

Chapter 8

1- What role do neurotransmitters play in memory consolidation? Explain.

Although we don't yet know which role each neurotransmitter plays in memory, we do know that communication among neurons via neurotransmitters is critical for developing new memories. Memory consolidation occurs through repeated activity by neurons that leads to increased neurotransmitters in the synapses, as well as more efficient and more synaptic connections.

2. Explain the difference between anterograde amnesia and retrograde amnesia.

The major difference between retrograde amnesia and anterograde amnesia is the following: Retrograde amnesia is the inability to recall past memories while anterograde amnesia is the inability to create new memories.

Anterograde amnesia: A person cannot remember new information but can remember events from before the onset of amnesia. Retrograde amnesia: A person can remember new information but cannot remember events from before the onset of amnesia. Dissociative amnesia: A person may forget specific events or time periods.

3-Summarize the Deese-Roediger-McDermott paradigm.

The Deese-Roediger-McDermott paradigm suggests that people can generate false memories. For example, the researchers involved conducted a study in which participants were given a list of 15 sleep-related words, but the word "sleep" was not on the list. Participants recalled hearing the word "sleep" even though they did not actually hear it.

5. Explain the difference between proactive interference and retroactive interference.

Proactive interference occurs when past memories hold back an individual from retaining new memories. Retroactive interference occurs when new memories hold back an individual from retaining old memories. Competition is what prevents recall of the memory in proactive interference.

6. Explain arousal theory and provide a real-life example.

Arousal theory states that strong emotions trigger the formation of strong memories, and weak emotional experiences form weak memories. For example, I have strong memories of the day I graduated from high school because that was a day filled with strong, positive emotions. I do not have

many clear memories of the week before graduation because nothing particularly exciting happened during that time.

7. List the three parts of the brain involved in memory processing and explain what role they play.

The three parts of the brain that are involved in memory processing are as follows:

- 1- The Hippocampus.
- 2- The Amygdala.
- 3- The cerebellum.

Memory processing may be defined as the process through which the memories get processed and then stored in the brain for future remembrance.

The functions of all three parts are as follows:

The Hippocampus: It works in normal recognition, spatial memory, declarative memory, and memory consolidation.

The Amygdala: It is involved in effectively influencing memory, emotional arousal, and modulation of memory storage. It also processes fearful and threatening stimuli in response to memory.

The Cerebellum: The main function of this part is to process procedural memories. The pre-frontal cortex of the cerebellum functions in the processing of short-term memories.

13. Explain and exemplify the memory sin called misattribution.

Misattribution--attribution of memories to incorrect sources or believing that you have seen or heard something you haven't.

Misattribution. "Memory is also characterized by sins of commission: Situations in which some form of memory is present, but is misattributed to an incorrect time, place, or person,

Misattribute means to incorrectly assign the origin, cause, or source of something. For instance, you remember that someone made great coffee for you. You thought that it was your friend Amy so, you ask her to make it for you again. However, it turned out that it was actually your friend, Sam.

26. Name some of the benefits and at least one drawback of having hyperthymesia.

Hyperthymesia involves more than just remembering everything that happened to you; it's also about remembering exactly when it happened.

Hyperthymesia is also known as highly superior autobiographical memory (HSAM). According to a 2017 study , people with hyperthymesia can accurately and readily recall numerous details about events that have occurred in their life.

HSAM causes you to overthink. Most overthinkers find it hard to fall asleep at night. Those with Hyperthymia are usually not the happiest folks around. Not being able to forget and focus on more important things selectively is a problem.

38. Watch the video “Living Without Memory” below and then answer the following questions: What role does memory play in our identity and connections to others? What does this case tell us about the mind-brain relationship?

