THE OPERATING SYSTEM OF THE BRAIN

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Abstract:

The basic driving force of animal (Animals with brains) life on the earth is thirst to be happy and get rid of sadness. Happiness is the state of the brain, when knowing information. Considering 'loss of information' and physical pain is sadness. The process of gathering information; rejecting 'loss of information' and physical pain is the living in animals.

Key Words: Brain, Mind, Information, Operating System, feelings.

Introduction:

The operating system of the brain operates for gathering information; rejecting 'loss of information' and physical pains. This is explained below with illustrations followed by the detailed operating system. The basic organization of the brain by which the operating system is realized and functional; and the factors affecting information gathering by an animal are explained towards the end.

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1. Considerations:

1. Brain's memory is semi volatile in nature. The information in the memory decays slowly.
2. All the information considered (observed) by brain is stored in the memory. Similarly, all the information in the memory is perceived as known.
3. Brain can build up information based on the existing information, by inter relating or integrating existing information and processing; which is called imagination. Build up process gives happiness and sadness similar to in direct information storage process.
4. Repeated storage of the same information reduces volatility of that information.
5. Animals other than Human beings do not have analytical ability and ability to imagine as much as possessed by Human beings.
6. All the good feelings an animal gets are happy feelings and all the bad feelings an animal gets are Sadness. Worry, cry, feel of physical pain, etc are sadness in different occasions or levels. Smile, happiness, surprise, feeling humor, feeling taste of a food, listening to liked music, meditational sense, etc are happiness in different occasions or levels. Hatred, selfishness, love, etc. are not feelings; but

understandings or behaviors over others in the way of getting happiness or getting rid of sadness.

2. Definitions:

Sense: The information directly received by brain through sense organs.

E.g.: Taste of a fruit sensed through tongue, Sound from drums sensed through ears, etc.

State: The state of animal with respect to its environment, by way of its abilities.

E.g.: Being the leader of a group, being achiever of a medal, winning a challenge, climbing a tree as a challenge, playing video game, etc.

State is not understood or not so good understood by Animal brains as by Human brains due to differences in analytical abilities, memories and other reasons.

The Operating System of the Brain: The primary control system (process) implemented in brain.

The functional unit implementing the operating system is called Main Operating Unit (Buddhi in Sanskrit). Mind (Manas in Sanskrit) is a supporting system under the control of Main Operating Unit. Only one of the Main Operating Unit and Mind works at a time as Main Operating Unit and Mind are different functionalities of the same system.

Information element: Information from a source or 'an information'.

E.g.: taste of a sweet, music, etc.

3. Illustrations:

1. **Listening to music:**

   Music has a different sound pattern with respect to amplitude and frequency from that of the general sounds reaching the ear. The sound pattern information of the general sounds is well known to the brain. But, the music pattern information is new to it. So, people like to listen to music till they know it.

2. **Eating a sweet:**

   Case1: sweet has not been eaten for many days

   When a sweet is not tasted for many days, the information regarding the taste of the sweet is lost in the brain to some extent, because of volatility of memory in the brain. Then the brain seeks to know the complete information of the taste of the sweet. So, the brain starts analyzing ways to taste the sweet. If it gets that sweet, knows its taste information.

   Case2: sweet just eaten up to satisfaction

   The information is already stored. So, no more sweet is needed for the taste information. So, the brain stops analyzing ways to get the taste information of the sweet. If the tongue yet provides the already existing information to the brain regarding that sweet, the brain ignores that information and tries to switch to getting some other unknown information by priority.

   Case3: feeling hungry and got a sweet

   The information about anything in the brain is inter-related with other information in the brain. The stomach burning increases forced attention to the stomach and so consideration of food which is related to the stomach. This concentrated consideration of food leads to the concentrated consideration of the taste information of food and leads to more effort to get food than it should be for the amount of taste information and burning pain. This means, brain has tendency to change the normal priority for information under exposure to information sources and stimulation.

3. **Feeling Hungry:**

   Hunger is a pain. To get rid of the burning inside the stomach, which is sadness, animals take food. Taste information of food is another factor for taking food.

