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Posted Date: 16 July 2024

doi: 10.20944/preprints202403.0289.v4

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Article

# Gravity and the Riemannian Hypothesis <sup>†</sup>

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<sup>†</sup> This paper holds significant importance in the field of mathematical physics, and it is essential for a wider audience to have access to it.

**Abstract:** Theoretical physics addresses the fundamental principles of nature and the mysteries of the universe. In the last century, the theory of relativity challenged people's understanding of time and space, while quantum mechanics revealed various forms of energy. However, the concept of gravity remains elusive. All matter in the universe is composed of energy that can be converted into other forms, yet it is always conserved. However, achieving a state of equilibrium, represented by the equal sign, can be challenging to achieve on both macro and quantum scales. A phenomenon that can transition from one state to infinity is called collision and is essential for understanding natural phenomena and physical processes throughout the universe. In the study of general relativity cannot be three-dimensional problems to gain mathematical inspiration, understand the application of new dimensions. Here, we elucidate the nature of gravity, which inspires the solution of the Riemann hypothesis. Our results show that the conduction mode of dimensional energy is defined by Euler's formula. And a special mode of collision is derived which translates into vibration.

**Keywords:** gravitation; Riemann hypothesis; Euler's formula; collision; vibration

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## 1. Introduction: Why Gravity Is Not a Force

When discussing gravity, the theory of relativity must be taken into account. The theory of relativity explains gravity as a result of the curvature of space. If gravity is a force, it may be quantized, but the results are evidently contradictory.

## 2. Shape of Space

According to Einstein's theory, the rotation of energy can distort space [1]. During the process of space distortion, a curved space is formed, but this approach overlooks the essential matter: the unit length of space is not fixed. Given that gravitational waves exist, there must be particle states [5]. However, gravitational waves are misleading. Gravitational waves are produced by space deformation and energy change, as gravity is space. Suppose there is a space 10 meters long, one meter of space is compressed and shortened, and nine meters of space is stretched and lengthened. which consists of a compressed space and a stretched space; this compressed space is matter, and the stretched space is similar to gravity. In addition, since the speed of light does not change, how can this stretch of space be calculated?

The key lies in the fact that time does not change. Regardless of how much space may change, the passage of a quantum through a fixed unit of space remains fixed. While the space in the middle may undergo stretching, this extension is not observable. Even though space appears stretched, the time it takes for a quantum to pass through that space remains the same. This implies that the speed increases. Although the length of the unit space can change, the original length is still used to calculate the perceived slow shrinkage of scale. Gravity arises due to this effect. The reason is that speed creates the illusion of changing time; what truly changes is scale. The reason that time does not change is because the total amount of space remaining unchanged does not change.

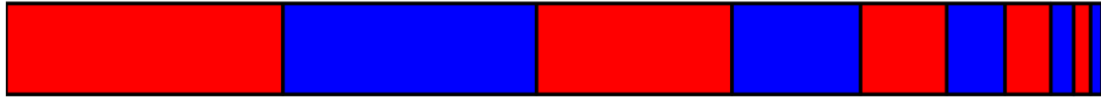


Figure 1. Space shape.

Another important factor to consider is the existence of space for compression. Here, because  $v = l/t$ , there is a process of slowing down, which results in a repulsive effect. This gives us the illusion of different rates of time. For example, two clocks with different speeds deviate under observation because the slower clock does not complete its own space traversal. This comparison is based on the same length of space. However, for all energetic matter, the duration remains the same. Space is considered an independent unit of existence, much like another form of energy that can undergo change under external influence. This space is an approximate view, and the space that is truly squeezed is all matter, so the squeezed and stretched spaces are intertwined. Two forms of energy make up three-dimensional matter: positive energy and negative energy. Since the length of the unit space changes, but we cannot observe, the time through the unit space does not change, so we need the time dimension as the fourth dimension in the calculation process, but the essence of the fourth dimension is still the direction dimension. Gravitons that form spatial variations are fundamentally different from three-dimensional space. Adding a dimension works the same way as adding time to an existing dimension, because time is fixed in unit space.

