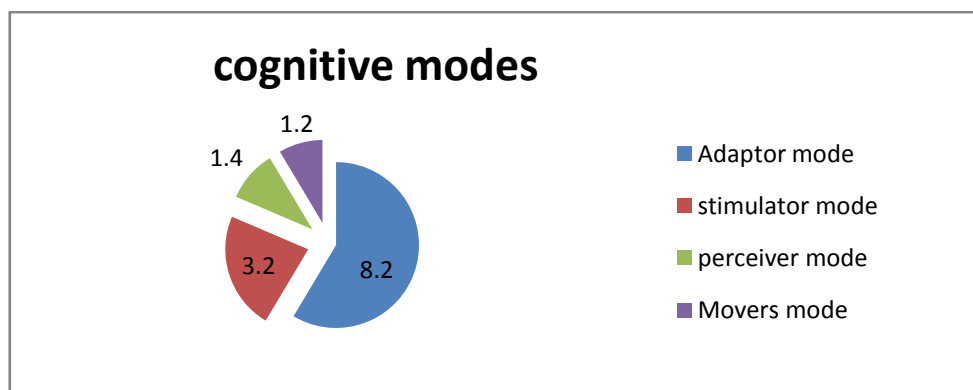
Questions:

1. Choose your any of the famous personality in given below
 - a. Elizabeth Taylor.
 - b. Tiger woods'.
 - c. Dalai Lama.
 - d. Oprah Winfrey.
2. If you are supposed to be in a new place lonely what will you do
 - a. You will introduce yourself to people around and start talking.
 - b. Sitting calmly and watch around how funny people are doing.
 - c. You will do something to get attention of people.
 - d. Or you will act as a responsive person in that place.
3. Which one of the task is easier for you (be honest and write what first strikes in your mind)
 - a. Recognizing shape.
 - b. Recognizing relative location.
 - c. Both shape and location.
 - d. Do nothing.
4. There is an unwanted situation occurs , which one will be your option
 - a. I will accept the situation and solve it as simple as possible.
 - b. I will ignore the situation.
 - c. First, I will initialise the plan and try to implement it.
 - d. I will stay calm to slow the heat of the situation and analyse how to solve it.

5. How do you feel of routines
 - a. Boring.
 - b. I will make it interesting by myself.
 - c. Feeling the beauty of routines.
 - d. Used to make money.
6. Choose your any of the famous personality in given below
 - a. Alex Rodriguez
 - b. Abbie Hoffman
 - c. Emily Dickinson
 - d. Franklin Delano Roosevelt.
7. What is your area of strength?
 - a. Initialise a plan.
 - b. Decision making.
 - c. Analysation.
 - d. Adaptation.
8. Write any four proverb that strikes suddenly in your mind
 - a.
 - b.
 - c.
 - d.
9. Write two lines that describes your history , behaviour ,character or may be life style
10. What kind of situation you love to involve yourself in?
11. What kind of dream you often dreamt of?

These questions will help us to predict which type of mode we are in present. The following pie chart will give us the clear version of details in which 60 of our students had answered these questions.

These data can be the official data that had been collected through these research questions.

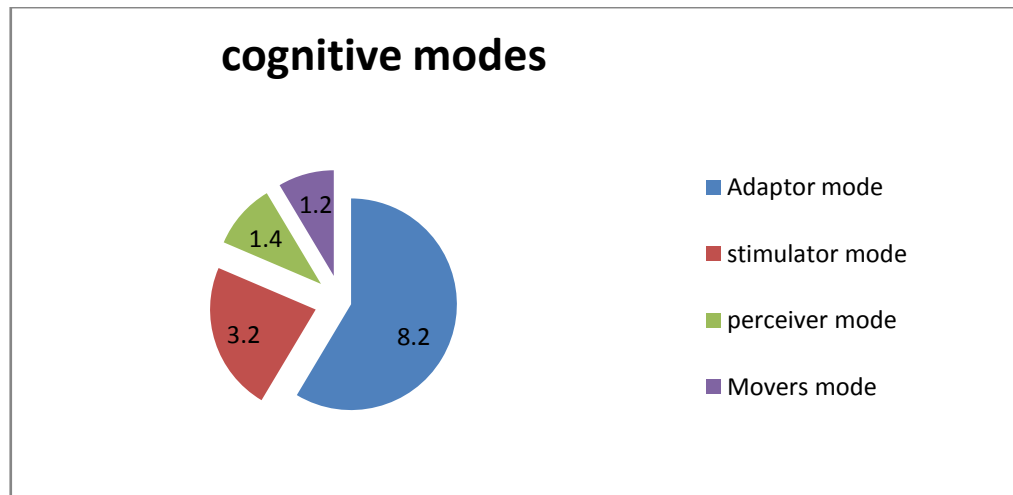


Pie chart based on 60 students who answered these questions which represents the respective cognitive modes.

1. What kind of situation you love to involve yourself in?
2. What kind of dream you often dreamt of?

These questions will help us to predict which type of mode we are in present. The following pie chart will give us the clear version of details in which 60 of our students had answered these questions.

These data can be the official data that had been collected through these research questions.



Pie chart based on 60 students who answered these questions which represents the respective cognitive modes.

REFERENCES

- [1] Scott Adams' Secret of Success: Failure (10/12/13).
- [2] Lee Harvey Oswald, Disappointed Revolutionary (10/5/13).
- [3] Why Tough Teachers Get Good Results (9/28/13).
- [4] A Nation Built for Immigrants (9/21/13).
- [5] America, Syria and the World (9/14/13).
- [6] The Ultimate End-of-Life Plan (9/7/13).
- [7] Hard-Wired for Giving (8/31/13).
- [8] Dr. Stephen koslyn and millers journal.
- [9] Algappa university text book.