

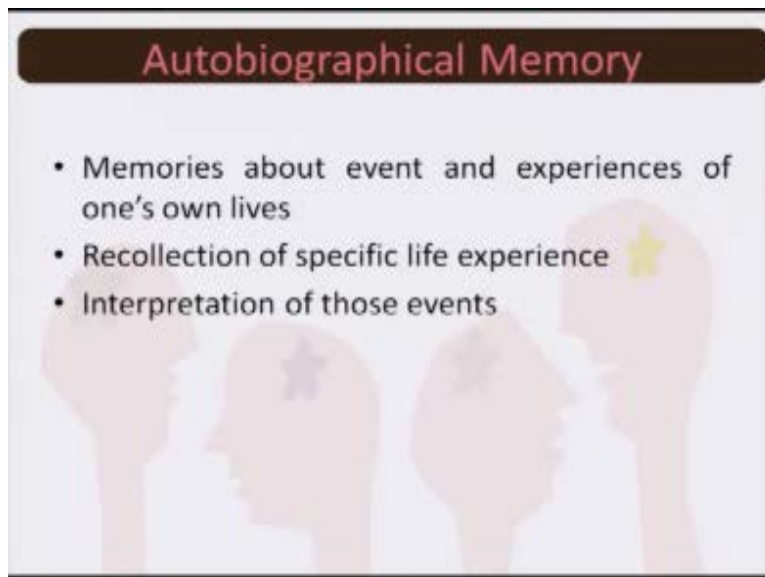
Indian Institute of Technology Kanpur
National Programme on Technology Enhanced Learning (NPTEL)
Course Title
A Brief Introduction of Psychology

Lecture – 16
Memory

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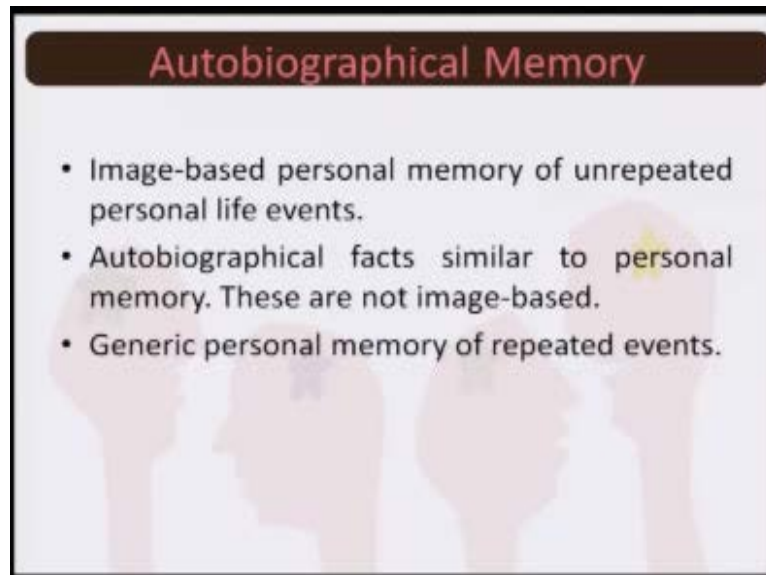
Let us now come to another form of episodic memory, what is called as autobiographical memory.

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As the name itself suggest autobiographical memory has to do with events and experiences of one's own life. So what happens when we have certain collection of a specific life experience, when you interpret them and you can see there that these are the events and experiences that defines you your life. So it is somewhere like your personal life narrative that constitutes the autobiographical memory.

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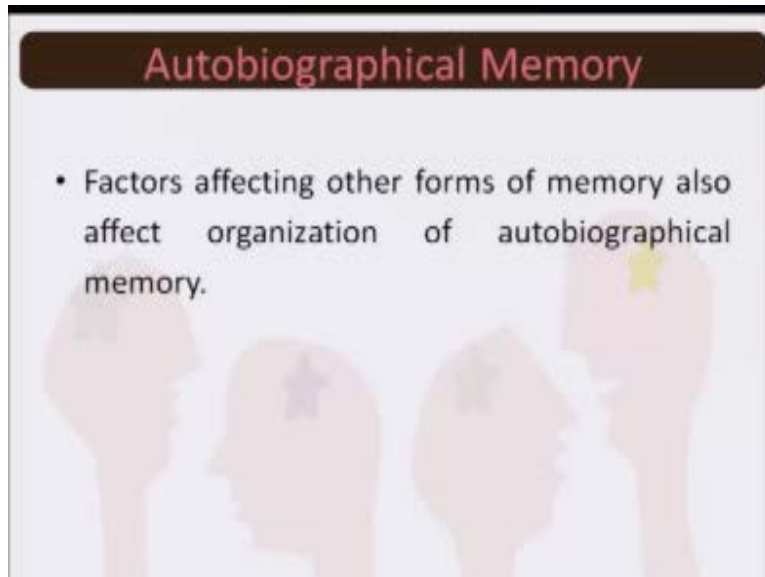
Usually autobiographical memory has the image-based personal memory of unrepeated events of the life of the individual, but there is also a possibility that it might have facts okay, similar to the personal memory, however in this case it would be not image-based. And therefore the generic personal memory of the repeated events that can also become a part of the autobiographical memory.