### 3. Constant Cause of Low Speed

The constancy of the speed of light, as stated in special relativity, means that no matter how fast an observer is moving, the speed of light measured by that observer remains constant. This indicates that it is influenced not by the velocity of an object that affects the speed of light but rather by the shape of the space itself.

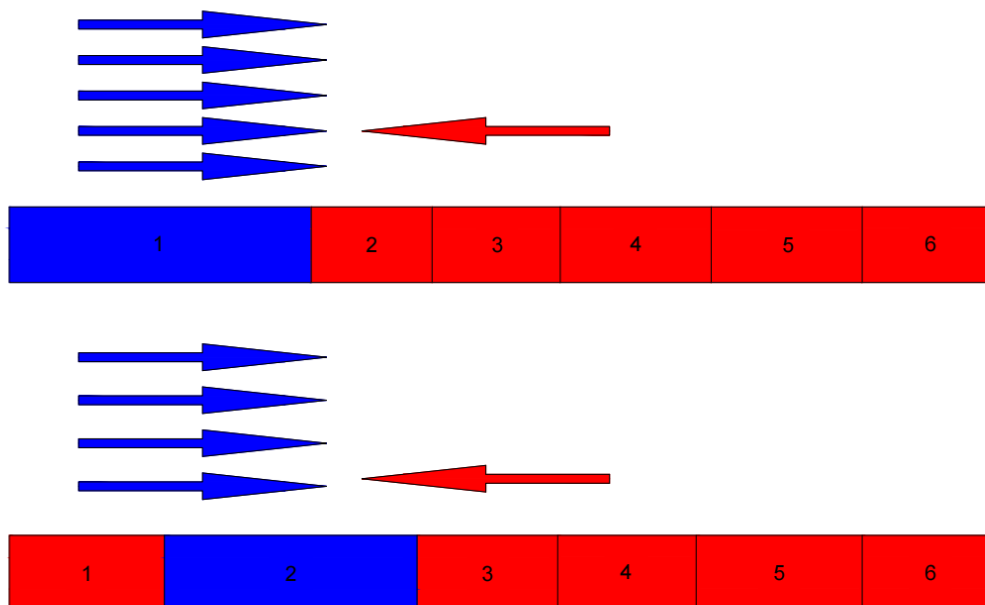


Figure 2. The process of spatial shape change.

In a given space, there will be a certain speed, and there is no concept of absolute time. Instead, the different speeds correspond to different lengths of space. When photons are emitted, they start at

a speed of  $c$ , the speed of light. According to Debroglie's theory, moving objects generate phase waves. However, these phase waves can reach faster speeds than light. This is because phase waves are not emitted by the objects themselves but rather result from spatial changes caused by the objects. Let us delve into the meaning of the phase wave speed,  $c^2/v$ . The velocity represents the spatial variation in the transmission velocity. In the overall space, the shape of space is constantly changing. Throughout this process, the spatial variation can still be transmitted at a speed of  $c^2$ . Therefore, in the  $c^2$  inference process, a moving object is constantly transmitting a deceleration signal  $v$  into space. Due to the constant changes in space, this value decreases to  $c^2/v$ .

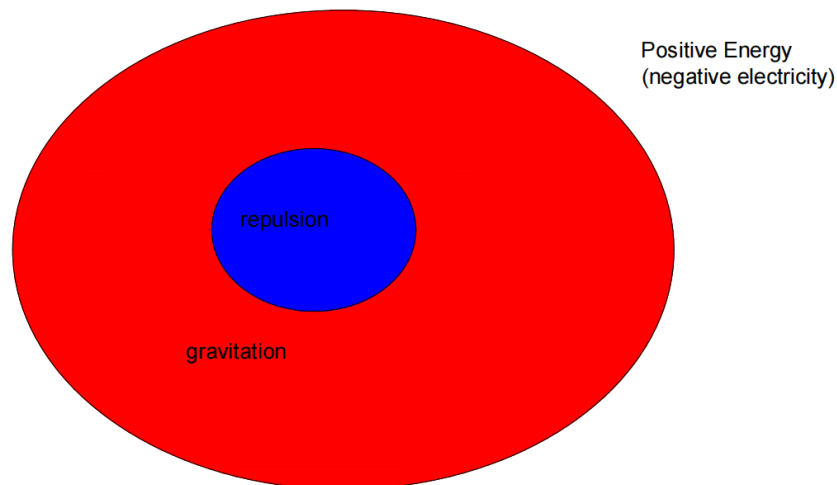
$$\frac{c^2}{v} \times v = \text{Spatial transfer velocity}$$

