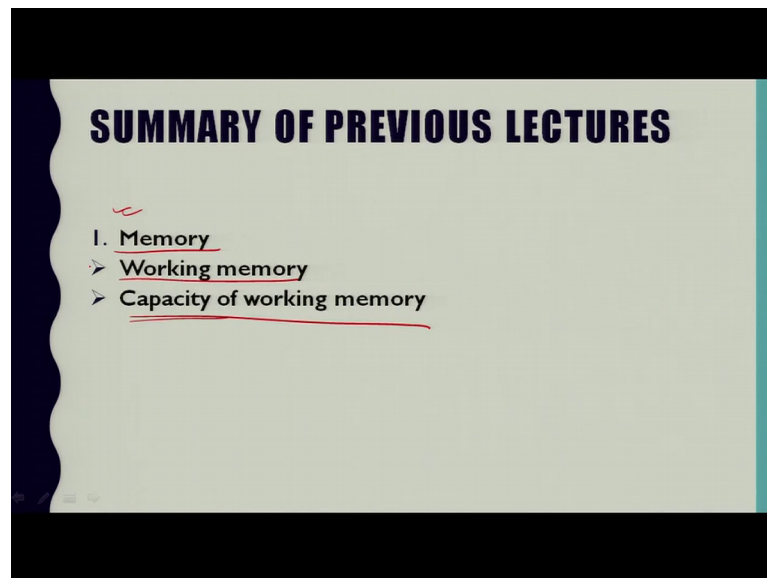


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Lecture – 16

So, welcome again to this series of cognitive ergonomic lectures. So, here and this we were covering about human information processing model in that, in the previous lecture we understood about the memory and its role as well as the various parts various types of memory. So, these memories are playing a very important role, in the information processing and its response and execution towards any particular event. So, that memory is consisting of 3 types basically, first is this is a short term memory which we say as a working memory and second is your semantic memory, that is known as a long term memory and the third kind of memory is sensory memory.

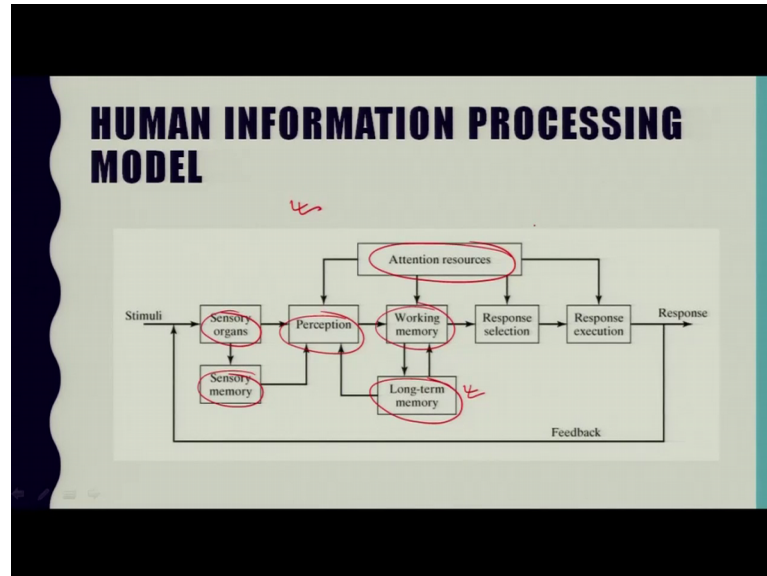
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As the Summary of Previous Lecture, we understood about the Memory, Working memory, and that there are various factors which are basically a key performance factors in the operation of working memory. So, these those factors were capacity kind factor attention resources and similarity of the information items. We discussed in the previous

lecture and now again since this particular cognitive ergonomic understanding is we started with this basic model of a human information processing.

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So, in that sensory organ we covered sensory memory, we understood perception we understood working memory in the previous lecture we understood. In fact, these attention resources we also develop some understanding and now in this lecture we will try to understand about this long term memory.

In fact, lot of information is processed in the working memory and if you really want to retain it for a longer time. So, we need a some sort of a technique in order to sustain it for a longer time. So, if is that substance is being done successfully. So, it retains in the long term memory. So, we with we will try to develop a complete understanding of this particular model and it is basic components one by one.

In the series of understanding this model, we started with we will start with in factor long term memory.