You can introduce the topic of memory with this dramatic case study. It vividly illustrates the significance of memory. We are what we remember. But only when memory fails are we truly aware of its importance. George cannot remember. He suffered a viral infection that caused his brain to become inflamed, a condition called encephalitis. It produced almost immediate memory loss. George reports, “I can’t even remember what it is like to remember.” When he and his wife Val return to a favorite spot that they have visited since their teens, George does not recognize it. And when Val reminds him that they have been married 47 years after being childhood sweethearts, it is clear that George has no recall. George considers use of a special pager to remind him of everyday tasks. For those suffering from significant memory loss this simple device provides an active prompt for taking medications, keeping scheduled appointments, and preparing meals. George hopes the pager will take some of the pressure off from Val as well as helping him. Val expresses deep sympathy for her husband and hopes the pager restores some of his independence. The pager is delivered. It will be used to remind George of what clothes to wear, of bills to pay, and of library items to return. Together George and Val learn the simple operation of the device and George happily leaves home with the pager that will remind him what to do. He successfully navigates transactions at the local library. Val’s deep emotional pain over her husband’s memory loss becomes apparent when the narrator asks what personal message she would want to leave on the pager for George. Through tears she expresses her deep love for her husband and continued commitment to him. In a final scene George drops letters in a mailbox and expresses victory over his illness.

Memory represents our ability to store and retrieve information. We become aware of its importance when it malfunctions. As this program vividly demonstrates, memory binds us to family and friends. To a significant degree, we are what we remember. The case also reminds us that everything psychological is biological. Quite possibly the viral encephalitis that George suffered damaged neural centers enabling storage and retrieval of explicit memories, perhaps the hippocampus, a neural center in the limbic system.

Chapter 9

39. What are the three stages of prenatal development? Explain.

There are three stages of prenatal development: the germinal, embryonic, and fetal stages. The first two weeks after conception are known as the germinal stage, the third through the eighth week is known as the embryonic period, and the time from the ninth week until birth is known as the fetal period. From beginning as a one-cell structure to your birth, your prenatal development occurred in an orderly and delicate sequence. There are three stages of prenatal development: germinal, embryonic, and fetal. Keep in mind that this is different than the three trimesters of pregnancy.

41. Describe the uninvolved parenting style.

Uninvolved parenting, sometimes referred to as neglectful parenting, is a style characterized by a lack of responsiveness to a child's needs. Uninvolved parents make few to no demands of their children and they are often indifferent, dismissive or even completely neglectful.

uninvolved parenting is related to lower self-esteem and self-confidence in children and teenagers. Other impacts include selecting replacement role models, impulsivity and aggression, poor academic performance, and substance abuse.

43. How are primary sexual characteristics different from secondary sexual characteristics?

An organism's primary sexual characters are its reproductive organs and gametes (sex cells); an organism's secondary sexual characters include all other structural or visual differences, such as mammary glands, muscular development, plumages, and behavioral patterns, that do not figure directly in the reproductive act.

Primary sex characteristics refer to changes to the sexual organs themselves (uterus, vagina, penis, and testes). Secondary sex characteristics refer to other visible changes that mark adult maturation such as changes in height and body shape.

Primary sexual characteristics are those characteristics which are inborn while secondary sexual characteristics are those which emerge at puberty. Penis in men and vagina in women are primary characteristics in human. Hair growth in the pubic region and height change are examples of secondary sexual characteristics.

49. Do boys and girls grow at the same rate throughout childhood? Explain.

No, the boys and girls grow at different rates. In girls, the puberty occurs earlier than boys. That is why during the early adolescent years, the girls are taller than boys. On average, girls start puberty between the ages of 8 and 13, while boys start between the ages of 9 and 15. That's why many girls might grow

taller than boys for a while in the late elementary school years. Depending upon when you start puberty, you could continue growing for several more years. Most girls start their sexual development between the ages of 8 and 13 (the average age is 12), and have a growth spurt between the ages of 10 and 14.

Girls generally gain no more than 2 inches in stature after the onset of menstrual periods. However, males can continue to grow in stature in their early twenties. By the time that adult stature is reached, the 50th percentile for stature-for-age is about 6 inches higher for males than for females.

