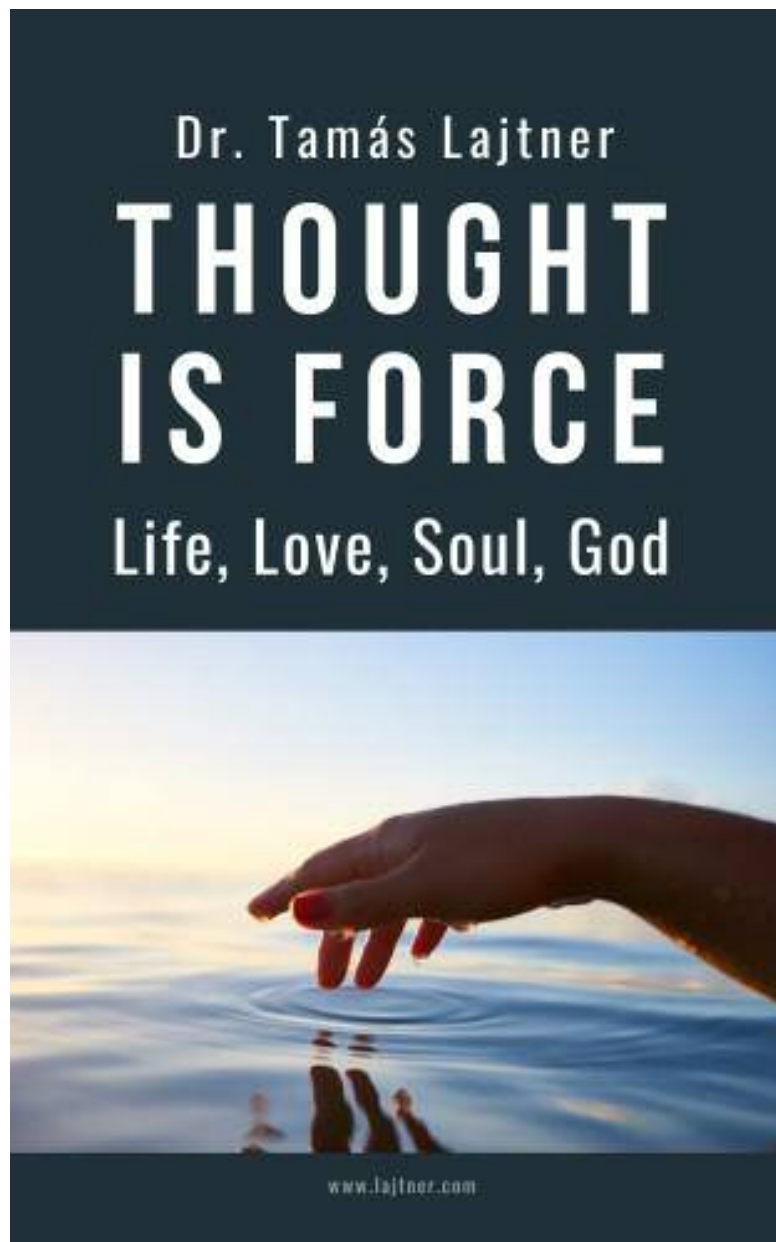


Dr. Tamás Lajtner

Thought is Force

Life, Love, Soul, God



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I. THOUGHT IS FORCE

What is thought and what is the force of thought?

1. THINK OR MURMUR THE MANTRA!

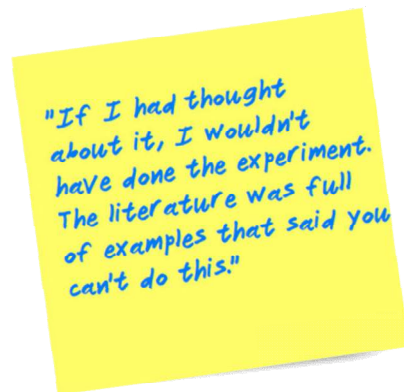
I have researched the force of thought for more than twenty-five years. Thought force is a real phenomenon. It is not the same as the brain's electromagnetic signal. Thought force is immeasurable without appropriate indicators, this force is an unexplored fundamental interaction. Therefore it does not exist in terms of physics theories. No problem. We can use it if it is not qualified as science. Using thought force is our inborn capacity.

Thought force is very intriguing. Everybody has it, but nobody knows what it is. Here I try to give an explanation. The science of thought force is very complex, it is more than sheer physics. It is inter- and multidisciplinary, and it needs a new world view. So young people are in favor, since they are more open and therefore smarter.

Is this book a valuable one? Yes, definitely yes, if you are able to release yourself from the false statements of mainstream science and ignore statements like: "There is no force of thought. Thought force has neither physics nor science".

Mainstream sciences are strong, but there are cases when definitely wrong. This is not the first, and probably not the last mistake of some mainstream science.

Just remember Silver's words! He invented the unique adhesives for "Post-It" Notepads.



Dr. Tamás Lajtner
Budapest Hungary (EU),
June 2019

2. THREE PARADOXES OF THOUGHT

Here I list three paradoxes of thought. I do not think you will understand them immediately. They are yet useful, because you meet three new aspects you have not seen before. This is your first step to think about thought a different way. At the end of this part of the book I relist them and I will give detailed explanations.

1. Your thoughts change even when they do not change.

2. If you are thinking today what you thought yesterday, you are already thinking something else.

3. In order to remain in one place you should run.



FIG. 2-1 In order to remain in one place you should run.

(Credit Picture CC BY-NC-SA 4.0 T. Lajtner, Lajtner.com from CC0 Clker-Free-Vector-Images, Pixabay.com. Edited)

I gave the third paradox in a general form, because it seems to be true everywhere. Here is an every day example: If you have had the same standard of life as those in your surroundings and you want to keep pace with them, you will need to work harder.

3. POPULAR BUT WRONG DEFINITIONS OF THOUGHT

Although thinking is one of our fundamental activities, there is no generally accepted definition as to what thought is. Understanding thought has been a goal of many academic disciplines. The most often used elements of the different definitions are the following:

1. Thought is always created by humans.
2. Thought is always created by brain or mind. In this sense brain and mind are not synonyms.
3. Thought is always the product of thinking.
4. Thought exists in a state, which is not bound by space and/or time.
5. Thought is immeasurable; thought expresses itself in the physical universe only via electromagnetism.
6. Thought cannot be described with the tools of physics.

In the following you will see, all the six above mentioned statements are false. So, what is thought?

4. MEASURING OF THOUGHT

4.1. Electroencephalograph (EEG) and TMS

According to current, widespread understanding, measurable thoughts (or their effects) are the brain's electric/electromagnetic signals. The brain's electric/electromagnetic signals can be demonstrated in several ways. In the Reference¹ you can find more than ten devices that can detect brain activity. The list is not complete. There can be even more different kinds of devices, but the list is complete, because it shows every method we currently use. They measure either the electromagnetic activity of the brain or the electromagnetic activity of any contrast agents. One of these instrument is the electroencephalograph². The electroencephalograph's output varies with changes in thought. As a result, up to this data the measurable (effects of) thought and the brain's electric (electromagnetic) signals have been synonymous. Since the brain is in the head, thoughts are also in the head. This, however, is only partly true. Thought can, indeed, leave one's brain. The electroencephalograph (EEG) itself provides evidence of this, since it records data of the thought outside the head along the scalp, see FIG. 4-1.

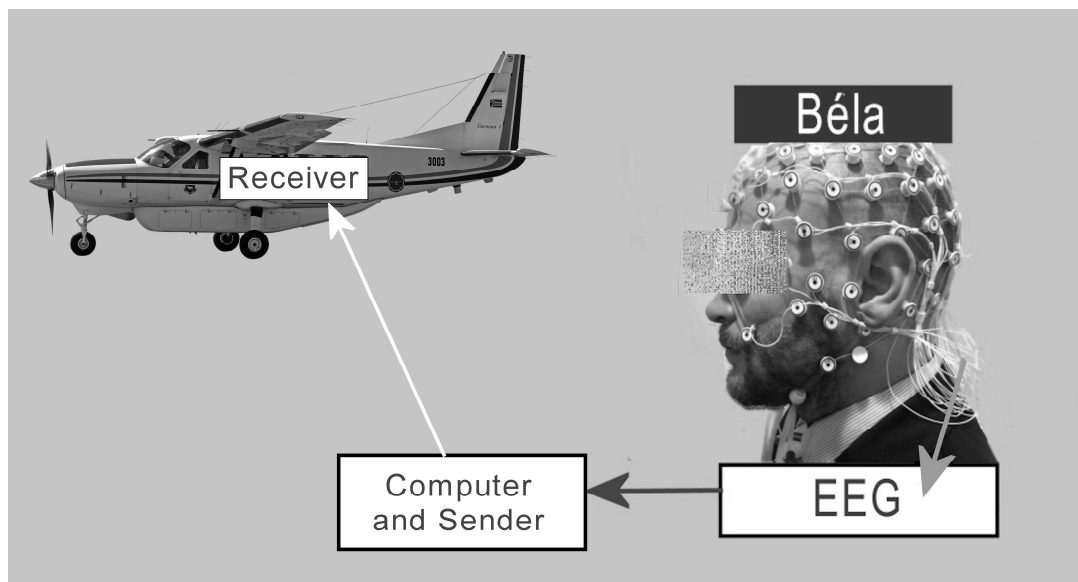


FIG. 4-1 Electroencephalograph (EEG) measures the electric waves of the brain. Nowadays it is possible to control devices with these signals of brain.

Model^a.

(Credit: Picture CC BY-NC-SA 4.0 T. Lajtner, Lajtner.com
from EEG (CC BY-SA 3.0 Petter Kallioinen, Wikipedia, Edited
and from Flugzeug CC0 Momentmal, Piaxabay.com,)

Using EEG and a computer that is able to convert the electric signals of brain into such electric signals that an electric sensor "understands", it is possible to run any devices by electric signals of brain, that is by thoughts in plain language.

Even more!

Nowadays we can do more than just read information out of the brain. We can put information in the brain. The method that is able to write in the brain is called transcranial magnetic stimulation³ (TMS).

^a Parts of this chapter have already been published in my previous books entitled "Die messbare Kraft der Gedanken" by Dr. Tamas Lajtner, Ancient Mail Verlag, Germany 2018.

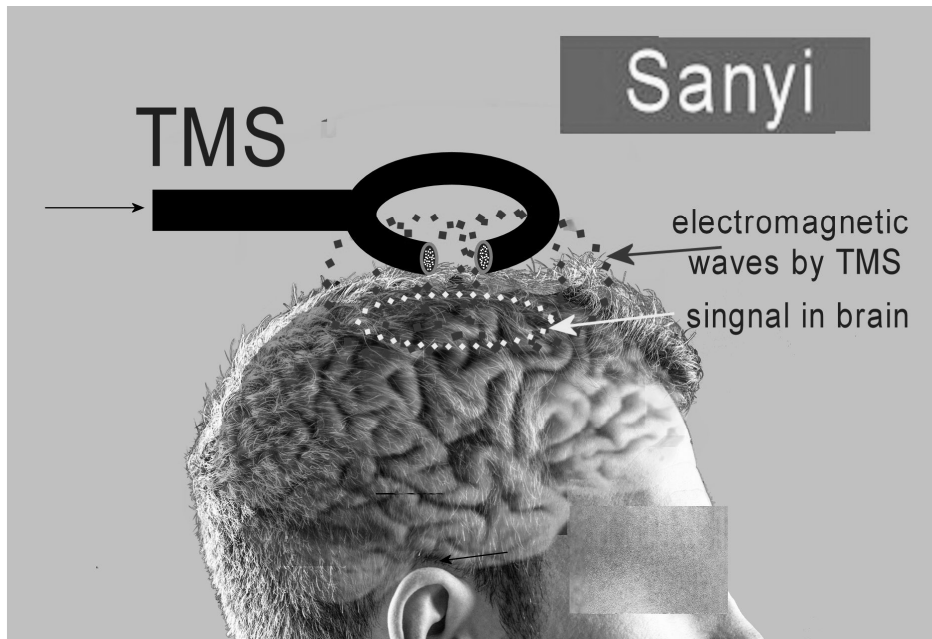


FIG. 4-2 TMS is able to write information into the brain through the skull.

(Credit: TMS-Model CC BY-NC-SA 4.0 T. Lajtner, Lajtner.com;

© Man, Wavebreakmedia, Photodune.net, Edited; Brain

and TMS Public Domain by Eric Wassermann, M.D., Wikipedia.org, Edited.)

Brain is able to understand signals sent by TMS. On the other hand, the brain is unable to realize that these magnetic signals are not brain's own signals. The brain uses these signals as its own product.

Using EEG and TMS, a new communication method between two people, that is between two brains can be built. We can call this communication a kind of “telepathy” based on computers and electromagnetic waves. In the given case Béla's thoughts “senses” Sanyi.

Béla's thought read by EEG, sent via Internet and written by TMS will be Sanyi's own thoughts. It seems to be unimportant who or what has created these signals. If there is an appropriate signal in the brain, brain will sense it as thought. Here information flows into one direction. From Béla to Sanyi. Sannyi cannot send information to Béla. This is a one-way communication. This communication does not work without using devices EEG and TMS.

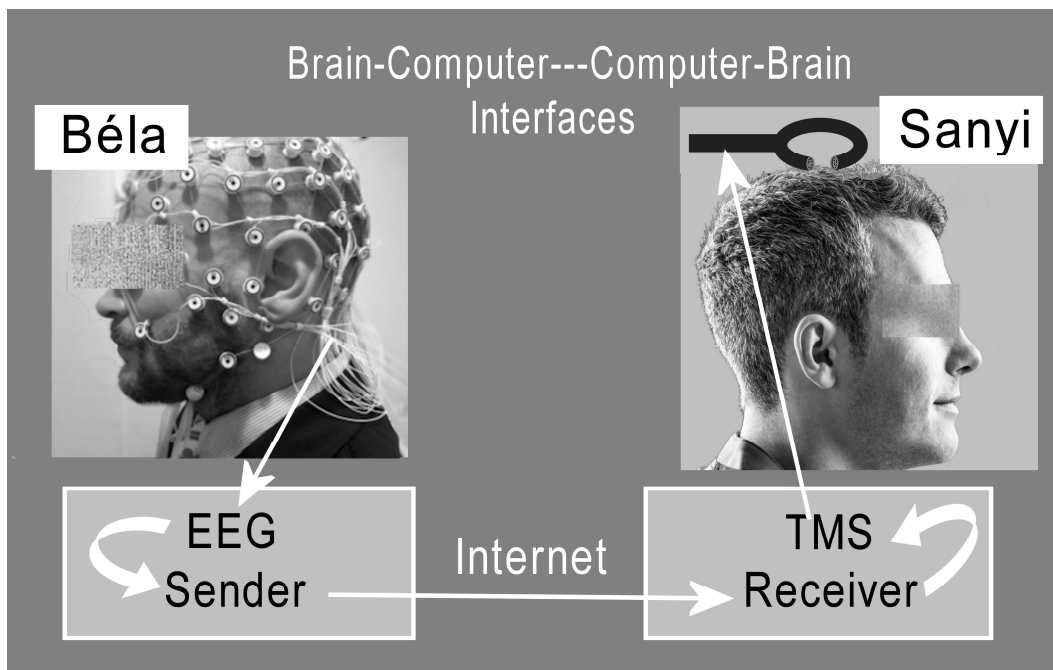


FIG. 4-3 Using EEG and TMS, here communicate two brains⁴. Model.

(Credit: CC BY-NC-SA 4.0 T. Lajtner, Lajtner.com)

This communication works if Béla and Sanyi are in the same room or if Béla is in Europe and Sanyi is in the USA or even on the Moon. The transmission of electromagnetic waves is a well-known technology. What revolutionary new is reading information from the brain and writing it in the brain.

If Béla's brain's signals are sent to Sanyi, and this information will appear as Sanyi's thought, which is surprising, but we can accept it: brain signals from human to human.

It is also possible that Béla's thoughts are stored in a computer and these stored thoughts will be sent to Sanyi, after Béla's death. It sounds horrifying, but it works. Sanyi will not be able to detect, when these signals were created. His brain uses these signals, when it receives it.

The next possible step is that Sanyi receives electromagnetic signals created by a computer.

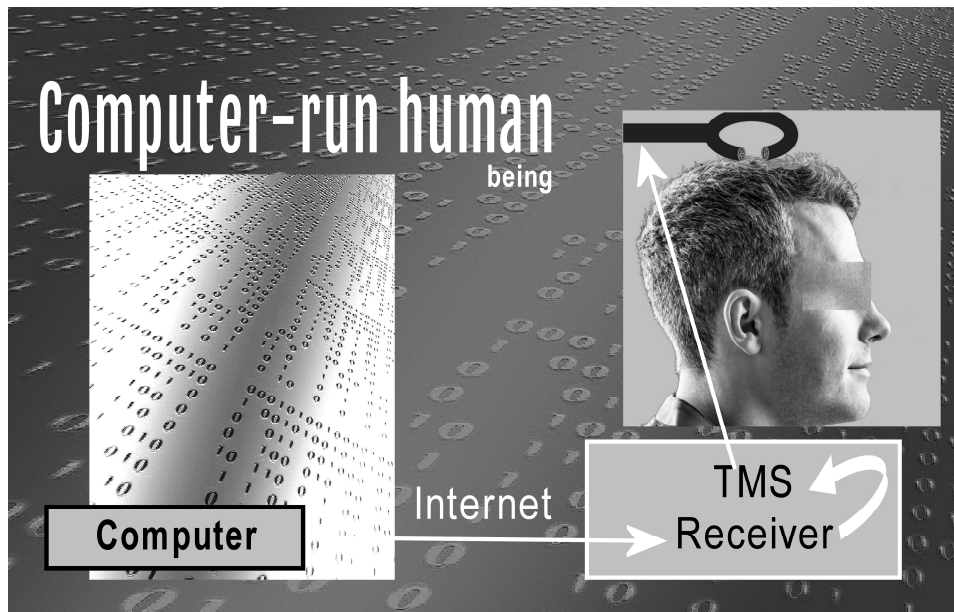


FIG. 4-4 Computer-run human being.

(Credit: Computer-run human CC BY-NC-SA 4.0 T. Lajtner, Lajtner.com
from above-mentioned and from Numbers CC0 gerald, Pixabay.com, Edited)

Sanyi's brain will not be able to detect who or what has created this signal. The thoughts that in Sanyi's brain will appear are produced by a non-living, inanimate thing. Those "thoughts" are born from electromagnetic signals that are neither brain nor living created.

Let's summarize the above-mentioned:

- Human brains create electric signals.
- These signals can be led into other human brains (e.g. Sanyi's brain).
- The brain (of Sanyi) will not make a difference between its own electric signals or made by other brains.
- The brain accepts electric signals even if these signals are not created by a human brain, but by an inanimate (non-living) thing.

Is thought really so simple? Is thought pure electromagnetism, something like your mobile phone's battery has? I do not think so, but let us suppose for one time that the electric signals of brain and thoughts are synonyms.

Our brain is able to create and receive thoughts. Is it unnecessary to be able to receive thoughts if nothing sends thoughts, i.e. there must be something in nature that sends thoughts. We saw in the above-mentioned that our brains are "unified", because our brains are able to receive thoughts from others. This "unified" brain is useless, and it cannot exist if brains are not connected. There must be a close connection between human brains. So the conclusion comes from itself: our brains are also able to send thoughts.

Saying this, our brains are able to create, receive and send thoughts.

What can we conclude from being aware of the possibility that a computer is able to generate thoughts in human brains? We can say brain must have an additional attribute. Our brains are able to sense signals that can be converted into thoughts.

What is thought that anything can create? This is a thrilling question: Does inanimate create thoughts? The answer is a clear yes. Saying this, thoughts can originate from living and inanimate (non-living).

We believe our thoughts are more than a signal of a one dollar battery. Have we been wrong?

We have believed that thought is our human privilege. We have believed that thought is very personal and our thought is our secret. We have believed that thought is something more than just the material world. We may have believed that our thoughts connect us with God. Are our all believes false?

Although nobody knows what thought is, there is a common and widespread view: We are more than just a battery in a very big mobile phone.

Science says a device which is operated by EEG brainwaves, is not operated by "thought" directly, but by the electrical impulses generated by the physical brain which in turn is being directed by thought.

This definition is an open definition, and we are not closer to understand what thought is. On the other hand, this is a valuable statement, since it states that thoughts are more than mere electrical signals of brain.

This recognition led researchers at Princeton University (USA) to test the "power of mind" or in my terms, the force of thought.

4.2. Mind power experiments at Princeton University

At Princeton University (USA), there used to be a research program named Princeton Engineering Anomalies Research (PEAR 2010)⁵ that studied the "power of mind". The power of mind is not the electromagnetic force of brain. The researcher wanted to go deeper, and they aimed to find the phenomena behind electromagnetism.

PEAR employed electronic random event generators (REG) to explore the ability of mind. REG is an electronic device that shows the "influence of mind" on the device. The thought of a human being tried to change the normal (Gaussian) distribution that the device creates. The power of mind can be shown if the normal distribution changes. At the end of the experiment you have two functions. The theoretical one, and the measured one. If the two functions are different, then the power of mind appears in this difference. To understand the difference a statistical method is needed that all statistical values, like variances, mean values, medians etc., can be investigated

There was a very small difference between theoretical distribution and the values measured by PEAR. In other words, PEAR's experiments were able to show the "influence of the mind" (the force of thought) on physical systems, but the results were not convincing enough.

The effect of thought occurs accidentally. The influence of thought was unpredictable and incalculable. The effect works "mysteriously", that is, the electric/electromagnetic signals of brain are unable to explain the results, and there is no theory to explain the phenomenon.

PEAR has ceased to exist, but the device REG still exists at Psyleron where they sell REGs online. Psyleron admits and presumably also Princeton University that they do not understand the working method of mind power (thought force), and no theory until now has been able at all to describe it ^{6, 7}.

