Cultural Daily

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The Science Behind Creativity

Our Friends · Friday, February 7th, 2020

The most beautiful trait of the brain is that it is highly curious. Even though it doesn't seem like a great trait, curiosity is what helps us develop our brain and form new neural pathways that we use in our day to day lives.

Every one of us is a creative person, but what makes us different from one another is how we use the neural pathways inside our brains. Some people are so focused on different aspects of their day to day lives that they might not observe all the creative thoughts inside their minds.

How does the brain work?

Neuroscientists have researched the processes that take place in the brain while we are creative and they have arrived at some pretty interesting conclusions. Usually, the brain observes what happens around us and processes that information through some neurons called sensing neurons.

These sensing neurons are connected to the acting neurons in our brains that make us do something with the information that the sensing organs have sent to the brain. When sending this information to the acting neurons, a connection made of multiple neural pathways is formed.

While these pathways are formed, we can experience various random thoughts that can lead to a lot of interesting creative ideas. This is a way in which someone has come up with the idea of producing large breed puppy food instead of normal dog food, through a random creative thought process that was triggered by a random thought.

Brain networks

Researchers have developed a theory that says that the brain is composed of two networks that are important when it comes to creative thoughts. These networks are responsible for different parts of the thinking process.

The default mode network is responsible for the formation of spontaneous thoughts that pop into your mind. And it is not alone, there is another area, called the executive control network, which is responsible for everything else that happens inside your brain.

So, the process goes like this: first, a random thought comes up in the default mode network. This thought is analyzed and your brain gives it an interpretation. If it is a thought that is worthy to be explored further, then the executive control network approves it and the thought remains in focus.

This creates a collaboration between the two networks that is essential for creative thinking.

Even though it was previously thought that there is a certain part of the brain that controls creativity, studies have shown that this is not true. The creative process is an interactive one that involves large areas of the brain working together.

If you think about it, it is understandable why it was previously thought that we only use 10 percent of our brains and why that perception was shifted in the last two decades.

What the brain does with our random thoughts

For the thought process to become a creative process, it is not enough for the executive control network to approve it. The brain has to do something with the thought so that it is turned into creativity.

So, the brain does these three things: it bends the stimuli, what we see, it breaks our expectations about what we see and transformers or blends things into some other things, so they become something new.

This is how we come up with creative thoughts. It is essential to understand the process so that you can understand why sometimes, even if you try, you are not able to be productive when it comes to creativity. It is an easy process to understand and we can use it to our advantage to develop strategies that allow us to become more creative.

Photo: [redacted] David Pisnoy

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