I frequently wonder about the idea of the "true self," and if there even is one, as I navigate growing up and making life decisions. After conducting research, I have concluded that the feeling of self is made up of memories, experiences, and the way in which the brain functions. Because of how these three aspects of self interact, I decided that people are only a reflection of their environments and therefore "true self" does not exist. However, I do believe that people help build their own environments. Perhaps it is only genes and chemicals in the brain, but maybe we do possess something deeper that determines how we build our environments that we then reflect – this could be our true self.

I consider Carl Jung's idea of The Self to be the closest to having a "true self." Jung used meditative mandala drawing as a way to connect with The Self; the deeper part of us that we can never become but always strive to be. I decided to experiment with my own meditative mandala drawing but replaced meditation with rock climbing because it is during this activity that I feel most connected to my Self. During my time painting, I seemed to lose touch with reality while my body created marks with the paint. I believe that during this time, I was accessing something deeper in myself – therefore it may have been my "true self," or in Jung's words The Self. This painting is not about what is on the canvas as much as what happened while I painted. After climbing and painting, I always felt more centered, calm, and confident. I want people to look at this and see not just a painting, but also a person and the layers of their identity.

Carmenilla R.

Abstract:

This paper explores the idea of “self” and what makes people who they are. I will discuss the importance of memories, experiences, and brain function and how they help shape who we are. Combining ideas from different disciplines this paper explores the idea that self may be only an illusion and whether this false impression is just memories, experiences and environment, how the brain works, or a little of everything.

As a young adult who is finding herself in the world, I have a lot of thoughts on the idea of "true self." How will I find myself? What am I doing here? What makes me who I am? Am I different from others? And most importantly, I ask, what is self? According to the Oxford dictionary, it is "A person's essential being that distinguishes them from others, especially considered as the object of introspection or reflexive action ("Self", 1964). This means that self is what disconnects us from others – it is how we see our own being, and how we are different than others. The second definition is "A person's particular nature or personality; the qualities that make a person individual or unique ("Self", 1964). This definition brings personality into play. Personality is something I have always been interested in. I am an observer, and I love to watch people interact. One of the things I have noticed about people is that they talk about themselves a lot; it is how we find what we have in common with others. While speaking about themselves people recap many of their experiences. These adventures are what people seem to think makes them who they are. However, when people talk about others they often use words such as "nice" and "funny", and do not repeat the stories and experiences as frequently. These describing words characterize personality. I always thought it was interesting that people tell stories while talking about themselves, but characterize others by personality traits. I wondered if stories and memories connect to personality and how people see themselves. I wanted to know what makes one person shy and quiet and the next loud and outgoing. Personality is a huge part of who we are, how others see us, and how we see ourselves. There is so much to the human quality of personality. Personality is what draws me to people. All of my friends have different and unique qualities that set them apart from each other. I love seeing how people portray themselves to the outside world. However, I am only seeing them from the outside. I cannot be inside their heads to discern how they think of themselves, but I can be inside my own head. What makes me the way I am? If I think about all the things that have constructed how I see myself, I recall of a lot of memories and experiences. My life is a story, and that narrative has shaped my being – my "true self." I can name off facts that have amounted to who I am today: I was born in 1999, my sister was born in 2001, my parents divorced when I was four, I have moved seven times, I switched schools in sixth grade, I started rock climbing at twelve, I started high school in 2013, I came to The Oxbow School in 2016. But these are only facts – is this really all I am? I want to believe that there is more to me than just a collection of experiences, memories, and feelings, but maybe that is all I am. Perhaps people are only the reflections of their environments, and there is no such thing as "true self."