So one we have unrepeated personal life events, something that happened only once, but it was extremely significant for the individual concern okay. And you have a very clear image-based personal memory of it, one single event, highly personally relevant okay. And you know that such events will not be repeated in life, the likelihood is very little, because of its uniqueness okay.

Still we have the image-based personal memory of it. The second aspect what we discussed was that there could be non image-based memory also of facts that are similar to personal memory. And third we also discussed that there could be repeated events okay, of the generic personal memory. And therefore when I remember my name, the name of my parents, siblings, other members of the family, friends, their family members okay.

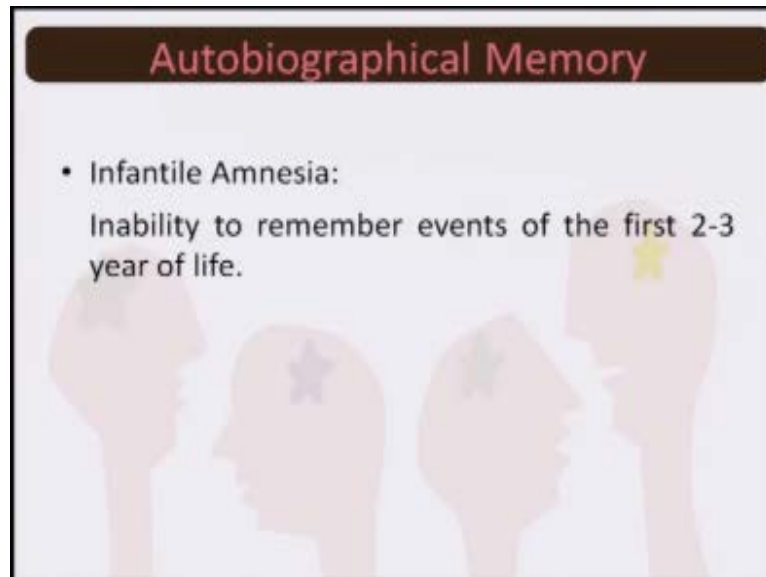
And many of those things which has connection to the self okay, they are considered as part of autobiographical memory.

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And therefore the factors that affect other forms of memory they are also supposed to affect the organizational process of autobiographical memory. One interesting thing you will find in autobiographical memory, what is called as infantile Amnesia.

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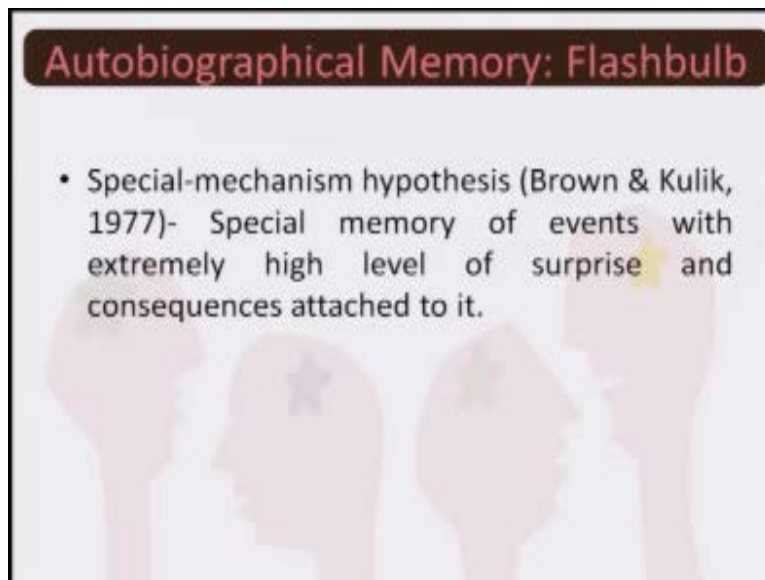
Amnesia of course know, is not the normal sequence of forgetting of events. It is a disorder, but infantile amnesia is considered to be perfectly normal. What happens in this case, let us take one of our life events and then try to understand what actually this means. If I ask you to go back to your earlier periods of life and recollect event, significant events okay, till whatever time period you can go back too.

And usually majority of us will have a recollection of some of the significant events, say when you are five years old, four years old, but only significant ones. Many day-to-day experiences will not be recollected okay, simply because we have crossed substantial period of time from that very stage. Therefore the life events from the first few years usually up to three years the chances are that we as human beings we forget, we completely forget.

And even thereafter although we have a memory of it, we have the recollection of only significant events not everything. This very inability of us not to be able to remember events of the first two, three years of life is called infantile amnesia, because it has to do with the earlier period of life, therefore it is called infantile, amnesia of course is forgetfulness, but remember infantile amnesia is not at all considered to be abnormal, it is not a pathology okay, although we

have find a word amnesia here. An interesting aspect of autobiographical memory is, what is called as flashbulb memory.