4. **Losing a sweet:**

   Assume, there was a sweet in a bowl in the dining room. When the owner of the sweet went to the bowl to eat the sweet, the sweet is actually missing there, because some rat took it away. If he had eaten it, he would have added taste information of

that sweet into his brain. Because of not having the sweet to eat which he actually owns, he has lost the taste information of the sweet. So, the loss of information is equal to the expected addable taste information (taste) of the sweet. So, his brain feels as sad (lose of information) as the information that could be added by eating the sweet.

If the person had long ago tasted that sweet, he would have forgotten its taste by now and so tries to know its taste again. But, he does not feel sad for losing the taste information by forgetfulness. This is because, as volatility of brain's memory is a general inevitable process, he does not consider that loss.

5. **Playing a video game:**

Suppose that a boy got a video game machine as a gift. When he opens it for the first time, he tries to get the state information "I won the first level". For winning in the first level, he does some effort. If he crosses the first level after some effort, now, he wants to get "I won in the 3^{rd} level" based on understanding of his skills. He again tries for the 3^{rd} level and wins it after some more effort. After winning the 3^{rd} level also, he wants to get much higher level. Like this, he continues to get state information till he finishes all the levels or he gets some other more priority work.

6. **Participating in a running race:**

Suppose a participant to be in the 7^{th} rank in the latest running race. The information available regarding the race in the brain of the participant is; "I am in the 10^{th} rank and running race fans recognize that I am in the 10^{th} rank (logically 10^{th} rank is within the scope of the 7^{th} ranker). I am in the 9^{th} rank and running race fans recognize that I am in the 9^{th} rank. I am in the 8^{th} rank and running race fans recognize that I am in the 8^{th} rank. I am in the 7^{th} rank and running race fans recognize that I am in the 7^{th} rank. I am not in any rank and fans recognize that (logically; not having any rank is true while he holds a rank; because not having any rank is under his scope. i.e., not having the 10^{th} rank also is under his scope)".

(The information of recognition by the running race fans is huge as it is made up of the information of recognition by each of the running race fans)
His brain does not contain information like "I am in the 4^{th} rank and running race fans recognize that I am in the 4^{th} rank", "I am in the 5^{th} rank and running race fans recognize that I am in the 5^{th} rank". So, he wants to get that not existing state information by doing some effort and then participating in this race. The participant any how does not think of the 1^{st} or 2^{nd} rank as it is not possible for him obviously. He does some effort to improve his abilities to get new state information and now his actual rank capability is 5 and the participant approximately predicts the same, but the race fans do not know his present capability. For expected information: "running race fans recognize that I am in the 5^{th} rank", he participates in the new race of running.

If the participant gets the 5^{th} rank in this race, the brain stores the state information as "fans recognize that I am in the 5^{th} rank". "Fans recognize that I am in the 5^{th} rank" information addition is happiness.

If the participant's capability has gone down after recent race, and he inevitably participates in this race and gets the 8^{th} rank, it leads to lose of existing state information "fans recognize that I am in the 7^{th} rank"; which is called sadness.

If the person (brain) cannot at all expect in winning any race (suppose he is a person with disability or general person, who cannot compete in a race), then he does not try to store any information of being in a rank as it is not possible (cannot be stored).

Getting the first rank for the participant gives more happiness than getting the 5^{th} or the 6^{th} rank when he was in the 7^{th} rank in last race; because the 5^{th} or the 6^{th} rank is in the neighborhood of the 7^{th} rank {The 6^{th} rank is near to the 7^{th} rank and so getting it is similar to getting the 7^{th} rank}. But, "I am recognized in the first rank" is largely new information, not slight boost of the existing information.

{There is possibility of doubt that why a participant can't imagine him-self to be having whatever rank he wants instead of practically trying for it. This does not happen because every possible state information element is logically already stored in imaginary world of a person; which means, in imaginary world, already person holds whatever rank he wants. So only practical information is not stored in the brain and so a participant tries for practical information}

7. **Winning a car in a game:**

   Let us assume that a poor person wins in a game for which the prize is a good luxury car; but the car will be given only after 2 months from the day he wins in the game. The person has the information immediately after he knows that he has won the car, "I have a luxury car". So, he starts dreaming of "enjoying status of having the luxury car" from the time he wins the car. This dreaming happens because the person actually owns the information to be added, but it is not getting into brain through sense organs immediately. So, he starts dreaming of the owned information. By this way, he adds some part of the total information before actually taking car to hand.

