

## Negative energy explained by an imaginary speed of light

Olav Drageset <sup>a)</sup>

Ryghsvei 15-B, N0785 Oslo, Norway

(Received 6 December 2013; accepted 2 February 2015; published online 27 February 2015)

**Abstract:** The energy equation  $E = mc^2$  can be derived from a quadratic equation  $E^2 = p^2c^2 + m^2c^4$  that has a second solution  $E = -mc^2$ . The negative energy was assumed to be based on negative matter. No evidence of such matter has been found. The negative energy solution was discarded by all major physicists early in the 20th century, because it did not express any physical reality. Mathematician Luigi Fantappiè discovered that negative energy has several properties that are descriptive of life as opposed to matter. If negative energy is associated to life, it can be seen as a kind of mental energy. A book by the author shows how a new interpretation of string theory can model consciousness and a mind with “nonphysical” properties. This kind of a consciousness is a potential container for negative mental energy. This article explores the possibility of matter in the negative energy solution being positive while the speed of light is imaginary. That means either the space can be imaginary or the time can be imaginary. Both these views of negative energy modeling are found to support the mentioned mind model. The concept of string theory branes explains how the spaces of positive and negative energy are separated. String theory also explains how energy can be exchanged between a negative state and a positive state. © 2015 *Physics Essays Publication*. [<http://dx.doi.org/10.4006/0836-1398-28.1.92>]

**Résumé:** L'équation d'énergie  $E = mc^2$  peut être dérivée d'une équation quadratique  $E^2 = p^2c^2 + m^2c^4$  qui a une deuxième solution  $E = -mc^2$ . L'énergie négative est supposée être basée sur la matière négative. Aucune preuve de cette matière n'a été trouvée. La solution de l'énergie négative a été rejetée par tous les physiciens principaux au début du 20e siècle car elle n'exprimait aucune réalité physique. Le mathématicien Luigi Fantappiè a découvert que l'énergie négative a plusieurs propriétés qui décrivent la vie par opposition à la matière. Si l'énergie négative est associée à la vie, elle peut être vue comme une sorte d'énergie mentale. Un livre de l'auteur montre comment une nouvelle interprétation de la théorie des cordes peut modéliser conscience et un esprit avec des propriétés 'non physiques'. Ce genre de conscience est un conteneur potentiel d'énergie mentale négative. Cet article explore la possibilité de la matière dans la solution d'énergie négative étant positive, tandis que la vitesse de la lumière est imaginaire. Cela signifie que soit l'espace peut être imaginaire ou le temps peut être imaginaire. Ces deux points de vue de la modélisation de l'énergie négative se trouvent à soutenir le modèle de l'esprit mentionné. Le concept de membranes de la théorie des cordes explique comment les espaces d'énergie positive et négative sont séparées. La théorie des cordes explique aussi comment l'énergie peut être échangée entre un état négatif et un état positif.

Key words: Negative Energy; Mind; Consciousness; Mental; Energy Equation; String Theory.

### I. INTRODUCTION

The energy equation  $E = mc^2$  was published by several persons including the Englishman Oliver Heaviside in 1890 in his *Electromagnetic Theory*, vol. 3, the Frenchman Henri Poincaré in 1900, and the Italian Olinto De Pretto in 1903 in the scientific journal “*Atti*” and registered at the “*Regio Istituto di Scienze*.”<sup>1</sup> The equation was not solved for different frames of reference until Einstein launched his special theory of relativity and a following article in 1905 where he developed the energy equation.

In the 1920s, a more complete energy equation was derived from relativistic quantum mechanical equations:  $E^2 = p^2c^2 + m^2c^4$ . For an object at rest, the momentum  $p$  is

zero. This gives a simplified equation with two solutions  $E = mc^2$  and  $E = -mc^2$ .

In the second solution, negative energy was associated to negative matter. No evidence of such matter has ever been found. All physicists agreed that the second solution with negative energy could be discarded since it gave no physical interpretation.

Luigi Fantappiè (1901–1956) was one of the most brilliant mathematicians of his time. He wanted to look at the negative energy solution from a pure mathematical point of view. As he started to list the properties of the negative energy, he found that they all were descriptive of life as opposed to matter, such as in Table I.

Fantappiè saw that the negative energy was governed by a law symmetric to the law of entropy. He named it the law of syntropy. He saw that if his findings were correct it would

<sup>a)</sup>olav@drageset.net

TABLE I. Properties of positive and negative energy.

Properties of positive energy	Properties of negative energy
Characteristic for matter	Characteristic for life (=consciousness? by the author)
Have a cause in the past	Have a cause in the future
Order and structure is reduced with time	Order and structure is increased with time
Energy disperses with time	Energy concentrates with time
Governed by the law of entropy. Any use of energy will increase entropy.	Governed by the law of "syntropy." Any use of energy will increase syntropy.

change the whole basement for understanding the cosmos and he found it difficult to accept his own conclusions. His work was not at all recognized by his colleagues and in reality forgotten after his death.