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LONG-TERM MEMORY

- Much of the information processed in working memory is transferred to and retrieved from long-term memory
- Information in long-term memory consists of semantic codes
 - Individual items are given meaning and are organized into symbolic structures and associations
 - The structures allow for new information to be added

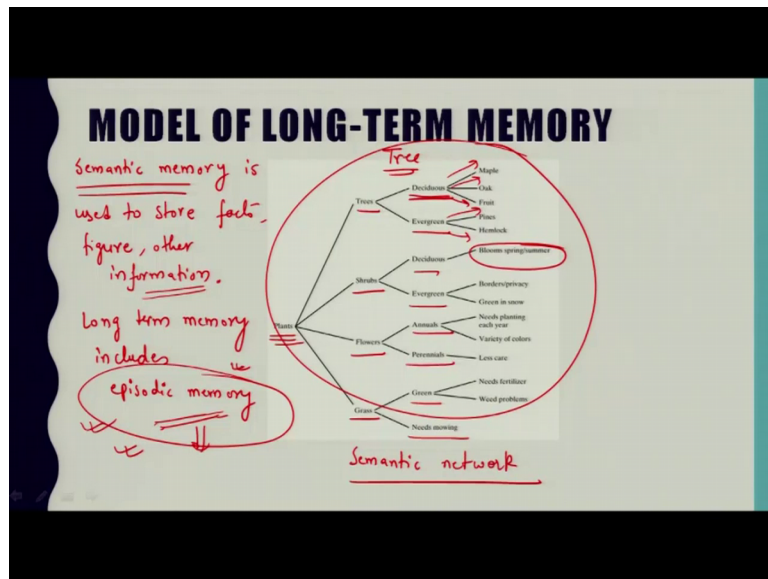
learning & experiences

So, much of the information process in working memory is transferred to and retrieved from the long term memory of course, as our description of working memory suggest a good deal of what is processed and never makes it to long term memory.

So, the information contained in long term memory, it consists of semantic codes in which individual items are given meaning and are organized into symbolic structures and association. The structures and association have been developed through learning and experience. So, this particular structure and association is developed through learning and past experiences and their organization allows for new information to be added.

So, one possible model of long term memory is I am going to show you in the next slide is that of semantic network.

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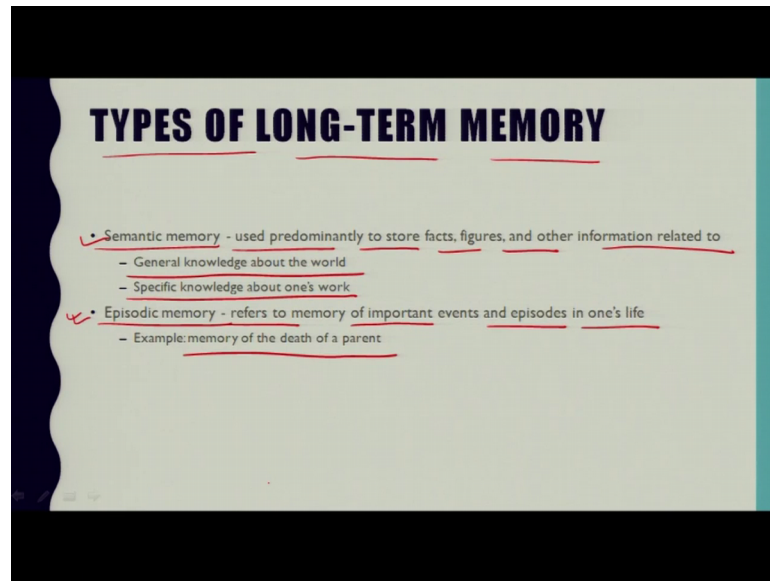


So, what is it is this is just one kind of possible model of long term memory as a semantic network. So, this is a kind of Semantic network. So, this model emphasizes the associated nature of it is contents as you can see from this particular branches this is we can treat it as a like if you want to recall this particular word. So, what we need to do we need to plot a particular tree, it is like a tree you have to make and it is association with the sub part of a particular system that you need to plot and that will be placed in your human body system as a semantic memory. So, this particular plant as a discriminated as a trees, shrubs, flowers, grass and this tree is itself as a sub branch of that deciduous and evergreen and shrubs deciduous and evergreen and flowers annuals and perennials grass has a green and needs Moish.

In that sub branches are also being opened and in this way the whole thing can be mapped in to the memory and can be recalled at anytime whenever it is required. So, basically this particular Semantic memory is used to store facts figures and any it can store, any information that relates to the general knowledge about the world as well as specific knowledge such as that related to a particular work.

Basically this long term memory includes episodic memory this particular episodic memory refers to the memory of important events and episodes in humans life, such as like birth or death of a particular person which is in close relative of a particular individual. So, the person's birth and death is restored as a episodic memory and that is why this episodic memory is very much used for a as a memory of important event of a person's life.