PEAR was partly successful and partly controversial. It proved the existence of the power of mind (force of thought). On the other hand, the device was a "black box", and there was no explanation as to how and why thought influenced the device. REG was able to indicate the mind power (thought force). PEAR was not absolutely successful, since it was unable to measure this mysterious power of thought, and the statistical method PEAR used had a not too impressive statistical confidential level.

After these semi-convincing results the nature of thought has not been identified, so the measurable thought has remained the electric/electromagnetic signal of the brain, although we do know now that thought is more than just the electric signal of brain. Thought is able to affect objects that are outside of our heads.

4.3. Immeasurable information in the face recognition

It is a fact that the mind can perceive some sort of secret information. Without that secret information, one could not recognize one's husband or wife. For face recognition eyesight is not enough. You also need the secret information. There are two diseases that affect face recognition (namely, Prosopagnosia⁸ and Capgras Syndrome⁹), and doctors who study them claim that there are at least two channels of information – a visual one and another one. What is the other one? We do not know, but we use various expressions to describe this unknown channel e.g. sixth sense, second sight, third eye, "In my mind's eye, Horatio" wrote Shakespeare. Eye of Horus, prana, extra-sensory perception, power of the mind and many more. Buddhism regards this special sense as thought itself.

Is thought just a passive perception? It must be more, since we, people create the signals that we, people receive.

Here we can see again that we create, send and receive thoughts—without EEG and TMS. These activities belong to our basic activities. Thinking is more than just creating thoughts. Thinking is setting up connections and contacts. Thinking is changing forces.

We have tested this force and found a new, unequivocal result. Thoughts have force, and that force is able to move real, visible objects.

4.4. Thought rotates a paper wheel

To avoid black boxes and questionable statistical results, in our experiments we used a very simple object – a paper wheel.

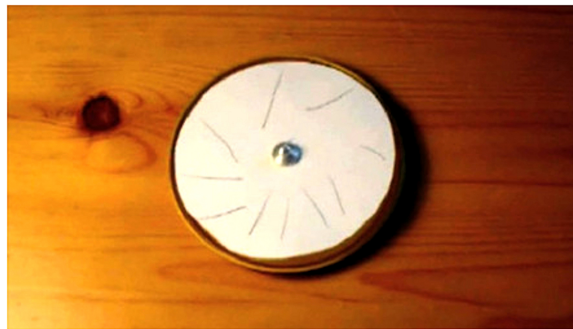


FIG. 4-5 Paper wheel rotating
(Credit CC BY-NC-SA 4.0 T. Lajtner, Lajtner.com)

The rotating wheel shows that thought appears as real force. The paper wheel is one of our devices that can be run by thought. We have used several devices to study the force of thought. This force, just like in the experiment at Stanford University, cannot be measured as electric/electromagnetic signals. This is an important result; thought force does not seem to be simply a kind of electric/electromagnetic signals. In the following you can find the physics of thought that explains why and how it rotates the paper wheel^b.

Studying thought force¹⁰, the easiest and cheapest experiment is to suspend a paper wheel – or pin it so that it hangs freely – from its center, and then try to make it rotate with your thought force. If there is no wind or any other unwanted force that affects the wheel – that is, the environment of the wheel is controlled – then, this is a normal physics experiment. The rotation is actually brought about by the force of thought, and it is possible to capture the wheel turning on video. Hence, the analysis of this movement is very easy. We have made several experiments, and we have determined the energy of thought (E_{rot}) that rotates the wheel.

^b Parts have been previously published in the article "Dr. Tamas Lajtner, Thought force is a new fundamental interaction", Physics Essays, Vol. 29, pp. 239-247 (2016) (<https://physicsessays.org/browse-journal-2/product/1463-16-tamas-lajtner-thought-force-is-a-new-fundamental-interaction.html>). They are reprinted with permission of Physics Essays Publication.

5. OUR PAPER WHEEL EXPERIMENT

5.1. Three factors of the experiment

#1 The subjects of the experiments.

#2 Special devices that are run by thoughts, named Lajtner Machines. One of the simplest Lajtner Machines is a paper wheel.

#3 Power Thinking, which is practically a capacity for concentration that makes it possible to move real objects with thoughts, *almost effortlessly*. (Power Thinking is actually a kind of know-how developed by Dr. Tamas Lajtner¹¹.)

#1 The selection of people for participation in the experiments was performed randomly. It can be established that, after some practice, almost every subject involved was able to move the wheel with the force of thoughts. There were differences in their performance. The value, which we will discuss in details below, represents the mean of the measured values (within accepted deviations and confidence level). It characterizes the value of thought energy of a statistical population chosen randomly on any given day. Other statistical characteristics regarding the distribution of thought energy are not relevant from the viewpoint of this paper.

#2 The term Lajtner Machines refers to several devices, each designed to move by the force of thought. The difficulty level of setting these devices in motion may vary. The distinct levels of difficulty from the viewpoint of motion are indicated on a scale from 1 to 12. For example, the difficulty level for the paper wheel is 2 or 3 – namely that it is easy to move.

#3 Power Thinking is a capacity for concentration which can be acquired by practice, and with proper application, only minute effort is required to move real objects with the power of thoughts. During our experiments, there were people who were able to move the paper wheel without using Power Thinking. The percentage of people with inborn ability constituted less than 18 % of the participants in the experiment.

5.2. The paper wheel experiment

We used a paper wheel described above. The force of thought was able to rotate the paper wheel. The paper wheel's motion was visible to naked eye. The process was video-recorded, and motions were computer-analyzed. We tried out several wheels with diameters. The diameter and the form of the wheel affected the results. From now on I speak about the “circle” wheel form.

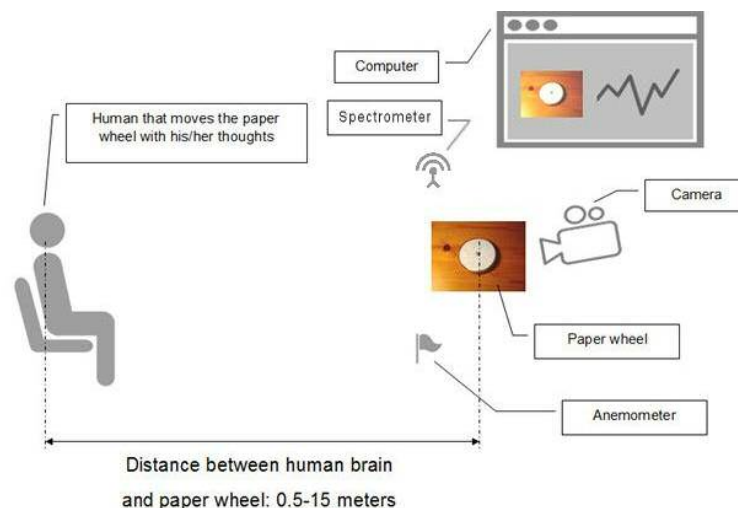


FIG. 5-1 Configuration of the thought-run paper wheel experiment.

Human being's thoughts make the paper wheel move. The brown-white picture shows the paper wheel being captured by a video camera. The computer is connected to the camera. The very sensible anemometer shows the slightest of air movement. Our measuring did not show any of it. The spectrometer catches the electromagnetic waves caused by brain within the calculated range. We did not measure signals of that nature.

The distance between the human brain and paper wheel is 0.5-15 meters.

(Conceptual drawings)

(Credit Picture CC BY-NC-SA 4.0 T. Lajtner, Lajtner.com from
Sitting man CC0 Melonnie Manohar from Noun Project, Edited.)

FIG. 5-1 is synoptic; details of the calculations of the energy that rotates the paper wheel – these are elementary types of operation¹².

6. THOUGHT MEASURED

6.1. An average value of the energy of thought (as measured in our experiment) and its effect

The experiment had two parts.

1. The wheel was at rest then it started rotating.
Here, we calculated with uniform acceleration. This period was 10 seconds.
2. The wheel rotated. This period was 50 seconds. The velocity of rotation did not change. The average thought energy of a seemingly ordinary person can be expressed as $E_{\text{rot}}=1.62 \cdot 10^{-11}$ Joules. It is about such a tiny amount of energy that the picture shows. A butterfly hardly moves its wings.

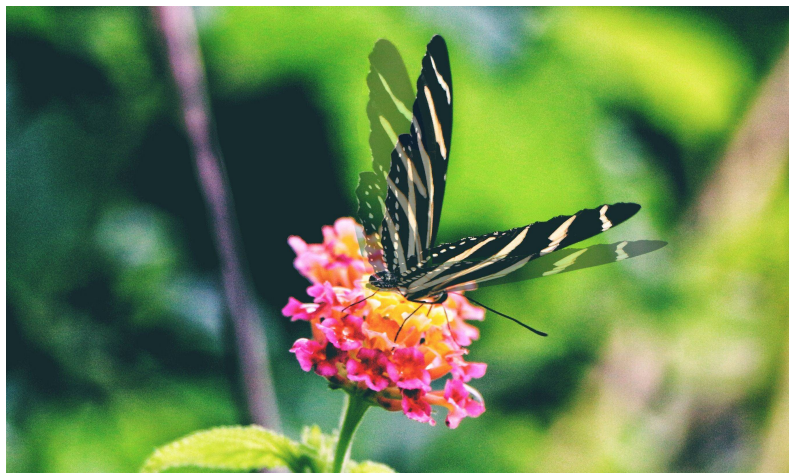


FIG. 6-1 A butterfly hardly moves its wings.
(Credit CC0 Pert Sevcovic, Unplash.com, Edited.)

E_{rot} is a very small amount, but not small enough. Measurable thought is considered to be the brain's electromagnetic signals. The brain radiates electric waves in a spectrum^{13, 14} of 0.01–800 Hz (Hz = 1/sec). These waves are not perfect sine or cosine functions. So if we use sine functions to calculate their energy, we will have some error in our calculation, since the waves of the brain are not perfect sine or cosine waves as we suppose in our model. Hypothetically these waves can be described in terms of sine and cosine functions in our math model (cf. Fourier transformation¹⁵), but it is pure mathematics. Until now, however, nobody has measured brain waves with frequency that can create the given result. The brain does not radiate signals that Fourier-transformation needs.

6.2. The energy of the brain's electromagnetic wave is too small to make real objects move

Our brain¹⁶ has about hundred billion ($n=10^{11}$) neurons. The energy that turns the paper wheel is $E_{\text{rot}}=1.62 \cdot 10^{-11}$ Joules. This energy is small, but not small enough. This energy must be created by neurons. If every neuron of the brain worked exclusively on rotating the paper wheel (which is, of course, impossible), then every neuron should produce a big average energy value and transmit this energy to the wheel. Sending this kind of energy from the brain to the wheel presupposes electromagnetic waves. Thus, the average frequency of the electromagnetic waves is in the spectrum of microwaves. There is no such a thing as microwave radiation of brain. To go one step further, this wave has to be generated by every neuron for 50 seconds. This is an impossible result. That is the paper wheel cannot be rotated by the electric/electromagnetic signals of brain. Does that mean that the paper wheel cannot be rotated by

thought? No, because that is precisely what occurred. So what can we conclude? We have to admit that thought must have an unknown existing part.

6.3. We measured the thought itself

A paper wheel is nothing other than a simple object that can be rotated by force. Without force, it cannot fail to rotate at all. It rotates if force acts upon it. What did we measure using a rotating paper wheel? The effect of thought or the thought itself? We measured the thought itself.



FIG. 6-2 The computer shows thought “Go”.

(Credit Picture CC BY–NC–SA 4.0 T. Lajtner, Lajtner.com
from Laptop CC0 Icon8, Edited)

The paper wheel reveals thought in its true form. A human being only has to think “Go”, so the thought is "Go", and the paper wheel "goes" (i.e. rotates). The computer that analyses the rotation of the paper wheel displays a big “Go”. If humans think "Stop", the thought is “Stop”, and the paper wheel "stops". The computer displays the word “Stop”. Saying this, the thoughts "Go" and “Stop” are visible. These forces are not the effects of the thought. These forces themselves are thoughts. We measured the thought itself. Thought is force and energy.

7. SIX SURPRISING CHARACTERISTICS OF THOUGHT

7.1. Immeasurable, “laser pointer”, “several musical instruments” “early bird”, superluminal and “keep in touch”

In the paper wheel experiment and in our other experiments we have found six very important characteristics of force of thought (thought force). These six attributions cannot be theoretically derived, only the praxis is able to explore them.

The following six points are surprising and therefore a lot of people refuses to accept them, or even to think about them. There is a solution for these people. It is time to try out a very simple experiment with a glass of water. Watch a short video here: <http://www.lajtner.com/book-thought-is-force.html>.

The six unexpected characteristics of thought are the following:

1. The first and most interesting characteristic of thought force is that we cannot directly measure it. This is very interesting, since it acts on the paper wheel and it rotates it. Our brain is able to create, send and receive it, so the force of thought can be interacted with real objects.



2. The characteristic of “laser pointer” means that your force of thought can be as coherent a laser beam, i.e. your thought force is focusable. If there are two Lajtner Machines on the table, you can run both or you can run only that one without running the other one.



3. The characteristic of “several musical instruments” mean that your thought force is able to run several different Lajtner Machines at the same time. It is like a street musician playing on a guitar, drum and harmonica at the same time. This is a very interesting nature of thought force. With some praxis everybody is able to run different Lajtner Machines at the same time, but almost nobody thought earlier that it was possible.



4. Thought force comes about sooner than light. This is the “early bird” characteristic. If you use a paper wheel you will know that the wheel or other Lajtner Machine will start moving before it has been made to move. Light cannot give information about motion that does not exist. The force of thought is able to inform you about motion that starts in the future. What does it mean in general? It means there is a phenomenon that exists and we use unconsciously, but our science has not known about it. The research of thought force helps us to discover the unknown world of this phenomenon, where can be other things but thought.



5. The fifth interesting characteristic of thought force is its superluminal (faster than light) velocity. The superluminal velocity known from many fields of physics, but physicists refuse to accept these phenomena in theories.



6. Our brain is able to receive electromagnetic signals from a computer and can use them as its own thoughts¹⁷ i.e. brain is able to get thoughts from outside. It also works using thought force. But there is big difference between thoughts as electromagnetic signals and thoughts as forces. Our thoughts leave our heads but they do not leave us. This very event is the most interesting about the thought force. Thought force is a force that generates counterforce. In plain English, we can receive thought force from inanimate things (like a paper wheel or other Lajtner Machine), and we are able to understand them as thought. This is the “keep in touch” characteristic.



(Credits in the order of appearance of pictures: CC0 Alexander Wiefel; Nociconist; sandra; Joni Trythall; Noel Braganza; Mourad Mokrane; Noun Project, thenounproject.com, Partly edited)

The last two remarks are very important. They show a feedback system that cannot be uncovered without human experience. Thought is force. Every force has its counterforce, every action has its reaction. Can we sense this counterforce or reaction? Yes, we can. What does it mean? It means, thought is a force that exist in a given range. Forces in this range can be accepted by brains as thought. We can receive force from inanimate things (like a paper wheel), and we are able to understand them as thought.

Thought is a form of physical communication. This communication travels “somewhere”, but we do not know where. We cannot measure this communication directly. So we cannot state when and where it exists. On the other hand, we have no reason to suppose that this communication works only with participants when one of the participants is a brain. Since in every experiment registered appeared in this communication, this must be a fundamental communication of nature. This is a single sentence, but it rewrites some very basic axioms of physics.

I cannot present an inanimate example, but there is a living one. See the chapter on elephants. It is coming soon.

8. THOUGHT AS A SPECIAL FORCE

I know by experience that simplest figures can be better understood than long explanations. Four very simple figures here support this statement. I want to stress that thoughts are phenomena that we imagine somehow but in most cases these imaginations are not correct. These pictures help us to understand the physics of thought that we are going to discuss later.

First let us see the old, most commonly used model. Needless to say that thoughts are in our heads.



FIG. 8-1 Thoughts are in the head. Illustration.

(Credit, Picture CC BY-NC-SA 4.0 T. Lajtner, Lajtner.com from © Head freshidea, Fotolia, Edited)

FIG. 8-1 is the "common pictures" many people believe about thoughts. Knowing that our thoughts can leave our heads this idea is no longer true. We may illustrate the head-leaving thoughts with FIG. 8-2. It shows one single thought that leaves the head and meets something e.g. a paper wheel.

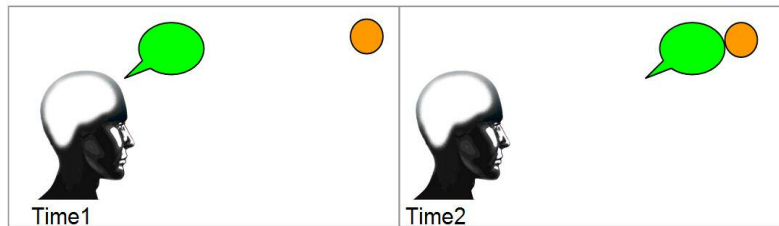


FIG. 8-2 One single thought leaves your head.

Thought is able to reach other objects.

Your thought floats away from your head and you lose all connections with your thought. Illustration.

(Credit CC BY-NC-SA 4.0 T. Lajtner, Lajtner.com)

FIG.8-2 shows the "stone thrown concept of thought". The thought has left our head, and we have no more connection with it. Thought does what it does, and we have no control over it. This notion is also false. FIG 8-3 corrects this idea.

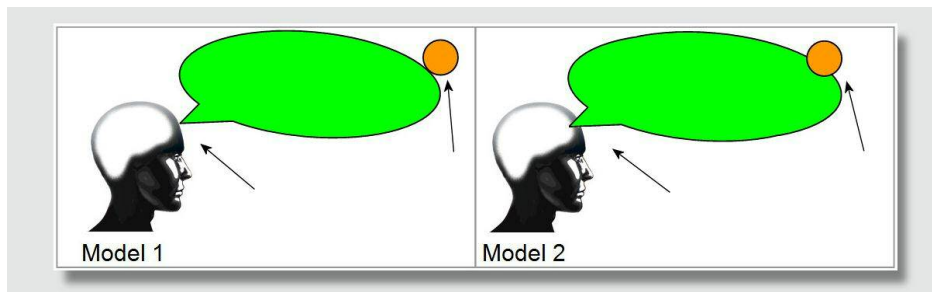


FIG. 8-3 Your thought leaves your head, but it does not lose the connection with you.

It gives feedback for you. Illustration.

(Credit CC BY-NC-SA 4.0 T. Lajtner, Lajtner.com)

In Model 1 and in Model 2 thoughts will express force on the small object. Model 1 shows the phenomenon without feedback: no thought force communication. The thought force communication works in the case of Model 2, where thought force has changed. The paper wheel experiment proves that Model 2 is correct.

FIG. 8–3 is the most important figure in this book. The working method of thought force presented in FIG. 8–3 cannot be derived from theoretical consideration. It needs experiments and praxis to realize the two-way communication via thought force. This two-way communication via thought force is a new discovery.

A short outline of the physics theory that is able to explain how thought force works is given in the second part of this book.

Model 2 of FIG. 8–3 shows a good picture that can be the simplest model of thought force communication.

Now, let us understand the situation shown by Model 2 using the terms of physics. The common picture of a force in physics is a vector. Thought force is a “normal” force that has direction and magnitude with respect to a frame of reference. Thought force can also be displayed as vector.

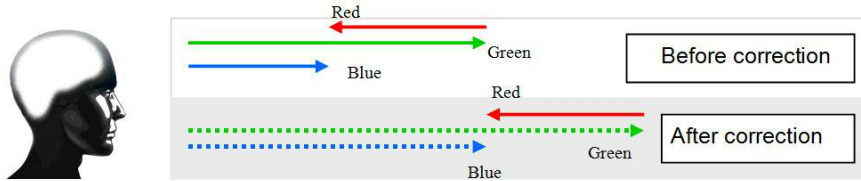


FIG. 8-4 Forces of thoughts.

The first part of this figure (with white background) shows that two forces meet. The green one is thought force, the red one is an external force. The resultant of these forces is the blue arrow. To restore the original effect of thought force in order to archive we wanted we need the brain to generate a new, longer (green dotted) thought vector. Here the blue dotted vector is as long as the first green vector of thought was. Illustration. Not proportional.

(Credit CC BY–NC–SA 4.0 T. Lajtner, Lajtner.com)

Your thought leaves your brain, but it does not lose connection with your brain. The changes of thought appear as feedbacks your brain perceives. Your brain can sense that the green thought has changed. It tries to restore the green thought to create its original form.

By stating this, we claim thinking is a continual interaction, seeking the balance between thought force and other forces. In terms of physics, our thought force (green) is a force like any other force. If it meets another force (red), they create the resultant forces (blue).

The second, gray part shows your brain activity at work, for example, rotating the paper wheel. Your brain can sense the blue resultant force and your brain tries to increase the (green dotted) force of thought as long as the new sum of forces (blue dotted) can replace the original green thought force. Now the blue dotted force will give you the result you wanted (for example, to rotate the paper wheel).

You get the result you want, only if you change the force of your thought depending on environmental forces. The method is generally known as a system with feedback¹⁸.

Of course there is a limit to increase thought force. Force of thought has upper lower limits. The limits of your thought force can be greater or smaller than my limits, but we both have a very small range of thought force comparing the forces of the Universe. But within this range you are able to grow or decrease the force you want to send via thought. That is you can change the length and the direction of your thought force arrow. This is your inborn ability. You use it, making unconscious thought force communication possible any time and anywhere.

You can also do it consciously. The method is not new. The conscious thought force communication, the experience will be new for you. The serendipity of your thought force that you can make real objects move with your thought is an experience that changes your life.

Now the question is how to help us thought force to redefine such important things like life, love, consciousness, soul, God.