Now, what is the speed of light constant and maximum? The velocity of photon movement in any shape of space is equal to the velocity at which the space transmits the photon. Photons are always moving in a constant space, meaning that their velocity does not change with gravitational influence. Therefore, regardless of the space they traverse, photons consistently maintain a constant velocity, reaching the maximum speed of  $c$ . Once the speed of the photon is greater than the speed of space transport, the speed of the photon will slow down so that the speed of the photon is at most equal to the speed of space transport.

$$v < \frac{c^2}{v}$$

When an object approaches the speed of light, its perceived time diminishes because the rate of space transfer aligns with the speed of photons. The process of space transfer corresponds to the time needed for particles to transition between adjacent spaces. However, when particles reach the next space, photons cannot enter the space, resulting in the apparent disappearance of photon time. Importantly, the cessation of time is attributed not only to reaching the speed of light but also to the speed of space transfer. Photons and ether have the same speed, which is why we cannot find ether. The propagation medium of different observers determines the speed of the ether, and the speed of the ether determines the speed of the photon.

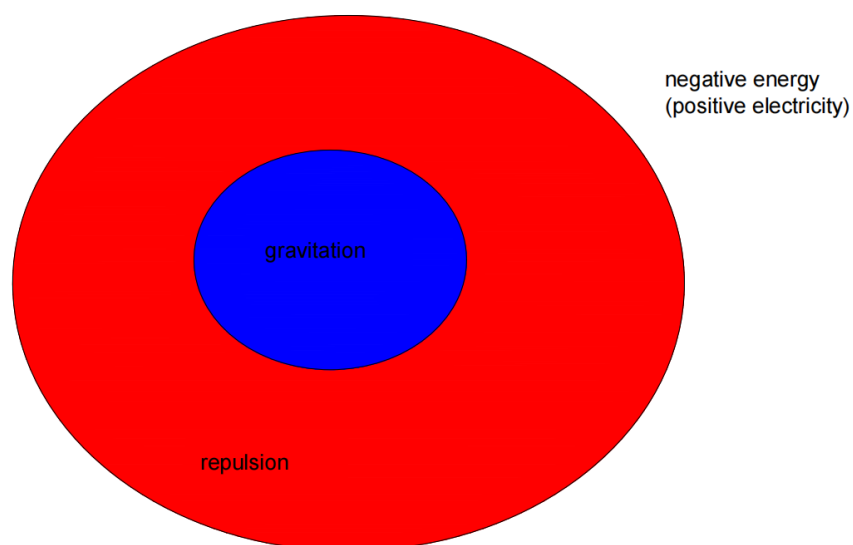
Energy is not confined by volume. Instead, it can be understood as a point of collision that creates a spatial configuration where the range of collisions is compressed. An energy body continuously vibrates within a small range, forming a unit space size and compressing the original unit space to zero, generating an extremely powerful repulsion force. Around this, the repulsion force stretches space one after another. When two objects are at rest, the initial velocity of the unit of energy emitted by this energy body is limited to the speed of light because the velocity of space transmission is limited. There may be two additional types of energy: zero-collision and negative-collision. Zero collisional energy does not produce a repelling volume, so zero collision can move very slowly in what people think of as space.



**Figure 3.** The positive energy is the central repulsive force, and the surrounding gravitational force is negatively charged.