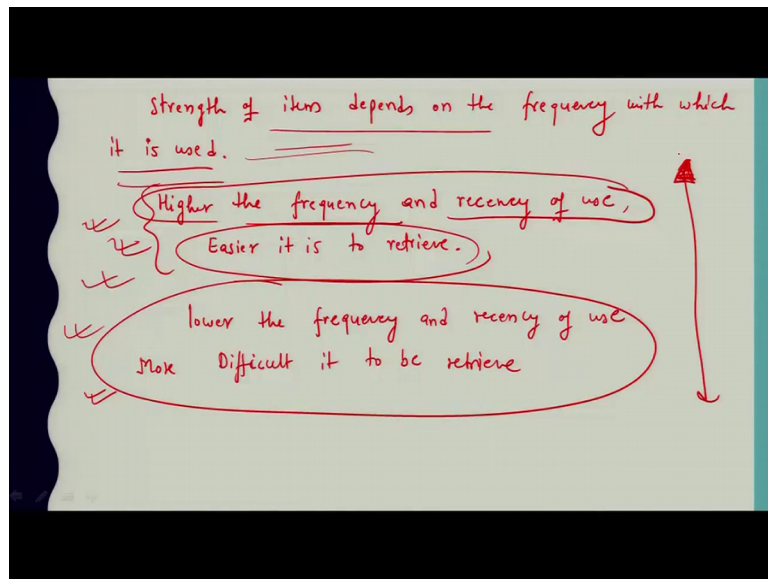
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So, here types of long term memory we can categorized as a Semantic memory and Episodic memory. So, here as well as we have to recall those points which we have discussed in the previous slide that semantic memory is used predominantly to store facts, figures, and other information related to general knowledge about the world and specific knowledge about one's work. Episodic memory it refers to the memory of important events and your episode in one's life so example as memory of death of a parent.

So, the real value of long term memory is demonstrated when information items must be retrieved from it. So, the ease with which items can be retrieved from a long term memory depends largely on the strength of the item and association it has with other events or other with other items in present in memory.

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In fact, the and the strength of a given item depends on the frequency with which it is used, like how and how many times are you retrieving and processing that is information in a certain period of time. So, that is also like a how recently and how frequently that particular information is being used by a human that is also depending on to enhancing the strength of that particular event in that memory.

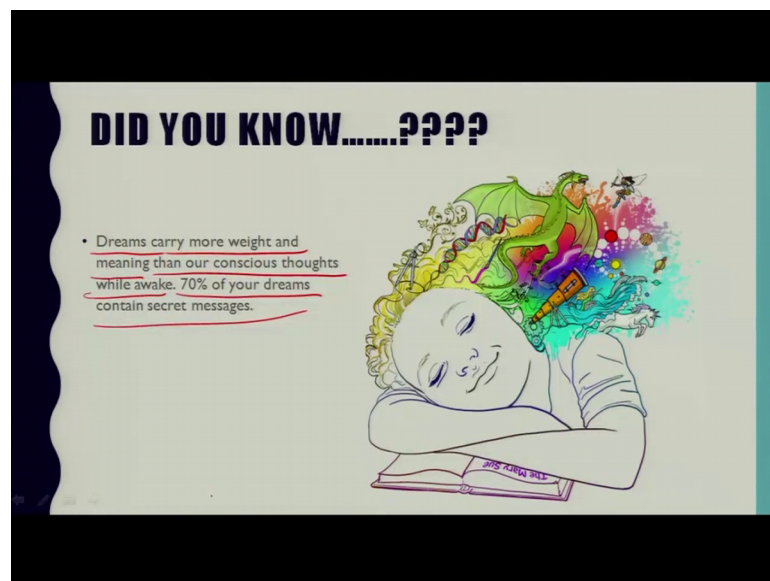
So, the higher the frequency higher the frequency and in fact, recency of use the easier it is to retrieve. So, we have a little difficulty remembering the names of people we live in because in suppose if you are living with one of your friend as a roommate. So, you are facing a daily ah with his name and his personality. So, it is it will not be a difficult for you to recall his name. So, if the frequency and recency of his particular name is higher, it is very easy for you to retrieve or recall his name at any point of time. So, the recency of use is completely dependent on your recalling capacity so, but at the same time you will find difficulty in recalling the name of people we rarely see and it has been years since you met last time to that particular person.

In technical way you can make this particular sentence that lower the frequency and recency of use difficult it to be more difficult it to be retrieved. These 2 sentences we can make and this is just the, but obvious thing, but in order to understand this long term memory and memory part we need to. In fact, correlates with the your daily basis activities. So, that these things could be retained in your memory the various parts of this ergonomic course.