8. **Waiting for relatives in the railway station:**

   In this case, the waiting person feels to do something to get some information till his relatives come. Since he knows some means of getting information, he tries for them, like eating peanuts or reading paper instead of being idle. This is because brain always keeps trying to get some information.

9. **Knowing a Secret:**

   A secret is an unknown information. Brain tries to know the secrets to get the unavailable information.

   For e.g.; trying to know the atmosphere of Saturn (even if this knowledge is known to not benefit us in other ways than just knowing it)

10. Seeing Stones on a Mountain:

Let us assume that a person Tom goes to a mountain with full of stones with random shapes. When Tom finds the first stone, he curiously knows its shape. When he finds the second stone, he knows its shape. After seeing a few stones, he understands that the stones are of random shapes. This means, he considers all random shapes for those stones in his brain. When he sees any more stones, he does not think of knowing their shapes, because he knows their shapes (random shapes). There exists the information of which shape belongs to which stone out of the infinite random shapes of stones known to him. But, it takes a lot of time for a single mapping of a stone to a shape already known. So, Tom does not spend time in knowing this less information in more time.

11. Loving animals, friends and country:

When a person observes environment in search of information, he looks at animals and people and observes what they are doing. He interprets their souls in his soul to analyze them. So, he feels (storing/loosing the information) the souls of animals or people observed by him or considered by him. But, the observing person wants to add information (feel happy) to his brain. So, he works for the happiness of the observed animals and people; which is in fact an effort to add information into his own brain through interpretation of their souls in his soul.

But, interpretation of others' feelings is not as effective as understanding of self-feelings. This property of not being able to understand others' feelings on par with those of self is called selfishness. This is because of the limited ability of the brain to analyze others' feelings from the observation, which varies among animals and person to person; and lesser stimulation coming from others' information environment than from self, as others will not always be staying with us.

Inability to interpret others' feelings leads to behaviors like greed, selfishness, cruelty, carelessness, irresponsibility, etc.

12. Torturing an insect:

Let us consider a boy torturing a big ant and enjoying it. Here, what happens is, the information of "how the ant behaves when tortured" is better understood by the boy than understanding (feeling) "how the ant feels". So, he finds more information in a suffering insect's dance than he feels its sadness.

13. Knowing a story:

Instead of knowing a story by some author, we can create a story by ourselves. But, our self-created story is what we imagine as we want. So, the self-created story is readily available in the self-imagination (self). So, there is no story information unknown from the self-imagination. The story information by some author is not known unless we know it by reading or listening or watching.

The content of a story is interpreted in the same way as a real situation by the brain. So, we feel by the information of a story (imagination) in the same way as in a real situation.

14. Knowing a joke:

A joke is a story with huge density of information.

A joke:

I found a way to earn money easily without doing any work or business or having property. I will tell you if you give me 1000 bucks.

Explanation:

After knowing the first sentence, the addressee expects to know a decent detailed logic to earn money easily. But, the addresser is actually asking 1000 bucks to get money for himself in the second sentence. This is far from what the addressee expects after getting the first sentence. So, the second sentence is a large information as it is far from the expectations (estimations/imaginations) of the addressee. This is knowing of a large information in a few sentences (dense information). This kind of high-density information reception is called surprise. Knowing of this joke gives a similar surprise to the joke knower also; but since he knows it as a joke in advance, he does not bother about giving 1000 bucks.

4. The Operating System of the Brain:

1. Get all the possible meta-information of information elements (‘all possible senses of objects’, states and secrets) from the environment for adding information in to the memory. Examples for meta-information elements are: “this fruit tastes good (how exactly is it tasting?)”, “This race participants get ranks (Do I hold a rank?)”, etc.

