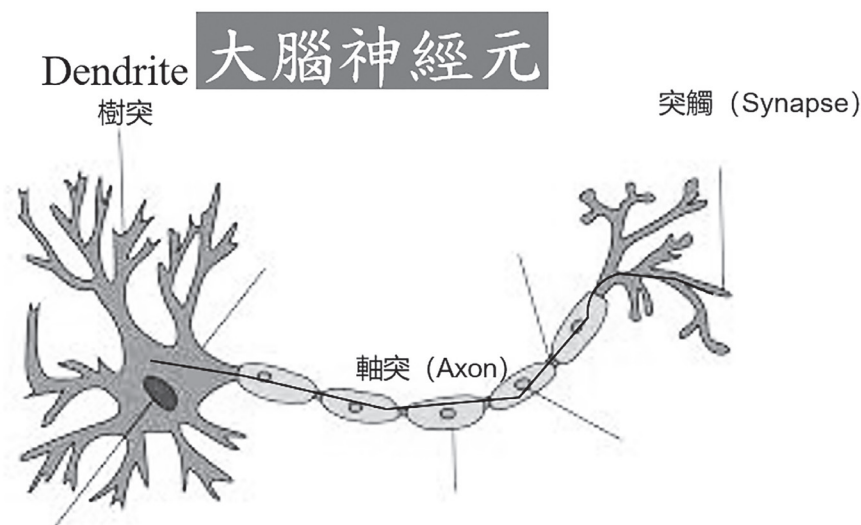


大腦的運作和念佛的關係

The Brain Mechanisms and Mindfulness of the Buddha's Name

恒懿法師 文

By Dharma Master Heng Yi



大腦的主要組成細胞是腦神經元(Neurons)，腦神經元是由數百萬個軸突和樹突相互連接的神經元組成的。

The brain does not consist of muscle cells, but of brain neurons, which are the main type of cells. Millions of neurons are interconnected by axons and dendrites.

我們的意識和我們的大腦的活動有密切的關係，現在科學很發達，我們對腦子的結構也瞭解了很多，我們可以通過對大腦結構的了解，和信息如何傳遞，來合理的解析我們思想是如何在大腦裡面形成的，從而幫助我們通過修行來改變我們的習氣毛病等。

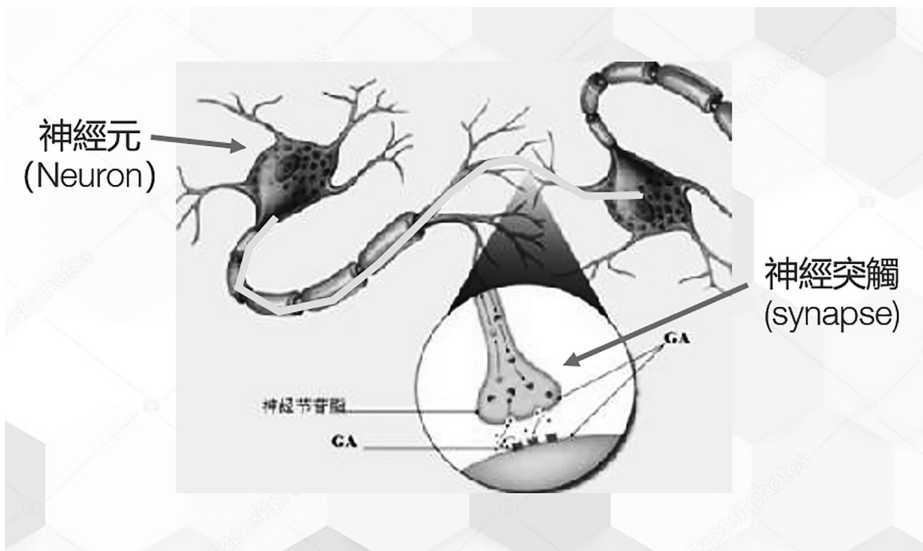
大腦是一個三磅重的超級計算機，我們的大腦會影響我們如何思考，而我們如何思考也會改變我們大腦的神經元鏈接。

大腦的主要組成細胞是腦神經元(Neurons)，腦神經元是數百萬個由軸突和樹突相互連接的神經元組成的。神經元能感知環境的變化，再將

Our consciousness is closely related to the activity of our brain. Science has advanced a lot and revealed much about the brain's structure. By understanding how the brain is organized and how it processes information, we can make informed guesses about how our thoughts emerge in the brain and use this knowledge to help us change our bad habits and mindset.