#### 4. Positive and Negative

There are two types of conclusions: positive and negative. Energy can be categorized into positive energy, negative energy, and massless energy. The negative energy is affected by gravitational acceleration because it creates space for growth. When it enters a gravitational field, the gap in the direction of gravity is larger, and the difference is larger. The negative energy is the center of space that creates tension, so the gravitational field of space will be compressed more, thereby accelerating the process. This acceleration is of the same magnitude as the positive energy. There may be an energy type called dark matter, which is postulated to exert a very large positive collision. Dark energy is just negative energy, whereas antimatter is negative energy that cannot be utilized. The reason is that negative energy cannot absorb photons, which have positive energy. Finally, zero energy is an advancement in dimensions.

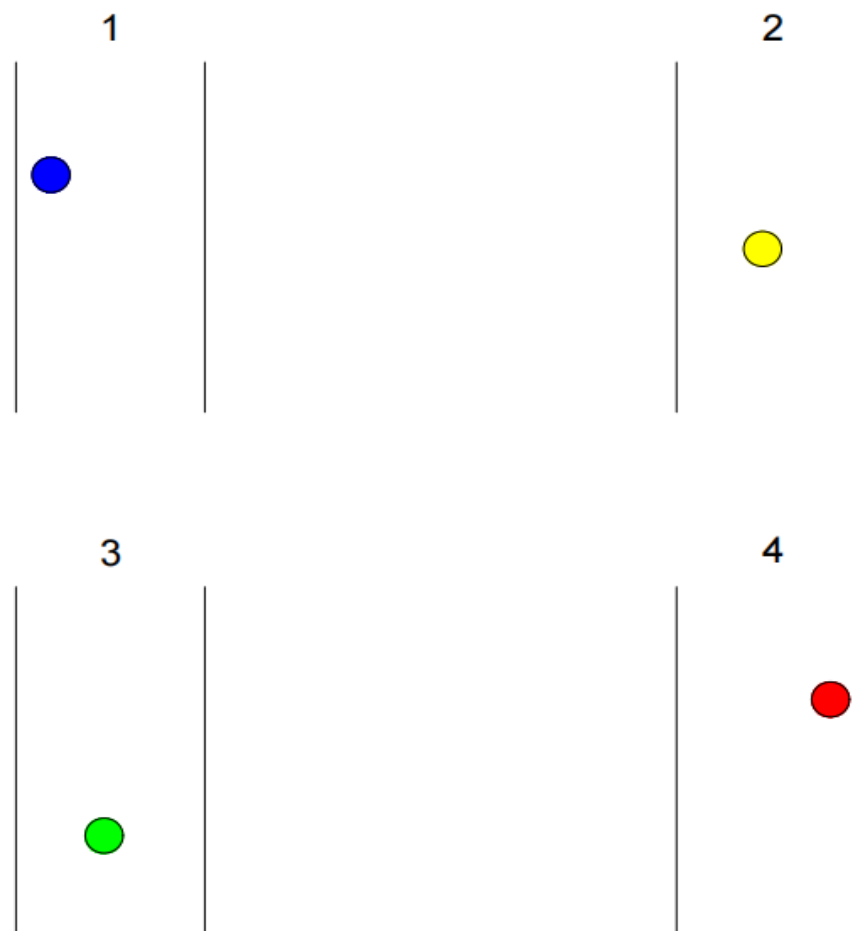


**Figure 4.** Negative energy is the repulsive force around the central attraction and is positively charged.

## 5. Explaining Microscopic Uncertainty

Electromagnetic waves, such as light, are usually considered waves. However, in some cases, light particles can behave like waves. This concept leads us to the concept of wave-particle duality. An important aspect of wave-particle duality is the observer effect. Observations have revealed what causes the particle wave function to collapse. Thus, these observations are probabilistic in nature [4].