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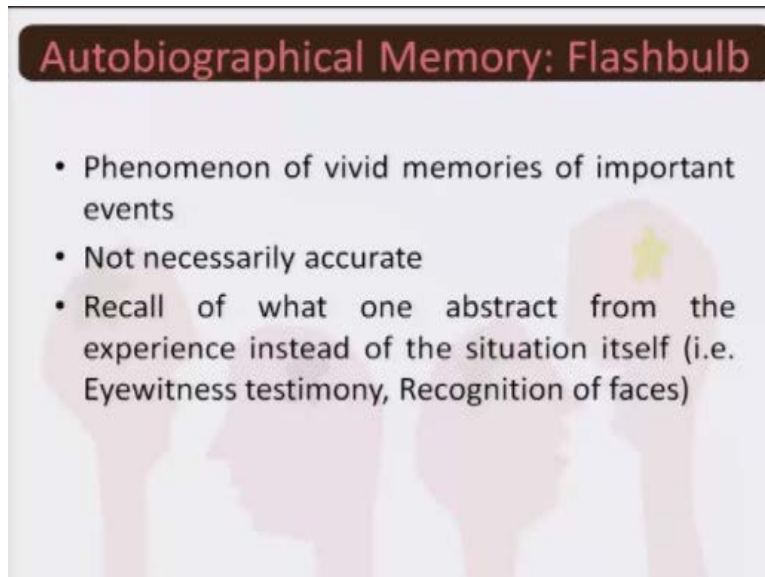
There is no mechanism, it is called special mechanism hypothesis by brown and kulik. Brown and Kulik they proposed hypothesis it is called a special mechanism hypothesis which says, that spatial memories of events which has extremely high degree of surprise and consequence attached to it, they have a better memory okay. So if there is something which had heighten degree of surprise better into it okay or the consequence was something that is unforgettable, the chances are that we will remember that specific moment. And that is called as flashbulb memory.

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Now flashbulb memory basically is just one type of autobiographical memory. Now I like though the episodic memory that we discussed especially the eyewitness memory okay. In flashbulb memory it is basically a recall of location, date, time and imagery. And what do we have, we have a vivid snapshot of the moments and its consequences okay. So surprise is to be there the consequence is to be there, and therefore where did it happen, what time, what was the date okay and the image which is based on a vivid snapshot of the in sequence of events that is what constitutes flashbulb memory.

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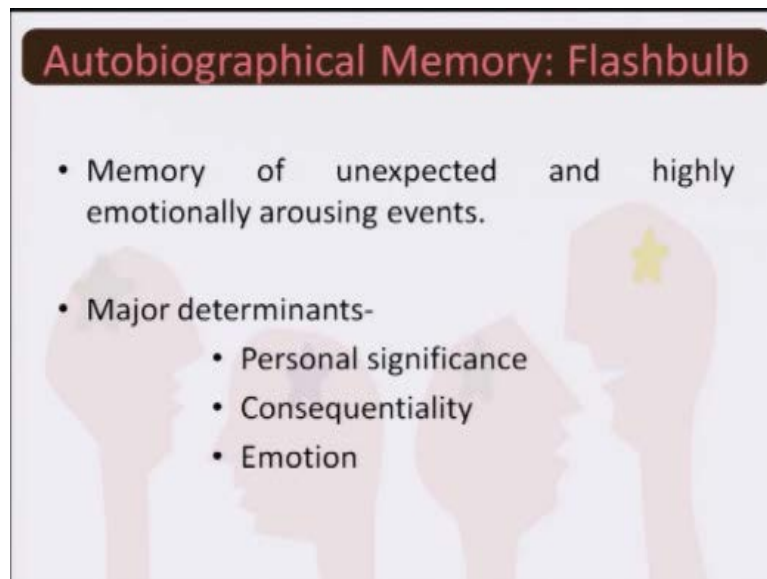


Autobiographical Memory: Flashbulb

- Phenomenon of vivid memories of important events
- Not necessarily accurate
- Recall of what one abstract from the experience instead of the situation itself (i.e. Eyewitness testimony, Recognition of faces)

Therefore flashbulb memory has phenomenon of vivid memories of important events but once again just similar to eye witness it is also prone to distortion and therefore it need not be accurate in nature okay usually.

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In flashbulb memory it is expected that you will always have a memory of something which was unexpected therefore there is an element of surprise here okay and because surprise is one of the basic emotions therefore the unexpected surprise component of very event also emotionally arousals you know so therefore the event as high degree of emotional arousal attached to it and therefore it becomes part of your flashbulb memory.

Three things are important no for flashbulb memory one the significance of the event how personally significant the event is to you to what was the consequence okay so more dire consequences the heir are the chances that it will remember why because things which has heir consequences are dire consequences will induce a heightened degree of emotional arousal within you okay.

So these three things becomes measured determinates for flashbulb memory look at this sick lady who experienced violence twice in her life once in 1947 when she was young and India was divided into two half's India and Pakistan and again in 1984 when the anti sikh riots took place in India.

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For one of the national geography programs one Vietnam war photographer was interviewed he was shown his own photographs and asked to recollect rethink okay years after the passage of the war what actually had taken place. What happens to him look in this very video.