9. PARADOXES OF THOUGHT

Your every thought has force, that is, your every thought is action that generates reaction. If force reaches your brain from the world as action, your thought or the change of your thought is the reaction. Thinking is a continuous action-reaction process, because each thought of yours has two parts.

$$\begin{array}{l} \text{Your intended Thought(I)} \\ + \text{Thought(W) as force given by the world} \\ \hline = \text{Your result Thought(R), it is the result of each thought force.} \end{array}$$

Your intention as force and the force of the world form a resultant force, this is not the intended thought, it is a third thought. If you want to think your intention, you have to correct the impact of the force of the world. If you want to think Thought(I), you should think Thought(I + (-W)).

$$\begin{array}{l} \text{Your actual Thought(I + (-W))} \\ + \text{Thought(W) as force given by the world} \\ \hline = \text{Your result Thought(R) = Your intended Thought(I)} \end{array}$$

Thought(-W) is part of your thought that keeps changing. It is neutralizing the thought force of the world Thought(W). The world changes uninterruptedly, therefore Thought(W) also keeps changing. If you want to think Thought(I), you have to keep adjusting to the force of the world. In plain English, you should always change your thoughts, if you want to think the same thought:

1. Your thoughts change even when they do not change.

The world is changing, Thought(W_{yesterday}) was yesterday, today Thought(W_{today}) exists, and they are different. They must be different, since the world is changing. If you want to think the same Thought(I) you thought yesterday you have to think Thought(I + (-W_{today})) instead of Thought(I + (-W_{yesterday})):

2. If you are thinking today what you thought yesterday, you are already thinking something else.

If the world is always changing, what is the stable point for you? The only stable point for you is your DNA (and its copy in space, see physics of thought later). You can compare your thoughts to your DNA. If the connection between your DNA and your thoughts of yesterday and today are the same, you are thinking the same thing you thought yesterday—according to your DNA but not according to the world. What does the world require?

3. In order to remain in one place you should run.

I gave the third paradox in a general form, because it seems to be true everywhere. Here is an every day example: If you have had the same standard of life as those in your surroundings and you want to keep pace with them, you will need to work harder.

And here is a cosmic example: Our Earth is traveling about at an average speed of 828 thousand km/h (514 thousand mph) around the center of the Milky Way¹⁹ in order to remain in the Solar System. It follows the Sun that is traveling this way.

Saying this, thinking is controlled by the same basic philosophical laws as other phenomena, i.e. thought force must have a place in science. It does not have as yet.

10. AN ELEPHANT IN THE WELL

Who thinks?

There is a video on the internet about a baby elephant being rescued from a hole it had fallen into. The baby elephant is at the bottom of a large hole. Game wardens are filling up the large hole, and it is becoming shallower and shallower. In a small lake nearby, but out of sight, the baby elephant's mother and four elephants are standing.

Eventually, the baby elephant manages to climb out of the hole, and sets off towards the other elephants. When it appears at the lakeside, the five others run up to the baby, hooting loudly. They are evidently very happy. They greet the baby elephant just as happily as human beings when we meet a long-awaited friend.

Once reunited, the six elephants stand motionless. Then, the mother elephant slightly raises her trunk and lowers it. She repeats these motions and stands perplexed for a while. Turning slightly towards the people who are present, she raises her trunk higher than before. The other five elephants do not move. Finally, the mother elephant turns to face the game wardens and elevates her trunk as high as she can. The game wardens break into cheers. Now the mother elephant lowers her trunk, turns around, and without looking back, she sets off with the other elephants.

I watched this scene several times. No doubt the mother elephant was thanking the game wardens for rescuing the baby elephant, and she would not depart before she made sure that those people got the message. In order to get that message through to them, she repeated the signals four times, each more emphatically. It sheds light on some important matters:

- The mother elephant understood that the game wardens had rescued her baby. It happened a long way away from her, and she could not see it, but she remembered where the baby got lost. She knew it would have been unable to get out of the hole by itself, and she was unable to help.
- The mother elephant thanked the men for the rescue.
- For the mother elephant, it was important to have the game wardens respond. All of the elephants were aware of that. That was why they continued to wait with her.

This sequence of the elephants' actions is conscious. What is more, in the case of the six elephants, a collective action was demonstrated. The story suggests that elephants do think. Do elephants actually think? And do other animals think? We have thought the capacity of creating thought has been attributed exclusively to humans. Have we been mistaken?

I think physics and physicists are also in a well. In hole there is tunnel vision. Now I give some help to get them out. I am trying to fill up the hole. Physicists will have new visions.

Would physicists be as polite as elephants, would you thank me? Or is it foolish to think of that? Ultimately, we are not in the jungle!

*

For more details about thinking elephants please visit the website of this book:
<http://www.lajtner.com/book-thought-is-force.html>.

II. PHYSICS VS. THOUGHT FORCE

More about this physics in Ref²⁰

11. HOW DOES THE ACCELERATING FORCE OF THOUGHT COME INTO BEING?

What is thought force? Let us think of it this way: From a state of rest, the wheel begins rotating, because the force of acceleration works upon it. According to Newton's Second Law of Motion²¹ we can calculate the force of acceleration. Acceleration force does not exist if the wheel remains at rest, i.e. if there is no change in spatial and time characteristics of Newton's law. Acceleration force comes into existence and rotates the wheel, when the values of spatial distance (space) and time are greater than zero. The wheel rotated, e.i. we have to conclude that thought changes time and space. How?

Let us see once more what happened in our paper wheel experiment. The wheel was motionless. Then it started rotating. So, there have must be some force which brought about rotation. What kind of force is the force generated by thoughts that is able to change space and time?

11.1.Four known fundamental interactions

Currently there are four fundamental forces that physics knows about. The electromagnetic force, the weak nuclear force, the strong interaction and the gravity. It seems to be logical that the thought force is one of these.

1. The paper wheel rotates, because the electromagnetic force pushes it. This statement is not true: we did not measure any electromagnetic force. On the other hand, as mentioned earlier, the electromagnetic force of brain is very small.
2. The weak nuclear is a force inside an atom. The weak nuclear force is out of question.
3. The strong interactions is a force inside the nucleus. It is out of the question in the case of thought force.
4. We have now just one known fundamental interaction: gravity. Should the thought force appear as gravity?

12. SPACETIME CONTINUUM BY EINSTEIN

What is gravity? Our suggested answer is that the definition of gravity depends on our theory. In Newton's Law of Gravity, gravity is given by the mass (mass density).

Time is not involved in Newton's Law of universal gravitation explicitly. Newton incorporated time into the gravitational constant.

Gravity does not change time according to Newton's law. If gravity does not change time, then in the case of the paper wheel experiment time remains zero, Newton's Second Law does not work, and the wheel will not rotate. But the wheel does rotate. Consequently, thought changes spaces and time. How? This is a riddle. Newton's Law of Gravity is not able to describe the force of thought.

Einstein's theory of general relativity gave a more complex system of gravity than Newton's Law of Gravity. In Newton's Law of Gravity there is one attribute of matter: the mass (mass density) of the object. Einstein's gravity model contains Newton's law of universal gravitation in a more complex form. The special and the general theory of relativity^{22, 23, 24, 25 26, 27, 28} introduced the definition of spacetime. Spacetime has three spatial dimensions and one time dimension, so spacetime is a four-dimensional model.

The general theory of relativity is a geometric theory of gravity where gravity is expressed as the curvature of spacetime generated by sixteen attributes of matter not only mass density.

Spacetime contains time dimension, therefore gravity expressed as curvature of spacetime changes time as dimension.

Can this theory be used to describe thought force?

12.1. Curved spacetime caused by mass—simplified explanation

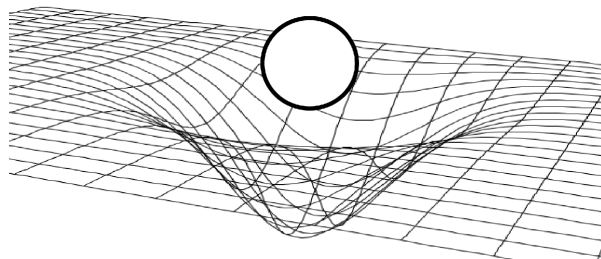


FIG. 12-1 The well-known and common picture of Einstein's curved spacetime caused by objects with mass. In the following, I will refer to mass.

Model not proportional.

(Credit CC BY-NC-SA 4.0 T. Lajtner, Lajtner.com)

The curvature of spacetime is an action-reaction phenomenon of energy (mass) and space. Here gravity is not a force, but a geometric phenomenon that has no velocity; the change of curvature has light velocity c .

FIG. 12-1 shows how mass modifies Einstein's spacetime continuum. Mass modifies space, giving rise to curved spacetime. Curved spacetime occurs on account of gravity according to the Einstein's spacetime model. Masses always make this "concave" depression in the spacetime continuum. Gravitational attraction is a "concave" deformation of spacetime.

Rotation of the paper wheel by thought means that thoughts are capable of producing the spacetime "concave".

This was not too hard. We have concluded that thought force is gravity. Is it really?

13. DEFORMATION OF SPACETIME CAUSED BY THOUGHT

Let us now examine a different experiment of thought force. The direction of the wheel's rotation can be changed by thought. Thus, thought is able to pull and push the wheel. This experiment will not be convincing, since we are speaking about a wheel. A "push" on one side is a "pull" on the other, and we cannot examine the workings of thought. Does it push or just pull? We need a new idea.

Take, for example, a ball moved by the force of thought. The ball can be attracted by thought force. Given the example above, it is not surprising. Yet, now we discover a strange result. Thoughts are able to push the ball, too. This is not a known effect of gravity. What could this be in terms of spacetime? Gravity's effect is a "concave" deformation, but this pushing cannot be "concave". In this case, spacetime is "convex". The spacetime continuum does not buckle, it bulges. Thoughts are able to make special deformations in spacetime. This special deformation is very different from the curved spacetime we are familiar with. FIG. 13-1 attempts to illustrate modifications in spacetime made by thoughts. Thought-induced spacetime modifications can be "concave" (first) or "convex" (second).

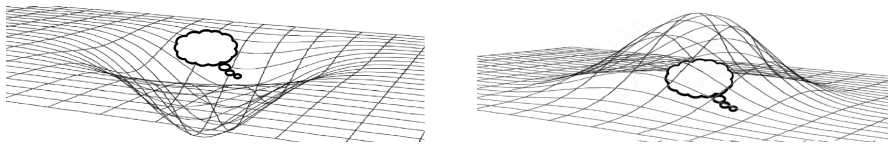


FIG. 13-1 Thought is able to alter spacetime in two ways.

Model not proportional.

(Credit CC BY-NC-SA 4.0 T. Lajtner, Lajtner.com)

How can we explain this "convex" attribute? Mass is not able to make "convex" depression, even with other characteristics described by general relativity, because gravity caused by mass is always attractive. If we want to use the spacetime model, there is a simple explanation: a "convex" deformation is the result of negative masses. Only negative mass could bring about "convex" deformation in spacetime, but we do not have knowledge of negative mass. Gravity is not the solution we seek.

Negative mass is a problem, but we need more things to explain than the mere convex character. There are several important additional attributes of thought mentioned above. We need to include them in our model that explains how thought force works.

Thoughts are two-way communication. In the general theory of relativity there is only a very complicated way, the continuously changing of the topology of spacetime that can explain this kind of communication. But only mass (or energy according to the famous function $E=mc^2$) is able to change this topology. Thought cannot be described by the general relativity.

How to go further?

We immediately jumped into general relativity, because we thought gravity in general relativity has a compact answer to the question of what thought is. Unfortunately it does not give an answer. So we have to start at elementary physics. Here can we find several axioms. And more of them do not seem to be right.

Thought is able to change time and space. So the next question is: what is time, and what is space? It is surprising, but physics gave these phenomena a bit lazy definition when they say "time is what we measure as time". What can we measure? We can measure a signal of matter and a lack of this signal, a pause. Without pause there is no change in signal. We measure changes. Time is measured change.

There are also models with one- and more dimensional time, but nobody has ever measured any dimensions of time at all. The dimension of time is an opinion, an axiom. It may be right or false.

What is space? Space is the infinite extent in which objects and events have relative position and direction. In different theories the number of the dimension of space is three or more: six, nine²⁹, twenty-

five³⁰ or any number. Space is always *the* same space, the same entity but it has different characteristics in different models. It means, there is no definition of space. Therefore there is no definition of spacetime.

Let us see further. One of the reasons why today's physics including quantum physics and relativity is unable to describe thought force cannot be understood is, if we do not understand the expression "inertial frame of reference". In plain English, this is the system the objects move with. This is an important and very basic notion in the physics.

Are the following chapters important to understand the chapters on life, consciousness, God? Yes, they are. Note this is a brand-new concept, you cannot understand it without giving a fast look at its roots in physics.

14. INERTIAL FRAME OF REFERENCE

According to mainstream physics only masses have inertial frames of reference.

14.1. What is mass?

What is mass? Mass is one of the attributes of matter. According to standard model of physics³¹ every elementary particle has three attributes, one of these is mass.

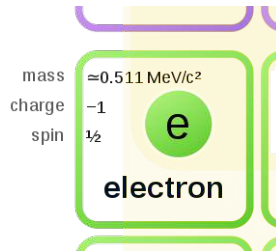


FIG. 14-1 Electron in the standard model.
(Credit Public Domain © MissMJ, Wikipedia.org, Edited)

14.2. Inertial frame of reference of mass

An inertial frame of reference is where there is no acceleration. The motion of an inertial frame of reference has constant velocity in a straight line. If we stand motionless, we are moving at constant zero velocity.

We can have rest while moving. Everything is in the rest of us we are moving with. The viewpoint about being at rest or moving is relative. Time and space from my point of view can be judged differently from other's point of view, depending on our speeds. Being in the same inertial frame of reference we measure the same things. Everything that moves together at a given constant velocity in a straight line is in one inertial frame of reference. What does not move together may be another inertial frame of reference or a non-inertial frame of reference.

14.3. Newton's First Law of Motion

First Galileo Galilei (1564–1642) explained with an example of a ship that we cannot distinguish constant velocities in a straight line from those that are in rest. This statement is one of the main paradigms of today's physics. And it does not seem to be correct.

Albert Einstein (1879–1955) three hundred years later gave an example of trains to show the same. Einstein also said we cannot distinguish sitting on train A (= inertial frame of reference A) and watching train B (= inertial frame of reference B) whether train A or train B moves if we do not see the environment.

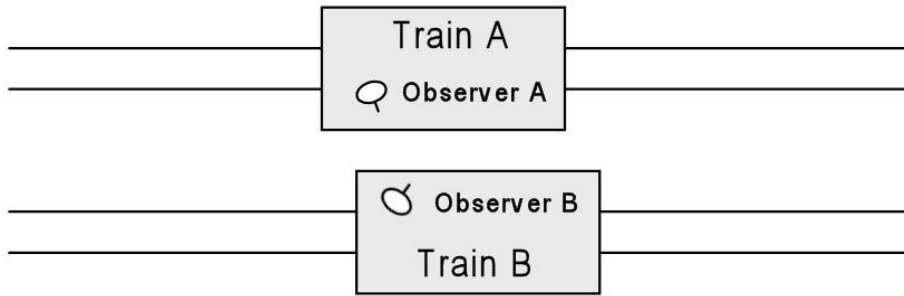


FIG. 14-2 Moving trains.
Everybody knows this phenomenon.
(Credit CC BY-NC-SA 4.0 T. Lajtner, Lajtner.com)

The inertial frame of reference is a fundamental notion in physics. In the special theory of relativity by Einstein the inertial frame of reference is the key.

Based on our everyday experiences the next statement seems to be self-evident: neither observer A nor B can identify which inertial frame of reference moves. In other words: the “laws” of physics do not allow us to discern one inertial frame from another^{32 (p 13)}. This is the next important paradigm. Is it true, or can the inertial frames of reference be distinguished?

Every observer can observe the same events in their own way. An event is a “thing” that has spatial and time coordinates. In special relativity, different observers can see the given event differently, they can see different space and time coordinates; the only thing that remains is causality. Now, even this kind of causality does not allow superluminal velocity—in *this theory*. Thought force cannot be put in this theory.

Also Galileo recognized first that if there is no force on the object, the object’s speed is constant. This is a breakthrough recognition because nobody ever saw any object that did not have force acted upon. Physics takes the idea as a fact, although it is rather an opinion than a fact. Galileo’s recognition is called Newton’s First Law in physics, because Newton was the first person who was able to put this recognition in a physical law.

Velocity in physics is a vector quantity. It has magnitude and direction. If either the direction or the magnitude changes, it is not constant velocity, but acceleration.

Sir Isaac Newton (1642–1727) was a prominent mathematician, physicist and a known metaphysicist. His first physics law says: In an inertial frame of reference, an object either remains at rest or continues to move at a constant velocity, unless acted upon by a force. This statement carries essential importance. This is one of the most important paradigms of physics. What if it is false? It may be false, since this is only an opinion. As a matter of fact no one has ever seen an object not exposed to force acted upon. This is a statement unproved. Maybe true, maybe not. It is most likely not true.

To understand my statement we have to understand the way how special relativity works.

15. SPECIAL RELATIVITY IN HEADLINES

In special relativity there can be compared different inertial frames of reference that move at different velocities. We can compare their spatial lengths, times and masses using the speed of light.

15.1. Time dilation and length contraction

Moving measuring rods are shorter. Moving watches are slow. These are the most famous phenomena of special relativity known as length contraction and time dilation. But what moves? Which inertial frame of reference moves? These questions cannot be answered either in special relativity, or in academic physics.

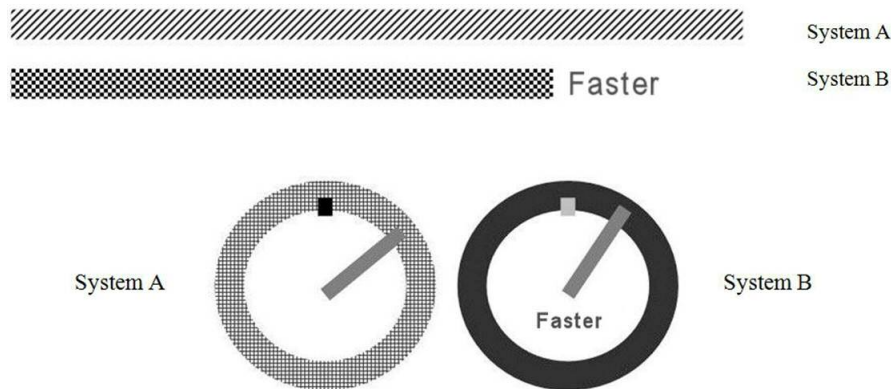


FIG. 15-1 Moving measuring rods and watches.
(Credit CC BY-NC-SA 4.0 T. Lajtner, Lajtner.com)

If System A and B are in rest or continue to move at a constant velocity in the same frame of reference, then both measuring rods have the same lengths and both watches show the same time. The difference in length and in time comes about if System A and B move at different, constant velocities for instance System B is a space shuttle that left the Earth. Although it is obvious that System B moves faster, because it accelerated.

System B may think System A moves faster, so clock A is slow. System A may think System B moves faster, so clock B is slow. Length contraction of the measuring rods can be seen the same way.

If the observer measures the spatial distance, he should find the longest distance if the mass is at rest—that is, mass does not move in the given inertial frame of reference. If the observer measures time, he should find the shortest time *units* as measured in its rest frame. In plain English, the astronaut of the flying space shuttle of System B lives longer according to System A, because his time units are longer. The viewpoints of System A and B are interchangeable.

Note both the observer and the object have mass.

15.2. Mass and its velocity

If an object has mass, the velocity of the object changes its mass. When an object is at rest, and both the object and the observer are in the same (inertial) frame of reference, the object has a rest mass. The rest mass of an object is the inertial mass that an object has when it is at rest relative to the observer (in the given frame of reference). The rest mass is the smallest value of mass in the given (inertial) frame of reference which is connected with the longest spatial distance.

15.3. Every inertial frame of reference is equivalent

According to special relativity and academic physics, both moving inertial systems (A and B) are equivalent. Both can be stated whether it stands and the other one moves or vice versa. From the viewpoint of System A space contraction and time dilation will occur in Systems B. From the viewpoint of System B space contraction and time dilation will occur in Systems A. This statement is in harmony with Einstein's example of trains.

15.4. Light in special relativity

Light is a fundamental phenomenon in special relativity, because its velocity is finite and constant for the viewpoint of an observer that has mass. The finite velocity makes the time dilation and the length contraction possible. Constant velocity makes it possible to express seconds in meters and meters in seconds.

Light always travels at a constant velocity ($c = 299,792,458$ meters per second ($=186,000$ mi/s) in vacuum). Light travels at the velocity c regardless of the motion of its source or the (inertial) reference frame of the observer.

So, using the speed of light, we can express meters in seconds and vice versa. This is a brilliant idea, so we can express the velocity of light this way: $c=1$, because

$$c = \text{spatial distance unit} / \text{time unit} = 299,792,458 / 299,792,458 = 1.$$

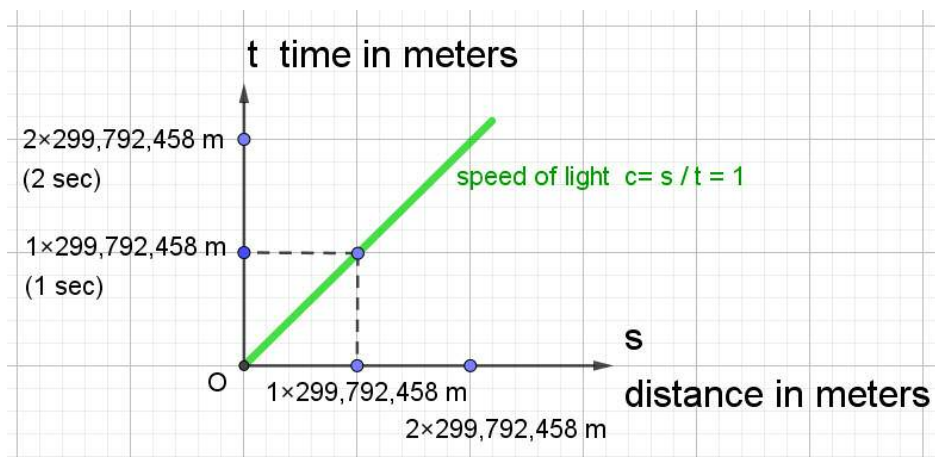


FIG. 15-2 Time in meters from the viewpoint of light.