The idea of self has been floating around for a long time – from early Greek philosophers, to Carl Jung, to today's brain science. However, one of the things that these many ideas have in common is that people have always believed that self is everything. Krishnamurti, a speaker and writer whose subject matter included psychological revolution, the nature of mind, and meditation believed, "self is an idea, memory, conclusion, experience, namable and unnamable intentions, conscious endeavor to be or not to be, memory of unconscious, the radical, the group, the clan, the whole of it all (Reflections on Self – Fifth Talk in Madras 1952, n.d.)." This means that every experience, memory, and moment in your life creates who you are. "You" only exist because of these moments that have shaped your being. From something as simple as the act of being conceived to the complicated and intricate course of occurrences that have been filed away in your brain, you only exist as an extension of these actions. Because everything that has ever had some form of contact with you has molded your being, there is not a perfect definition of who you at the center of all these things. There isn't even a center. All experiences and memories, desires, beliefs, knowledge, and sensations are connected. These

connections make you who you are, but there is no center in the brain where all of this comes together and creates "true self." If the idea of self is thought about as an abstract tangle of string that is representative of everything that is connected to you, there is no center. People are always changing because they are constantly having new experiences, making new memories, and their ideas and beliefs change. Self is not a single entity, but a process – true self is not there to discover, but to create (Baggini, n.d.). This self sees the world from it's own perspective and takes in information from the outside.

While trying to think about the idea of "self" in an objective manner, we can question why we think about the world in terms of "I." Is it possible that the idea of "self" is only how the brain makes sense of the world? In our day-to-day lives there is an "I" who is thinking, perceiving, and interacting with the world. However, self may solely be an illusion. We have a sense of self, a feeling of identity, but self is not identifiable. Everyone is constantly searching for who they but there is no one self that is what you truly are. Some believe there are two selves. The first is consciously aware of the present, and the second is our personal identity. The brain generates both selves to make sense of the world (Woolfe, 2013). The way this works is that the brain creates a narrative. The "I" that people refer to is the protagonist of the narrative. This is why people talk of themselves using stories. However, this "I", the main character of the story that we present to the world, is separate from The Self. The Self, something that Carl Jung believed existed, is an archetype of centeredness – the union of conscious and unconscious. We know of The Self, but the true self is unknown. Carl Jung believed that if someone was to become one with The Self they would know everything there is to know. The Self is a deep guiding factor in which people follow throughout their lives. Individuation is the endeavor to become this Self; it is the search for true self, which is hidden somewhere deep within you (Transpersonal pioneers: Carl Jung, n.d.). If people do have a true identity, Jung's idea of The Self would be the closest to that. Because it is the connections, the narrative, that create self, memory is amazingly important to who we are.

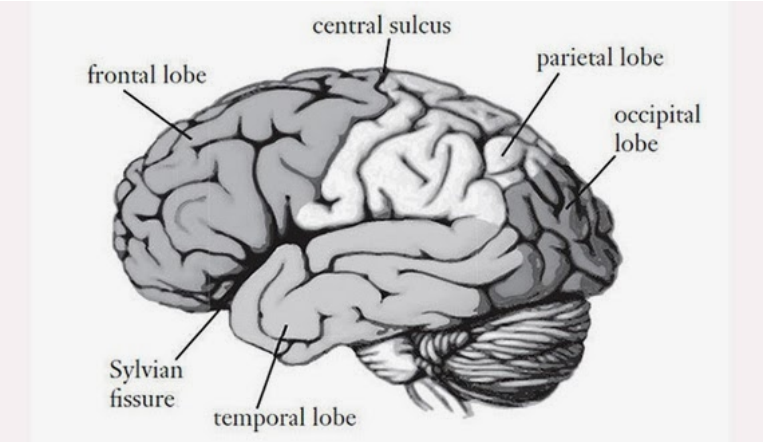
Memory plays a large part in how we grow and change. Oliver Sacks, a famous neurologist, had a patient named Jimmie G. who lost the ability to form new memories. Without the ability to make new memories it lost he lost his sense of self, and the narrative of his life. He became depressed and his personality changed because he had lost the ongoing record of his life (Woolfe, 2013). Memory is important for people to know themselves. Experiences are part of what makes us who we are, and we remember experiences as a way to manifest who we are. There is the "experiencing self" that lives in the moment and cannot see the past, only the present and the future, and the "remembering self" that maintains the story of our lives. Experiences are important but memories are even more so. It is the memories that create the narrative of a person. This is important because people remember things differently than they did in the moment. In a colonoscopy study, two patients, A and B, were asked every minute how much pain they were in. B had more pain than A in the moment but A remembered it to be a worse experience than B because A ended with more pain (Kahneman, 2010). This means that if you had an amazing vacation but the last day was the most horrible day of your life, you would remember the vacation differently than it happened. It is interesting that memories are not always correct but they are important to who we are. Sometimes we even remember things without meaning to.