The brain is a three-pound supercomputer that influences our thinking. Our thoughts, in turn, alter the structure of the neural network in our brain.

The brain does not consist of muscle cells, but of brain neurons, which are the main type of cells. Millions of neurons are interconnected by axons and dendrites. Neurons can sense changes in the environment, and then relay the information to other neurons, and direct the group to react. Neurons comprise about half of the nervous system, and most of the other half is made up of glial cells. We'll discuss glial cells later.



神經元之間是通過神經突觸（神經元間的接合部）間的化學物質的傳遞和化學反應，而產生活動電流的方式來接受和傳遞信息的。

Neurons communicate by transmitting chemicals and generating electrical signals at synapses, which are the junctions between neurons.

接受到的信息傳遞給其他的神經元，並指令集體做出反應。神經元佔了神經系統約一半，其他大部分由[神經膠質細胞]所構成。

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軸突通過一種稱為突觸來向其他神經元傳遞信號。當一個動作電位通過軸突傳遞到一個突觸時，它會觸發釋放一種稱為神經遞質的化學物質。神經遞質會和突觸後細胞膜上的受體相結合。

每當神經細胞受到一定刺激，神經元會輸出電脈衝。電脈衝從一個神經元傳到另一個神經元，並會刺激其他神經元做出指令，或者令我們產生感受。

我們再來看我們大腦的神經組織。神經元(neuron)中能夠延伸到肌肉組織的部份稱為軸索(axons)，它像電線一樣需要絕緣體包裹，而這個絕緣體就由髓磷脂(myelin)來擔任。之前，我們提到[神經膠質細胞]，

人腦之中分佈著大量「自由的」髓磷脂，它們觀測腦神經纖維的信號發射和組合，哪些神經纖維用的越多，它們就過去把這一段線路給包起來，形成絕緣體稱為髓鞘，使得線路中的信號傳遞更快，形成

Neurons communicate by transmitting chemicals and generating electrical signals at synapses, which are the junctions between neurons.

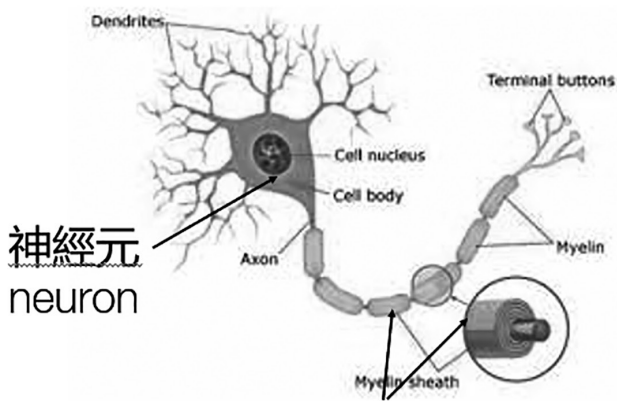
Axons send signals to other neurons via synapses, which are specialized junctions. An action potential traveling along an axon triggers the release of a neurotransmitter, a chemical messenger, at a synapse. The neurotransmitter binds to receptors on the membrane of the postsynaptic cell.

When a nerve cell is stimulated, it produces electrical impulses. These impulses travel from one neuron to another and stimulate other neurons to send commands or create sensations.