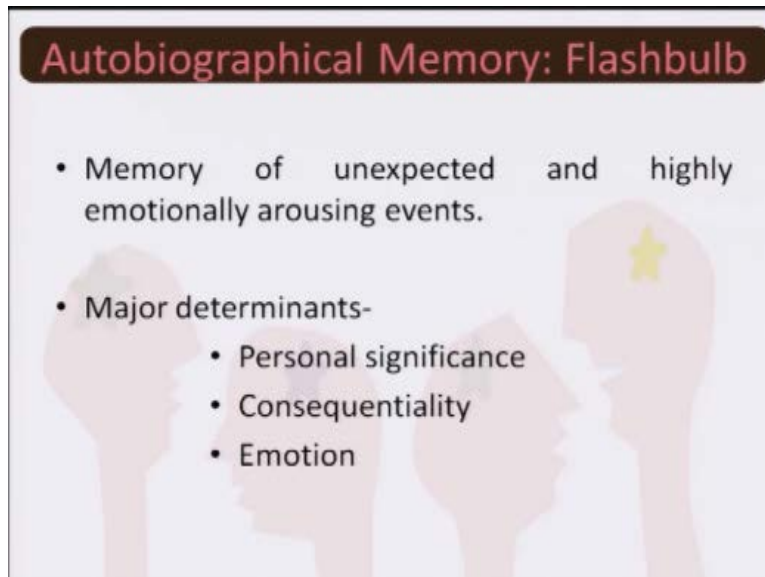
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Now if you look at these videos in the first case okay the woman is in a position to recollect her experience know what time of the day what did the policeman say okay and making a comparison between the two experiences of communal violence okay in the second event okay although this photographer considers the event to be a significant event to be clicked when he is re-exposed to his own photographs okay the consequence of the war emotions overpower his memory okay.

Therefore the three things which we discussed right now the personal significance of the event,

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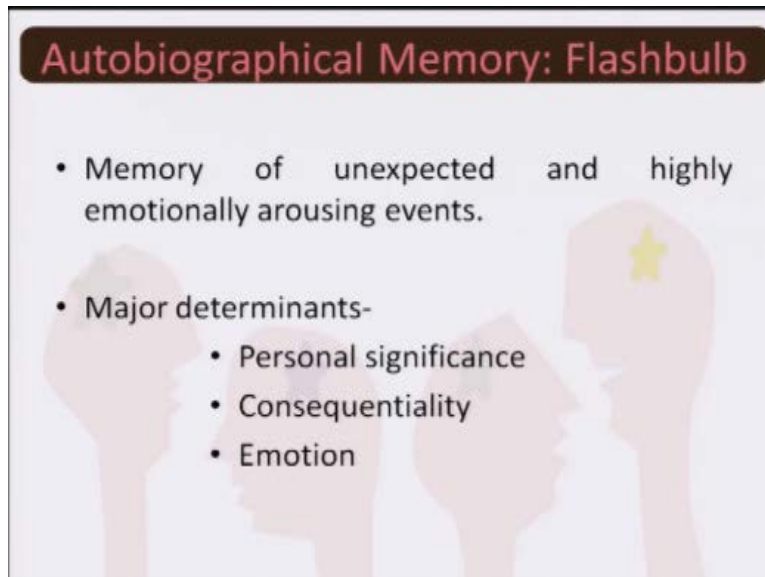


Autobiographical Memory: Flashbulb

- Memory of unexpected and highly emotionally arousing events.
- Major determinants-
 - Personal significance
 - Consequentiality
 - Emotion

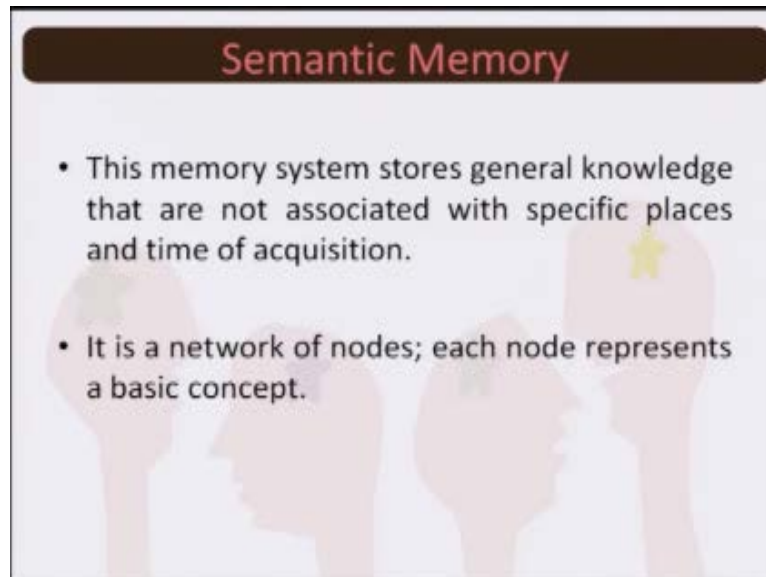
The consequence of the event and then the emotional arousal it is attached to the memory of the event these three things become extremely important as far as flashbulb memory is concerned having discussed episodic memory the flashbulb and the testimony we shall now discuss symmetric memory as we have been referring to it means meaningfulness therefore the structured record of facts.

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The concepts skills okay these constitute the semantic memory card so it is basically the retention of the abstract knowledge meaning of the words, symbols, ideas under and the rules that govern them okay.

