

A Solution for Repairing Plastic Audio Nerves

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Abstract

Did you hear about brain damages and people who lose their hearing because of it? or maybe you heard about plasticity nerve, but I have called them lazy nerves! When people talk to each other or watch TV and hear voices, lyrics. It is because of neurons. Sounds have frequency and vibration, frequency is a rhythm, in physics it is measured as cycles per unit of time. If someone's auditory nerve hurts they can't hear well because voice frequencies reach to brain nerves for response by audio nerves. In this case, we can say their nerve is got plastic, or we can say their nerve is got lazy! People who have this issue use hearing-aid for helping them to hear a bit better, but they have a speech perception problem. We can improve their hearing by an attack on their auditory nerve with a wave with a low and high speed for force nerves to vibrate.

Keywords: brain waves, brain, neuron, auditory nerve, electromagnetic waves, brain signals, gamma waves, impulse, gamma rays, frequency, vibration, ear, hear, ion.

Introduction

What makes nerves plastic or lazy? If someone's audio nerves hurt they can't hear well because voice frequencies reach to brain nerves for response by audio nerves in other hands, we can say we hear with our brain. In this case, we can say their nerve is got plastic, or lazy because their nerves do not vibrate anymore when they receive sound waves!

I have been examining a person for 14 years who has had her neurons damaged by a stone when she was 4 years old. Losing her hearing is because of her genetic and it is congenital, doctors said. It's absolutely incorrect, here is the reason, if a person has a genetic problem they cannot speak well because they cannot hear people's voices when they born and learn how to talk, in other words, they will be deaf or half deaf.

This issue not only influence on neuron and hearing system but also it makes other nerves lazy, these people have problem with their eyesight and their focus.

However, human neurons are always changing, in fact, they repair themselves, and if neuron damage it will repair again. But what about plastic neurons?

When nerves hurt, they remains plastic after a period of sensory deprivation. In fact, auditory nerves are working well but it should force plastic nerves to vibrate, it is called auditory neuropathy.

In this article, I intend to present a solution to this problem by using physics and neuron science, and I will discuss how a neuron works and why those have electricity and we can vibrate them with external waves.

1 - Sound waves and Frequency Range

Sounds are not only some voices which rich to our ear and brain nerves! Those are waves with their special frequency.

Here is a plot that shows a sound wave by using Audio library in python language (Figure 2).

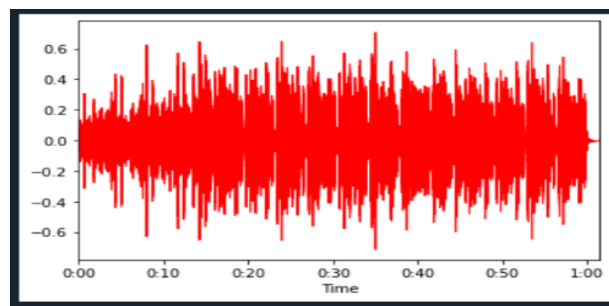


Figure 1. Sound wave with python language

Sound waves make the eardrum vibrate, when someone talks to us or we listen to music, sound waves first reach to hearing system and hearing system transfer it to the neural system, and finally, we can hear, so it is correct if we say that people hear with their brain!

I intend to focus on human voice frequency, different voices possess different vibration and frequency but in general, the range of human voice is according to the table below:

Female voice frequency	Male voice Frequency	Hearing Frequency Range
350 Hz - 17000Hz	900Hz - 8000Hz	300 - 3000 Hz

Table 1. Frequency range for females and males and the frequency range of human hearing

Frequency scale is Hz(1000 Hz = 1 KHz), According to table 1, human voice possesses an extended range frequency, base on a test, the human hearing organ can hear vibrates 12000Hz and is a high tone.

But even if voice frequency be strong, with a plasticized nerve that person is not able to hear!

What is the solution? We need to force these lazy nerves to vibrate again by the attack to them by a high frequency and high-speed waves!