   (Animals other than humans have limitations in analyzing and dreaming. So, they do not understand or well understand states and some secrets. They are weaker in analyzing the world for information.)
2. If an unknown (sense or state or secret) information element is not zero in content, not already stored completely or partially in the brain and possible to be stored (obtainable); prioritize that information element for attempting to get the information. Else, neglect for storage.
3. Give priorities to different unknown information elements based on ‘the right time for getting the information’, ‘the effective amount of information obtainable per unit period of attempt’ and ‘the obtain-ability of the information’; for attempting (the amount of information that an information element contains and the obtain-ability of that information affects the priority in direct order; and total time needed for obtaining affects the priority in reverse order. The physical pain due to attempt affects the priority in reverse order).

   Effective Amount of Information=basic information amount - information amount equivalent of the physical pain occurring in getting the basic information (Physical pain is generally less compared to the basic information)

   This prioritization is done by the Main Operating Unit (Buddhi, which implements the operating system) without further analysis. Then Main Operating Unit directs the Mind to analyze the information sources and environment deeply and reprioritize the information elements considering the effective information (effect on the other information elements) obtainable in the long run.

(All this prioritization can happen with the Main Operating Unit stimulated by the information elements or environment, leading to over or under prioritization; improper analysis by the Mind, due to influence of the Main Operating Unit to adhere to its initial decisions; and incorrect or insufficient analysis by the Mind irrespective of the influence of the Main Operating Unit (with the available information for analysis). So, the average information obtained after attempts can be less than what could be obtained under the absence of these limitations).

4. Direct the Mind to plan in detail and work for the information elements according to the priorities.
5. If a task is being performed by the Main Operating Unit or the Mind, consider new information elements from the environment at regular intervals or when interrupted by an intense sense.
6. Under the success of an attempt to get the expected information element, the Main Operating Unit adds (knows) that information of sense or state or secret in to the memory, which is called happiness (While adding information, sometimes brain may activate body organs in different ways in different animals; which are like the body actions we see when a person is feeling happy of sense or state or secret information). Failure/partial failure to get the expected information through an attempt means, the brain loses some information below the existing level (or achievable level); which is called sadness (lose of information can be considered as addition of negative information and vice versa). Sadness may induce some special actions in the body like crying, tearing, etc, in some animals. Information loss due to volatility of the brain is not considered by the Main Operating Unit as it is an inevitable and continuous process. So, sadness in an animal can be seen only under information loss in some other way than the memory volatility. The Main Operating Unit tries to avoid sadness through analyzing the means to avoid sadness by assigning priority to it in the prioritization for information.
7. Physical pain is always rejected by the Main Operating Unit. When a physical pain signal reaches the Main Operating Unit, the Main Operating Unit considers it as not to be stored (added/known), even if that information is not already stored in the

memory either partially or completely. The Main Operating Unit prioritizes to get rid of (reject) physical pain in the prioritization for information.

8. The Main Operating Unit directs the mind to build up (imagine/dream) the real information from the available information, to boost the amount of information obtainable in the memory.

   Imagination provides reinforcement of direct information input to the brain, through data integration/inter-relation techniques of the mind. Imagination happens also to rebuild the lost information. This build up process can be called 'reinforcement through imagination'.

   In the analysis phase of an information element for prioritization and planning to get, there always exists imagination of both addition of information and lose of information.

   The imaginary information world is not as strong as the real (direct) information world due to brain's limitations of memory and ability to inter-relate existing information. So, imagination can provide reinforcement of information, as an alternative to real (direct) information. When there is real (direct) information available, it is preferred.

9. For getting information or avoiding loss of information, the Mind is directed by the Main Operating Unit to invent new means through imagination and analyzing if the objects in the imagination can be used to get information or avoid some loss of information and how, which is called the creativity of the Mind.

5. Information elements naturally rejected by the brain (pains):

1. The brain rejects to store pain information naturally even if it is not already available in the brain. So, animals try to keep off pain givers.
2. But, there is possibility that pain givers (objects with information naturally rejected by the brain to store) can be in touch with sense organs and give forced information in to the brain though the brain tries to keep them away. Under continuous pain by any object, the brain tends to ignore that pain and thus not store it; so that the brain can concentrate to get some other information from other objects instead of continuously rejecting continuous pain information. The brain keeps scanning the

information environment at some intervals in seek of more/better information. Pain givers also are part of the environment. So, this information search sometimes leads to tasting of pains though the brain does not want them.