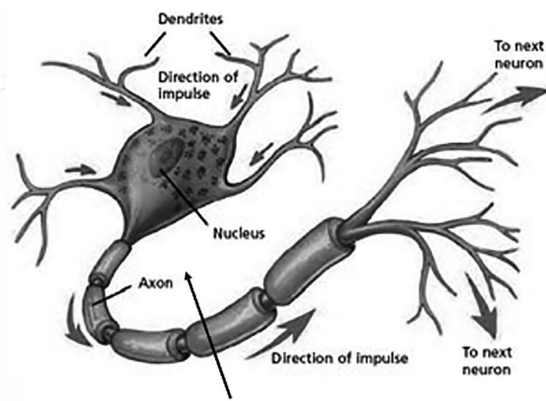
Let's examine how the neurons in our brain are organized. The axon is the part of the neuron that can extend to the muscle tissue, and it is wrapped by an insulator called myelin, which is similar to a wire coating. We previously mentioned glial cells, which are the cells that produce myelin.

The human brain contains a lot of “free” myelin, which is not wrapped around nerve fibers. Scientists can observe the signal emission and combination of brain nerve fibers using special techniques. When nerve fibers are used more frequently, myelin will cover them and form an insulator called the myelin sheath. This makes the signal transmission along the nerve fibers faster, creating a highway.

Myelin is a protective layer of fat and protein that wraps around nerve fibers, like the insulation around electrical wires. It allows the myelinated nerve cells to transmit signals faster and more efficiently between the brain and other body parts.



髓鞘 Myelin Sheath



髓磷脂 Myelin

髓鞘不僅能像電線塑料皮一樣保護「神經電線」不致短路，還能使被包覆的神經細胞傳導腦與身體各部之間的訊號，並能加速神經訊號的傳導。也是在一些軸突受損的情況下引導軸突的再生。

This process of wrapping nerve fibers with myelin is medically known as nerve myelination. The quality of myelination affects the speed and accuracy of information transmission in the brain network. With good myelination, information can be sent faster and more precisely, enabling us to react quickly.

高速公路。

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這種包裹的過程在醫學上就叫神經髓鞘化。髓鞘化的品質將影響日後腦網絡電流信息傳遞的效率和結果，髓鞘化良好，信息之間的傳遞才能快速準確，我們才能反應迅速。

髓鞘化品質良好外在表現為：專注力好，思維效率高；髓鞘化不良，則容易產生神經電流信息流失，即所謂漏電現象，電流不能準確快速地傳送到目的地。其外在行為表現就是專注力容易受干擾，不能較長時間地把注意力保持集中在某一活動上，容易分心，多動，坐不住，做事半途而廢。

這就是為什麼小孩容易做錯事情或有許多失誤，而髓鞘化是在神經纖維周圍形成保護層的過程。這層保護層能提高大腦神經訊號傳遞的

It also promotes axonal regeneration when some nerve fibers are damaged.

This process of wrapping nerve fibers with myelin is medically known as nerve myelination. The quality of myelination affects the speed and accuracy of information transmission in the brain network. With good myelination, information can be sent faster and more precisely, enabling us to react quickly.

The quality of myelination affects cognitive functions, such as concentration and thinking efficiency. Good myelination allows nerve signals to travel faster and more accurately, resulting in better focus and problem-solving skills. Poor myelination leads to loss of nerve signal information, a phenomenon known as leakage, which impairs the transmission of nerve signals. This can cause poor concentration, short attention span, distractibility, hyperactivity, restlessness, and difficulty completing tasks.

This is why children tend to make mistakes or do wrong things. They do not have enough myelination, which is the process of forming a protective layer around nerve fibers. This layer enhances the speed and efficiency of nerve signal transmission in the brain. When children repeat an action a few times, they become accustomed to it and stop doing wrong things.

