

5D Thinking:

The Nervous System

Is it good or bad to feel pain? Have you heard the story of the boy who feels no pain? Isaac Brown was born with a condition called “Congenital Insensitivity to Pain”. As a young child, Isaac was unable to feel the sensation of pain after touching a hot stove or dipping his hand in hot coffee. To protect him from injury, his parents had to teach him that seeing blood was a bad thing! To better understand the incredible nature of the nervous system and the value of pain, we will explore it through a 5-dimensional reflection.

◆ **First Dimension: Analytical Thinking**

Scientific Understanding of the Nervous System

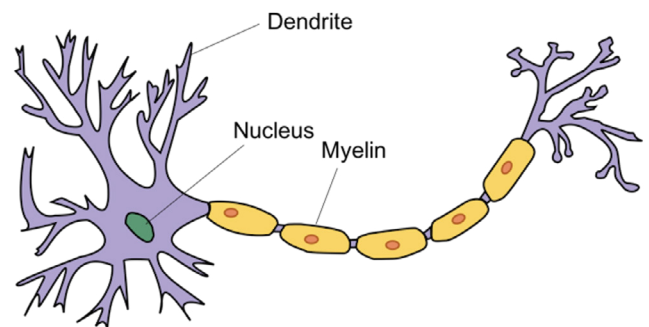
YThe **brain, spinal cord** and millions of **nerves** found in our body make up what is called the **nervous system**. The nervous system connects our **skin, sensory organs,** and **skeletal muscles** through the coordination of **motor** and **sensory** information. It is the center where **conscious (voluntary) functions** like talking, eating and walking, and **unconscious (involuntary) functions**, such as breathing, digestion and the beating of our heart, are coordinated.

The **spinal cord** is a very thick rope of delicate nervous tissue that is protected by a bony structure called the vertebral column, or **backbone**. One of its roles is to carry signals from the brain to the rest of the body. Another role is to control reflexes. **Reflexes** are quick movements that the body appears to perform without informing the brain such as when your hand is suddenly pulled away after touching a hot stove.

Nerves are made up of nerve cells, also known as **neurons**. Nerve cells are specialized cells that are designed to transmit signals from one part to another part of the body. Messages between cells seem to move as a result of a combination of electrical and chemical signals.

When we think of doing something, an electrical signal is produced in the brain. This electrical signal is then delivered along the nerve cell to synaptic terminals (the ends of the neurons), which are prompted to release chemicals called neurotransmitters. These lifeless chemicals then move in a seemingly conscious fashion onto the next neuron, which causes a spark, or electrical signal. All these processes occur at incredible speed. So, for example, if you decide to flex your right arm, a signal is immediately created in the brain. The signal passes from the nerve cells in your brain all the way down to the muscle cells in your arm resulting in the contraction of the correct muscles. Your nervous system is thus harmoniously connected to your muscular system and to your entire body.

Nerve Cell Structure



◆ Second Dimension: Critical Thinking

Comparing the Nervous System to Man-Made Sensors

It is quite difficult to find a single man-made object that can mimic our extremely sophisticated nervous system. Nevertheless, to appreciate the various functions of our nervous system, we will compare the nervous system to the light sensors in a streetlight system.

A man-made system that uses sensors and electrical signals is the automatic streetlight system. Modern streetlight systems work by using light sensors called photocells that detect the level of light in the streets. When it gets dark and the light level is low, the photocell signals to the computing unit in each streetlight to activate an electrical signal that switches the streetlight on. At dawn, when the sun rises, the light sensors- detecting an increase in light levels- send a signal to the streetlights to switch them off. The ambient light sensor in your smart phone

works in a similar way by measuring the light levels in the room you are in and auto-adjusting your screen's brightness.

In a similar way, sensors in our skin detect temperature changes outside our body. When the external temperature is high, the skin sensors send a signal to our brain. Our brain then responds by sending signals to the muscles lining the blood vessels in our skin and as a result, the vessels release the excess heat from the body in the form of sweat. When the weather is cold, the skin sensors send a signal to our brain, which is in turn triggered to send a signal back to our muscles to contract repeatedly, allowing us to shiver, generating heat. The nervous system is thus a mechanism through which your body's responses are coordinated with environmental changes resulting in a state of balance.

In short, the nervous system somehow functions like an intelligent communication system providing a great platform for the constant transmission of information between the brain and the body. In reality, our advanced communication networks and smart sensors are no match for our marvelous nervous system. Indeed, human inventions are often inspired by the incredible systems found in both human and animal bodies.

◆ Third Dimension: Critical Thinking

Reflecting on The Maker

Reflect on the sensors found in a man-made streetlight system. What does it take to make them? Would you believe that the wind can produce such devices?

Now let us imagine that an intelligent man from the Middle Ages came and saw our complicated streetlight systems. At first glance, it is likely that he would assume that there must be a genie of some sort inside the streetlights who turns the lights on and off at the right time.



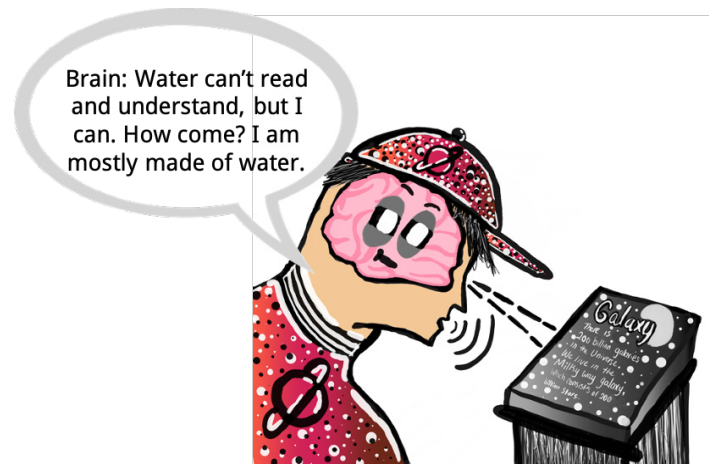
The man will probably ask himself a series of questions: Where did those smart devices come from? How did their blind components come together so meaningfully? Did they appear out of thin air, or did their intricate components come together randomly? Who designed the light sensors in the street light system? Was it the same person who designed the street lights?