Light does not create these units, just shows them.

(Credit Picture CC BY-NC-SA 4.0 T. Lajtner, Lajtner.com)

In the following I will use the idea how time can be expressed in meters. But I will use space wave instead of light.

16. WAVE OF SPACE

16.1.Space waves

We know from quantum mechanics that particles of matter are in constant vibration. It is a physical impossibility for matter to come into contact with space without vibrations having an effect. Based on the Casimir Effect³³ and other physical phenomena we can state that space exists in waves and vibrations.

Can we describe a model of a moving mass using the waving space? Yes, we can use my Space-Matter Theory.

16.2.How to picture space waves?

In this study a two-dimensional cosine function as space wave made by mass (mass density) will be used as model, because it is simple.

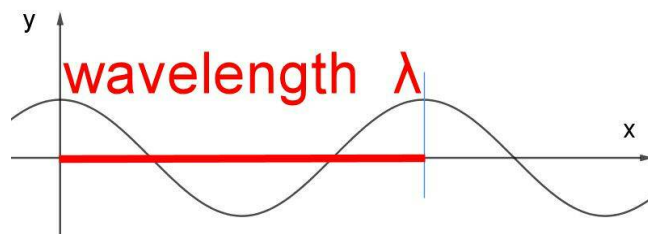


FIG. 16-1 Space wave created by mass.
 x and y are spatial distances. The wavelength is the length of one wave period.
 Two-dimensional Model not proportional.
 (Credit Picture CC BY-NC-SA 4.0 T. Lajtner, Lajtner.com)

If we use space waves that contain Einstein's model, we can calculate with more than one space wave or just with their sum. Einstein used sixteen attributes in his model that modify the curvature of spacetime displayed earlier. It means these sixteen attributes have prints in spacetime. This concept was recognized neither by Einstein, nor modern physics.

In Space-Matter theory every attribute of matter has a print in space as space wave, but here the space wave created by mass will be used, because it is the simplest model.

If we know the wavelengths of space waves created by System A and B, we can compare them.

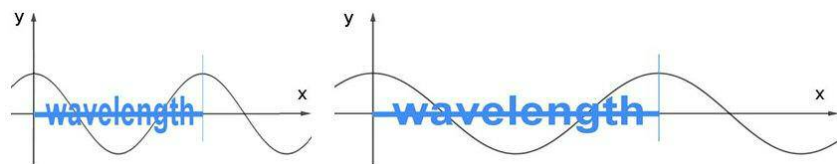


FIG. 16-2 Space wave created by System A and B.
 (Model not proportional.)

17. SPACE WAVES ARE PARTS OF (INERTIAL) FRAMES OF REFERENCE

17.1. Space waves are parts of inertial frames of reference

Every (inertial) frame of reference is made of mass, therefore no frame of reference can exist without generating space waves.

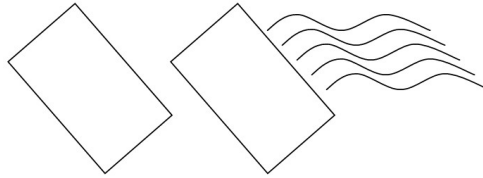


FIG. 17-1 The same inertial frame of reference without and with space waves.
Today's physics does not accept that inertial frames of reference create space waves.
(Credit Picture CC BY-NC-SA 4.0 T. Lajtner, Lajtner.com)

Space waves are part of the frames of reference. They are also part of every inertial frame of reference i.e. two inertial frames of reference are not identical if they create different wavelengths of space waves. If the observer is able to measure the wavelengths of a space wave, he would find the *shortest* wavelengths of space waves if mass is at rest—that is, mass does not move in the given inertial frame of reference. If mass moves in the given inertial frame of reference (or with the whole inertial frame of reference), the wavelength of space wave made by moving mass is longer. Two identical objects e.g. two electrons (electron_A and electron_B) are in the frames of reference A and B. An observer finds that the wavelengths of space waves created by electrons are different, then the observer will know how fast the inertial frames of reference move.

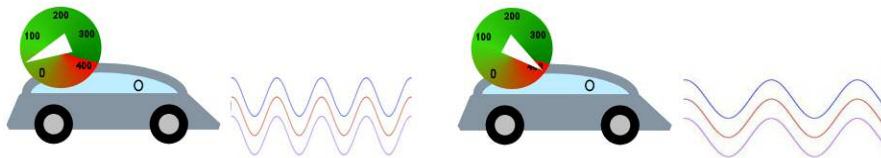


FIG. 17-2 The space waves are longer if the object is faster.
Model not proportional.

(Credit Picture CC BY-NC-SA 4.0 T. Lajtner, Lajtner.com from Speedometer CC0 OpenClipart-Vectors, Pixabay.com)

The above-shown two “identical” cars as “identical” inertial frames of reference are not identical, since they make different wavelengths in space waves. Saying this, the special relativity theory must be corrected. In this theory the two inertial frames of reference moving at different velocities are identical, but according to space waves they are not. What should we change in special relativity? We should give up the idea of symmetry. This symmetry says no matter whether the observer or the object moves, the result will be the same on both sides.

It is not true. Space waves uncover the moving inertia frame of reference. It is important to know who or what moves and how fast it moves. Space waves show it.

17.2. Why is the speed of light constant?

This is a simple question, but it has not answered at yet. Instead of an answer there is a law: the speed of light is constant.

But how can the speed of light be constant in every (inertial) frame of reference?

The speed of light can only be constant if light is in the given frame of reference. How can it be? It can happen by using space waves created by the inertial frame of reference. We know that these waves are part of the frames of reference. Light travels on Space wave created by mass.

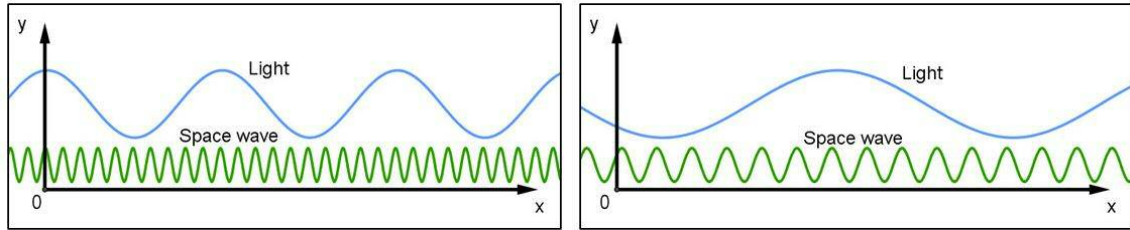


FIG. 17-3 Space wave and light wave at several velocities of mass.

x and y are spatial coordinates. Model not proportional.

(Credit CC BY-NC-SA 4.0 T. Lajtner, Lajtner.com)

Light travels on Space waves generated by mass. Space is written in capital S means space that masses change. Light does not change Space waves. That is light travels in a space different from mass. The space of light, i.e. Space wave generated by mass is part of the frame of reference of mass, it is “glued” to the mass, that is the mass and the space of light are in one inertial frame of reference independent of the velocity of mass, i.e. independent of the wavelengths of Space waves. In this inertial frame of reference the velocity of light is constant c .

According to the above-mentioned, there are several spaces. Mass has its Space and light has its space and they are different. Saying this, the definition of space is not self-evident.

What is space? And what is time? And what is matter?

18. SPACE-MATTER MODEL: SPATIAL DISTANCES GIVEN BY SPACE WAVES

Can we measure space? Measuring space, we measure matter. The meter is the length of the path traveled by light in vacuum during a time interval of $1/c = 1/299,792,458$ of a second³⁴.

If we measure space by means of light, we use a kind of matter that has its own nature. We cannot measure space at all. We measure only matter.

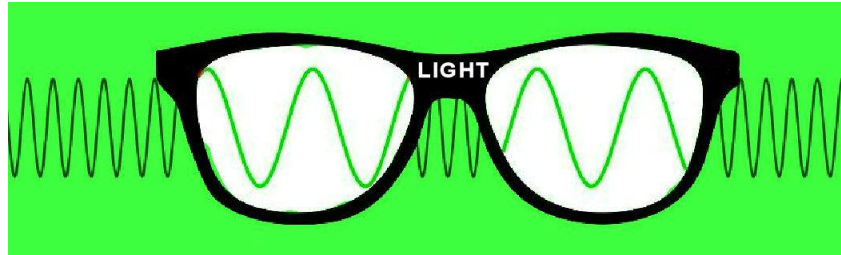


FIG. 18-1 We can see the length of space through light's glasses.

Illustration.

(Credit CC BY-NC-SA 4.0 T. Lajtner, Lajtner.com from CC0 Clker-Free-Vector-Images, Pixabay.com, Edited)

18.1. Wavelength and spatial distance

The given spatial distances of the object and of the observer can be given as the sums of the wavelengths of space waves.

If the object moves in relation to the observer because they are in different inertial systems, then the observer and object will realize different space wavelengths.

Longer wavelength mean higher speed. Different speeds mean different lengths of wavelengths of space waves.

The same spatial distance measured from Object A to Object B can be made out of different wavelength of space wave according to different observers.



The length contraction described in special relativity is a length dilation of the wavelength of the space wave. A imagines the distance of B this way:



FIG. 18-2 How does spatial distance change?

(Model not proportional)

CC0 T. Lajtner, Lajtner.com)

R is the way how relativity presents the distance of B as length contraction. In reality B solution exists, because the wavelengths of space waves grow.

The length dilation of the wavelength of the space wave is not symmetrical; the wavelengths of space waves are different of different observers or objects. There is an exception: the observer and the object can see the same wavelengths of space waves between each other.

The change of wavelength is a real phenomenon in space, not the viewpoint of the observer. Behind the relativistic length contraction of relativity is a real difference of the space's wavelengths of observer and object, says the Space-Matter Theory. The symmetry in special relativity is broken if we study the source of the change of the wavelengths of space waves. System A and B do not have the symmetry supposed in relativity.

19. TIME GIVEN BY SPACE WAVES

What is time? Today's physicists claim that time is what we measure as time. What does the phrase "what we measure" mean? We can measure only matter.

One second is defined as a changing character of the cesium 133 atom³⁵ we can measure. If we measure time by means of mass, we use a kind of matter that has its own nature. We cannot measure time at all. We measure only matter.

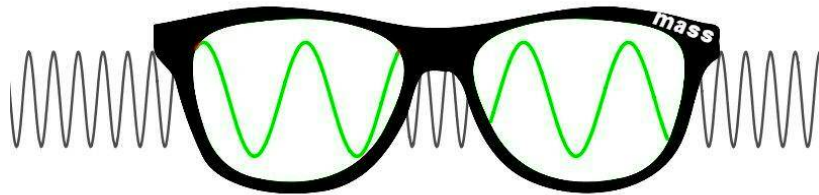


FIG. 19-1 We can “see” time through the glasses of mass.
Illustration.

(Credit CC BY-NC-SA 4.0 T. Lajtner, Lajtner.com)

One second has its start and has its end that we measure. The main element of time is the change. If there is no change, there is no time. We measure changes of matter measuring time.

According to Space-Matter Theory, time exists without having been measured.

19.1. Time as spatial waves

In Space-Matter model, time comes into existence when matter and space meet. Also, whenever matter and space meet, the result is time. Time is the action-reaction phenomenon of matter and space, and appears as a spatial wave.

There is no way putting space and matter together without action and reaction coming into being. Or in other words there is no way putting space and matter together without time coming into being.

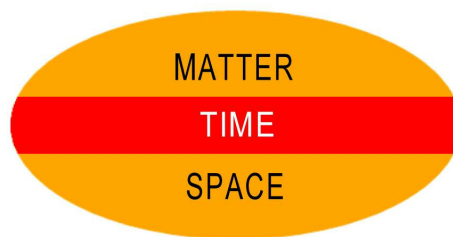


FIG. 19-2 Lajtner-burger.

$3D \text{ space} + 3D \text{ matter} = 3D \text{ space} + 3D \text{ matter} + \text{Time}.$

(Credit CC BY-NC-SA 4.0 T. Lajtner, Lajtner.com)

Time depends on two things: on the given space and on the given matter that travels in space. According to modern physics, only mass has time. Accepting this, our time is the action-reaction of mass and Space that exists as Space waves.

Wave of Space is not the only space wave, i.e. not the only time, it is just our time. In our life (and in physics models) we use the time created by mass, but "non-mass" objects may use different space waves as time. Photons create their own time, although physics states that a photon has no time. It is impossible, since photon is matter that causes changes in space.

19.2. Our time wave and time unit

The actions between Space and mass, from the view point of mass, can change between strong and weak. It oscillates. The change is periodic, and one period is one unit of time. This unit of time has two parts:

- the hit, when Space acts upon mass most strongly;
- the period between hits when the force of Space acts less strongly upon mass.

If we employ a cosine function to describe time, we get a periodic wavelength. Hence, it appears to be a good model: where a) equals the positive amplitude of the cosine function, and every other value of the function is b). In a timeunit (in a single time wave), there is only one positive amplitude. Time is a repetition of these units. Time is the continuous alternation between a) and b). From the viewpoint of matter, time is characteristic of the periodic way that Space acts upon mass.

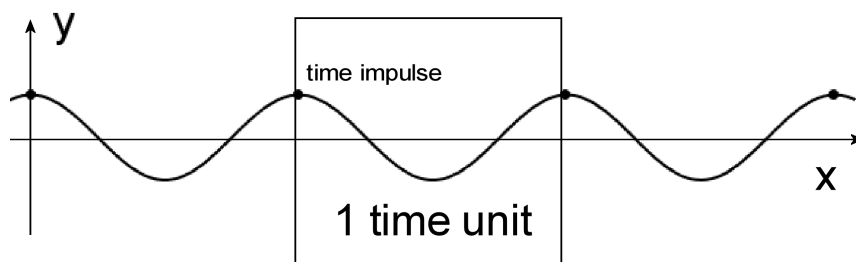


FIG. 19-3 Time as Space wave.
x and y are spatial distances. Model not proportional.
(Credit CC BY-NC-SA 4.0 T. Lajtner, Lajtner.com)

A pulse of time marked as point. This is followed by a lack of time pulse:

pulse pulse pulse ...

The longer the wavelength of the Space wave, the rarer the time impulse:

pulse pulse pulse ...

Saying these, we can understand why the paper wheel rotates by thought force. Thought force changes the wavelength of Space wave i.e. time and Space are changed. The paper wheel will rotate. What else can we conclude from this? We can conclude if the wavelength of Space wave grows, mass accelerates.

20. ATTRIBUTES OF SPACE WAVES

20.1. Velocity of space waves is constant

If time waves are derived from space waves generated by mass, there arises a strange phenomenon—time and distance are the two sides of the same coin from the viewpoint of mass. Saying this, it is impossible for an object with mass to change any spatial distance without changing time, and changing time means changing the position in the given space.

20.2. Space unit and time unit given by the same spatial wave

Now we can use the idea of Minkowski geometry to make the new time and distance model visible. In the following coordinate systems both time and distance are expressed in meters. We can realize that the velocity of mass according to Space waves is always 1, because distance Δt is always as long as Δs . The wavelength of Space wave always defines 1 unit of time t and 1 unit of spatial distance s .

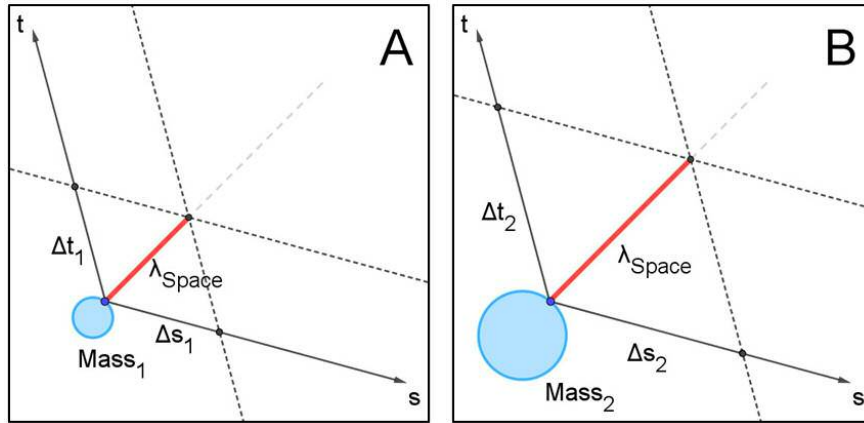


FIG. 20-1 Wavelength of space wave λ depend on the velocity of mass.
FIG. 20-1A and FIG. 20-1B show the same mass at different velocities.

$$v_{Mass_in_Space} = \frac{\Delta s_1}{\Delta t_1} = \frac{\Delta s_2}{\Delta t_2} = 1$$

(Credit CC BY-NC-SA 4.0 T. Lajtner, Lajtner.com)

Bigger velocity makes the wavelength of Space wave longer. The wavelength of Space wave creates the unit of time and spatial distance for the given mass. The velocity of an object with mass changes the length of wavelength of the Space wave but not its velocity. The growing length of units does not destroy the proportion of the units:

$$\frac{1 \text{ unit of distance}}{1 \text{ unit of time}} = 1.$$

The wavelength of Space wave is the smallest unit. Mass uses several pieces of space wave, a “set of space waves” to build its own unit of spatial distance and time. This “set” is one unit from the viewpoint of mass, therefore the above-mentioned explanations remain true.

FIG. 20-1 explains how space and matter create and change time. An observer or an object gets moved in space. This is the action. The reaction of space is the change of wavelength of the space wave. Time is created and changed.

The changing wavelength of Space wave has an action on mass. This is followed by a reaction of the object. It moves faster. This is followed by a reaction of space—the wavelength of space wave grows, therefore mass goes faster, therefore the wavelength of space wave grows... Mass in Space will accelerate once it started moving unless acted upon by a force.

20.3. Problem with Newton's First Law of Motion

Knowing space waves, Newton's First Law of Motion is disputable. It needs modification. This modification is called Lajtner's Law of Motion, and it sounds like this: in Space, an object *accelerates*, unless acted upon by a force *caused by matter*. This acceleration can be measured by an observer. The same event from the viewpoint of Space and from the viewpoint of the object can be given this way: In Space, an object with mass continues to move at constant velocity in a straight line, unless acted upon by a force *caused by matter*. The velocity of mass is constant: $v=1$, according to the function mentioned above, therefore there is no acceleration. Mass does not accelerate in Space from the viewpoint of Space waves and the given mass. As mentioned earlier from the viewpoint of an observer this motion is an accelerating motion. This kind of acceleration is constant from the viewpoint of an observer, every object with mass has the same acceleration, because the constant proportional of distance and time.

Gravitational acceleration confirms this theory. Watch the gravity experiment on the Moon: Hammer vs. Feather. Both had the same gravitational accelerating. FIG 20–2 shows them before they reach the surface of Moon.

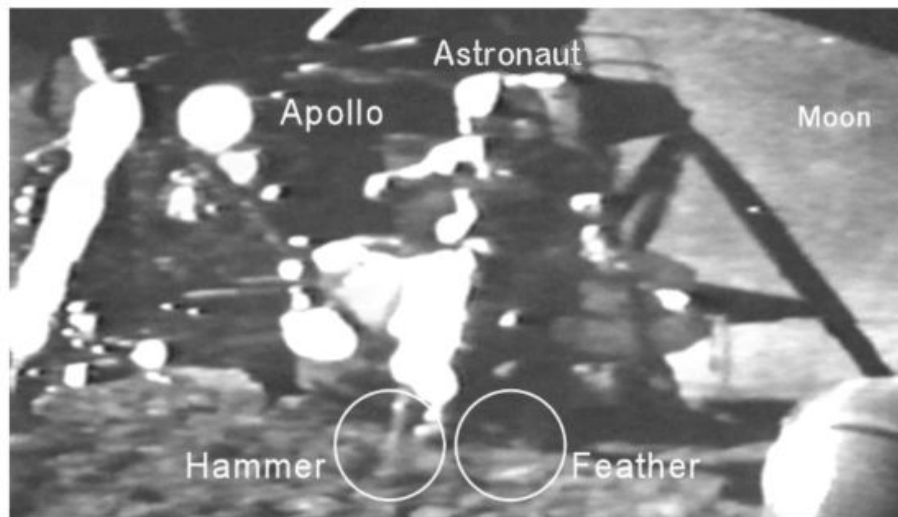


FIG. 20-2 Apollo on the Moon.

The picture requires a bit of imagination.

(Credit © Public Domain Apollo 15 Crew, NASA, Excerpt, Edited, <https://moon.nasa.gov/resources/331/the-apollo-15-hammer-feather-drop/>)

In space, an object with mass continues to move at constant velocity in a straight line from the viewpoints of velocity of Space waves and the given moving object. If this motion is a motion with constant velocity from the viewpoint of an observer, it means that the wavelengths of space waves are unchanged. In this case force *caused by matter* does act upon the object. Lajtner's Law of Motion is in contradiction with Newton's First Law of Motion. And with today's academic physics that accepts Newton's First Law as fact. This is not a fact, it is actually Galileo's 400 year old opinion. It is disputable.

20.4. Space as inertial frame of reference

Space is a special, non-mass inertial system.

From our viewpoint in Space's inertial frame of reference, an object with mass neither remains at rest nor continues to move at a constant velocity, it accelerates, unless acted upon by a force *caused by matter*.

The same acceleration does not change the velocity of mass measured by the wavelengths of Space waves that are modified by the given mass. This is Lajtner's Law of Motion.

20.5. Action and frequency of Space waves

Solely through the use of Space waves, we can express spatial distance, time and energy. Space waves are not only indicators of these phenomena like e.g. light indicates the longer space waves. These phenomena are created by Space waves.