To break bad habits, we need to weaken the nerve connections that have been myelinated by those habits, or strengthen our practice (such as reciting the Buddha's name, chanting mantras, meditating, etc.). This will help us myelinate the nerve connections that support

速度和效率。當兒童重複一個動作多次時，他們就會養成習慣，不再做錯事。

所以如果我們要改掉壞習慣，就要把已髓鞘化的壞習慣神經消滅，或要加強我們的修行（比如念佛，念咒，打坐等）就要把這個修行的神經，好品質的髓鞘化。就是不停的練習。

愛迪生的名言：所謂天才，就是1%的天分，加上99%的努力。我們看看參加比賽的運動員，或音樂家等，每一天都要花十幾個小時來練習，才有可能在比賽時熟練表現出成績來。

所謂老實念佛，就是把念佛這條神經，訓練成為高品質的髓鞘化，讓髓鞘非常厚實包裹念佛這條神經，那麼任何時候都會想到念佛。行住坐臥都在念佛。

記得有一次香港道場慈興寺的比丘法師來主持禪七，他在講法的時候，提到他們在香港慈興寺辦六字大明咒的法會時，一共七天，每天二十四小時不停地輪流唸，有一天他一直在想那個六字大明咒的調子，突然間他發現所有的聲音都是六字大明咒，電話鈴聲、人們講話聲、走路聲、煮飯聲等等，他聽到的都是六字大明咒。這個讓我想起有一個人參加念佛法會的時候也有同樣的境界，他向師父上人報告這個情形，他說他走在路上，車子的聲音，講話的聲音，電話的聲音，開水龍頭的聲音，他聽的都是阿彌陀佛。師父告訴他因為他很誠心，又用功所以感到這念佛三昧的前方便。

這情況就是髓鞘非常厚實包裹念佛這條神經，而且這條神經的髓鞘非常大，大到其他的神經也等於被包在裡面，所以無論做什麼事，所有神經傳導的電流，都會直接傳導到念佛的這條神經。因此不管做什麼事，他聽到的，感受到的都是阿彌陀佛，或是六字大明咒。

我們修行，無論什麼法門，就是要把那條屬於修行法門的神經線作高品質的髓鞘化。使我們能夠專心一意的修行下去。也就是所謂的老實修行。

our cultivation. We just need to keep practicing.

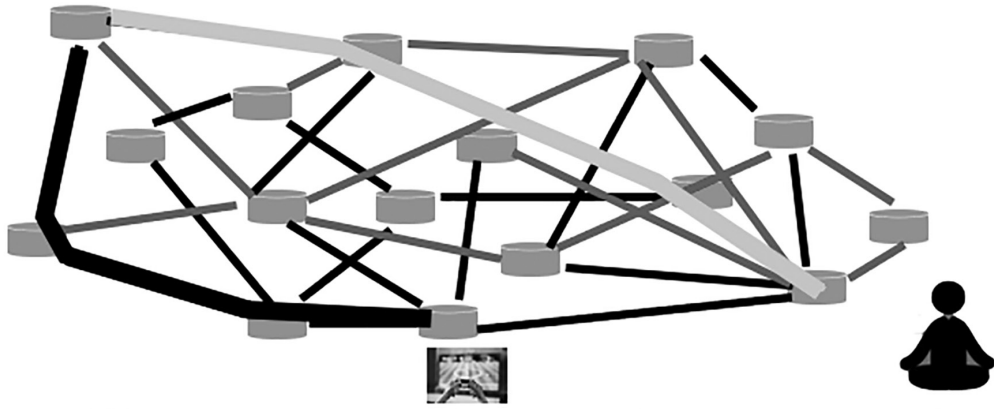
Edison's famous quote is: "Genius is one percent inspiration and ninety-nine percent perspiration." This means that success requires a lot of hard work and dedication. For example, athletes and musicians who compete at a high level must practice for more than ten hours a day to perform skillfully.

The purpose of sincerely reciting the Buddha's name is to improve the quality of myelination of the nerve fibers that are involved in Buddha recitation. This way, the myelin sheath becomes thicker and covers the nerve fibers more completely, so that you can think of the Buddha's name at any time. Whether you are walking, standing, sitting, or lying down, you can always recite the Buddha's name.

