Characters and Relation to Psychology In Inside Out: Film Summary

Emotion affects us on many levels. It affects our brain, our level of hormones and endorphins, as well as our overall happiness. In the movie Inside Out, Riley, an 11-year-old girl, and her family pick up their lives and move from Minnesota to San Francisco, California. This move proved strenuous for Riley and her family's emotions. Riley originally grew up with one primary emotion, personified in the movie as a girl named Joy. She then proceeded to add the emotions of Sadness, Anger, Disgust, and Fear which came to life as actual characters in the movie. In the movie Inside Out the audience is also introduced to the notion of the human sleep cycle, REM sleep, different kinds of memory, and memory storage.

Once Riley's family has completed their move, Riley becomes depressed as she misses her past life. The character personified as Sadness begins taking over her key and core memories. The character personified as Joy goes on a mission to make Riley happy again and finds ways to trade Riley's emotional state of sadness for joy. In the end, Riley plans to take a bus back to Minnesota without telling her parents but realizes that she, in fact, needs her parents more than anything. Her memory islands defines how she feels and anticipates the world around her as well as the demeanor of her character. They begin to rise again but with new names and concepts that alter how she would have reacted at age 11 and now how she'll react at 12; islands are made up of Riley's core memories.

Inside Out Characters

Joy

Joy is in charge of all yellow orbs, joy is the only one that can make Riley happy. Joy only wants the best for Riley, meaning all of Riley's key memories are of only happiness and joy so they are

yellow. When these orbs are replaced by blue, Joy goes on a journey to retrieve Riley's five core memory islands which are directly linked to key memories. Joy is attributed to the development of our charter and our drive to explore in our youth.

Fear and Disgust

Fear is green and Disgust is purple and they work together to keep Riley safe. Fear works to keep us safe by analyzing situations and determines the safest possible outcome(s).Fear is characterized by extreme anxiety and irrationality. Disgust gets described by Joy as "protecting Riley from anything that can poison us physically and emotionally.(Disney,2015, 3:34) Disgust is wary and avoidant of new situations.

Anger

Anger is majorly represented in Riley's childhood and is orb-colored red. Characterized by

outbursts of flames shooting from his head due to short temper, Anger is additionally characterized by grumpy, reactive and easily annoyed. In Riley's early years of growing up simple things such as picking her up when she doesn't want to be touched and dropping a soon easily set of anger. As Riley grows older we hear from anger less frequently as she learns to cope with anger.

Sadness

Sadness is colored blue and represents all the sadness in the world. She is gloomy and thinks negatively about anything and everything. Sadness represents depression traits, lack of motivation, always tired and irritable. Sadness is characterized by many psychologists as a depressogenic schema which means "dysfunctional beliefs that are rigid, extreme, and counterproductive and that are thought to leave one susceptible to depression when experiencing stress" (Mose, 2018).

Film in Relation to Psychology

Where Does Emotion Take Place in the Brain and How?

Emotions take place throughout the brain but are highly concentrated in the limbic system, also known as the paleomammalian cortex, which is represented as Headquarters in Inside Out. The limbic system is made up of many interconnected structures located under the cerebral cortex and above the brainstem. The two major parts of the limbic system is the Amygdala and the Hippocampus. The Hippocampus is in charge of "our episodic memories being formed and cataloged to be filed away in long-term storage across other parts of the cerebral cortex."(Queensland, 2019,3) The Amygdala plays a central role in our emotional responses, including feelings like pleasure, fear, anxiety, and anger. The amygdala also attaches emotional content to our memories, and so plays an important role in determining how robustly those memories are stored."(Queensland, 2019, 3)

Emotions take place by triggering a reaction to a stimulus in the brain which then gets attributed to memory. Memory and emotion are linked hand in hand when forming memories, we attach them to emotions we felt. Let's say you're recalling when your pet dog died, when recalling that memory you also recall the way it made you feel, our brain connects memories with emotion; therefore, you would be feeling sad or maybe depressed by recalling your beloved dog's death.