Remembering does not have to be a conscious act. A man in a coma went into psychological anxiety state when exposed to a scent that was related to a personal trauma. Emotional reactions can happen without conscious recall, or consciousness for that matter. Memory is who we are. We are only the sum of our memories. However, each time you

remember something it can be changed ("Memory Hackers", 2016). Changes, significant moments, and endings create stories, and memories. Most moments are forgotten, but all moments create who we are (Kahneman, 2010). All memories are stored in our brains even if we do not have access to them. We may not remember things from our early childhood, but the happenings that occurred actually help shape who we are.

Babies are born with fully developed amygdales, the part of the brain that processes highly charged emotional memories, so infants are able to feel emotion but cannot put the emotions into context. The hippocampus, which stores memories in terms of sequence of events, is not fully developed until between the second and fourth years of life. Even though we cannot remember things from early childhood in terms of sequence of events, the amygdale stores emotional content starting at birth or before. Memories from before we can remember can shape who we are. Early memories, such as experiencing some abuse as a child, will change our personalities. A baby who was left in a crib crying for hours, may have issues with attachment, and abandonment, even as an adult. Any memories, whether they be very early ones or the recollection of experiences hold great significance to who we are. Without the ability to make new memories we cannot grow and change as people (Grille, n.d.).

When you are unable to create new memories, it becomes difficult to continue to expand as a person. A man named H.M. had this exact problem. After being knocked down by a bicycle at the age of 7 in the early 1930's he began to have seizures. For many years he lived with the seizures, but as he got older they became more and more severe (Squire, 2009). After undergoing an experimental procedure to treat the seizures, in which in surgeons removed much of hippocampus, a part of the brain highly important for memory storage, H.M. was unable to make new memories. He was said to have maintained his personality and intellect, but could no longer create new memories. He didn't know his age or the year, could not find his way to or from his house, could not remember people, news or new facts, but could still learn new skills (Kalat 458, 1998). Because H.M. could no longer create new memories he was stuck as the same person – he never continued to grow and change. He remained, in his mind, as being in his twenties, and he was never able to deeply connect with others because he could not remember names or faces. The brain is not only important for storing memories but it is, of course, essential to making sense of the world around us, and the different ways that the brain does this correlates with one's unique personality.



The brain helps us by taking in information from the outside world and connecting it to our memories, thoughts, and feelings. The "Theory of Cognitive Modes," found by Mortimer Mishkin and Leslie G. Ungerleider in 1982, is the theory that the top and bottom brain have different functions. These functions work together to help us to understand the outside world and our connection to it. The top-brain formulates plans, such as moving the body or objects in space, and carries them out. The bottom-brain classifies and interprets information from the outer world. (Kosslyn, 2013). The bottom

brain is made up of the occipital and temporal lobes and the parietal and most of the frontal lobe are the top brain.

The top and bottom-brain play important roles in memory, attention, decision-making, planning, and emotion. The bottom-brain processes input from the senses and uses them to activate memories. Deciding and carrying out plans is what happens in the top-brain but to know what things are in the world it needs the bottom-brain – so the top and bottom-brain work together. The bottom-brain informs the top-brain of what is happening "out there," and the emotions connected to it. Using this information, the top-brain can synthesize goals (Kosslyn, 2013).