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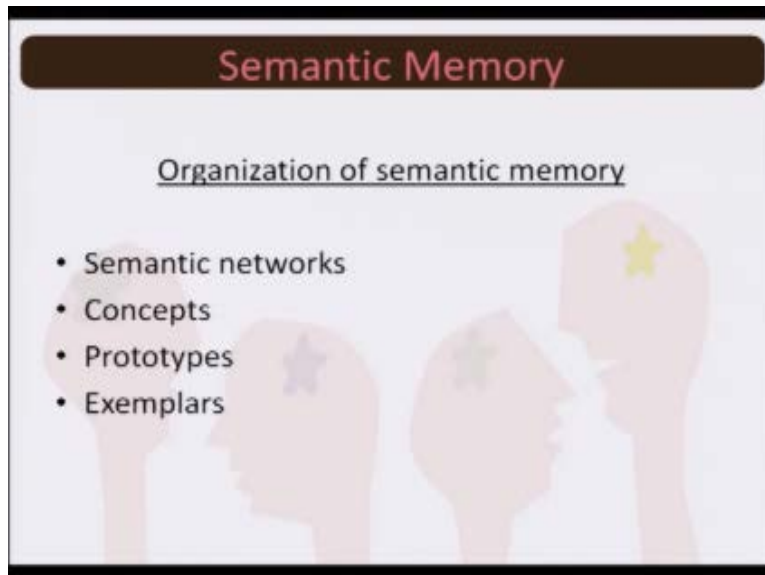


So this memory system basically stores the general knowledge that are not associated with the specific places and time of acquisition. Remember in the case of episodic memory, time of the event, the consequence, okay. The location these were important parameters on the basis of which the whole sequence of event was broken into episodes. Given no, what you called the? Association with personal significance and with the forensic significance.

We further divided into forensic and sorry with eye witness and flashbulb memory, whereas because semantic memory has to do more with the concepts the rules that govern it, the words that represent them therefore they are supposed to be basically free from the time of acquisition and the place the location in which you learned this, okay. Therefore basically what happens here, you have a network of nodes, okay.

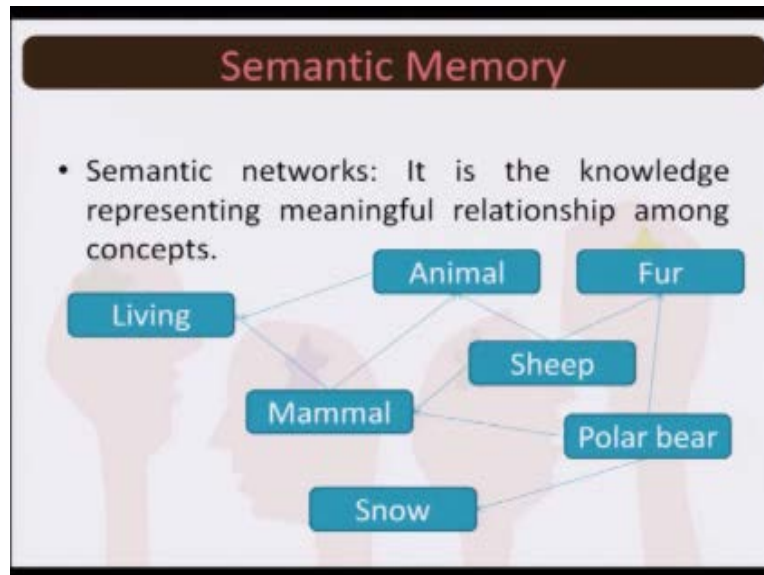
And each of the node that represent the basic concepts. The more and more you spread the network higher and better is your semantic memory, okay. The much better is the understanding of yours with respect to that specific concept. There are four important things in semantic memory they play important role in organizing the content.

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First is the semantic network, okay. We talked about the nodes and the network that is formed we will talk about it again. So semantic network concepts, the prototypes and the exemplars, okay. So we will talk about all four of them one by one.

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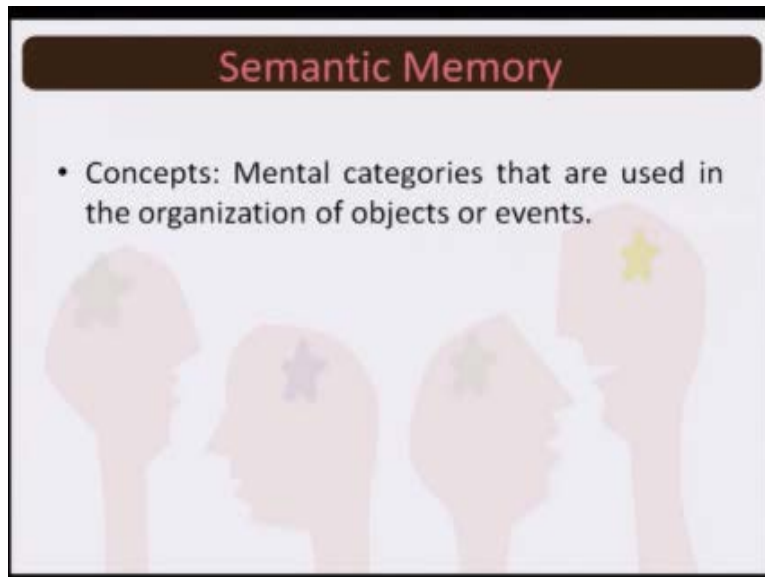


Now semantic network is nothing but it is basically a knowledge representing meaningful relationship among the concepts no? So when you think of an animal, okay. The moment you think of animal you consider that okay. Animal by default means that it would be living, okay. Because we have understood to classify world in terms of living and non-living creatures, okay. Now you think if it is say living then it will definitely be it would be a mammal.