- Every spatial distance can be expressed by using the wavelength of Space waves.
In our physics terms this is the shortest unit of distance.
The length or wavelength of matter is always longer.
- Every unit of time can be expressed by using the frequency of Space waves.
In our physics terms this is the shortest unit of time.
The frequency or the vibration of matter is always higher.
- Every amount of action (energy) can be expressed by using the value of the action of Space waves.
In our physics terms this is the smallest unit of action.
The action of matter is always bigger.

The lengths of the meter and second are dependent upon Space waves. Note this is not the theory of special relativity. In our case we speak about real changes of Space waves.

One Space wave has energy, action. Using the action of space waves we can define what matter is and what space is.

21. WHAT IS MATTER, WHAT IS SPACE?

You have seen and will soon see again there are several spaces, and not all objects are able to use all spaces. So it has to be defined what space and matter mean. Let us see some simple definitions first.

Space is what matter uses as space. Matter is what space allows to exist as matter in the given space. There are spaces that the given matter cannot use as space, and there is matter that cannot exist in given spaces. For example, light normally does not exist in Space.

21.1. Action and density of space and matter

The simplest way to define space is to give its energy (action) value. Our known Space has the smallest action value. It is also possible to use the density of space. If we calculate with little Space cubes, we can calculate the density of Space.

Using the simplified Space-Matter model with cosine functions, we can conclude that the density of the proton is nineteen orders of magnitude beyond the density of Space.

The density of Space is very important. From the viewpoint of a third party observer it can change because of the growing wavelength of Space wave. If Space's density is small enough, Space can turn into matter.

21.2. What is space, what is matter?

The action of matter is always bigger than a threshold of action of space. The density of a matter is always smaller than a threshold of density of space.

If the action of an object is bigger than the action of Space, this object can act as space from the viewpoint of a third object, and can act as matter from the viewpoint of another object. Tunneling (coming soon) works this way. The barrier is made of matter, but electrons and photons are able to use it as space. The barrier can be called space made of matter, or matter-space, in short.

The notions of Space, time and matter are not as simple as we thought earlier. They had to be defined, using density and action. These definitions are the very first complex definition of space, time and matter. Without these definitions, we will neither understand the working method of spaces like matter-space, nor understand how matter objects exist in matter-space. Here we can use the above-mentioned new definition of time in a wider meaning stating that time is the action-reaction of space and matter, where space is either Space or matter-space.

Different spaces mean different circumstances that light and other particles have to accept. In different spaces particles work in different ways. How do they do it? They are capable of surprising metamorphoses.

22. TUNNELING: SPACE MADE OF MATTER

22.1. Tunneling

Quantum tunneling refers to the quantum mechanical phenomenon where a particle (with or without mass) tunnels through a barrier that it normally could not surmount.

In experiments there are many particles sent to the barrier, and only part of them—get through the barrier. They are the tunneling particles. In tunneling group velocity is important, but if we examine the tunneling effect as the behavior of the given particle, we can analyze *this* single particle i.e. *its* velocity. In the forthcoming parts of this study I analyze the behavior of a “single” tunneling particle, because I want to point out the metamorphosis of this particle, which is a common and still unknown attribute of particles.

Particles travel with superluminal velocities in tunneling, therefore they will be called fast waves in the forthcoming parts of this study.

Nimtz³⁶, Enders and Spieker first measured superluminal tunneling velocity with microwaves in 1992. According to their statements, the puzzle is that the jump of the particle over the barrier has no time (it spends zero time inside the barrier) and the particle is undetectable in this condition. Tunneling, however, does take time, which can be measured.

According to Nimtz, the particle cannot spend any time inside the barrier³⁷, because the wave function has no missing part (and no missing time). The tunneling method of the particle is unknown and immeasurable. If the wave does not spend time inside the barrier, what is the tunneling time? Nimtz supposes that the measured barrier traversal time is the time spent at the front boundary of the barrier.

There comes the second riddle in tunneling. Experiments show³⁸ that tunneling particles are faster than light, and these facts are *not* compatible with the theory of relativity. According to the theory of relativity the growing velocity of particles with a mass (for example an electron) causes growing mass, and if its velocity is near the light speed c , then its mass goes to infinity. Mass cannot travel at c or over c , according to relativity. Even light cannot travel faster than c . But they do in tunneling. The special relativity is no more applicable here.

Since the mass of the electron is never infinite and the tunneling is fact, we have to suppose that there is a discrete jump at velocities. The velocity of mass will be greater than c from a less than c velocity, without ever picking up c velocity. This superluminal_M velocity is immeasurable as yet.

22.2. Tunneling particles—fast waves

Tunneling from the viewpoint of the form of the electron (or other tunneling particle):

- Before the barrier: electron—particle or wave.
 - * Metamorphosis 1.
- In the barrier: unknown object (fast wave).
 - * Metamorphosis 2.
- After the barrier: electron—particle or wave.

It means that the unknown, faster-than-light-object is the same electron we know, but it *does* have a new form we do not know. The given form of an electron always depends on the space in which it travels.

So there is a 'fast wave—wave—particle triality' instead of the 'wave—particle duality'. Note fast wave is a new form of particle made of matter.

22.3. Traveling time in the barrier

We are able to measure only tunneling time, but tunneling time is longer than traveling time in the barrier. As mentioned above, according to Nimtz's statement, the particle does not spend any time inside the barrier. In fact it does, but its actual traveling time inside the barrier is much shorter than tunneling time. In tunneling time there are three time periods: tunneling time, time of metamorphosis from particle into fast wave and time of metamorphosis from fast wave into particle. A particle needs time to adapt itself to the new space. This means that particles have structure that can change.

23. SPEED OF SPACE WAVES—GRAVITY CAUSED BY MASS AND BY PHOTONS

There are forces (actions, information) that are embedded in space waves. These forces (actions, information) are transported without particles of matter. They are transported by space waves, therefore here it is partly about the velocity of space waves. This kind of superluminal velocity is called in Space-Matter Theory $\text{superluminal}_{\text{EMB}}$. According to my data $\text{superluminal}_{\text{EMB}}$ velocity is greater in several magnitude than other superluminal velocities e.g. than $\text{superluminal}_{\text{M}}$ in tunneling.

23.1. Gravity as difference of wavelengths of Space waves caused by masses

Gravity occurs when Space accelerates masses. Among bodies experiencing gravity, the frequency of Space waves decreases. That is the Space “pressure” between the bodies decreases. Gravity arises because the portions of Space with higher force (action) shift the masses. The greater frequency—the greater force (action) of space moves the mass forward. This force will give the direction of the object moving in gravitation.

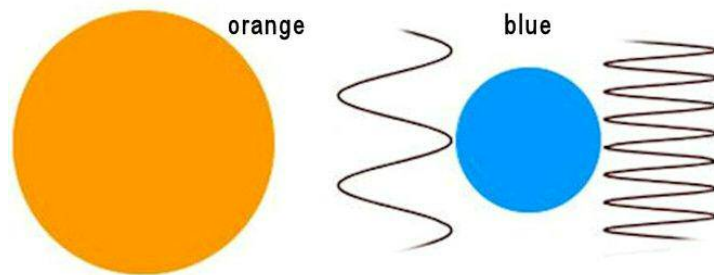


FIG. 23-1 Space wave model of gravity.
Gravitation occurs when space shifts. Model not proportional.
(Credit CC BY-NC-SA 4.0 T. Lajtner, Lajtner.com)

The big (orange) mass makes the frequency of Space waves (time wave) smaller on the left side of the small (blue) mass. On the other side of the small mass, the frequency of Space waves (time wave) is greater. The greater frequency moves the mass forward.

Or even more clearly, although the statement may sound less scientific “You’ll get a slap that sends you flying!” If the small planet gets four slaps from the right and one from the left, it will move left. Since Space waves are time waves from the viewpoint of masses, we can state that gravity occurs when time shifts.

Gravity is created between two or more bodies. You have seen that one body without force acting upon will accelerate on its own.

23.2. Gravity as antigravity caused by mass

Gravity – originally – is a force that holds the masses, planets, galaxies together. Therefore the Solar System is one unit. So far so good. On the other hand, gravitation is Janus-faced. It is gravity and antigravity at the same time.



FIG. 23-2 Janus, a god with two faces.
(Ancient Roman religion.)
(Credit © Public Domain, Wikipedia.org)

As it has already been said, gravity increases the wavelength of Space wave. This phenomenon has two effects. Firstly, it shall increase the space between galaxy clusters. According to our measurements the galaxy clusters will be more distant from each other. Secondly, Space waves will always be longer, so galaxy clusters move faster and faster. If we add these two effects, the result is an accelerating universe. So why is the universe expanding? Because there is gravity.

The accelerating Universe can be explained with Space waves. The constant acceleration of gravity has been explained above. The growing acceleration measured in the Universe comes from the growing wavelengths of Space waves between galaxy clusters, since gravity of moving mass makes Space waves longer.

In Einstein's model gravity as curvature of spacetime has no velocity—it is a deformity of spacetime. It is a state. Therefore gravity as Space wave must have such a large velocity that Space waves can be seen as some motionless structure. The velocity of the Space wave (time wave) must be an over-superluminal velocity independent of our viewpoint. Over-superluminal velocity is the speed limit of every superluminal matter.

In the theory of general relativity there is no place for gravity caused by non-fermions, e.g by light. According to Space-Matter Theory a special kind of gravity exists between photons.

23.3. Spooky action as difference of wavelengths of space waves caused by photons

The spooky action at a distance is the nickname of the non-local correlation in quantum entanglement (*nlcqe*) given by Einstein³⁹. Quantum entanglement is a physical phenomenon that occurs when two particles interact in a fashion that the quantum state of each particle cannot be described independently. The best known example is the change of spins of photons.

Independent measurements by Salart⁴⁰ and by Yin⁴¹ prove that the velocity of spooky action is more than 10.000 times greater than c . The measured velocities of the spooky action are 54.000 times c by Salart and 13.800 times c by Yin. Spooky actions' times measured are longer than the traveling time of the spin-changing information. Current researches suppose the spooky action is communication without particles^{42, 43}. I think the spooky action is communication using modified space wave created by photons. Its velocity is superluminal_{EMB}.

23.4. Gravitational waves measured by LIGO

In spacetime models of physics, no particles can move faster than light (cf. Standard Model of Physics⁴⁴). Not even the wave of gravity that travels in fabric of space. It travels at light speed c . This was Einstein's theoretical concept. First Hulse and Taylor^{45, 46} proposed measuring the gravitational wave found c . They were awarded the Nobel Price for this measuring⁴⁷, but the question remained open. Chinese scientists are supposed to have measure the same value⁴⁸. On the other hand, there are physicists that state gravity is much faster than light⁴⁹. According to measurements of Flandern (1940- 2009) the speed of gravity is at least 20 billion faster than light.

The physicists of LIGO accept c as fact. Based upon it, LIGO's scientists are supposed to have measured the gravitational waves of two black holes that collided. The *supposed* event measured took place 1.3 billion years ago. In the collision about 3 times the mass of the Sun was converted into gravitational waves in a fraction of a second⁵⁰. This gravitational wave was measured by LIGO. This was the first measurement of LIGO in September 2015. The timing of the collision of two black holes proved extremely lucky. The gravitational waves reached Earth 1.3 billion years + 100 years + 9 months after their collision. It was exactly the time when Einstein's paper of general relativity turned 100, and the 1 billion dollar LIGO had its test run.

23.5. Velocity of gravitational waves and Space waves

The published measurements of LIGO and the academic standpoint seem to contradict the Space-Matter theory where the speed of gravity is over-supersluminal. Is there truly a contradiction? No, there is not.

There are two different phenomena here. Gravitational waves measured by LIGO are transverse waves. A transverse wave is a moving wave. Light (energy) is transverse wave. It consists of oscillations occurring perpendicular to the direction of the propagation of the wave.

This transverse wave travels on the space waves created by mass. To make it more understandable, let us suppose a model where space waves created by mass are longitudinal waves. This presumption is not necessary, but it helps to imagine the difference. Longitudinal waves, like sound, are waves in which the displacement of the medium is in the same (or opposite) direction as the direction of wave's propagation. See the difference in FIG. 23-3. The arrows show the direction of the propagation of waves.

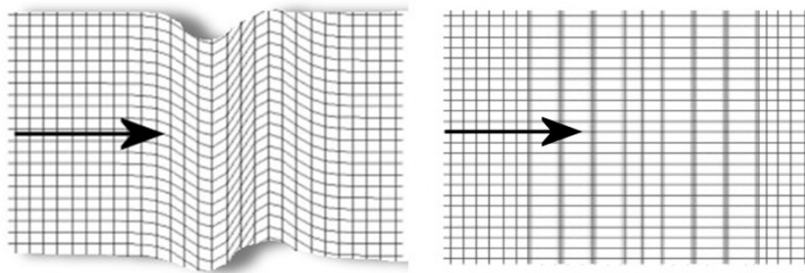


FIG. 23-3 Transverse and longitudinal waves.

Simple model.

(Credit CC BY-NC-SA 4.0 T. Lajtner, Lajtner.com)

Space waves (time waves) that create gravity force can be supposed to be standing waves. Transverse gravitational waves travel on standing Space waves like light does. This model seems to be an acceptable model, since light (energy) can be embedded in space waves. This embedded energy in space waves has c velocity, since it is energy, that is matter. This kind of gravitational wave is an energy wave embedded in space waves that travels on Space waves caused by masses.

23.6. A major consequence of LIGO's measurements

Existing gravitational waves created by different attributes of matter explained by general relativity confirm my earlier statement. Not only mass has a copy in Space. Every attribute of matter has a copy in space. This result is measured. It is fact.

23.7. "I think, therefore it is"

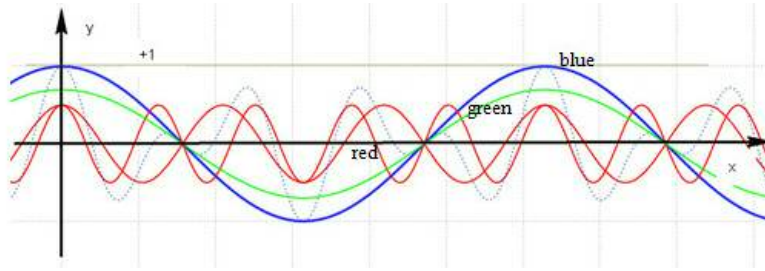


FIG. 23-4 Space waves and gravity of mass.

x and y axes are spatial distances. Two-dimensional model not proportional.

(Credit CC BY-NC-SA 4.0 T. Lajtner, Lajtner.com)

The gravity of mass as space wave is marked as a blue cosine function in the two-dimensional model displayed above. The "blue wave" appears as gravity from the viewpoint of mass. This is a set of space waves where the set contains several waves of space created by different properties of the object that are described in general relativity.

In FIG. 23-4 there are several unknown waves of space and they are not part of gravity according to general relativity, e.g. the "red and green waves". But they exist and these forces may be able to modify the force of gravity. The existence of these forces is not a mere assumption but a fact. The force of thought runs the paper wheel, ergo it exists. "I think, therefore *it is*."

23.8. New force

Let us see the following figure. Here the force of thought and gravity are pictured as space waves. The sum of these waves depends on both forces, i.e. the force of thought is able to change gravity.

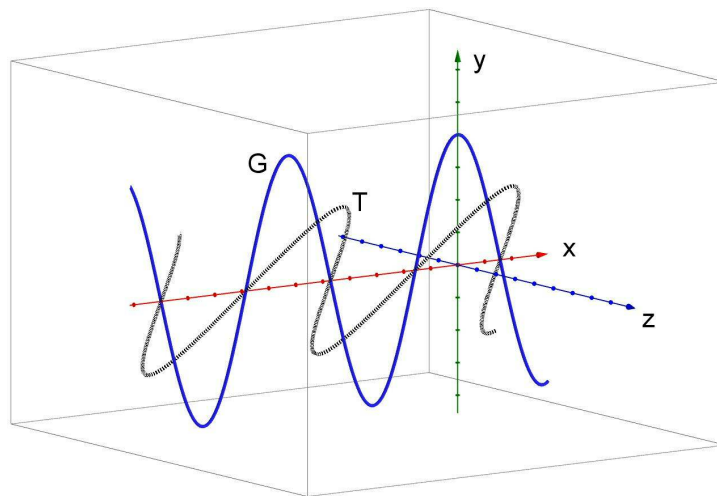


FIG. 23-5 Forces of thought (T) and gravity (G).

x, y and z axes are spatial distances. Three-dimensional model not proportional.

(Credit CC BY-NC-SA 4.0 T. Lajtner, Lajtner.com)

Remember FIG 13-1. It shows that the forces of thought are able to make "concave" and "convex" curvatures in spacetime, they can be attractive and repulsive. In other words they can increase or decrease the wavelength of space wave, while gravity only increases the wavelengths of space wave.

On the other hand the force of thought like every force has a counterforce, see Chapter 7. This counterforce (force) can be created by any object. Saying this, every mass is able to increase and decrease the wavelengths of space wave, but in this case we are not talking about gravity and not about antigravity. We will see soon this is a new fundamental interaction that modifies space waves. It is not part of general relativity, and LIGO does not know it.

This new force can be created by living and inanimate. Human beings and other living beings we know use (parts of spectrum of) this force as thought.

24. SUPERLUMINAL VELOCITY AND GENERAL CAUSALITY

According to relativity faster than light velocity of matter or space destroys the general causality. This view is a particularity of relativity. Let us see a draft of Minkowski geometry of special relativity in FIG. 27-1. A geometrical explanation will be shown how fast waves do not work.

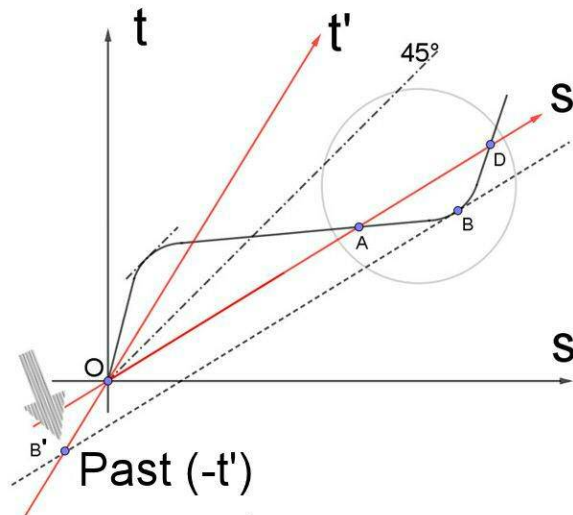


FIG. 24-1 No superluminal velocity in (special) relativity.

t and s are expressed in meters. According to Minkowski geometry of special relativity superluminal velocity in the st coordinate system is a time travel in the past in the $s't'$ coordinate system. According to $s't'$ AB and BD events are in the past. Superluminal_M velocity in one system (e.g. st) is time travel in another system (e.g. $s't'$).

For example, event B is B' in the $s't'$ coordinate system. B' is in the past in $s't'$.

In the special theory of relativity, it is not possible to display an event at superluminal velocity.

Superluminal velocity destroys general causality—in this theory.

(Credit CC BY-NC-SA 4.0 T. Lajtner, Lajtner.com)

24.1. No causality without superluminal velocity

Superluminal_M (and even superluminal_{EMB}) velocity cannot destroy general causality in Space-Matter Theory, since time travel is impossible here, because time has no dimension. General causality remains untouched in both in theory and in praxis. As it has actually been measured, superluminal_M velocity of fast wave does exist. This velocity does not and cannot violate general causality⁵¹. What is more superluminal velocities are the explanation of many unexplained phenomena, like tunneling or spooky action.

25. UNITS IN SUPERLUMINAL_M SPACES

Superluminal_M velocities are in superluminal spaces, in matter-spaces. Seeing FIG. 25–1, we will understand immediately why a matter-space is faster than our Space.

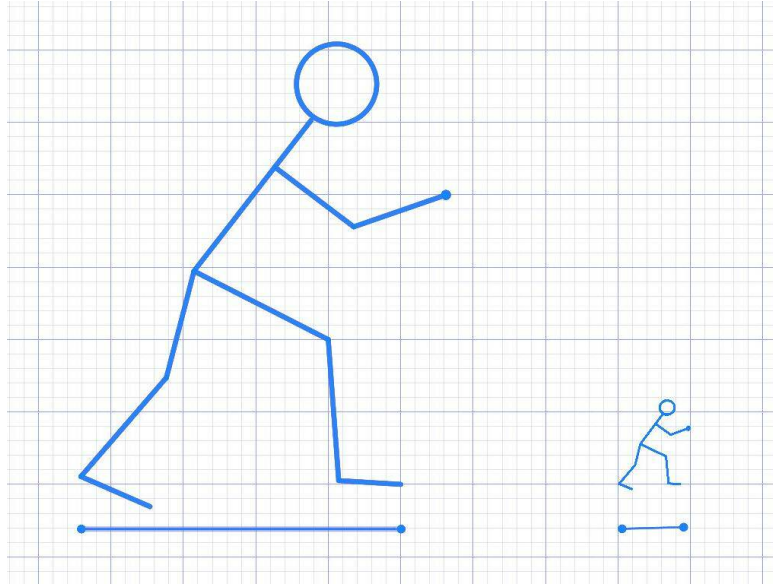


FIG. 25-1 The same step, a different country.
A step in the country of giants is longer than in the country of dwarves.
(Credit CC BY–NC–SA 4.0 T. Lajtner, Lajtner.com)

The basic units of matter-spaces are longer than ours. Here waves travel at superluminal velocity (as fast waves) from our viewpoint, but the velocity of traveling matter is 1 (that is c) from the viewpoint of the given matter-space and the matter travels in it.

26. RELATIVITY SUPERLUMINAL

26.1. No-man's land in theory of relativity

In theory of relativity it is impossible to handle superluminal phenomena. Fast waves and space waves that have superluminal velocities are unwelcome in relativity. By this the theory of relativity ab ovo abandons the ambition of exploring part of the world.