The top and bottom-brain interact differently in everyone. Some people rely more on the top than the bottom, more on the bottom than the top, rely on both or rely on neither. Each of us has a particular dominate cognitive mode that effects how we interact with people and the world around us. There are four modes: Mover Mode, Perceiver Mode, Stimulator Mode, and Adaptor Mode (Kosslyn, 2013). Mover Mode is when both the top and bottom-brain are highly used. People that function in this mode are most comfortable when they can act, plan and see the consequences of their actions. Perceiver Mode is when the bottom brain is highly used but the top is not. People whose brains work in the way do not initiate detailed or complex plans. Stimulator Mode is when the top-brain is highly used but the bottom-brain is not. People who function in this way are creative and original but can over do it. Their actions can be disruptive. Adaptor Mode is when neither the top nor bottom-brain is highly active. When functioning in this mode, people do not make many plans. They tend to be very in the moment and action oriented. Everyone has a dominant mode that directly has to do with their personality, beliefs, and emotional make up (Kosslyn, 2013).

When researching these Modes, I immediately thought that I function in "Mover Mode." I feel most comfortable when I am in charge of a situation, and I like to plan ahead. I get nervous when I do not have a plan, or cannot see the outcome of a decision. After finding the online version of the top-brain/bottom-brain test, and learned that I was correct – according to the test, I function in "Mover Mode" (Kosslyn, 2013). It is incredible that the different parts of the brain functioning together can determine personality types. If the chemicals in my brain operated in a different way I would have a personality that was not my own. Not only does chemical communication in the brain shape who we are but one molecular biologist has a theory that sometimes what we believe can be an adaptive trait.

Molecular biologist Dean Hamer claims that spirituality is an adaptive trait, also known as a genetic trait that used to maximize success. One of the genes responsible for this spirituality trait also codes for production of neurotransmitters that regulate moods. Hamer found this gene while conducting a survey of smoking and addiction. Because he had the access to the DNA of so many people he decided to search for a gene that codes for spirituality. As part of the smoking and addiction study he had 1,000 men and women take a 240-question personality test called the Temperament and Character Inventory (TCI). One of the traits that the TCI measures is known as self-transcendence, which consists of three other traits: "self-forgetfulness, or the ability to get entirely lost in an experience; transpersonal identification, or a feeling of connectedness to a larger universe; and mysticism, or an openness to things not literally provable (Kulger, 2004)." These traits try to scientifically measure what it feels like to be spiritual. When looking at the DNA of the volunteers Hamer found a gene: vmat2 (vesicular monoamine transporter) that

correlated with how the people scored on the self-transcendence test. Just one base change in this gene could show if people thought of themselves to be spiritual or not (Kluger, 2004). If there is a gene that codes for spirituality, then there could be genes that code for all the different ideas that we believe. It is possible that only genes determine who we are. After all, as Hamer says, "I think we follow the basic law of nature, which is that we're a bunch of chemical reactions running around in a bag."

Genes and environment are connected, and both may play into who you are as a person. I am constructed of genes that have been passed down from my parents – I have dark hair and olive skin because of my Italian genes from my father, and my Slovenian genes from my mother. My personality can also be connected to genes that have been passed down from my parents, or grandparents. For example – if the God Gene ran in my family, there would be a possibility that I would have it, making me more spiritually inclined. As important as genes are, environment also adds to how you grow and change as a person.