Using the same reasoning, we can ask ourselves: Who designed the nervous system in our body? Who designed our body? Is He the One who allows us to breathe every moment without effort, the one who makes our eyes see? Isn't He the same One who enables us to be able to read the letters on this page and understand their meanings?

When you are thinking about those questions at this very moment, light rays are bouncing off this page into your eyes and are being processed by your eye's light sensors. The light sensors then transfer electrical signals to your brain. Your brain is now making sense of all those little black shapes that make up the writing on the page you are reading. Who designed your brain is such a way for you to understand the meaning of the written word?

As we study our brain and nervous system, we will logically conclude that it must be the

work of someone with tremendous knowledge and power. Since the odds of a simple man-made sensor being made by someone without the required knowledge and ability are negligible, what about the extremely complex, living human brain? The more we realize how wonderful the brain is, the more we can conclude that its Maker can only be someone with great knowledge, power, and wisdom. Now let us explore the hidden reality behind the nervous system.



◆ Fourth Dimension: Meditative Thinking

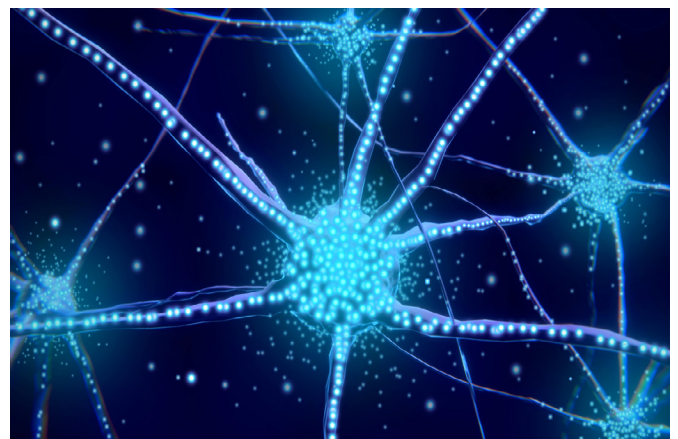
Understanding the Attributes of the Maker

What is the Hidden Hand behind the intricately inter-connected and well-organized activities in our body? How do we get to know Him and be sure about His existence?

Recall- the nervous system is comprised of the brain, spinal cord and nerves. It is not an isolated system. Rather, it is well-connected to the entire body and linked to the rest of the world; it is connected to sunlight, air, food, water and therefore to the sun, sky, seas and biotic living systems. In many ways, your body and therefore your brain and nervous system are connected to the entire universe.

Can blind and ignorant neurons perform such incredible tasks? How about the individual atoms or molecules that make up these neurons? Neurons are not qualified to perform such amazing acts. In fact, cells have neither the knowledge, nor the wisdom or power required to understand such an elegant system- let alone produce it. Similarly, we cannot ascribe these ex-

traordinary capabilities to the molecules, atoms, and subatomic particles of the nervous system because they do not have the necessary knowledge and power. Otherwise, we would have to claim that the neurons- and their molecules and atoms from which they are made- are more intelligent than scientists because they achieve things that science is unable to do. In reality, rather than being an agent itself, our nervous system is a platform through which the Hidden Power controls our bodies.



Who is the Maker of our nervous system? What can we know about its Maker? The Maker of the nervous system must have the knowledge and power to create and sustain it. In addition, since our nervous system is connected to the entire universe, its Maker must be aware of everything that we experience through it. The Maker must know of the need to balance all the functions of our body so that they remain in sync. The precious gift of a nervous system shows that The Maker is very generous and kind. Indeed,

since no power is above the Infinite Power, He has no obligation to make our nervous system- yet he does. Therefore, we can conclude that He creates nervous systems for living beings purely out of His mercy. He communicates His generosity to us through the granting of such a precious system free of charge. Indeed, our nervous system is evidence that our Maker is All-Seeing, All-Knowing, All-Powerful, All-Wise, Most-Merciful and Most-Kind.

◆ Fifth Dimension: Moral Thinking

Responding with Better Character

Reflect for a moment on the value of your brain and nervous system. What would happen to you if your nervous system were faulty?

Do you remember the story of Isaac who did not feel any pain? Feeling pain is just one of the many beneficial outcomes of the nervous system. Even a partial defect in this system will result in serious consequences. People with Isaac' condition have a short life expectancy because they are incapable of feeling whether their bodies are experiencing damage from wounds, illness or accidents.

Now that we have learned about the value of our nervous system and about its Kind Maker, should we not pay our due respect for this precious gift? The True Bestower of Bounties wants three things from us: remembrance, reflection, and gratitude.

Indeed, The Creator wants appreciation through our good words and good deeds. He wants us to remember that He is the One who continues to bless us with a healthy nervous

system and allows it to work in marvelous ways. We should always reflect on the perfection of the nervous system in order to understand its true value and be grateful to our Creator.

1

Remembrance means realizing that there is a Creator of this system and that this creator is All-Knowing, All-Wise, All-Powerful, and All-Merciful.

2

Reflection means meditating upon the miraculous creations we discover- such as the nervous system- by observing and exploring the world.

3

Gratitude means being thankful to the wise and merciful Creator for such a wonderful blessing. As a result, the grateful does not waste the gift, but instead honors it and uses it in a beautiful way.