Storage of Long Term Memories

Long term memories can last from hours to years. Long term memories come in two forms explicit which happen in consciousness and are further broken down into episodic and semantic, and implicit which happens mostly in unconsciousness. Riley uses implicit memory when playing hockey, such as how much pressure to use when hitting the hockey stick to the puck. She also uses implicit memory when skating on the ice, such as how to balance herself. Implicit memories are hard to explain and we often find them as common knowledge to us. Riley used explicit semantic memory in Inside Out when she saw the golden gate bridge and identified it, which was her knowledge of San Francisco. She also uses it in class when recalling and answering questions. She then uses explicit episodic memory when recalling the first time she played hockey, scoring her first goal.

Long term memories can be replaced, which is depicted in Inside Out when the “Mind Workers” throw the emotional lobes over the edge into the “memory dump”, which is the land of unwanted, not accessed and unneeded memories. Once the orbs go over the edge they are hard and often unable to be recalled. Much like in Inside Out we have our own mind workers, for example, I used to have the song “Rap God” by Eminem completely memorized; however after time I lost the ability to recite the song word for word because that “orb” was replaced by a piece of new information. Sadness also shows long-term memory storage as she reads the manuals of the long-term memory maze; being able to help joy and sadness to get back to headquarters.

Short Term Memories

Short term memories are defined as “non-sensory information which is held for more than a few seconds but less than a minute.”(Gilbert and Wegner, 2018, pg. 169) We quickly lose information when forming short term memories such as when Riley’s mom was not aware/ forgot how much money she had in her purse before and just assumed none was missing. Short term memories can be overcome by the rehearsal of the information. By repeating something you give it around “15-20 more seconds of shelf life”(Gilbert and Wegner, 2018, pg. 169)

Iconic and Echoic Memory

Iconic memory is fast decaying visual information whereas iconic memory is auditory information decays rapidly. Riley used echoic memory when zoning out at the dinner table or when she walked outside hearing people talking and the information quickly decayed. She used iconic information when walking by people in public and while her mind took notice that information rapidly decayed and failed to get stored into her memory.

The Sleep Cycle and Dreaming

Sleep is important when new memories are formed as it gives us time to convey these memories. The hypothalamus controls our sleep and wake cycles. The sleep cycle has 4 stages and REM sleep. We enter REM sleep around an hour and a half after falling asleep, REM stages can last up to an hour. During REM sleep, our brain becomes more active and we begin to have more vivid dreams. Inside Out depicts dreaming in Riley’s mind as the “dream production” a studio in which there is a black screen that depicts dreams based on her past experiences. Riley’s dreams appear in color, but according to the National Institute of Neurological Disorders and Strokes “Some people dream in color, while others only recall dreams in black and white.” (NIDHS, 2019, 25)

Depression

Inside Out briefly touches on depression which is represented by sadness. Sadness has no will or motivation to do anything other than be sad, she constantly wants to be asleep and thinks of everything in a negative way. Depression is described by the American Psychiatric Association as “a feeling of sadness and/or a loss of interest in activities once enjoyed.”(APA, 2019) Riley shows signs of depression with her disinterest in hockey, family and her overall irritability and outbursts of anger.

Takeaways

My key takeaway is that there is never a reason to think you're alone. Riley thinks she’s alone but realizes her family cares deeply about her, which in a way shows you that you are never alone. There is someone out there who cares deeply about you. Riley also learns that it is ok to cry and let things out, which is important because she built up so much stress by not letting things go. The movie shows you that it is ok to be unhappy but it’s not ok to be unhappy forever and we must make ourselves happy at some point.

Correlation with reading

Inside Out correlates with the textbook we are reading in class Introducing Psychology and many discussions we have in class as it hits on many major concepts of the chapters we are reading. We talked about memory in class and our connection to memory; Inside Out takes a deeper look into our memories and what they mean to us as individuals. It also covers sleep cycles and the importance of sleep as related to how we develop and keep our memories. When depicting the sleep cycle it also talks about dreaming and REM sleep and what characterizes REM sleep.