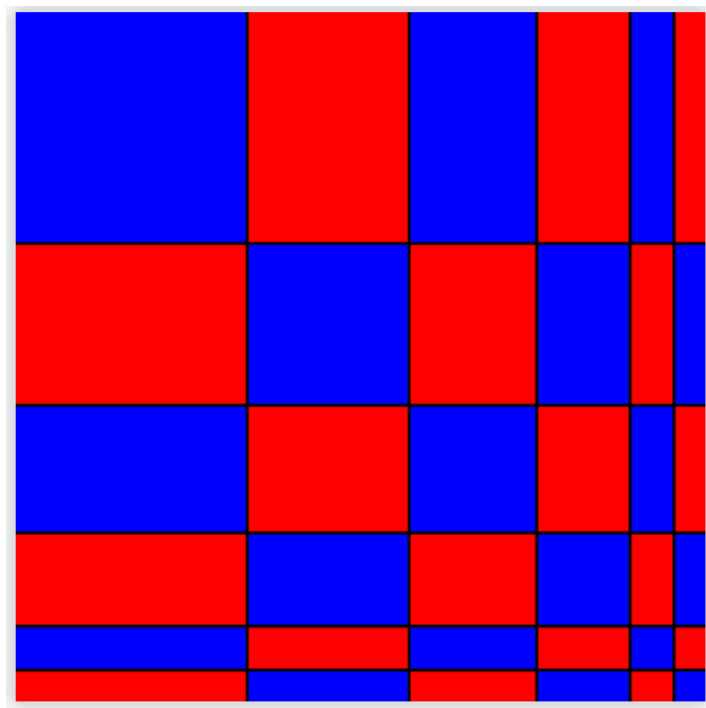
When a particle passes through a narrow gap, the space it occupies undergoes significant changes. The limited space within the gap may not be sufficient to accommodate the gravitational space of the particle. As a result, the compressed space surrounding the particle experiences substantial alterations. As the particle encounters this compressed space, it experiences a high amount of pressure. Causes it to move in a disorderly manner. As a result, the spherical volume is affected, and the resulting wave becomes unstable. The position of the waveform represents the probability as described by the wave function. When the particle exits the gap, the surrounding space stabilizes, and the deformed wave gradually reverts back to its original shape. However, the velocity of the particle becomes uncertain at this point. The absence of wave-particle duality in macroscopic objects is primarily due to their larger size. A significant compression of space is needed to induce changes in fixed energy.



**Figure 5.** Two-slit interference experiment.

## 6. Guess

With slight deviation in the exact position where the particle enters the slit, there can be significant variations in the surrounding space around the particle. This variation creates an asymmetrical space when magnetic and electric fields intersect. As a result, the space becomes distorted.



**Figure 6.** The space formed by the intersection of magnetic and electric fields.

If the form of matter is related to the dimension, the original dimension of matter will change slightly after entering the slit, and the change is the non-integer dimension behind. The reasons can be understood after reading the article.

## 7. Hypothesis

### 7.1. Hypothesis Can Dirac Antimatter Be Applied [7]?

Negative energy is generated in later changes, and time, as a dimension from the beginning, is not negative, just like space.

### 7.2. Hypothesis Two Black Hole [8,9]

From a relativistic perspective, we know that escaping from a black hole is deemed impossible because of the overwhelming force of gravity and the presumption that time has stopped. Therefore, the following question arises: Since energy travels at the speed of light, how does time stop when energy enters a black hole? Each photon occupies a discrete unit of space in which all motion occurs at a speed greater than the speed of light. Black holes can be thought of as precursors to matter, and any energy that enters a black hole is converted into units of collision within the black hole. A black hole can be visualized as a two-dimensional plane, and no matter how fast an object is traveling, once it enters the black hole, it will remain in a state relative to this two-dimensional plane. In addition, in the universe, there is a large amount of two-dimensional energy.

### 7.3. Hypothesis Three Is It Possible That White Holes Exist [9]?

White holes are considered to be the opposite of black holes. A white hole is the result of central gravity produced by negative collisions around the center of the space it occupies, which results in a repulsive effect in its surrounding area. Theoretically, white holes could exist at the center of black holes. However, white holes cannot easily release anything because when quantum objects enter the internal space of a white hole, space contraction occurs, which slows the movement of the white hole.