2 - The role of brain waves

All of our emotions, learning new technologies, listening, hearing and every event in our body and our mind is the result of our neuron communication!

Neurons are able to change their structures, when we meditate or study or every action we do, our nerves change because all of our actions are the result of neuron interaction!

Brainwave speed unite is Hertz (cycles per second) and they are divided into slow, moderate, and fast waves.

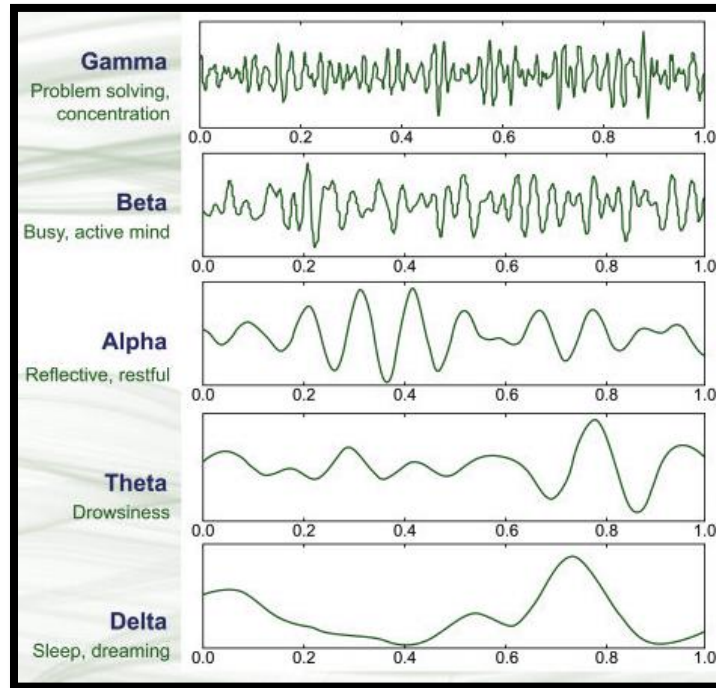


Figure 2. Brain waves frequency per second, belonging to beta, alpha, theta, delta, and gamma waves.

According to figure 2, the gamma wave possesses high frequency and finally, it has the most speed among the brain waves because frequency and speed have a direct relation base on the golden rule for waves.

$$v = \lambda f \quad (\text{Formula 1})$$

According to formula 1, the “golden rule” is the relationship between the speed (v) of the wave, the wavelength (λ) and the period (T) or frequency (f).

Gamma wave frequency is 25 Hz -140 Hz, the 40-Hz point being of particular interest.

We observed sound waves and brain gamma waves and their frequency, but what will happen when someone’s voice reach to the human ear?

In fact, voice signals are some inputs that reach to the nerves and during a process, outputs are the words which we hear!

Why are we focusing on neuron? Because we hear with our nerves, and ear system is a way for reaching voice signals to the auditory nerve and then to brain nerves!

When sound waves reach our ear, during some process in the auditory system, chemicals move into the hair cells and create an electrical signal, the auditory nerve carries this electrical signal to the neuron, brain nerves turn it into a sound that we recognize.

Our brain is just like a machine, or like a computer that you write some codes and your compiler interprets it to machine language and finally, we can see the output in the console. In other words, we can express this statement:

Neural code \approx Binary code

It means we assume sound signals as input (0, 1) and the final sound that is recognizable for us is output! but what will happen if the compiler doesn't work properly? Those are known as plasticity nerves that I called them lazy nerves because those nerves don't work 100% and with increasing age, the percent of the hearing will decrease!

A solution to make lazy nerves to vibrate again is attacking them with a high frequency like gamma waves in the brain. We can't attack to lazy nerves with any waves, its frequency and energy should be control. If a wave with a so high frequency use it will hurt to healthy cells and nerves certainly! So we should choose it carefully with test and reason.

Scientist found the gamma wave is the most high frequency in brain. They use electroencephalogram (EEG) and Magnetoencephalography (MEG) for revealing the electronic field and electromagnetic field in the brain. They place two electrodes with approximately 0.2 V for a tiny fraction of time, for example, 0.1s on the head skin.