3. Also, the brain cannot neglect strong information signals, which are capable of taking most of the brain's concentration. So, if some forced pain information intrudes the brain, it cannot ignore it and animals inevitably feel pain in such cases.

6. Meditational sense:

1. Sense of bliss in meditation is the sense of the neural energy (noise) information of brain. When this information is sensed, it gets stored because it is sensed. But, this information dries up or becomes inaccessible while it is stored unlike the information of senses from the sense organs. So, the neural energy (noise) can be sensed and known continuously as it is no more available after knowing. So, the meditational bliss can be had continuously throughout the life.
2. Since this sensible neural energy is feeble, it cannot be identified as long as we consider the external environment. This is similar to that loud sounds can make the weak sounds not easily noticeable by ears.
3. When the Main Operating Unit/Mind is in peace (under low stress of thinking about external environment), automatically the neural energy is sensed by the Main Operating Unit, which is a happiness.
4. Love or Friendship support a person (animal) and reduce stress to some extent. Proper understanding of the environment also reduces unnecessary stresses. These are some contexts of meditational sense (delight) in limited levels in regular life.

7. Basic Organization of the Brain:

The brain can be divided in to three basic functional units. They are

1. Processing Unit
2. Memory Unit
3. Body Control Unit

The Processing Unit works as the Main Operating Unit (Buddhi in Sanskrit) and the Mind (Manas in Sanskrit). The Main Operating Unit and the Mind are undivided

functionalities of the single processing unit. The Main Operating Unit generates the key commands (Operating functions) to run the animals. The Mind executes these commands at a lower level under the control of the Main Operating Unit. Since both of these are un-divided functionalities of the single processing unit, the exact functional border between the Main Operating Unit and the Mind is not analyzed here.

The Memory can be sub divided into the Main Memory and the Cache Memory (short-term memory). The Main Memory is slowly volatile and the Cache Memory is fast volatile. Main Memory is popular as the long-term memory of an animal. The Cache Memory is continuously fed with data from the sense organs in parallel. Some of the available data from the main memory also is placed in the short-term memory by the processing unit during thinking/imagination. It is the Processing Unit which adds information to the Main Memory whether information is received from the sense organs through the Cache memory or information is imagined; as the Processing Unit is the one which seeks information (to store in the Main Memory) and works on information. Out of many data feeds to the Cache Memory, only a little data is processed and stored in the Main Memory. Data in the Cache Memory can be accessed by the Processing Unit until it is volatile. For example, I can recall what an un-thought of low noise was around me just a moment ago. Similarly, in the case of body reflexes we understand the incidents after a moment, taking the incident data from the Cache Memory.

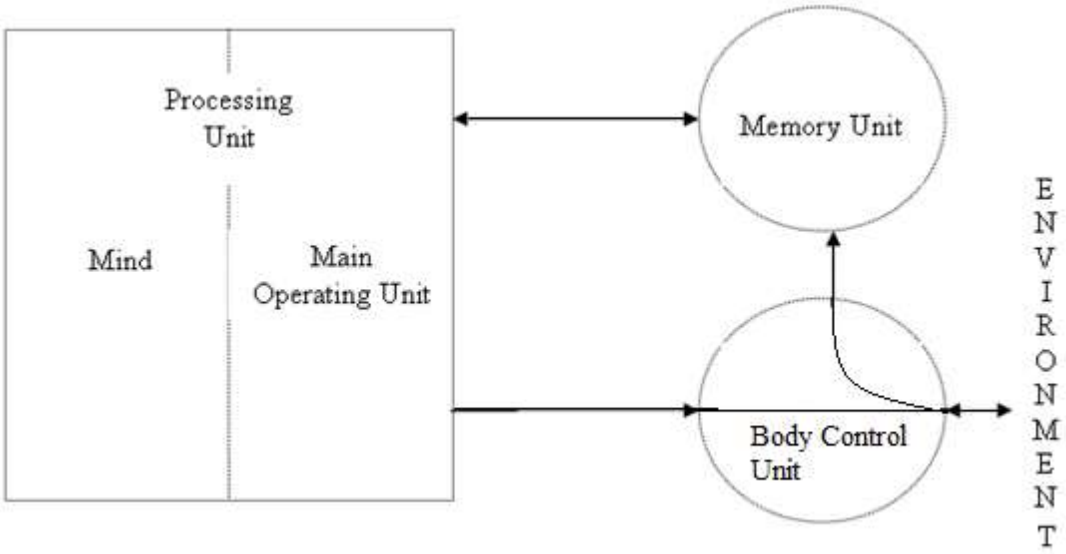
The Main operating unit implements the operating system with the help from the Mind. Additional analysis; building up new information based on the existing information, which is called imagination or dreaming or abstraction; innovation also happen in the mind. All these abilities aid in getting information or avoiding loss of information.