Traditionally, wormholes are thought of as tools for traveling through time and space by means of a combination of black holes and white holes. According to the theory, black holes and white holes can only return to someone else's timeline. Your own timeline cannot go backward. For example, if A were to go into a black hole first and then go into a white hole, A's time would stop once A entered the black hole. However, B's time would not change. Two years later, A is taken to the white hole by a force, and A's time begins to accelerate. A exits the white hole after a year, and A finds B a year younger than A. However, from B's perspective, three years have passed into B's timeline, and A has gone for two years, which means that A has missed out on that year. Alternatively, if individual A were to go into the white hole first and then go into the black hole, A's time would begin to accelerate, and two years later, A would come out two years older than B. After entering the black hole, A's time would stop. After being pulled out by a force a year later, A would find that B was one year older than A was. Even though A was younger than B by one year, A still had gone for three years, during which events during which A could not change or influence it. In summary, traveling to the past is impossible because the past has already happened, and events in the future cannot be changed. For the reason that dark energy is not easy to observe, it may be that the inverse energy is unable to absorb positive energy photons, or the high dimension makes the energy too small to observe.

## 8. Collisions Produce

If the influence of different forms of energy is fixed and the composition of energy is singular, various manifestations of quantum energy should not occur. Additionally, with the passage of time, energy will remain static. To illustrate this, let us consider the three-body motion model. Although the motion of three small balls may be complex, there is a fixed value that governs their interactions. However, if one of the small balls experiences an uncertain change in its properties, the entire system becomes irregular. This unpredictable aspect can be seen as introducing another dimension or variable sphere into the system.

Suppose the universe began with an infinite number of zero-dimensional points in an infinite dimensional space. The universe began as a single point that suddenly vibrated. Since the surrounding points were static, the vibrating points would elastically collide with the surrounding points, causing them to vibrate as well and propagate the collisions to the surrounding points. Due to these collisions, the central point and the surrounding points develop different collision frequencies. As this process continues, the dimensions of the universe gradually emerge.

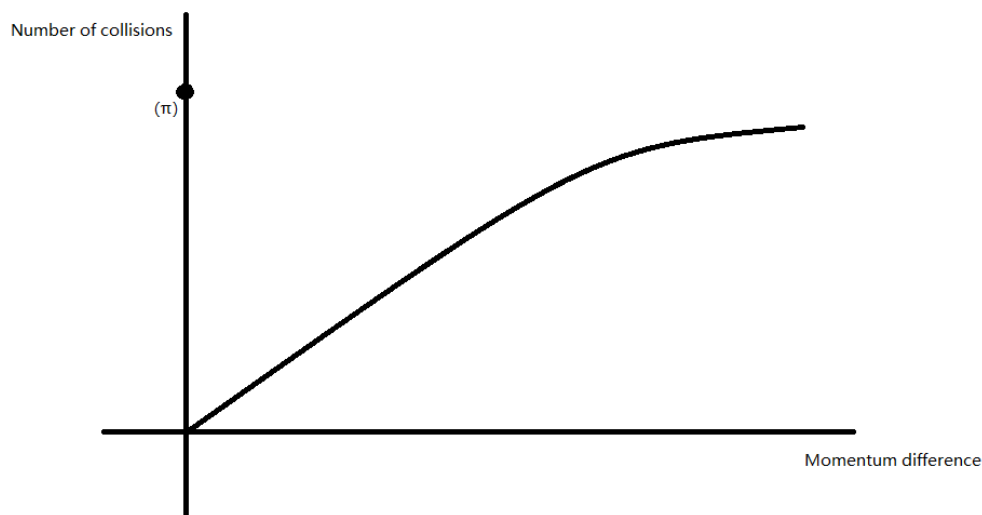
## 9. Necessity of Circles

When the central point suddenly vibrates, suppose that a square is filled with countless points without any gaps. When the central point vibrates, the resulting collision will propagate to the surround.

After a certain amount of time, the vibrating pattern evolves and eventually forms a structure resembling countless balls filled with squares. This structure appears relatively stable because there are numerous points in the surrounding space, similar to walls, that help maintain its shape. The reason for the formation of squares around the initial vibrating point is that the collisions cause elastic collisions between the points, leading to the arrangement of squares. These squares are formed in a manner that is a multiple of  $\pi$ , where 1 represents a human-defined size (which can be infinitely small). After a point vibrates back and forth, it exhibits two distinct trends: forward and backward movements. Both of these trends are multiples of  $\pi$ . The forward and backward movements give rise to two opposing forces: central repulsion and central attraction. The forces result from the collisions

of the surrounding points, indicating that a single collision can result in the formation of two opposing energies. Due to the reduction in momentum consumption and collision frequency, the positive vibration is larger than the negative vibration.