Why neurons have electromagnetic waves?

Did you ever think why do we can connect head skin to an electrical circuit and detect electromagnetic waves by it and why do we want to use an external wave to make lazy nerves active again?

In neurons, the potential for action on the irritating membrane of a nerve cell arises, extends the length of the axon, and is responsible for delivering the message. During the action potential, the sodium pores in the cell membrane open and a positive current is generated as the sodium ions enter the cell.

After creating the action potential at a point on the axon, the sodium pores close at that point and the axon opens at the next point. As the sodium pores close, the potassium pores open, and with the flow of potassium ions out of the axon, a positive current is generated.

So it's a proof that we can use an external wave to force lazy nerves to vibrate, we can assume these ions as binary codes, in fact, our brain is full of 0,1 (+, -), you can call it binary house!

You can observe a simulation of the electric and magnetic fields in the brain at following (Figure 3):

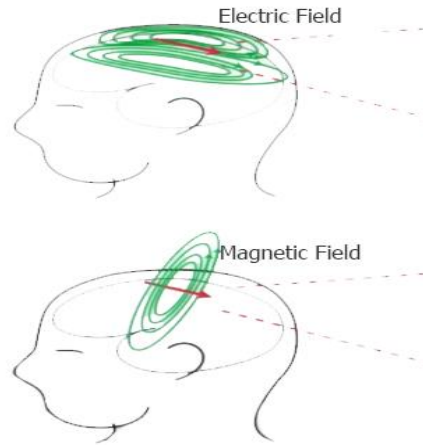


Figure 3. Neural Electromagnetic and Electric fields that are detected by EEG and MEG test

3 - Sun rays and nuclear fusion

3-1- Super low frequency

If we attack to lazy nerves with a so high-frequency wave, it will destroy them and other nerves completely, their frequencies should determine by considering gamma waves frequency in the brain. It means, the frequency must be approximately 25-300 Hertz.

I perused about sun ray's frequencies and its different classes but only its radio rays because other classes have so high frequency and we can't use them.

LF	VLF	ULF	SLF	ELF
(Low Frequency)	(Very Low frequency)	(Ultra Low Frequency)	(Super Low Frequency)	(Extremely Low Frequency)
30KH – 300KH	3KH – 30KH	3KH – 300HZ	30HZ – 300HZ	3HZ – 30HZ

Table 2. Sun radio rays based on their frequency

As you're observing (Table 2), SLF ray's frequency (30HZ – 300HZ) is near to gamma wave frequency (25HZ – 300HZ), so it's acceptable for brain to receive it, and it will not hurt healthy nerves.

Radio waves and ions

We proved that neuron possess ions and they create an electromagnetic field and we can use technologies like EEG and MEG for detecting brain waves because of them!

Radio waves with low frequency are proper for attacking to lazy nerves, but we are attacking to a system with an electrical field, what will happen if we combine SLF with ions?

If radio waves combine with ions, these waves will travel in a straight line and those ions have an important part not only in radio communications but also in neuron and neurophysics.

Discussion

In this article we found that lazy nerves (plasticity nerves) aren't the end of story people who have this problem and also they haven't a genetic issue, neuron possesses too many ions and in fact, they treat like binary codes.

With brain waves knowledge and being familiar with their actions and structures we can force lazy nerves to vibrate again and in this way, we can prevent Alzheimer. In the next section of this article, we will discuss this solution for people who have an eyesight problem because of head damage.

Methods

Python language, plot modules, physics, neuron field, personal research for 14 years

Experience

This Article is based on 14 years study and searches about neuron and how they can be related to audio nerves, I didn't consider a brain and an ear separately, our nerves related to each other in the whole body and they are sending different signals, every nerve can affect directly on an organ, with measuring their frequency and signals I estimated the most related signal to the audio nerve for attacking to them.

We learn that we shouldn't always rely on too many usual references, this article is based on python programming and mixing computer language with neuroscience and neurophysics.

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