Once, Golden Buddha Monastery invited a Dharma Master from Cixing Monastery in Hong Kong to lead a meditation session. While teaching the Dharma, he mentioned that they had chanted the Six-Syllable Great Bright Mantra at Cixing Monastery for seven days and nights without interruption. One day, he was pondering the melody of the Six-Syllable Mantra, and suddenly he realized that all the sounds he heard were the Six-Syllable Mantra: the phone ringing, people talking, walking, cooking, etc. He only heard the Six-Syllable Great Bright Mantra. This reminded me of someone who experienced the same state during a Dharma assembly of Buddha name recitation. He told the Venerable Master about his situation, and he said that when he was walking on the street, the sound of the car, the sound of conversation, the sound of the phone, the sound of turning on the faucet, all he heard was Amitabha. The Venerable Master said that because he was very sincere and diligent, he had reached the preliminary stage of Buddha name recitation samadhi.

When the myelin sheath is very thick and covers the nerve fibers that are used for Buddha name recitation, it also affects other nearby nerve fibers. This means that whatever you do, all the nerve signals will be directed to the same nerve fibers for Buddha name recitation. As a result, you will only hear and feel Amitabha Buddha or the Six-Syllable Great Bright Mantra, no matter what you do.

Whatever Dharma door we follow, we need to create high-quality myelin sheaths that correspond to our practice



基本腦部網路架構被遺傳支配。基本腦部網路架構跟個性、學習及思考能力有很大的影響。
Basic brain network architecture is governed by genetics. Basic brain network architecture has a great impact on personality, learning and thinking abilities.

我們天生的基本腦部神經網路格局架構生下就已經形成。這部分我們是無法改變的！而這個基本腦部神經網路跟我們的個性、學習及思考能力有很大的關聯。當然，每一個人都可以藉著後天的環境的刺激來調整基本的神經網路架構，甚至經由訓練學習可以超越本來的格局。

假設，這個人很愛打電動，所以打電動的神經線很粗，他決定要改掉這個壞習慣，於是就把打電動的時間來打坐，慢慢的那個打電動的神經線外面所包的髓鞘漸漸的薄了，然後打坐的那條神經線的髓鞘越來越粗，於是愛打電動的習慣就改成了打坐。當然我們無法一次就完全改過來，需要一次一次的重複去做。

拿我自己做例子，我過去並不喜歡唯識，因為感覺上好像就是一大堆的名詞堆砌在一起，所以一聽說要講唯識，內心是有排斥的，但是想到別人想學唯識，我應該學習講，開始是看參考書籍以及別人怎麼講，慢慢地理出一點頭緒。也開始喜歡了，同時也希望聽聞唯識的人，生出歡喜心。由此可知我們的喜好，我們的習慣是可以改變的。✻

method. This helps us focus on our practice. This is what we call sincere practice.

We are born with the basic neural network structure of the brain already formed. This part is fixed and cannot be changed. The basic brain neural network influences our personality, learning and thinking abilities. However, everyone can modify the basic neural network architecture through environmental stimulation, and even improve beyond the original pattern through training and learning.

Imagine that this person likes to play video games very much, so the nerve fibers for video games are very thick. He decides to quit this bad habit, so he uses the time he used to play video games to meditate instead. Gradually, the myelin sheath around the nerve fibers for video games becomes thinner, and the myelin sheath around the nerve fibers for meditation becomes thicker. This way, he changes his habit from playing video games to meditating. Of course, this cannot happen overnight, and he needs to practice repeatedly.

For example, someone asked me to teach the Consciousness-Only school. I used to dislike the Consciousness-Only school, because it seemed to have too many technical terms. I felt reluctant to teach it, but I thought that if others wanted to learn it, I should try to teach it. I started by reading reference books and learning from other teachers, and gradually I understood it better. I also started to enjoy it, and I hoped that others would appreciate it too. This shows that we can change our preferences and habits. ✻