Environment, as in the people you are around, the place, and emotions, can play a huge part in who you are. Some people believe that you are only a reflection of the things around you – mirror neurons almost prove this exactly. First found in the early 1990's, mirror neurons are brain cells that respond to someone else's movements, experiences, and emotions as if it were happening to the person seeing it. For example: actually feeling disgusted and looking at someone else's face that is showing revulsion causes the same neurons to fire (Winerman, n.d.). People's mirror neurons fire when watching other people's actions. These neurons help translate what we see so we can relate to, and project out into the world. They help us to tie to other's feelings, this is called empathy ("Mirror Neurons", 2005). Mirror neurons are important for finding and understanding others intentions as well as actions. People see the person they are looking at as self (Winerman, n.d.). You may feel like yourself, but actually be having the same emotions as someone else you happen to be watching. It is an amazing way the brain imitates others. It could mean that everyone is just reflecting everyone else, and there is no self. Have you ever had a day when you wake up feeling great but end up dealing with someone who is grumpy and irritable? This person's emotions may end up changing how you day is going. If everyone is affect by others emotions and actions constantly, it would mean that individuals emotions and actions are not their own – therefore self does not exist, everyone is only a reflection of their surroundings. This reflecting creates connections in the brain, as do experiences and memories.

The brain creates neural connections when experiences happen and are then filed away as memories. These connections help to govern who we are. Studies done on twins have scientists thinking that environment plays into personality and who we are. "Current thinking holds that each individual picks and chooses from a range of stimuli and events largely on the basis of his or her genotype [the genetic make up] and creates a unique set of experiences – that is, people help to create their own environments (Bouchard, 1994)."

Brain connections reflect experience, and even if you are an identical twin, you will have different brain cell connections than your twin (Greenfield, 2002). However, there are some issues with this idea of twins proving the important of environment. Genetically identical twins raised in different environments don't necessarily prove that environment is a factor for personality because of randomly determined instances. Genes, environment, and stochasticism, or basically genetic randomness, all govern biology. Even identical twins don't have the same neural network from birth. However, stochastic instances, such as the mixing of genes, may just be micro-environmental differences (Cashmore, 2010). Because environment is so hard to categorize, we could just be reflections of our surroundings.

There are many components that are part of, and affect environment. Heredity traits affect your functioning in environment, and environment affects development and expression of inherited traits. Family environment can help children learn how to love and trust. People who are loved and supported as children are more likely to take healthy risks in the business world, and in their personal lives as adults because they are more sure of themselves. In a study done on childhood abuse and adult mental heath it was found that, "Emotional abuse in the childhood family environment proved to have a significant main effect on adult mental health (Edwards, 2003)." Family culture, customary beliefs and models are passed down. Everything you believe is most likely learned from family and friends. Peers influence teenagers as they are search for identity – their sense of self. Young People want to fit in, they want to be "cool", therefore they may begin to dress, and act like their peers. Religion can also influence people's morals, ethics, and beliefs, and some people may be more prone to spirituality due to the God Gene. The media can change your ideas of what you should look and act like, as well as what you believe. Every news channel has their own take on the news, depending on what channel or radio station you pay attention to, you may believe different things. Not only can media change ideas, but also can disrupt how young children see the world. At a young age kids have a hard time separating fact from fiction. Things they see in the world such as violence can desensitize them from others feelings ("Your Environment Effects Who You Are", n.d.). Environment has a large impact on how people grow and change. Everything around you affects who you are, and who you are becoming. It is a substantial part of what makes up experiences and memories.

Without environment we would not have experiences, memories, emotions, or any brain activity. I believe that without environment, we would not exist; therefore we are only the reflections of our environment. However, environment is a very open category and almost anything can fit into it, whether it is a vacation, a family, a traumatic event, or how your genes were mixed. I agree with Krishnamurti in the idea that self is everything – "the whole of it all (Reflections on Self – Fifth Talk in Madras 1952, n.d.)." We are everything, but I also believe that everything is us. Humans are one big interconnected web. No one is perfectly unique, but everyone is a unique combination of everything that is around them. As Krishnamurti said, "This is society and society is us" (Reflections on Self n.d.). Because imagining that I have no center is depressing, I also believe that there is something that draws people to things that helps them to create their own environment. Perhaps it is only genetics, stochastic instances, or some chemical in the brain but maybe, just maybe, there is something a little deeper that draws us to the things that shape us.

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