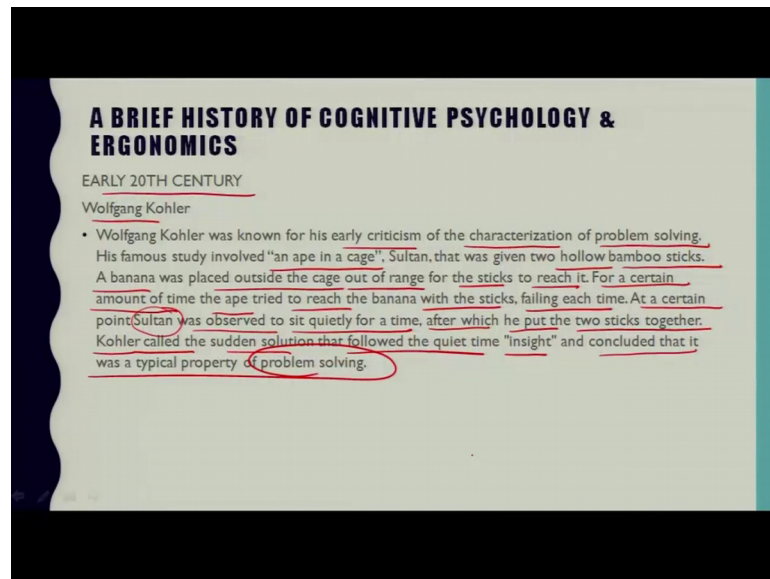
So, you have to keep on revising and those content that we are discussing here we are sharing here. So, you should add that particular course it will be convenient for you to recall at any point of time. So, you have to see these lecture slides again and again so that since it is new for you, it has a hard to retrieve at a particular time, but once you will revise this content. So, as long as and as the number of times you will revise the content it will be easy to recall at particular at any point of time.

So, this you have to think in this way and so that you can relate this particular learning with your daily life situations also. So, this long term memory I am finishing here and before closing this lecture just as a matter just as a fact that do you know that dreams carry more weight and meaning than our conscious thoughts while awake so 70 percent of your dreams contain a secret messages.

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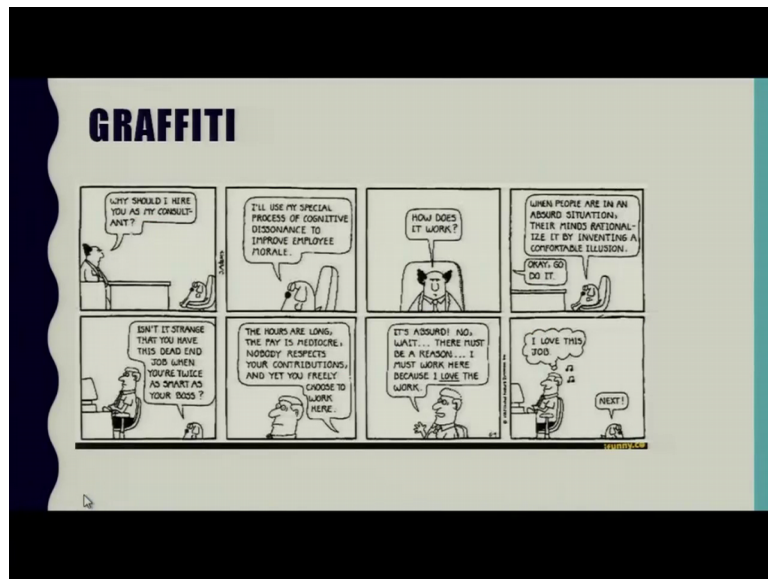
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And in continuation with our recalling our as a history of cognitive psychology and the ergonomic part, I have put the contribution of one scientist which has done his part in early twentieth century the Wolfgang Kohler.

So, Wolfgang Kohler was known for his early criticism of the characterization of problem solving. His famous study involved in “an ape in a cake”, Sultan that was given 2 hollow bamboo sticks. A banana was placed outside the cake out of range for the sticks to reach it. For a certain amount of time the ape tried to reach the banana with the sticks, falling each time. At a certain point sultan was observed to sit quietly for a time, after which he put the 2 sticks together. Kohler called the sudden solution that follow the quiet time “insight” and concluded that it was typical property of problem solving. So, that problem solving and decision making ability and response selection and execution we will be covering in the next lectures.

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So, there is a graffiti for you for a refreshing your mind you just read it and enjoy till we start next lecture goodbye and.

Thank you.