You think of one good example of a mammal which is an animal, you think of sheep, okay. The moment you think of sheep you think, okay. It has fur the moment you think of fur you think, okay. Other animals also have fur's for instance you think of polar bear, you connect polar bear is also a mammal which is also an animal and the living creature, polar bear they live on snow. So this is how the network expands, okay.

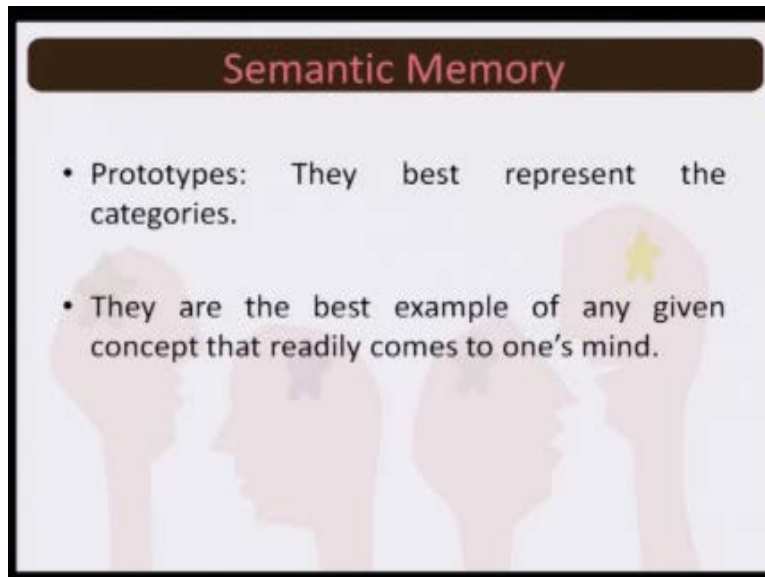
You have nodes each node representing no an important concept and then you start spreading the network, the more and more holistic is the network that you derive, okay. And the interconnections that you establish between different nodes, okay. The more and more better is, your semantic memory. What are concepts?

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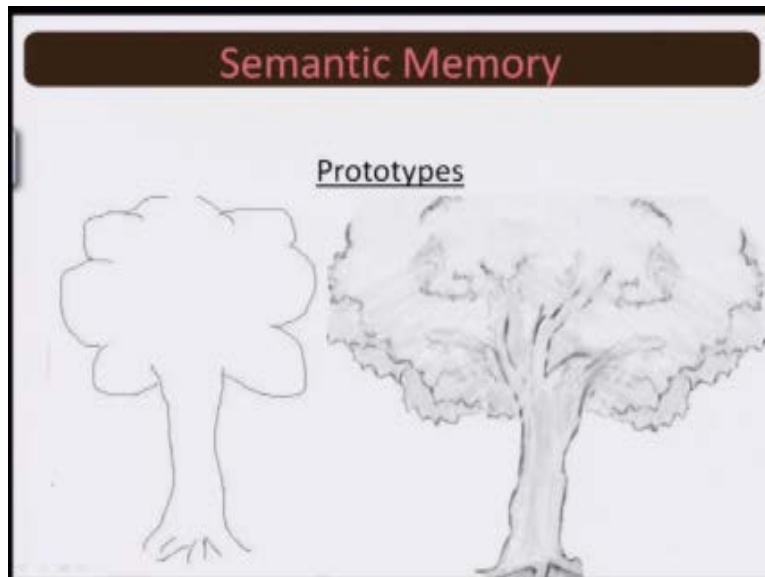
These are nothing but simple mental categories that are used in organizing the objects or the events, okay. So you think of an object, you think of an event, okay. And therefore you form a mental category, okay.

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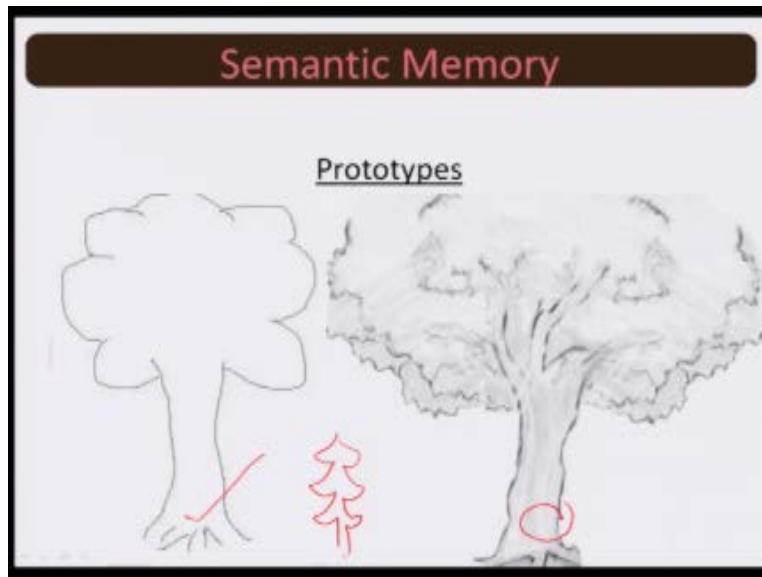
That is called concept. Now prototypes are the best representatives of these categories, okay. So they are basically the best examples of any concept that comes to your mind the moment you think of that very concept, okay. A think for instance you are now told a word tree, the moment you hear the word tree a representation comes to your mind, a mental representation.