The Mind analyses information elements before final decisions are taken by the Main Operating Unit to attempt for that information element. But, mind is

influenced by the Main Operating Unit to adhere to the initial decisions of the Main Operating Unit.

Processing unit thinks serially (i.e., only one thought at a time and a thought has serial analysis of data) and so information addition in to the memory (Main Memory) also happens serially. Thinking/analysis/information is serial, but data is processed in parallel by the processing unit in the process of serial analysis. Processing unit has a fixed speed of serial analysis. [The speed of signals through neurons is constant. All kinds of data get analyzed by a serially thinking unit (processor). So, we cannot think faster or slower. We always think at a constant speed.]. Information addition in to the memory by the Processing Unit also happens at a constant speed (rate) as long as it happens. So, if an information element is high in quantity, it takes proportionately high duration to be stored in the memory and vice versa.

The Body control unit controls all organs of the animal body; some of which are completely under the control of this unit and the remaining organs are under the influence of the processing unit (Mind). All the sense organs exist under the influence of the processing unit.



When the Main Operating Unit scans the environment for information, it prioritizes information elements based on information content and tries to get information

from information sources. Then, it analyzes information elements through the mind to take final decision on priorities considering the long-term obtain-ability of information.

For getting information or avoiding loss of information, the mind is directed by Main Operating Unit to invent new means; through imagination and analyzing if the objects in the imagination can be used to get information or avoid some loss of information and how, which is called creativity of mind. Good creativity needs enough information in the memory in less volatile state (The person should have enough knowledge. Long-term memory should be good to possess abundant less volatile information over long run) and good short-term memory to use the information in the memory in imagination and analysis process effectively. Forgetfulness affects analysis and so creativity.

The Main operating unit can undergo stimulation from environment or information elements under high visibility of the information elements, leading to over prioritization (sometimes lower prioritization) for those elements by the Main Operating Unit.

When the Main Operating Unit identifies an information element and decides to get it, then it influences the Mind to do restricted analysis of that information element in favor of getting that information; deviating from the fact based correct logical analysis. How this happens is as follows. The job of the Mind is analyzing all the aspects pertaining to an information element to make a final decision on the priority, feasibility, consequences and worth of getting that information element. The analyzed aspects within the capacity limits of the Mind are all combinations of assumptions, ‘available facts’ and ‘things of imagination’ that can be related to the information element. But, the Main Operating Unit influences the Mind in such a way that the Mind is pulled back (cut short) from analyzing the aspects that will prohibit the obtainment of an information element and the Mind is freely allowed to analyze the aspects that support getting of the information element. Sometimes

the Mind does a little or no analysis under the influence of the Main Operating Unit and the Main Operating Unit proceeds with its initial decisions. Analytically strong mind uses a little chance given to it by the Main Operating Unit in such circumstances to come up with right decisions.

Sometimes, the Mind cannot analyze correctly or sufficiently irrespective of the influence of the Main Operating Unit (with the available information for analysis). In such cases also, inappropriate decisions are taken by the processing unit.

Short-term memory, knowledge (long-term memory enables to have good knowledge) and forgetfulness affect analysis. If some information that can help to make right decisions is readily available in the memory (knowledge), it helps in the decision-making process when needed. Having knowledge of what to do, when and how depends on observation, analytical ability and availability of corresponding knowledge sources (books, environment, etc).