The newly generated opposing forces can continue to affect the collisions of the surrounding points. However, the newly generated forces are almost negligible compared to the original forces. This is because new forces must be formed in integer multiples of  $\pi$  units of collisions to achieve stability. If this condition is not met, dimensional separation occurs.

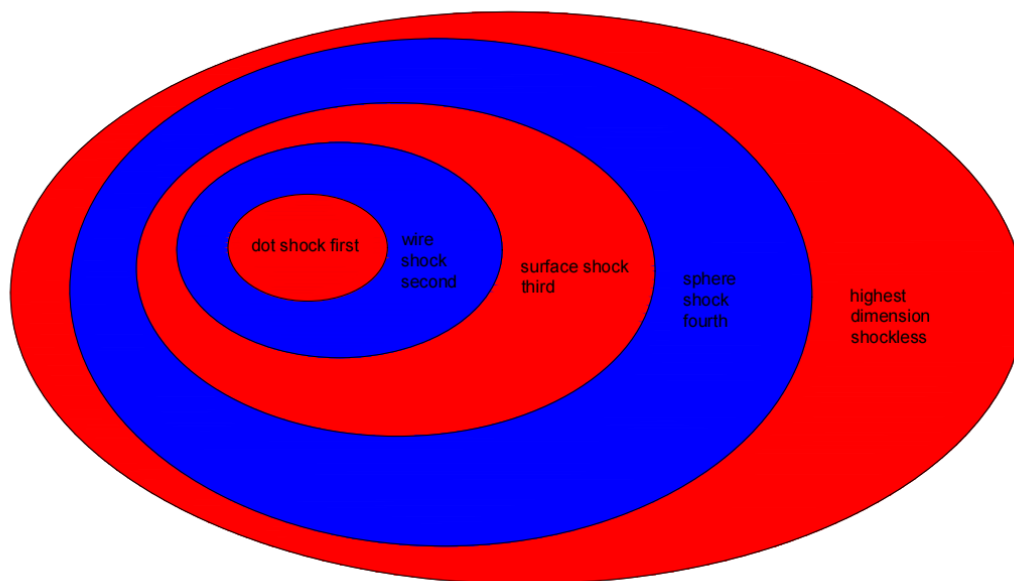


**Figure 7.** When two objects of the same mass collide, the greater the difference in momentum is, the closer the number of collisions is to the  $\pi$ .

## 10. Conclusion

When a large central collision occurs, it produces two opposing collisions: positive energy and negative energy. These collisions, in turn, lead to the generation of new opposing collisions. For instance, a perfectly elastic collision can produce a central collision that results in  $N\pi$  elastic collisions. These collisions can take the form of particles that give rise to matter worldwide. All of these phenomena are formed by new unit collisions that are created by previous unit collisions. The newly created quantum cannot directly change the collision frequency of the previous quantum because the new frequency is low.

Matter is governed by hierarchical control, where points vibrate into lines, lines into planes, planes into spheres, and so on. Points on a line move along the line by changing the position of a change in the position of a point without impacting the plane in which it resides. Similarly, planes contained within a sphere cannot fundamentally change the sphere. However, at this point, the final dimensions are not controlled. No action can change the ultimate dimension because energy does not disappear; it can only transform. While all the other dimensions are subject to control, the final dimension remains static.



**Figure 8.** The relationship between dimensions is that the higher dimensions have a larger range but infinitely small energy, the lower dimensions are faster, and the lower dimensions produce more dimensions.