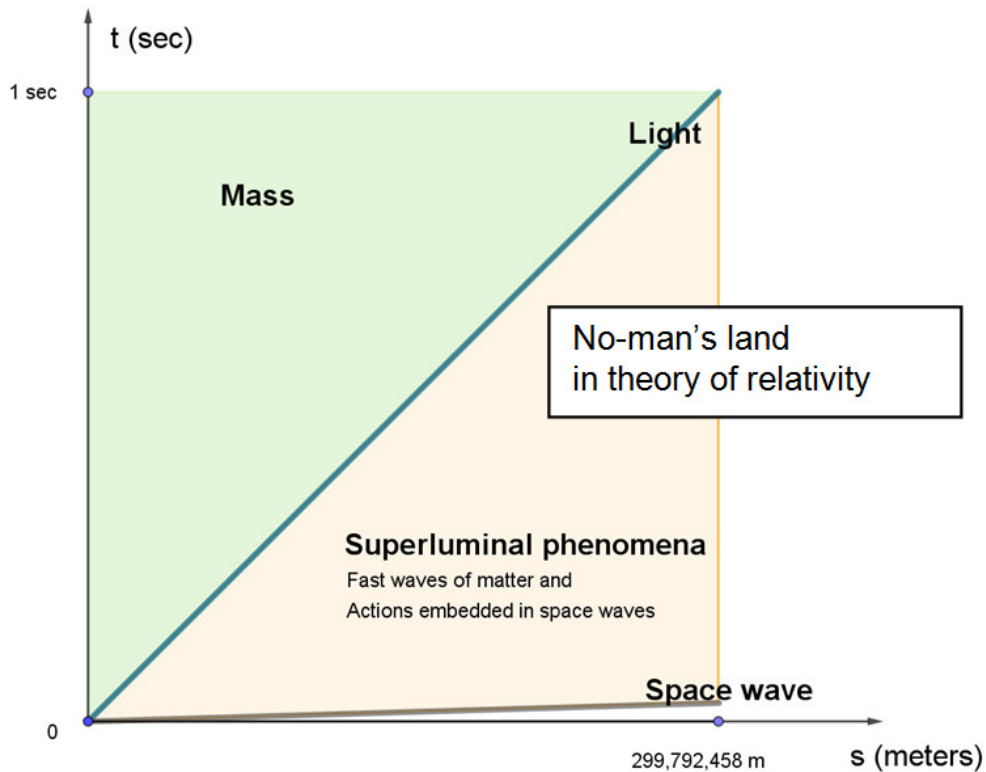


FIG. 26-1 No-man's land in theory of relativity.

Velocities of mass, light and superluminal phenomena that exist in reality.

The velocities of space wave and the velocity of light cannot be displayed proportionally in the same coordinate system using linear scale, because the speed of space waves is several orders of magnitude faster than light. Space waves have the highest speed in our Universe, its speed is over-superluminal.

Model not proportional.

(Credit CC BY-NC-SA 4.0 T. Lajtner, Lajtner.com)

26.2. Distortion of light

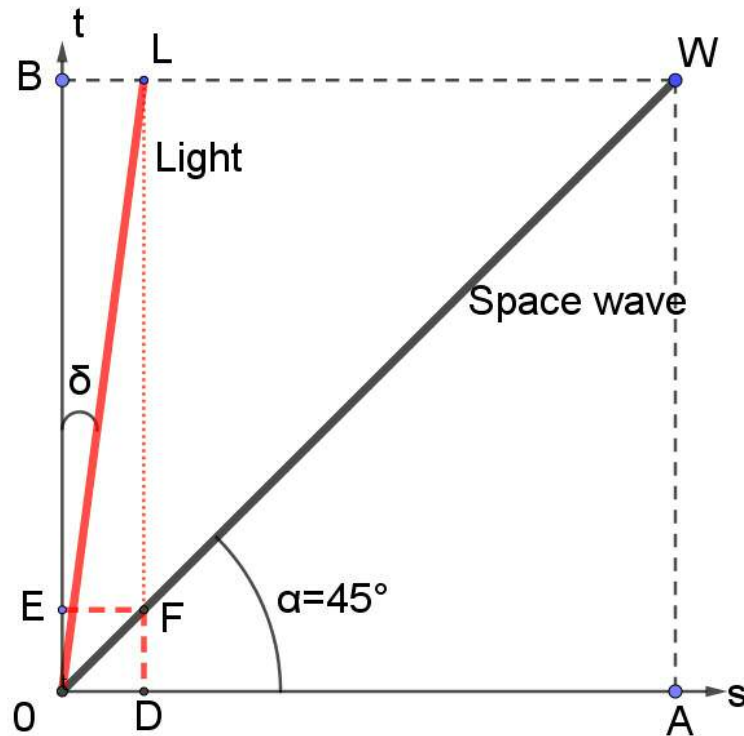


FIG. 26-2 Coordinate system of Space wave.

t and s are spatial coordinates expressed in meters. Data given by Cosine-model.

The scale of the coordinate axes is logarithmic. OB represents 1 sec. OA represents the distance where Space wave travels one second. This is a very long distance according my calculation. $\alpha = 45^\circ$ shows the highest velocity. This is the over-superluminal velocity of Space wave. Result $OD/OB=1$ originates from

Space wave. It shows the nature of Space. In the coordinate system of Space wave light displays a different rate: $OD/OB \neq 1$. This different relation is expressed by δ (delta). Delta contains both the nature of space and the nature of light. In our dally calculations we use the function $OD/OB=1$ supposing $\delta = 45^\circ$.

In reality $\delta < 45^\circ$.

(Credit CC BY-NC-SA 4.0 T. Lajtner, Lajtner.com)

This is, why Minkowski geometry of special relativity does not allow us to display superluminal velocities. It uses the speed of light as general speed limit.

Superluminal phenomena, fast waves and forces embedded in space waves appear in the triangle OLW . These phenomena are several times faster than light, but their velocities are lower than the speed of Space wave. Information as force embedded in space wave is also slower than the velocity of space waves. Remember the velocities of spooky actions at a distance.

Knowing this, there is an absolute speed limit for every matter and every action of matter in every space. This is the speed of space waves of the given space. Therefore, the space waves in every given space must be faster than light in the given space.

The distortion pictured by beta is a general attribute of matter. The distortion of matter is very important. It makes possible that the same Space waves appear as different counter (distance) and denominator (time) in Newton's Second Law of Motion, while we rotate the paper wheel by thought force.

Light travels at velocity c in every matter-space from the viewpoint of the given matter-space and the given light, but we are not inside in this matter-space, so we measure this velocity as superluminal_M velocity. Knowing that delta exists, and that it can have different values in different spaces, and delta is smaller than 45° , we may use the velocity of light in different spaces to describe these spaces. Light is our general measuring instrument.

26.3. How to extend relativity?

Is there a way to extend relativity using fast waves in this model? I think there is a way.

Using fast waves in special relativity we should put two coordinate systems together. The white area, the coordinate system st is the common coordinate system of mass and light. This is in the country of dwarves. The coordinate system $s't'$ is the country of giants. We do not need more details. It is enough to know, Relativity Superluminal is a real model.

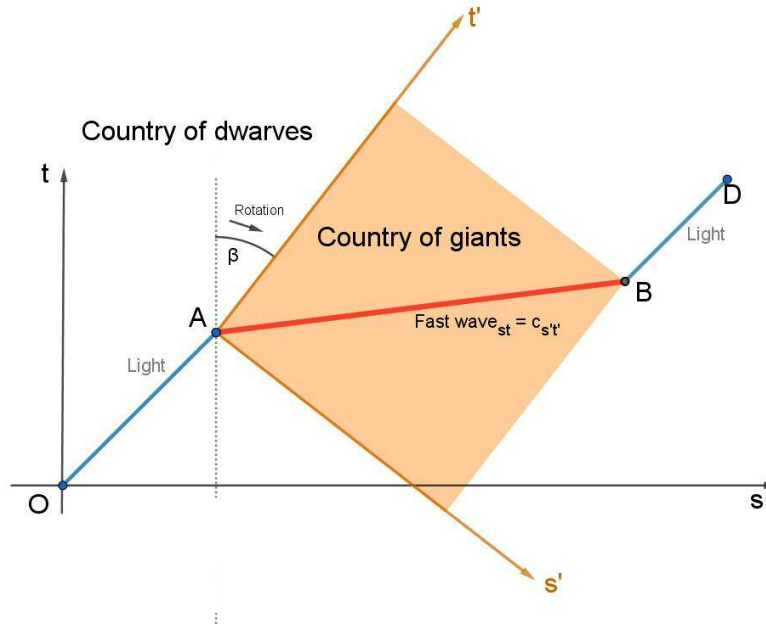


FIG. 26-3 The measured superluminal_M velocity in Tunneling Experiment 2.

Every axis is in meters. Two-dimensional model.

(Credit CC BY-NC-SA 4.0 T. Lajtner, Lajtner.com)

There is no faster than c phenomenon in the yellow coordinate system $s't'$, but it connects events A and B. The coordinate system st and the coordinate systems $s't'$ are different. Countries of dwarves and giants.

Relativity superluminal_M makes it possible to compare different spaces, and the behaviors of particle in these spaces. It allows to display superluminal_M velocities, e.g. fast waves in tunneling. It is a new instrument to work with.

Relativity superluminal_{EMB} makes possible to accept superluminal space waves. There is not “no-man’s land” in Space-Matter Theory.

27. MATTER MADE OF SPACE

27.1. Rotating galaxies

Gravity grows the waves of Space, that is Space. The growing wavelengths of Space waves means if after the extension reaches a certain size, the density of space decreases to such an extent that Space transforms into matter. This is like Space would hole. Since where there is no space, there is matter, and where there is no matter, there is space, it will be matter in the hole.

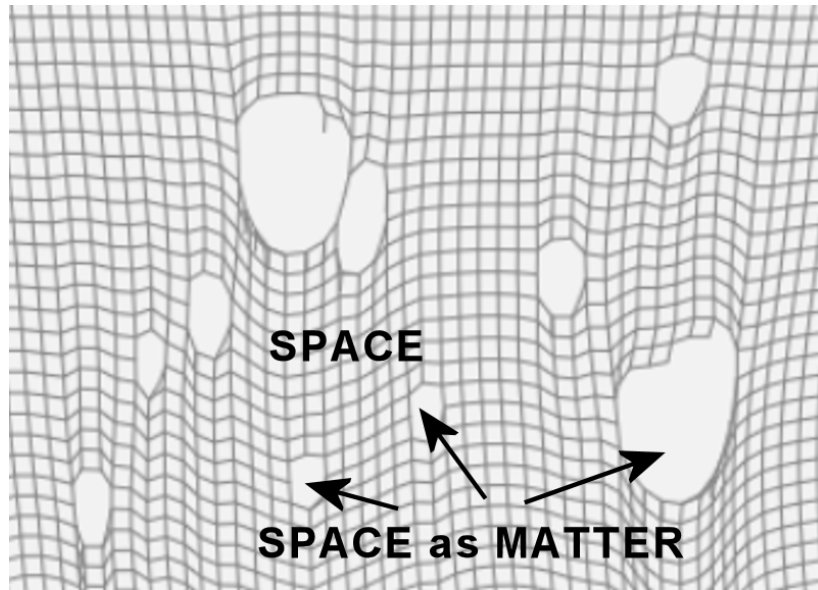


FIG. 27-1 Space as matter.

(Credit Picture CC BY-NC-SA 4.0 T. Lajtner, Lajtner.com from CC0 mtnon, Codepen.io)

In galaxies, the objects do not rotate as they do in the Solar system. In the Solar system the 3rd Kepler law of Johannes Kepler (1571-1630) is valid. The orbital periods of the planets depend on how far they are from the sun. The farther, the slower.

The stars in galaxies rotate differently from the planets in our Solar system⁵² – discovered by Vera C. Rubin (1928 - 2016). How do stars rotate in a galaxy? According to (Kepler's Law and) Newton's Law of Gravity we would expect the lower blue (in print grey) line. The stars have chosen the black line. See FIG. 27-2.

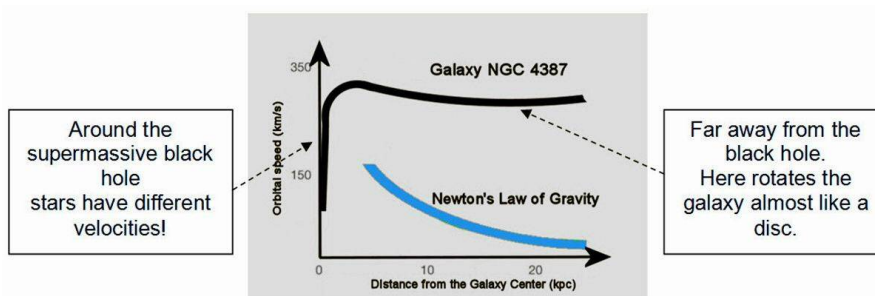


FIG. 27-2 Velocities of stars in galaxy NGC 4387.

The diagram is not perfectly proportional.

(Credit CC BY-NC-SA 4.0 T. Lajtner, Lajtner.com)

Why-do not the outer stars of the galaxy fly away? According to physics the dark matter should work here. Dark matter is supposed to exist. There are some evidences that can proves its existence, but its existence is not obvious. For example, according to Müller⁵³ dark matter is missing in the galaxy

"Centaurus A". It has no, or very little dark matter. The existence of dark matter as matter is questionable. The role of "dark matter" is not.

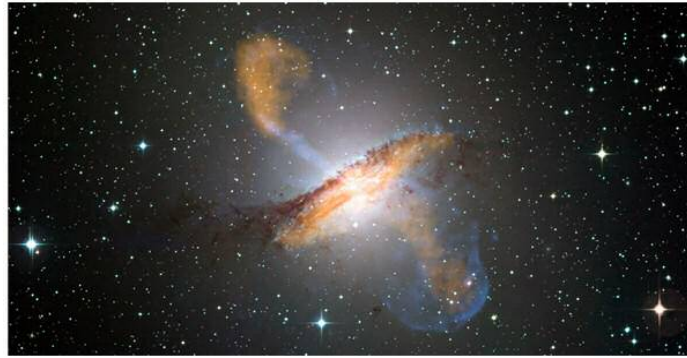


FIG. 27-3 Centaurus A. without(?) dark matter

(Credit: Public Domain © ESO/WFI (visible); MPIfR/ESO/APEX/A. Weiss et al. (microwave); NASA/CXC/CfA/R. Kraft et al. (X-ray), Edited)

And there is the Tulley-Fisher relation (TFR)⁵⁴. This is an empirical relation between intrinsic luminosity of a spiral galaxy and its rotation velocity. The bigger is the luminosity created by more stars, that is from more mass, the faster the rotation of the galaxy is. It seems to be logical, but it is not, since according to measurements, the mass of stars is not enough to keep faster rotation alive.

What else is able to effect here? The Space whose density is so low that Space is transformed into matter. The more stars are the smaller the density of Space is. It means Space will have increased nature of matter.

What is matter, and what is space? As you have read it above, it depends on their density and actions. Quantum mechanics has known for ages that matter can be created out of Space. The particle created from Space will disappear after some time, the process is regulated by the Planck constant. This is a phenomenon we know: matter can be created out of the Space. So my state that space can be turned into matter has a stable base.

And now, we are able to continue our basic line: the investigation of thought and thought force.

Based on the above mentioned we can give new definitions of life, consciousness, love, soul, and maybe we can give a minor look at God's home.

III. THOUGHT FORCE, LIFE, CONSCIOUSNESS, SOUL, EVOLUTION, GOD

28. HOW DOES THOUGHT FORCE WORK?

28.1. Thought force is a new fundamental interaction

The force of thought is a small force, with a small energy. The problem is that these small quantities are not small enough.

Let us see now an example about the energy of the thought force. Why the energy? Because I mentioned earlier the energy of the thought that run a paper wheel. Is the earlier presented value of the energy of thought correct? Yes, it is.

Let us see now an example using a brand-new invention called Lajtner Sensor. It is able to measure the force (energy, power) of thought. The Lajtner Sensor is an electrical device connected to an electrical circuit whose properties can be measured by well-known categories such as voltage (Volts), current (Amps), resistance (Ohms), Power (Watts) etc.

The Lajtner Sensor changes, if it is affected by the force/energy of thought. The changing Lajtner Sensor changes e.g. the voltage, the current etc. of the circuit. It is more than just a measuring instrument; it makes possible to control the computer and other devices by thought force. (Visit www.lajtner.com.)

What does the Lajtner Sensor show? The Lajtner Sensor indicates significant changes in power (energy) of the given circuit caused by thought. These values do not seem to be realistic at first glance according to today's science. The mainstream science finds these thought forces (energies) too big, because the brain cannot create electromagnetic waves like these. This kind of thought force (and its energy) cannot be made of the electromagnetic signals of brain.

The conclusion of the above-mentioned is the same as the one that was drawn in the chapter on the paper wheel. Since thought force exists, it must be more than only electrical signals of brain. Now here we can go further and we can confirm our earlier conjecture:

Thought force is a new fundamental interaction.

Thought force (thought energy) is so big that the brain cannot create it without using matter-space. So our brain can use the matter-space where the rest energy of fast wave *and* its superluminal velocity ($v \geq c$) causes the big energy. The faster is the fast wave, the bigger is its energy. When the fast wave enters our Space its speed decreases ($v \leq c$) and its rest energy increases. So, it will be a wave (or particle) with a big energy. Saying this brain is able to create fast waves in matte-spaces. This working method of the brain makes possible to create such big energies and power that we measured with the Lajtner Sensor.

The thought force has another surprising feature. Remember the “keep-in-touch” nature of the thought force. How does that work?

28.2. Thought forces as modified Space waves

Thought force has several very important properties mentioned above. Four of them:

1. It cannot be measured directly. Only the result can be measured.
2. Its velocity is superluminal, that is higher than light's velocity in vacuum.
3. It is an “early bird”, is created earlier than light. It already exists when light comes about.
4. The “keep-in-touch” characteristic: the connection between brain and the rotating paper wheel is a real and up-to-date issue.

If thought force exists as modified space waves, every requirement we specified can be solved. What does it mean? It means that thought is a new fundamental interaction as mentioned above.

If we accept Space-Matter Theory, we can give a new viewpoint of thought, life, consciousness, spirit, love...

First of all, let us see the problem of "concave" thoughts. That problem is no problem any more.

The attractive or "concave" thoughts of spacetime model makes the wavelengths of Space waves longer in the space-matter model. On the other hand, pushing or "convex" thoughts make them shorter.

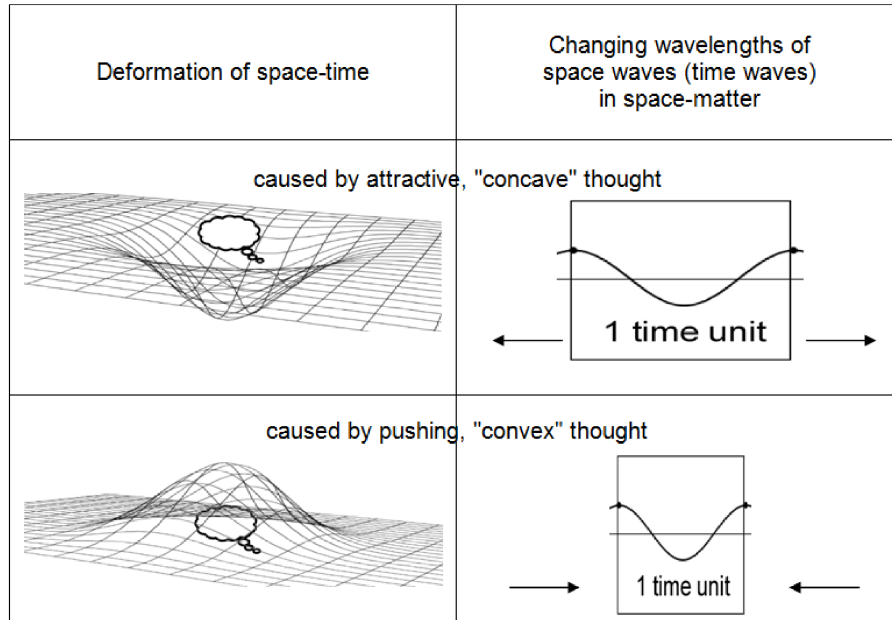


FIG. 28-1 The effect of thought force displayed in spacetime and space-matter models.

Model not proportional.

(Credit CC BY-NC-SA 4.0 T. Lajtner, Lajtner.com)

Thought is a new fundamental interaction that exists as the modifications of wavelengths of Space waves. Thought forces are able to increase and decrease the wavelengths of time waves (Space waves). The black arrows show the direction of the change in wavelengths. Force embedded in space waves is real. Remember the spooky action transported in photon's space waves. Our thoughts spread in Space wave, i.e. in time wave.

Thought force is modified time wave. Hence, those who think, control time; and those who control time, control your thoughts. In my experience thought force is faster than light. This is necessary if thought force is embedded in time wave (Space wave).

28.3. The velocity of thought force

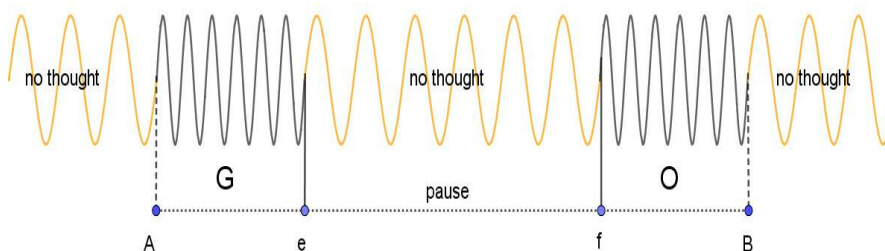


FIG. 28-2 Thought force "GO" embedded in time wave.

Model not proportional.

(Credit CC BY-NC-SA 4.0 T. Lajtner, Lajtner.com)

The speed of thought force is superluminal_{EMB}, but it is slower than the speed of time wave, because of the same effect we have seen in the case of spooky action and tunneling. Here is not about time of developing spins, it is about time we need to put our thought force in space waves. (I intentionally avoid using the expression “modulation of time wave”.)