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Now look at your screen in most likelihood the line drawing that you see of a tree is perhaps the image that you draw, okay. I have performed this exercise several times in the classroom and let me share one thing with you, most of the students in the class where I have tried this example, who are from northern part of India, they usually have no the representation of a tree like this, okay.

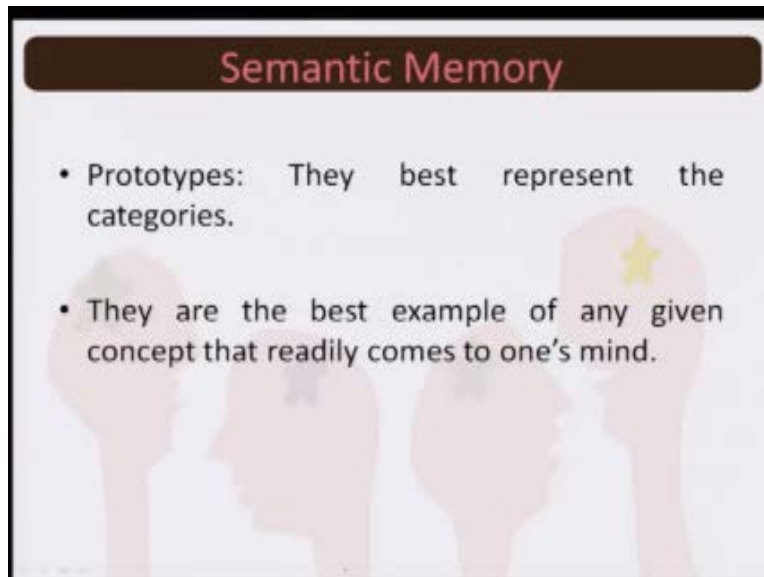
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Actually you have something like this, okay. This very example but then some of the students who are from the extreme northern side the mountain area they usually know they have something like this, okay.

So depending on what type of exposure you have, what type of experience you have of a tree you will have the ready-made example the image of that very concept, okay. So this is what is called as prototype, the categories told you and the best example that comes to your mind.

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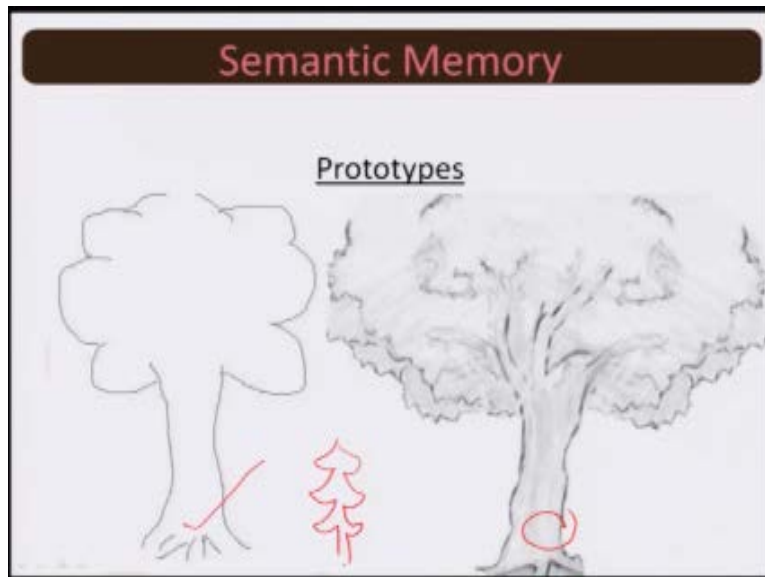
Semantic Memory

- Prototypes: They best represent the categories.
- They are the best example of any given concept that readily comes to one's mind.

The slide features a background illustration of four stylized human heads in profile, facing right. The heads are light pink with darker pink outlines. The first head on the left has a small purple star on its forehead. The second head has a small purple star on its forehead. The third head has a small purple star on its forehead. The fourth head on the right has a small yellow star on its forehead.

That represents that very category.

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Now tree could be of anything banyan tree, pine tree, mango tree now any daily type of a tree but depending on the mostly visible tree in your locality you develop an example a mental image that is the prototype.

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Now we come to the exemplars. You think of an insect, okay.