Illustrations:

Fox and Grapes Story:

Once upon a time there lived a fox in a forest. One day, it was very hungry and searching for food. At a certain place in the forest, it found a grape tree with lot of grapes at the top of the tree. Grapes looked to be ripe, but they were at height. Fox tried to catch those grapes by jumping high. It tried for a long time in different ways. But it was not able to get them. Finally fox thought, “These grapes are sour in taste. They are not so tasty as to try for them” in mind and left the place.

Analysis: To avoid the sadness that the fox did not get the taste information expected (loss of expected taste information), fox thought that they were not having much taste and more over they were pain-full by sourness. It suppressed the aspect of grapes that they will be tasty and built up justifications on the sourness of grapes with a mix of assumptions and facts. It suppressed the analysis of groundless assumption that these grapes are sour. Actually, fox did not have any proof of bad

taste for those grapes. Grapes are generally good to taste. They can be sour and not very good some times. But, fox analyzed in its mind incorrectly under the influence of its main operating unit. Because the correct analysis could cause sadness, the main operating unit controlled the analysis by the mind in a way to get happiness or avoid sadness from grapes. (But, this strategy of the main operating unit actually does not work in the long run. It can show more bad effects than the good effects it shows. Someday the fox has to accept the good taste of grapes and then feel sadness of the current loss of taste; or it may end up taking more wrong decisions to avoid accepting the fact). If that fox had tasted that type of grapes many times earlier and (or) done correct analysis with an effective mind, it would have felt the loss of expected grapes taste information when it was not able to catch them.

Even the people committing crimes interpret what they are feeling to do and doing as correct. This foolishness (lack of wisdom or qualitative analysis) can lead to more overall sadness than there will be without this type of thinking. In other words, this type of thinking can reduce effective happiness (Incorrect analysis can give fewer good results than the maximum good results that are obtainable by correct analysis).

Arbitrary Decision:

Suppose, a person is advised to reduce eating high calorific food in view of his obesity. Now, that person has decided in emotion not to eat sweets much; but he is not clear whether he really needs to reduce eating of sweets from the present level and by how much amount. He is in the state of “not eating sweets much”, as he decided so. If he minds his self-decision, he feels to know the state information “I am eating sweets well” and so he will break his decision and eat sweets again to know this state information. He will have more tendency than earlier to eat sweets as he wants to know the new state information of ‘eating sweets’, every time he thinks of his decision; independent of weather he really wants to taste them or not; as his decision is not strong enough to overcome the desire for this state information as he does not know how many sweets he has to eat clearly. This arbitrary decision based on insufficient information and through insufficient analysis; taken in hurry,

influenced by the Main Operating Unit exemplifies the analytical insufficiencies of the Mind and the influence of the Main Operating Unit on the Mind. A better mind would think of gathering sufficient information and do appropriate analysis for taking decision on eating of sweets.

If the decision of not to eat sweets much was taken after gathering sufficient supporting information and doing appropriate analysis like, "I have to reduce eating sweets by half of what I eat now. Any excess sweets eaten beyond this level cause more problem than the joy of taste they give; as confirmed and explained by the doctors", it would be better possible to overcome the desire for the state information - 'I am eating sweets well' and maintain control over eating of sweets.

8. Factors affecting information gathering by an animal:

The total amount of information (happiness) an animal can get in its life depends on the availability of information in the environment for the animal, natural disasters, unexpected environmental conditions, animal's ability to get information, wisdom and other mental aspects of the animal, getting a disease naturally and volatility of animal's brain (a highly volatile brain will forget information quickly and can get it again and again and vice versa. But, high volatility will also reduce the knowledge that is useful in getting information).

9. Conclusions:

1. Happiness is the state of brain, when knowing information. Considering 'loss of information' and physical pain is sadness. Animals live for getting information from their environment and they reject 'loss of information' and pain.
2. The decisions of the Main Operating Unit (Buddhi) get influenced by the environmental stimulations. The analytical decisions of the Mind (Manas) get influenced by the Main Operating Unit. Also, the Mind may not be able to analyze correctly or sufficiently always irrespective of the influence of the Main Operating Unit.