Psychologist Dr. Ulisse Di Corpo rediscovered these views in 1977. When he later worked on his thesis in statistics, he was presented to the works of Fantappiè. Di Corpo and his colleague psychologist Dr Antonella Vannini are now probably the only persons working to understand this potential breakthrough in physics,<sup>1-3</sup> and they are not even physicists.

I myself being educated in theoretical electronics and having proposed a new interpretation of string theory,<sup>4-6</sup> enabling it to model mind and consciousness, will also propose a variation to the negative solution of the energy equation so that it shows coherence with my understanding of the string theory, and the model of the mind and the consciousness.

## II. DISCUSSION

The negative solution of the energy equation can be written as

$$E = -mc^2 = m(jc)^2 = m(jd/t)^2 = m(d/jt)^2$$

where E is energy, m is mass, j is square root of minus one, d is the distance which light travels during a time unit, and t is a time unit.

A number containing j is said to be imaginary. No real number has such a quality. The two final expressions of the negative energy are associated to an imaginary distance and an imaginary time, respectively. In mathematics imaginary numbers express something which cannot be expressed by real numbers and are usually presented as an additional dimension. When real numbers are expressed by the x-axis, imaginary numbers are expressed by the y-axis. A complex number has one real part and one imaginary part. A complex entity may oscillate between an imaginary and a real expression in time, while it is regarded as consistent and constant such as a traveling photon is oscillating between a magnetic and an electric state. The two final expressions have no interpretation in the physical universe, but I will show that they could express energy of what I have proposed to be consciousness, in a kind of parallel universe called a **brane**, modeled by the string theory.

In the energy equation, the imaginary distance could express that the negative energy is in a room having dimensions different from the physical universe, exactly such as expressed by the string theory in the proposed interpretation

given in Refs. 4 and 6. The mind is modeled as two three-dimensional branes being parallel to the physical universe, which is also seen as a three-dimensional brane. The latest findings presented in Ref. 6 show that "life," such as used by Fantappiè, should be equal to "consciousness" such as defined in Ref. 6. This definition of consciousness is very different from what is normal among neurologists, philosophers, and psychologists. They define consciousness as a state-of-mind like "wake and self-conscious." In Ref. 6, consciousness is defined as a specific nonphysical matter, modeled by string theory. This kind of a consciousness, based on negative energy, is suggested to be associated to a brane separate from the mind and the physical universe. This conception of living beings, consisting of an assembly of entities from different string theory branes, is a strange assumption and represents new physics. However, it seems to give a scientific model that can explain most reported subjective observations such as thoughts, emotions, consciousness, spirits, telepathy and clairvoyance, as well as inexplicable physical measurements such as dark energy, dark matter and entanglement. I find this fact justifying a closer examination of the hypothesis. Reference 6 presents a deeper analysis of a scientific model based on string theory. This article presents a discussion on how the negative solution of the energy equation could have a real world interpretation if the model laid out in Ref. 6 is accepted.

We have seen that negative energy could be real if it is found in a brane different from the physical universe. The last expression of the equation says that negative energy can be real if it is associated to an imaginary time. In Ref. 6, the 11th dimension of string theory is found to be the speed of time. If this time dimension is used as the imaginary time in the energy equation, the square of the imaginary time is a real negative time. According to Fantappiè, the driving force of a syntropic process is in the future. All life forms are building or acting to get a better future, our driving force is a more prosperous future. If we see that the cause of the activity for all living systems is in the future, the time from the cause to the result is negative. So in a way, the time of a syntropic process is running backward compared with entropic processes. The imaginary time solution of negative energy has a reasonable interpretation in real life.

Energy conservation and energy transfer between branes are a main issue for this discussion. String theory specifies that only closed strings can wander between branes. Only the gravity force has been modeled as a closed string, which means that gravity can act between matter of different branes, and no other interference should be possible between physical particles and the content of other branes. This

means that matter from other branes can pass through physical walls without meeting resistance, since nonphysical matter is not influenced by the electromagnetic force that prohibits two physical objects from penetrating into each other. There is however a possibility that another elementary particle modeled by a closed string can have existed without being detected. This kind of a particle could carry a force, and it must be very weak, comparable to the gravity force, because it spreads across all branes. Such a weak force could easily have avoided detection. If this force is associated to mind and consciousness, we would also not see a need for it, since our understanding of mind and consciousness is so premature. In Ref. 6, I see a need for such a force and propose that the alleged aura found around all biological bodies could be the fifth cosmic force, carrying information to and from the consciousness and the mind (the four known forces being the strong- and weak nuclear forces, the electromagnetic force and the gravity force).