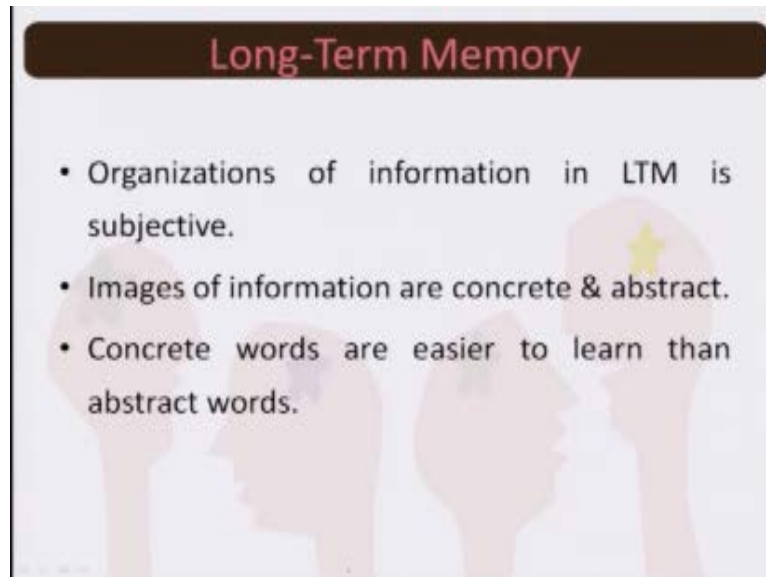
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And you have a grasshopper in your mind okay, so you think of a bicycle okay, a mode of transport and something comes to your mind so these are again the best example of the exemplars. What happens in the case of exemplars okay, these are once again the best example that would come to your mind. Now what we have discussed, we have the notes which represent the concept. Each of these concepts are interconnected to several other concepts which basically helps you form a network to represent a concept, we have a prototype and we have the best example that would try to explain the concept for yourself okay.

So that, when you look at certain phenomenon in the world using your semantic network you can think of a whole lot of things. Remember, that things are not so crystal clear and things are not presented in an isolated way. The way we have discussed here in the example, but then we have to simplify for our understanding okay, as a living being we cannot live in a complex system where most of the things are known, you are not capable of interpreting them, and therefore semantic networks play an extremely important role here. Now when we come to long term memory organization of information in long term memory.

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Is purely subjective okay, how you would organize it is your choice okay, is your convenience. Images of information's okay, can be concrete or it could be abstract okay. So if you are told something like say, old and if you have seen your know elderly grandparents in your house you will have somewhere an image of what is, what is meant by the word old? If you hear the word brick if you hear the word pencil okay, so many of these things will have a very concrete image that it will generate.

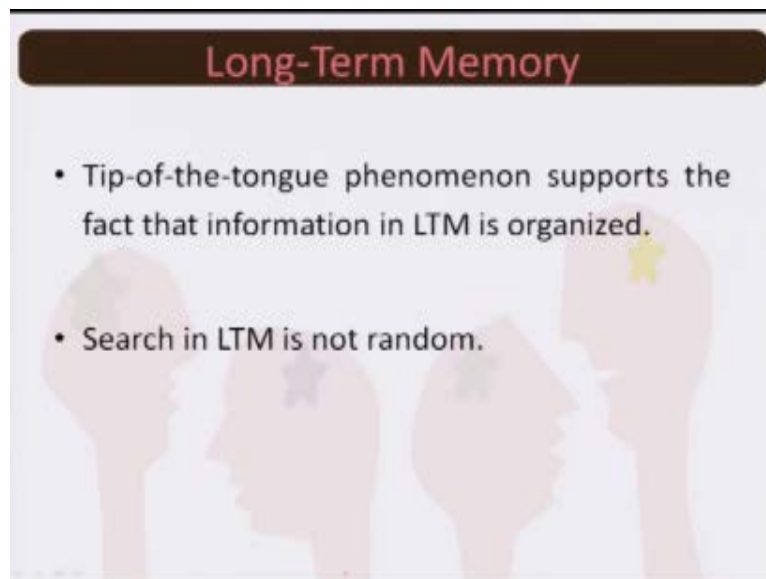
Many other concepts might not generate concrete images know, say for instance if you are told know that there was a king who was very honest okay. Now there could be example of know what honesty meant okay, but then honesty cannot create a very clear concrete image in your mind okay. Similarly, if you are told know that he was very hard working okay, you can think of whatever type of activity this character was involving in the story and accordingly you can think of you can intensify the engagement of that very individual in that given activity to visualize what it would mean know to be hard working in this very scenario okay.

Similarly, if you are know, told many of those qualifications which are more qualitative in nature okay, like honesty okay you have difficulty in creating clear concrete images. Therefore, when

we combine these things in the long term memory we might have images of the concrete words and we might have certain information which are more and more abstract in nature, and of course because it is like this, therefore the learning of the storage of, the concrete words would be much more easier compared to abstract words.

Another interesting thing observed in long-term memory is, what is called as tip of tongue phenomenon, tip of tongue phenomenon basically means that when we store the information and try to.

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Recollect it we failed to do so, although we feel as if, as if things are readily available it is somewhere in the top of the tongue but it is not making its way out of the mouth, and therefore you are not able to recollect it okay. So imagine something like this no, snake inside of borrow okay, so this is the borrow there is a snake it comes out of the barrow and again it goes down okay. So it is something like that now you feel as if the event is about to be recollected, you can very easily know extract information from your long-term storage.

But somehow you keep struggling and you are finally not able to do so okay, this is called tip of tongue phenomenon, and why does this happen? This basically is a phenomenon which supports the fact that the storage of information in the long term memory is very, very organized okay. So if you want to make a random know, recollection attempt the information will not will be readily available to you.

So if you move in a sequential order okay, in an organized order because information is stacked in an organized manner, retrieval becomes easier. Because information is stored in the organized manner and you start making random recollection then you feel to do some.

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