The great superluminal_{EMB} speed of thought generates a paradox:

The whole world is in your thoughts, and your thoughts are in the whole world.

It brings the Möbius strip to mind.

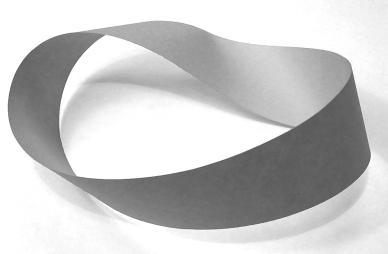


FIG. 28-3 Möbius trip.
(Credit CC BY-SA 3.0 [D. Benbennick](#), Wikipedia.org.)

28.4. The physics of emotions

If you are happy, time seems to fly. Can the physics of space-matter explain this statement? Yes, it can. What does it mean in physics? Time slows down for you. The clock indicates that an entire afternoon has passed, although it seems like only a few minutes, just as though you were traveling at high speed. We know that clocks moving at great speed proceed slowly (special relativity). When you are happy, you behave as though you were flying.

Other times, it feels as though time is dragging. You have been standing in line for an hour and you are about to go mad, but only five minutes have passed according to the clock on the wall.

When you are in love, the subject of your love is attractive. Why? They truly capture you while you are filled with the flying sensation, and you have the impression your clock is proceeding—slowly. A slower clock can result in higher gravity. Thus, what you feel for the subject of your love is—actual attraction; they truly do attract you. In physics terminology the wavelengths of Space waves, in fact also wavelengths of time waves close around you will be longer than those farther around you. The energy of the time waves is different. It is like gravity. It is attracting⁵⁵.

28.5. Human emissions are thoughts

May 2018. Biologists report they have transferred a memory from one animal to another, creating artificial memory by injecting RNA from one to another⁵⁶.

The researchers gave mild electric shocks to the tails of a species of marine snail. The snails received five tail shocks. When the researchers subsequently tapped the snails, they found those that had been given the shocks displayed a defensive contraction that lasted an average of 50 seconds. Those that had not been given the shocks contracted for only about one second.

After that, scientists extracted RNA from the nervous systems of marine snails that received the tail shocks, and also from marine snails that did not receive any shocks.

The un-shocked marine snails that received the RNA from snails that were given the shocks behaved as if they themselves had received the tail shocks: They displayed a defensive contraction that lasted an average of about 40 seconds. “It’s as though we transferred the memory,” said researcher Glanzman. (The report is partly quoted from <http://newsroom.ucla.edu/releases/ucla-biologists-transfer-a-memory>)

Where are the memories? According to today’s neuroscientists, our memories are stored in the brain, in synapses. As mentioned above the human brain consists of 100 billion (10^{11}) neurons. The connection mechanisms between the neurons are called synapses. The number of connections between the neurons is amazing: 100,000 billion (10^{14}). The individual neurons can connect to tens of thousands of other

neurons, send signals to and receive signals from these neurons. Our memories are supposed to be in these connections.

Glanzman takes a different view. Memories are supposed to be stored in the nucleus of neurons, and also the RNA participates in the storage process, or the memory experiment of total memory gives no result.

RNA is a molecule. Every organism uses such molecules. The RNA molecule locates in all our cells. RNA is known as a cellular messenger that produces proteins and forwards DNA instructions to other parts of the cell. It has other known functions. And a surprising piece of news: apparently it can also save and pass on memories.

Where are memories saved?

I am plucking up my courage to come up with a third option. Memories can be stored in the brain, and partially almost throughout the body, because RNA is everywhere, just like our nervous system or DNA.

Memories can, even if partially, be stored in space where every matter has a copy, like RNA, DNA, body, thoughts ...

Memories are stored as forces, in other words, they are stored thought forces. Can our thoughts be reached everywhere in our bodies? I think so. How else could the thought force be so great when the force of the brain signals is so small? Our body is crammed with thoughts.

When brain wants to send thought forces into the world, our body is always there to help. No matter what we call it, human mission, third eye, "mental power" or "ESP", they all constitute one thing, that is thought force.

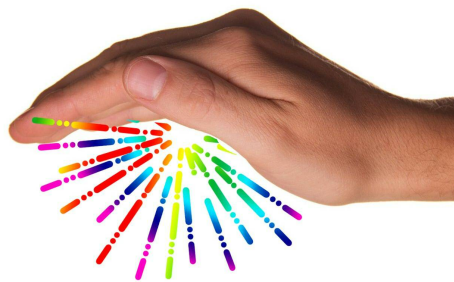


FIG. 28-4 Human emission = Thought Force

(Credit Picture CC BY-NC-SA 4.0 T. Lajtner, Lajtner.com from Rays; Hand CC0 geralt, Pixabay.com, Edited)

Your thoughts change your body, e.g. by your RNA. Beware of bad thoughts! They are destroying your health! But the beautiful ones shine! Like love!

Talking of, love! Do you know why it is so hard to bear when we have been abandoned? We now know that RNA stores thoughts. If we love someone or something, our RNA is set to pull it. If we have to let go of him/her, we need strength to convert our RNA. Suffering or lovesickness is a real fight between new and stored mental powers. Or in terms of physics: Action-reaction.

28.6. Thoughts without brains

Thought has a given frequency spectrum within space waves. Thought forces are phenomena that are embedded in the modified space waves. Thought forces have their spectrum. In this spectrum can also be other forces. From the viewpoint of physics, these forces that can be made by brains or non-brains, by living or inanimate (non-living). Brains sense the forces in this spectrum as thoughts. Saying this, there are thoughts that no brain and even non-living thing created. This is the general description of the above-presented examples of brain electromagnetic signals.

29. OUR FIRST THOUGHT

Physics of emotion? Nice, but where is the physic of thought? What is the first thought of a human being? Everything starts with this first thought. How was this first thought born? If we understand this, we understand how other thoughts were created.

I think we all must have a “Personal Data Bank” (PDB) somewhere. It will be always called upon if we see, hear or sense something, that is if an input reaches us. For example, if I see a paper wheel, my personal data bank will offer a lot of choices what to do with this paper wheel. a) Swallow it. b) Lacerate it. c) Ignore it. d) Rotate it with finger. e) Rotate it by thoughts. My PDB contains the choices and I can choose one.

Our PDB can essentially have information from our personal experiences, memories and our knowledge sources. These kinds of information originate from us.

There are thoughts that do not originate from us, and yet they can also be stored in our PDB. So what is my first thought when I see the paper wheel? It is what I choose from the possibilities generated by the paper wheel as input. This data bank can be in our brain, and it can be stored partly in our body, or in space.

A very small embryo has a body and causes changes in space waves, but it has neither brain nor head. But we already get thought forces. And because of the action-reaction, we also send thought force as an embryo. There are experiments that show that an adult has something of the embryo time that is unconscious and you can call it memories. There are many experiments that show that the 30-week-old embryo already has "measurable" memories⁵⁷.

It is possible to go farther, because we had thoughts earlier already. What was our first thought? It was the very first action-reaction we had. What was the only answer we could give back then? That was: "I am!" We were aware of that right away.

"I am!", this is our first thought, and we have to keep to this status. The first law of nature that comes with our first thought is: Stay alive!

30. WHAT LIVES?

30.1. First law: stay alive!

Time wave is space wave. Time is a fast and continuous force that is always present in every matter. It is a constant series of signals which matter can conform to and does conform to. The only condition of this is that all elementary particles of matter have an algorithm. This is an important question. Without time the algorithms do not work, and without algorithms time cannot control-processes. Thus “laws of nature” are no longer in a mystical sphere. They are the cooperation of algorithms and time. The “laws of nature” are expressed by the distinct algorithms that can be described. See a short sketch in⁵⁸. The first command in the algorithm is "stay alive". This means, the smallest structure builds biggest structures to get more protection. This bigger structure is useful as long as the existence of the smaller part is safe. See FIG. 30–1.

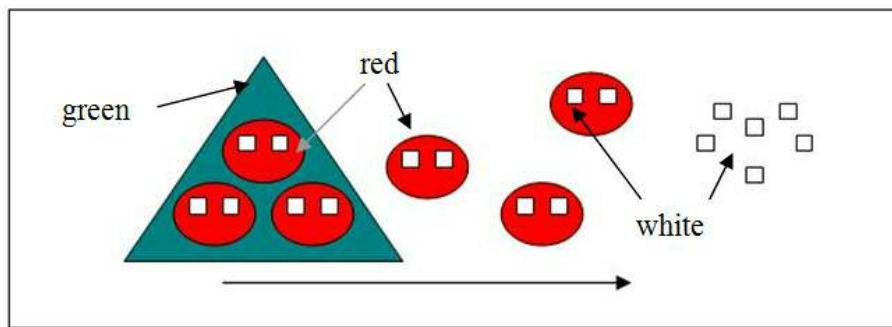


FIG. 30-1 Staying alive.

The arrow shows the growing force of the environment (for example temperature). The white matter objects are the tiniest objects that are able to exist as matter. Model not proportional.

(Credit CC BY–NC–SA 4.0 T. Lajtner, Lajtner.com)

This model is very simple. It shows the most important command of the algorithm "Stay alive!". It means the following: if the temperature grows, first the biggest structures disappear (water --> stream). If the temperature will be higher, the matter will go to smaller pieces (molecules --> atoms.), etc. The rule is simple: the smallest object is the most important, it has to stay alive. The bigger objects can be rebuilt any time. The green objects exist, but does not live. Note the green object is able to use space waves to communicate. We do not call these signals thoughts but our brain may be able to sense them, and recognize them as thoughts. So-communication between living and inanimate is possible, and it exists. You can try it out with a simple paper wheel. So, the statement "no brain, no thought" is not correct.

Why is to build green and red objects useful if the white ones are the most important? Because the white matter particles have the lowest energy. The white matter particle has the greatest chance to be transformed into space, and lost as matter. Forming a group means increasing safety. The energy (force) of the red object is much higher than a single white particle. See for example the energy of quarks according to Standard Model of Physics. In other words a red or a green object cannot disappear in space. They are simply too large.

Where are algorithms? They are in the particles. What runs these algorithms? It is the wave of space, or time, by another word. Time runs the algorithms of matter (and the algorithms of space).

How do the white particles decide to build or unfold the red formation? They vote. Their algorithms exist as force, so the sum of force is the outcome of the voting.

And now there is an important question: what has algorithm? Do only the white objects have it? Or do also the green and red ones have it? It is important to answer this question. The answer will tell us what lives.

30.2. What lives?

Whatever *lives*, operates on the basis of at least one more algorithm than the number of elementary particles *and* living elements than it is composed of, and at least that many algorithms that receive input from space. Furthermore, any two interdependent components that make up the being must be within a given distance. What is this *given distance*? In the case of being made up of water and carbon compounds (such as grass, trees, flowers, you and me), these values can be calculated^c.

But who said that life could only be carbon and water-based? We have only seen that type so far, but the world is vast. Moreover, the essential condition of life, as explained above, is not restricted to carbon and water. Thus, the *given distances* could be different from those that we encounter on Earth. The definition above holds true for everything that exists as matter— even for Martians if they exist. If they do not exist, they may now bring themselves into existence on the basis of the definition.

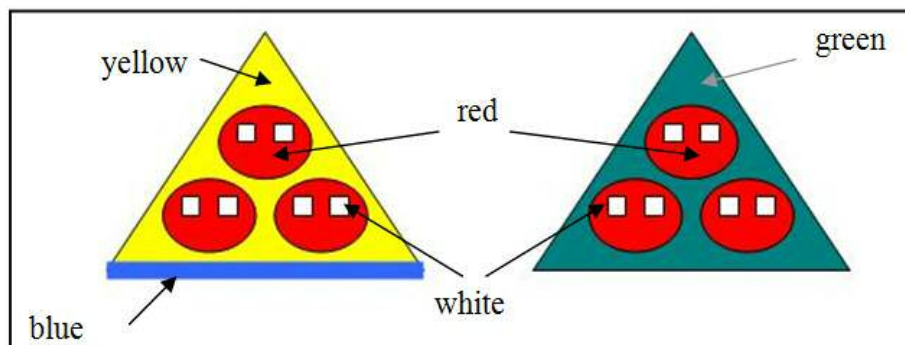


FIG. 30-2 What lives?

The white squares have algorithms. The yellow triangle lives, because it has an autonomous algorithm as triangle, too. The blue line shows this autonomous algorithm. The green triangle has not autonomous algorithm, it contains only the algorithms of the white particles. It exists, but does not live. Model not proportional.

(Credit CC BY-NC-SA 4.0 T. Lajtner, Lajtner.com)

30.3. What is consciousness?

Consciousness can be *created* when traces (prints) of space of the algorithm run themselves through the algorithm. Many runs mean many results. Consciousness can then *come about* if the original matter (mass) is capable of recording some of the results of these runs. That is the results are capable of bringing about material structures within their own systems. For example, changing vibrations in one component part. A body of matter organizing the distinct vibration can itself become distinct, but not necessarily.

A brain (or nervous system, at least) takes shape when these vibrations being created in the mass have physical outcroppings that become distinct. The ongoing vibrations of these distinct parts exert such force on the chosen algorithm that the algorithm forces the mass to make a move that corresponds to these kinds of vibration.

This sometimes supersedes the basic necessities of the “survival reflex.” The essential condition for this is when following the principle of “survival reflex” should remain in harmony with the current state of the environment – so that the imperative to remain alive does not manifest itself so strongly as to push aside all the signals in the algorithm⁵⁹

30.4. Human consciousness

Human awareness comes about when the stored patterns fashion further patterns which have such a strong influence over the algorithm that it makes the matter (mass) obey patterns extrapolated from previous patterns. Hence, the fundamental algorithm, in this case, produces patterns from reflections upon

^c Parts of this chapter have been published in my paper entitled “Thought force and Consciousness” by Dr. Tamas Lajtner, Jour. Of Consciousness, Vol. 19, No. 61, 2016, and in my book “Die messbare Kraft der Gedanken” (2018).

external stimuli and its own reflections in space, then produces more patterns out of the new ones. The algorithm recognizes these new patterns as input like any other input. However, its constant presence redeems it, and as a result, a change occurs in the algorithm's output which matter (mass) must perform. This *performance* is essentially following and giving shape to the pattern. In this sense, giving shape to the pattern can manifest itself in motion, but other new patterns can be created, too.

Is this conception in harmony with life as a process? It is indeed, and highly so. At the end of the DNA strand there is a place for information storage. Its role is information storage and delivery. This means it has an algorithm, and on the basis of this, it works as an independent unit. According to my definition above, this autonomous unit lives, and live it does, not just in my definition! Where do the living store this algorithm? In matter, in compounds, and in molecules. If DNA continuously deals with this matter (i.e., these compounds and molecules), then traces of the process are continuously brought into existence in space. Our brain perceives this, senses it, and automatically makes use of it. For the mind, it is simply more input to be processed among other sources of input.

The operation of life and consciousness may come about through other information storage systems, not just DNA or RNA. Consequently, consciousness is not necessarily the sole province of Earth-dwellers. We know of this type, but other forms of life could have consciousness.

30.5. Is there life in space?

The question is unavoidable. Could there be life in space? Could life in space mean the very same thing as life in matter? Evidently, it could not. Nonetheless, I stand by my earlier definition here, too. On the basis of that, life is also possible on the Universe's space side.

What is more, there is such life! Matter is always surrounded by space. If space encircles the living, then space itself can be considered living, because the definition still holds.

Could awareness exist in space, in the texture of space? Yes, it could. After all, a trace of our thoughts, that is consciousness (this is a given portion of it) is always present in space. Is space's consciousness also independent? Perhaps it is. One thing is certain. Space *could* possess awareness. It is capable of storing information. Why, it is even capable of storing thought.

Thus, space can even bring about the existence of "intelligent" life.

31. WHAT IS SOUL?

How does our personal thought data bank (TDB) work, wherever it is? I'll show you a possible way using creativity as an example.

31.1. Creatives become more creative

We live and there always comes something new, a new input, a new action. What is our reaction, our answer?

The answer will be the one we can take out of our thought data bank. An example: The offer of the database consists of 11 colors.

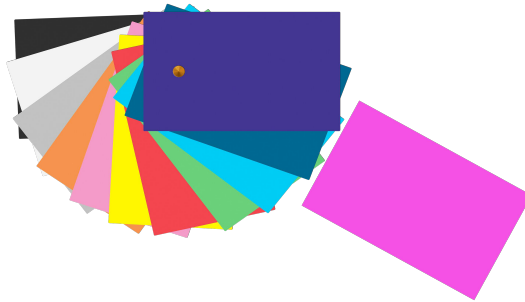


FIG. 31-1 Model of Thought Data Bank.

(Credit Picture CC BY-NC-SA 4.0 T. Lajtner, Lajtner.com from Cards CC0 JanBaby, Pixabay.com, Edited)

Answer without creativity: "I choose color 5." Answer with creativity: "I choose color 12." Creativity seems to mean being able to think something that is not already stored in the database, but what you are suddenly mixing yourself. Color 12 cannot be created without superpositions described in Schrödinger-cat part. Saying this the database has 11 colors and additional superpositions.

After the creative choice, next time the offer will consist of 12 colors and more superpositions than earlier. The creatives become even more creative.

There are of course many card collections, because there are many different questions.

31.2. Soul

In such a big world, where life is so colorful, there must be a place for our soul. Where is this seat? Is there soul at all?

Yes, seats for the soul exist. We all know that soul exists. From personal experiences we all are aware of its existence. We all claim to know what soul is. And how peculiar, we have no idea what soul is. Here faith takes over the control and defines a direction.

In most religions soul is immortal. There are different ideas here. The difference is in what soul does after the death of the body. Is it "somewhere" and it expects the resurrection of the dead to eternal life? Where is this "somewhere"? Nobody knows. No, that is not correct. Emanuel Swedenborg⁶⁰ (1688-1772) knew it. From personal experiences. He was in heaven and in the hell. You can read his book as a weird sci-fi, but you should not underestimate it! There are people who accept the teachings of Swedenborg as the truth.

In other religions the metempsychosis is supposed. Where does soul "go"? In some matter or in a new human body. If soul lives on in a new human body, that is reincarnation. Can one prove reincarnation? Yes, if you believe in it. How can you prove it? For example, as you do in Tibet. There lives the Dalai Lama. The Dalai Lama, the "Ocean of Wisdom" is the highest position within the hierarchy of the Gelug School of Tibetan Buddhism. The respective Dalai Lama may only be the reincarnation of the previous

Dalai Lama. The most important feature of reincarnation is when the successor recognizes the ancestor's personal belongings.

In addition to these ancient traditions, there is a new and modern version to prove the existence of soul. This is the near-death experience research. The the near-death experience was an experience that one would experience after his/her own clinical death, according to his/her view. After the reanimation one could tell his/her experiences. Near-death experience is immeasurable, but there are experiments where it is believed that the experience of death could be proved.

Soul is "something" that is. But there is no "something", there are only matter and space. Therefore soul must be either matter or space. Or both.

Is soul perhaps an immeasurable matter – fast wave – that flies from one space to another? In which space is it now? Is our body the space for our soul? It would be possible. Or is there another relation between our body and our soul?⁶¹

To find the new Dalai Lama, the successor should know "something". So soul is knowledge. Knowledge means thoughts. Where are these thoughts?

31.3. Soul from the viewpoint of physics

When earlier I mentioned the thought data bank, I did not tell everything I meant to. Our thought data bank exists, that's a fact. This thought data bank, no matter where it is, must have two parts. Matter and space. The material thought database has an imprint in space. This impression changes the waves of space. See Level 0 in the following model:



FIG. 31-2 Thought Data Bank and Space Waves. Level 0.
(Credit CC BY-NC-SA 4.0 T. Lajtner, Lajtner.com)

Level 0 shows our thought data bank. In this thought bank are answers with which we answer the questions. In what form can these answers be found? As forces and the questions we get are also forces. This database has an copy in space; it modifies-space waves. We can answer individual questions with individual forces. In the model, the forces are the small cards, as you have seen in creativity. Attention, this is not about algorithms, as it was in consciousness, it's about results.

But how do we answer the question "who am I"? I am my body and my thought data bank. I can see, feel, test my body. I can see my body as a unit. But how can I see my database as a unit?

There must be a force in the data bank that describes my entire data bank. How can we produce it? We do not need to produce it. It is ready. It is in the waves of Space (or spaces). So, the simplest solution is to describe the entire database using the space copy of our TDB. The space copy of the data bank must be integrated in the database itself. Level 1. This integration can be done with matter or with space waves.



FIG. 31-3 Thought Data Bank and Space Waves. Level 1.
(Credit CC BY-NC-SA 4.0 T. Lajtner, Lajtner.com)

Space print changed by database is a part of thought data bank; thought bank contains a picture of itself. This conclusion can only be drawn because we all know "our big picture," TDB, so we know that it exists. Without this knowledge we could not get to level 1 from level 0. Pure physics alone can never discover level 1, here physics needs our "human" help. The situation is similar to the case of the force of thought. If I did not know from my experience that my thought force would create actions and reactions, and I can "feel" the reaction, I would never have been able to work out the physics of thought.

When the space copy (TDB) appears in the database, space waves caused by data bank will change. This new copy in space (new force) will also modify thought data bank. Level 2. This new state modifies space waves again. So the database is changed again. Stage 3. And it goes on like this. Database is permanently changed because space copy is at permanent change.