3. Meditation is the best way of getting information as the neural energy (noise) information can be sensed continuously (information addition in to the memory happens at a constant rate as long as it happens) in meditation throughout life without regard to the external environment. So, meditating is the happiest way of living. Meditational bliss occurs automatically in peaceful (stress less, not bothered about the environment) state of the processing unit (Mind/Main Operating Unit). Love, friendship and proper understanding of the environment are some contexts in regular life that reduce mental stresses leading to sense of the meditational bliss (delight) in limited levels.

Appendix:

Serial Thinking:

A lot of information reaches brain in parallel through sense organs. But, only one of them receives concentration. For example, when I am in deep concentration on my book, I do not observe normal sounds, people walking, etc happening around me. When I am not concentrating deeply in to something, I easily notice all the things happening. If I had parallel observation, I should notice the things around me always in the same level. So, what may look like happening in parallel is actually happening serially. In this case, I have the sense of things happening around while having deep concentration on book also, but for a too short time and so I do not have good knowledge of them. When there is no much urge to concentrate on book, I spend more time for other things also in between.

When I am seeing the see, standing on the shore; if someone is walking towards me from the side, I notice him because actually my serial concentration keeps roaming on all things surrounding. When I walk, I keep thinking about something, but it is not parallel. I, in between keep an eye on my walking for a fraction of my thought time. But, since the side concentration is very small fraction compared to the main concentration, some people think that some parallel thinking is noticing the things

happening aside main focus/concentration.

When we are thinking / minding about some specific thing, we come out of concentration in two ways. One way is, brain automatically stops concentration after regular focus intervals by its nature and traverses other items in its consideration in a brief traverse interval. The frequency of focus intervals an item gets depends on the priority of that item as decided by the Main Operating unit. The processing in the brain is a repeating cycle of focus and traverse periods. Second way is interruption. When I am typing here, I noticed the loud sound of TV just because that TV sound loudness has ability to forcefully interrupt, using the interrupting mechanisms of brain for strong inputs. So, what is running in parallel here is an interruption mechanism, but not the main thinking itself. This interruption mechanism runs as a co-process of the main thinking.

When I want to drink water, my brain processes the data of glass, water and drinking along with many other things. At any instant, there is only one thought / information element. In each thought element, many data objects are processed together (parallel processing of data, like water and glass imagined together). Interpretation or analysis happens only serially (a series of related thought elements. First notice thirst, then relate thirst to a memory of water satisfying thirst, relate it next to water in a glass, etc.). I.e., information is serial even when data processing is parallel. When I see a picture, I catch a large part of the picture in my mind simultaneously, but I interpret the different parts and designs of the picture one by one. A thought has parallel data processing (without parallel processing, brain cannot even work the way it is doing), but the analysis/interpretation/information is serial. This serial thinking nature is the reason behind serial handling of different thoughts also. So, brain deals only one thought (a set of related objects) at a time and each thought has serial thinking.

Sub-conscious mind:

The existence of sub-conscious or unconscious mind does not have firm proof. For

example, if you are struggling for an idea in your work, the chances of getting a good idea are better when you take a break and then return to work than when you continuously keep thinking for an idea in the work environment. This could be, as a break takes a man out of a single dimensional thinking on the problem, or the brain regained thinking ability after some rest from serious thinking. There need not necessarily be an unconscious process running during a work break. Its existence can not be proven with the available data. Even if it exists, it works as a sub process or co-process of the conscious thinking.

There was an experiment to explore a nature of the brain. Some volunteers were asked to raise hand when told to do. All volunteers were found to feel the consciousness to raise hand after a fraction of second that of getting instruction. The delay time was doubted to be unconscious thinking time. But, when a volunteer wants to raise his hand up, actually there exists delay between start of the decision to raise the hand and start of the detailed execution in mind. This can be the memory searching and fetching delay and analysis pickup delay. Volunteers are interpreting the detailed analysis or execution of thought as consciousness, which can be felt more clearly later than the initial phase. So, this experiment cannot be taken as a proof for sub-conscious mind. Reference is....http://www.centenary.edu/attachments/philosophy/aizawa/courses/intros2009/libetjcs1999.pdf.....