50. Compare B. F. Skinner's and Noam Chomsky's ideas about language acquisition. Who was correct?

The difference between Chomsky and Skinner's beliefs can most simply be put as such: Skinner believes that language is learned, whereas Chomsky believes that language is innate, and is simply developed.

51. What did Harry Harlow's monkey experiments demonstrate about attachment?

Harlow's explanation was that attachment develops as a result of the mother providing "tactile comfort", suggesting that infants have an innate (biological) need to touch and cling to something for emotional comfort.

Harlow's research suggested the importance of mother/child bonding. Not only does the child look to his/her mother for basic needs such as food, safety, and warmth, but he also needs to feel love, acceptance, and affection from the caregiver. His findings show some long-term psychological physical effects of delinquent or inadequate attentiveness to child needs.

52. Describe the Strange Situation experiment.

The Strange Situation is a semi-structured laboratory procedure that allows us to identify, without lengthy home observation, infants who effectively use a primary caregiver as a secure base.

53. Compare and contrast the authoritative and authoritarian parenting styles.

Authoritarian parenting focuses on discipline and control, while authoritative parenting focuses on limit setting with connection. Permissive parents focus on a lot of connections, but setting boundaries comes hard for them. Neglectful parenting is low on both connection and boundaries.

Authoritative parenting is characterized by high responsiveness and high demands. They are responsive to child's emotional needs while having high standards. authoritarian is characterized by high demands and low responsiveness. They have very high expectations and provide little feedback and nurturance.

54. What does research suggest about hospice care?

The researchers found that patients receiving hospice care tended to experience better end-of-life treatment than those who did not. Ninety-one percent were administered medication to manage pain symptoms, compared to 81 percent of control patients who reported the same.

What are the five stages of grief?

1- Denial

Feeling numb is common in the early days after a grief. Some people at first carry on as if nothing has happened. Even if we know with our heads that someone has died it can be hard to believe that someone important is not coming back. It's also very common to feel the presence of someone who has died, hear their voice or even see them.

2- Anger

Anger is a completely natural emotion, and very natural after someone dies. Death can seem cruel and unfair, especially when you feel someone has died before their time or you had plans for the future together. It's also common to feel angry towards the person who has died, or angry at ourselves for things we did or didn't do before their death.

3- Bargaining

When we are in pain, it's sometimes hard to accept that there's nothing we can do to change things. Bargaining is when we start to make deals with ourselves, or perhaps with God if you're religious. We want to believe that if we act in particular ways we will feel better. It's also common to find ourselves going over and over things that happened in the past and asking a lot of 'what if' questions, wishing we could go back and change things in the hope things could have turned out differently.

4- Depression

Sadness and longing are what we think of most often when we think about grief. This pain can be very intense and come in waves over many months or years. Life can feel like it no longer holds any meaning which can be very scary.

5- Acceptance

Grief comes in waves and it can feel like nothing will ever be right again. But gradually most people find that the pain eases, and it is possible to accept what has happened. We may never 'get over' the death

of someone precious, but we can learn to live again, while keeping the memories of those we have lost close to us.

In fact Kübler-Ross, in her writing, makes it clear that the stages are non-linear – people can experience these aspects of grief at different times and they do not happen in one particular order. You might not experience all of the stages, and you might find feelings are quite different with different sorrows.

57. Why did Jean Piaget call his second stage of cognitive development the preoperational stage?

The name of this stage hints to what's happening here: “Operational” refers to the ability to manipulate information logically. Yes, your child is thinking. But they can't yet use logic to transform, combine, or separate ideas. So, they're “pre” operational.

The preoperational stage occurs from 2 to 6 years of age, and is the second stage in Piaget's stages of cognitive development. Throughout most of the preoperational stage, a child's thinking is self-centered, or egocentric.

59. Define and provide an example of postformal thinking.

Postformal thought involves complex reasoning that can understand and accept complexities and contradictions and still synthesize new or opposing information into a more complete understanding. This is demonstrated when a married couple is able to communicate, see their partner's perspective and compromise.