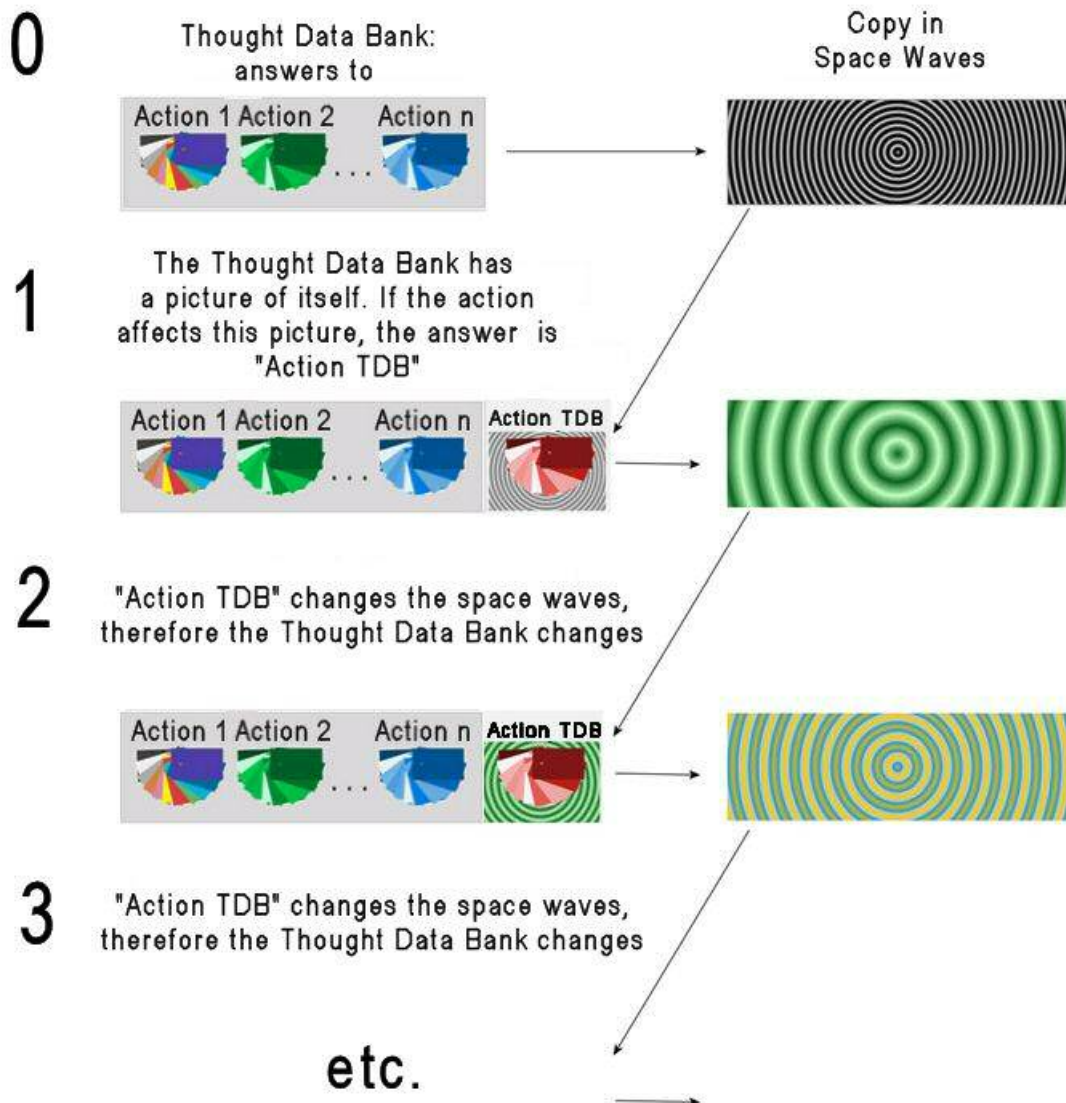


FIG. 31-4 Thought Data Bank and Space Waves. Level 0-3.

(Credit CC BY-NC-SA 4.0 T. Lajtner, Lajtner.com)

Reaction is exercised by TDB when thought database "in person" as-entity receives impact. When it is about our soul, we talk about the TDB and its actions and reactions. It includes the possible answers we can give if the TDB, i.e. our soul is touched by an action.

So if the question is who I am, the answer is: I am my thought data bank.

Is the soul immortal? Our forces of thought can exist without us and continue to go where they want to go. If soul consists of thoughts, as I suspect it does, then it can exist without us, not only as long as we live. So soul must at least partially be made of matter that is connected to the body. It must also be stored in material form thoughts. It should be something like the memories in RNA.

For the last-thousand years we have meant that soul is invisible and immeasurable. Which matter is invisible and immeasurable? Fast wave is invisible and unmeasurable directly. Matter can be space, we saw that in the tunnel effect. If soul, at least partly, consists of fast waves, then our body is the space for them.

Unfortunately, our body is mortal. If soul is immortal and partially exists as fast wave, then it needs a matter-space i.e., a living body, to live on. That would be reincarnation.

Or will the fast waves transform into space waves and then live on as thought forces?

Is there life after death? It can not be excluded ...

32. EVOLUTION NEEDS THE WHOLE WORLD

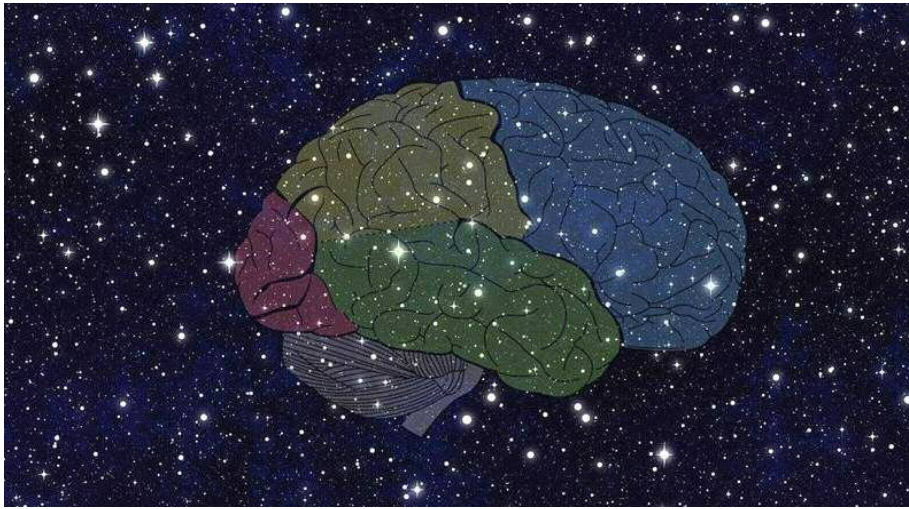


FIG. 32-1 Evolution needs the whole world.

(Credit CC0 T. Lajtner, Lajtner.com, from Brain CC0 ArtsyBee, Pixabay.com, Edited, and from Kosmos CC0 geralt, Pixabay.com, Edited)

We all think, we all send thoughts out into the world continuously. And because our brain unintentionally receives these signals, we get thoughts from all over the world.

More specifically, forces affect our brain region, where the respective forces, according to the brain, will be thoughts. Right now your brain is getting millions of thoughts out of the world.

Is it a problem? No, it is not. It is a very good thing! Man is born with this capacity. And so are animals with brains. Probably so are animals and plants that have no brains.

Can this phenomenon be *the* cause or *one* cause of evolution? Naturally.

This is much more than an idea. We are speaking about real forces. No matter where they come from and why they have been sent. They are here and they work.

Of course, like all forces, these forces also generate opposing forces. So here we are not talking about an influence, but an influence with feedback or control function. So far there has been no feedback in evolution. Feedback is one of the most important factors of evolution. And what the "intelligent designers" ask is a very fair question: how could, e.g. the evolution of the eye, have arisen? The eye is so complex that it does not work when the smallest part of the eye is not in the right place.

Without feedback it could not have developed. So I think evolution needs feedback that was and is available. In other words, evolution needs the whole world. Evolution is not earthly but "worldly".

How does match the evolutionary teachings? Very well. It brings the two leading teachings, that is "evolution" and "intelligent design" closer together.

R. C. Darwin (1809 – 1882) was the first to put forward the idea of-evolution⁶². Evolution summarizes four attributes: evolution, mutation, selection and adaptation. With these attributes Darwin tried to find one single root of all living beings. His picture is a tree, every creature has a common root.

The intelligent design supposes that God created everything. Every creature was created on its own. In this picture there is no tree but bush. Here new creatures do not use any attributes of other still existing, less developed creatures. Every creature has been designed as it is. God knows, designs and creates everything and rules everything.

Based on the existence of thought force, I propose considering a third opportunity next to evolution and intelligent design. In the new theory both versions exist together, but neither works the way we imagine. They work together.

The development of the various species did occur in the Darwinian way. One animal did not develop from the other, but its development was not independent of the other's existence.

The result of one's evolution was taken over by the other. How did it happen? By means of space waves.

A new species builds on the results of the existing species, but it does not develop out of it. Saying this, there is no Darwinian mutation, but there is a complex system that "fills the holes". Selection and Adaptation exist in this system of Darwinian way.

What is evolution? A copy in space wave of an already existing species met the matter of Earth in some given circumstances. This meeting caused birth and the creation of new species.

This is almost the same way as how the first ever living being came entered the world. Some appropriate space waves happened to meet the matter of Earth. Space waves could have been created by nature or by God. The Creator did not have to be on the Earth. It could have been at any place in the world, since thought force travels all over the Universe.

This "evolution via space waves" is in harmony with the above-mentioned definitions of life and consciousness and their physics.

According to pure Darwinian theory, the ancestors of chimpanzees and mankind have become separate between about 5 million years ago. Based on newly discovered human fossils in Morocco⁶³, Africa the mankind is about 300 thousand years old, mainstream science says. There is a fossil of two human hands found in Columbia, South America about 100-130 million years old⁶⁴. Mainstream science refuses to examine this fossil.

Mainstream science seems to want to place the oldest human roots in Africa. Nobody-knows why.

According to the intelligent design view mankind is about 5-10 thousand years old. This is an indisputable opinion, because it is firm belief.

The seed of these theories is the same. According to theory of evolution and intelligent design human being was the last to be created.

This concept remains unchanged also in theory of "evolution via space waves".

According to the "evolution via space waves" concept human being was the last to be created, since it is the most intelligent of all species, this species needed the most detailed information holding in space waves. On the other hand, according to this, mankind is much older than today's academic science or intelligent design suppose.

Now Darwinians can say that God was supposed to be more intelligent than us, so he must have been created after the creation of mankind. Therefore, God could not be the Creator of mankind. So, this theory is false. Let us go back to Darwin.

This argument is misleading if God is able to "detect" and "understand" information embedded in space waves as forces. Our starting point was The Creator was of top capacities. If the Creator was God, then God always stays at the top of evolution. Why? Because the changed space waves caused by mankind are portion of embedded information. The smarter you are, the smarter the Creator is. Saying this, mankind cannot be cleverer than God, but it can be cleverer than its Creator if this Creator was not God, but a simple force transferred by space waves.

The creation of the various living creatures went without the assumption of any intentions but it could have hardly worked without feedback, i.e. without space waves.

33. WITHOUT THOUGHT FORCE THE MILKY WAY WOULD NOT BE THE SAME

In our galaxy gravity is the basic force. It is permanently changing, since stars and planets are moving. Thought force and gravity are different forces, but they have common roots. Saying this, gravity changes your thoughts.

And what about thought force? Does it change gravity? The gravity of the Milky Way is practically many-many orders of magnitude of thought force. Can the very small thought force influence the giant gravity of Milky Way? Yes, it can. Let us see the phase space of Milky Way *and* thought force. Theoretically one single thought is able to change the gravity of our galaxy. At first sight it seems to be an intangible result of the nonlinear dynamic mathematics, that is of the well-known butterfly-effect⁶⁵.

At second sight, this is more than just a small effect. It may work, since we know very small forces that are very effective, e.g. Yarkovsky effect^{66, 67} and YORP effect⁶⁸. Both effects are caused by thermal radiation. They act on small objects like asteroids with smaller than 40 – 300 km diameter. These effects change for example the orbits and/or the rotation period of the asteroid. The source of these effects is a star. The starlight warms up parts of the rotating asteroid differently. This unbalanced thermal effect produces a tiny acceleration that changes the motion of the asteroid. It is a small force but it works. The effect also works in our Solar System. Both effects are typically long-term effects of million-years.

But if the asteroid is small enough, then these effects cause measurable changes in years.

Yarkovsky effect has been measured at the small asteroid 6489 Golevka. In twelve years its orbital path shifted from 15 kilometers (about 10 miles) calculated based on gravitational interactions. According to the NASA the force of this effect was about 28 grams (one ounce) that acting on the asteroid that weighs 210 billion kilograms (460 billion pounds)^{69, 70}. Notice the difference: twelve orders of magnitude.

YORP effect influenced the asteroid's rotation about its axis. Rotation increases until the centrifugal force breaks the asteroid apart. In 2013 NASA⁷¹ captured this effect on the asteroid P/2013 R3. See the four captured steps of this event.

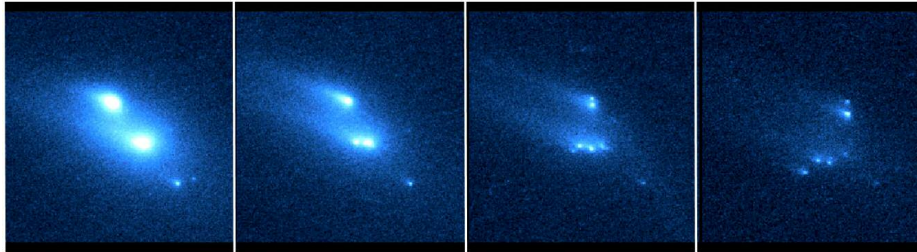


FIG. 33-1 Asteroid broken captured by HST.

Hubble Space Telescope recorded the break-up of the asteroid P/2013 R3 into as many as 10 smaller pieces.

(Credit Public Domain © NASA, ESA, D. Jewitt (UCLA))

According to astronomers, Yarkovsky and YORP effects should be-regarded as important effects in the life of small objects in our Solar System.

The small but long-lasting forces are effective. Everybody knows that water is able to wear away hard rocks if water is given time.

Knowing the above mentioned, the effect of thought force is real, although it is obviously smaller than Yarkovsky or YOPR effects. But thought force is also a force that acts. I do think thought force would be measurable in the case of very small astronomical objects, since we have been thinking at least of more than 300 thousand years. 300 thousand years is a considerably long period of time. Our thought force must have measurable impact on the world.

Thought force is superluminal_{EMB}. We can get farther than YOPR effect. Let's see our Milky Way! There was a visible supernova explosion in 1054 (Crab Nebula). The explosion itself occurred 6,500 years ago. Luckily, the Earth was not damaged. About 500 years after it there was a new, visible to naked eye supernova explosion (Cassiopeia A). The explosion itself occurred 11,000 years ago, that is, the supernova explosion occurred approximately 11,000 light-years away from Earth. Fortunately, the explosion was too far from Earth to do away with life on Earth.

NASA has found a third, a young supernova explosion in our galaxy occurred about 140 years ago⁷². Luckily it was also a long way away from us. Where and when does a supernova explode? Nobody knows. This kind of explosion is one of the biggest forces we know of. So our thought force is practically nothing compared to this force. But “practically nothing” does not amount to “nothing”. Could we influence where and when a supernova explodes? The answer is very important, since it is more than just mathematics, more than just physics. It is about its impact on mankind. Our thought force exists, therefore we should have some impact—on the whole world. Or putting it even more clearly and with sterner confidence in the quest:

Without thought force the Milky Way would not be the same.

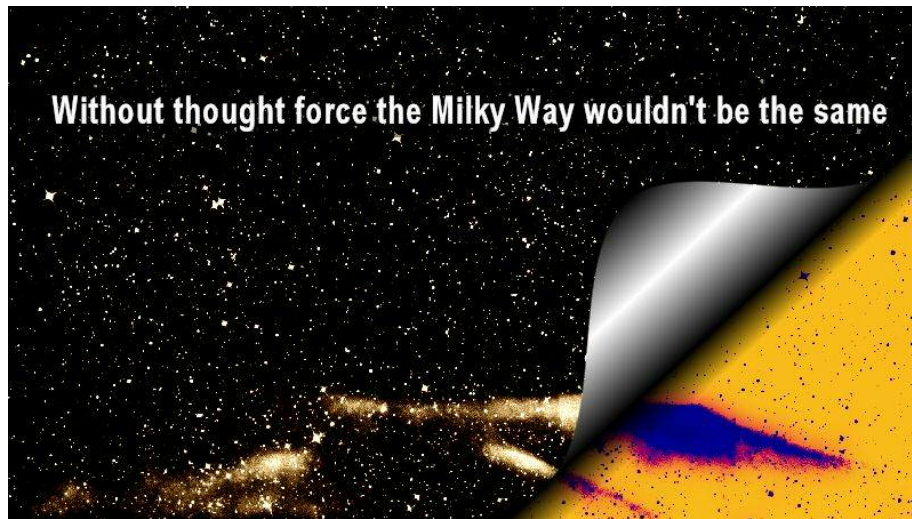


FIG. 33-2 Without thought force the Milky Way wouldn't be the same.

(Credit: Picture CC BY-SA 4.0 T. Lajtner from Supernova Remnant G266.2-1.2, Public Domain NASA, Edited)

34. GOD AT HOME IN THE UNIVERSE

34.1. Is there life in space?

The question is unavoidable. Could there be life in space? Could “living” in space mean the very same thing as living in matter? Evidently, no. Nonetheless, I stand by my earlier definition here, too. On that basis, life is also possible on the Universe’s space side.

What is more, there is such life! Matter is always surrounded by space. If space encircles the living, then space itself can be considered living, because the above-mentioned definition still holds.

Could awareness exist in space, in the texture of space? Yes. After all, a trace of our thoughts, that is consciousness (or a given portion of it) is always present in space. Is space’s consciousness also independent? Perhaps. One thing is certain. space *could* possess awareness. It is capable of storing information. Well, it is even capable of storing thought.

Thus, space can even bring about the existence of “intelligent” life.

34.2. God at home in the Universe

Those who believe in God and persistently think of God’s presence actually bring the deity into existence – not just for themselves, but for everyone else’s sake. This is a continually present force – not on matter scale, but on space scale.

Thought is not in our “touchable, evident” matter reality, that is God is not in our matter world. Yet, God is present in reality of space of thoughts. He is in space, therefore God *exists*.

In fact, God already exists in the world, for everyone, so long as one person thinks of God’s existence.

To clarify the issue: atheists need not believe in God. They need not believe in quantum physics either. God affects nonbelievers, just as quantum physics does.

Thought alters time, and love works just the same way as gravity. Love decreases time frequencies, and that is why we feel attracted towards the beloved.

Any god that is not “charged” with love is not an attractive god. Thus, it is possible to bring Satan into existence in space, but hatred repels, the very opposite of gravity. Satan worshippers cannot love the Satan they bring into existence (merely the associated rituals), because love decreases time frequencies, whereas hatred or Satan only increases them. Nevertheless, Satan, as evil, has just the same effect on you as it does on them.

What is the main difference between God and Satan? The fact that the Milky Way, the Solar System and all earthly existence depends on gravity. Gravity upholds our existence. Love is gravity, and thus, love is essential in our galaxy. In a sense, any idea of God without love is unviable in the Milky Way.

Beings that exist in any sort of solar system, galaxy, nebula, or super nebula must certainly be aware of love, because in these formations, gravity reigns. Therefore, wherever gravity has a decisive presence, love is all around in the form of attraction. To this end, in every such unit, God is the embodiment of the greatest love.

How does the fact that the Universe is expanding at an accelerating speed concern my statements above? The expansion of the Universe is caused by gravity stated by space-matter theory. So expansion can be seen as the expansion of love.

Our starting point was how in our earthbound lives a thought could bring God into existence, and how God could be physically perceptible in the (gravity-saturated) space world. God affects us and others in space. The sentient and non-sentient alike. Indeed, the consequences extend even further. If viable life exists somewhere in the Universe outside Earth, and it lives in a gravitational environment, then their God could not entirely differ from our own. It is even possible that our gods are intertwined in one. Hence, our God could be one with other’s God, and the other god may be one with our own. Thus, God could connect us with others whose existence we have not even suspected.

One thing, however, is absolutely certain. God is at home in the Universe.

34.3. Is mankind older than God?

I claimed earlier that God exists if a single person ponders God's existence. This statement would suggest that God's existence depends upon someone's thinking up God, which would mean mankind's existence precedes that of God. Hence, God is 150 thousand to 5 million years old. (The period depends on that who we call a human being.)

Other living beings, on another level of consciousness, may have brought God into existence, even before the appearance of mankind.

Could awareness exist in space? Yes. After all, a trace of our consciousness (this is a given portion of it) is always present in space. Is space's consciousness also independent? Perhaps. Who knows? One thing is certain. space *could* possess awareness. It is capable of storing information. Well, it is even capable of storing thought.

Thus, space can even bring about the existence of God. But how?

34.4. If there is nobody?

Could God exist in a (theoretical) world where there is no "living" made of matter? I do not think that the existence of God depends on living matter.

The "birth" of time means that the frequency of time was created. A change occurring in the frequency of space wave (under given circumstances) results in thought. Therefore the birth of time was the first thought ever. It was the first thought in our Universe.



FIG. 34-1 The first thought.

Illustration.

(Credit CC0 AbelEscobar, Pixabay.com, Edited)

If the first *thought* implies God Itself – to be more exact, if the first thought is meant as God Itself – then it is not possible to create a world without God. In this sense, God created the Universe, and the Universe created God. God, therefore, is the same age as the Universe.

But who knows how old our Universe is? We do not know where in the line of grandchild worlds our Universe falls. According to Space-Matter theory the continuous renewal of the Universe is possible with and without the Big Bang^d.

The conditions for time, life and consciousness can have come about in all earlier worlds. Saying this, God is older than our Universe, born in an earlier Universe, before *our* time existed. In other worlds God is timeless from our viewpoint. He is able to live and think in the space of our Universe. He is able to know everything within our Universe using time waves, and can send thought everywhere in the Universe using time waves. He communicates via time waves.

^d More about the continuous renewal of the Universe: 19 False Axioms of Physics by Dr. Tamas Lajtner. <http://www.lajtner.com/book-19-false-axioms.html>

Remember our human thoughts are communication. This kind of communication is a two-way communication. We are able to communicate with anyone that is able to use this communication.

It is thrilling, isn't it?

* * *

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