In Ref. 6, dark matter is associated to the **psychological room/universe/brane of the mind**, and dark energy to the **intuitive room/universe/brane of the mind**. Energy transfer with the gravity force requires a matter gradient. Dark matter is measured to be lumpy, so that psychological phenomena based on dark matter should be able to influence the body. Epigenetics and diversification of stem cells in the body are examples. A more detailed mechanism for this influence, called **gravity snapping**, is explained in Ref. 6. Dark energy and consciousness seem to be evenly distributed in the physical universe and can therefore not push physical matter with a gravitational force. Aura or a comparable interbrane force must exist in order to support communication between the body (the brain) and the consciousness. A storage medium of the memories, emotions, and inner images is never found in the physical brane. These phenomena are probably written in dark matter being part of the psychological universe. A very efficient signaling between the mind and the body must exist in order to explain the smooth functioning of the psyche having functionality partly in the brain and partly in the non-physical mind and consciousness.

The most comprehensive work on negative energy is probably made by Henry-Couannier.<sup>7,8</sup> He is analyzing in detail the negative-energy solution on the bases of quantum field theory and general relativity theory. He finds that a world based on negative energy is symmetric to a world based on positive energy. String theory seems to mend one of his strongest concerns, the problem of separating these two worlds.

Fantappiè associated life to construction and making order, which is opposite to all natural processes of the physical universe that creates more disorder and disperse energy with time. We can also see that life creates disorder—particularly through digestion of food and disposal of waste. To kill for food is also a kind of disorder on short term, but on long term we can see that it can create a balance that enables “nature” to make a higher degree of order. Wolves were extinct from Yellowstone national park several decades ago. When they were reintroduced recently, large herbivores were scared from the open plains into the woods. Bushes and other plants regained, and a wide variety of smaller animals came back to settle in the area.

The high intelligence of humans, organized into large societies, is a new invention of nature. Humans have a lot of activities that seem to be constructive on short term but turn out to be destructive on long term such as removing the wolves from Yellowstone. Acquiring unproportional wealth and power, and disposing waste in unsustainable ways are other examples. It is vital for life and nature to keep a balance between construction and destruction, that is, between entropic and syntropic processes. There seem to be long-term stabilizing mechanisms. Humans with a high intelligence are part of this, and we are in the middle of an adaptation of the nature to establish high complexity high intelligent societies. This adaptation requires exchange of positive and negative energy and energy conservation.

It is a common observation that people acting on long term with a wide scope of attention create beneficial constructions and are regarded as “good.” People acting on short term with a very narrow scope of attention are often causing destruction in a long-term and a wide scope of view. They are often regarded as “bad” or criminals. This could reveal a connection between what we call moral and a law of nature being part of physics.

### III. CONCLUSIONS

The negative solution of the energy equation could represent energy of the consciousness. All living biological entities have a consciousness in this respect. If this kind of a consciousness is seen as the driving force in all forms of life, then the negative energy equation infers that consciousness and its influence are counteracting entropic processes such as we see in the physical universe where life makes microscopic and macroscopic constructions. If consciousness is defined as being part of the cosmos, we see a cosmos balancing between construction and destruction. Consciousness will have to reside in a (string theory) brane which is parallel to our physical universe (also being a brane). Energy, matter, forces, and distances should be different in the various branes, but they are governed by the same basic law—string theory. Gravity and possibly one or more additional unknown forces are common for all branes and enable interference, information exchange, and energy transfer between them.

Particle physicists are required to take this proposal further.

### ACKNOWLEDGMENTS

Comments from professor of physics Dr. Krassimir Stoychev have been very helpful.

<sup>1</sup>U. Di Corpo, “Life energy, syntropy, complementarity and resonance,” Paper presented at the first international conference on “Life Energy, Syntropy and Resonance,” Viterbo, Italy, 4–8 August 2013.

<sup>2</sup>A. Vannini and U. Di Corpo, *NeuroQuantology* 6, 291 (2008).

<sup>3</sup>A. Vannini and U. Di Corpo, *NeuroQuantology* 8, 550 (2010).

<sup>4</sup>O. Drageset, *Phys. Essays* 26, 7 (2013).

<sup>5</sup>O. Drageset, “String theory with a new interpretation can model the mind,” Paper presented at the first international conference on “Life Energy, Syntropy and Resonance,” Viterbo, Italy, 4–8 August 2013.

<sup>6</sup>O. Drageset, *Consciousness and Cosmos: Proposal for a New Paradigm* (Ado Publishing, Oslo, Norway, 2014).

<sup>7</sup>F. Henry-Couannier, e-print [arXiv:gr-qc/0404110](https://arxiv.org/abs/gr-qc/0404110).

<sup>8</sup>F. Henry-Couannier, e-print [arXiv:gr-qc/0410055](https://arxiv.org/abs/gr-qc/0410055).