## 11. Understanding the Riemann Conjecture

First, based on the previous statement,  $\pi$  is the number of collisions in a dimension; thus, how is the energy transmitted? Note that  $e, (1+1/n) * n$ ; this formula is the base number of energy transmission, similar to a multiple of the conduction relationship; and the imaginary number  $i$  is the direction of a dimension generated by collision in the presence of one dimension. The  $e*i$  equivalent of a collision produces another dimension; this length can also be considered to be energy. That is, each new dimension addition is equivalent to 0 energy of the previous dimension; of course, 0 is an approximation.

The process of dimensionality formation is the same as the calculation of compound interest by banks. Regardless of the collision frequency and analytic continuation, a straight line collides with a plane composed of  $n-1$  straight lines. Let  $V1$  denote the velocity of the line and  $V2$  denote the velocity of the line in the plane.

$$\frac{1}{2}MV1^2 = \frac{1}{2}nMV2^2$$

$$\frac{1}{n}V1^2 = V2^2$$

This is a straight line colliding to produce a plane. This is an overall dimension of speed; however, the number of dimensions is wireless  $n$ , and this process is repeated  $n$  times.

$$\left(1 + \frac{1}{n}\right)^n = e$$

All the dimensions are in the same direction:  $e^{i\pi} = -1$

One dimension represents repulsion, two dimensions represent one-dimensional apparent gravity, three dimensions represent one- and two-dimensional apparent gravity, etc., and all the dimensions are 0.

**The Riemann conjecture:**  $1+1/2*s+1/3*s+1/4*s.....$  [6].

Let us say that we start with a point with mass 1 and velocity  $V1$ . The velocity of each point after  $n$  passes is set to  $V2$ .

$$\frac{1}{2}MV1^2 = \frac{1}{2}M(V2^2 + V2^2 + V2^2 + \dots)$$

$$\frac{1}{2}MV1^2 = \frac{1}{2}MnV2^2$$

$$\frac{1}{n} V1 = V$$

When a line collides to produce a plane, the velocity of a single line satisfies the above equation. A total speed of 0 can be achieved only by introducing imaginary numbers. The energy of the new dimension is equal to 0 relative to the previous dimension. Therefore, we perform  $\pi$  collisions and add all the dimensions to find the imaginary part. Since the relative dimension can be simplified, the imaginary part has an infinite number of possibilities.

The law of energy transfer can be realized only when the real part satisfies 1/2. The Riemann conjecture is the total energy of the new dimensions, and according to Euler's formula, all dimensions in the same direction produce the effect of -1.

Whether  $\pi$  is irrational depends on the dimension. The lower the dimension is, the closer the number of collisions is to  $\pi$ . The more obvious the trend of the polygon until the motion stops. Even if we observe that the universe is expanding, it is just a different frame of reference; the whole universe is a frame of reference, and the universe is static.

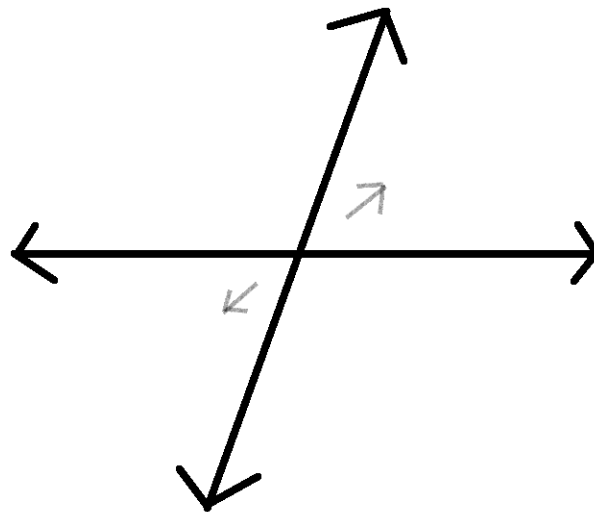
## 12. Dimension and Life

A two-dimensional substance vibrating in space will generate a direction of motion, but in space, all directions are the same (moving forward), so the motion formula will not change, therefore the direction of vibration towards the lower dimension is also the same. The original integer dimension determines the complex part in the Riemann hypothesis. Only one imaginary number  $i$  can exist because matter can only change direction in one dimension at a moment.

Substances of the same dimension must be the same, and the direction of any substance vibrating towards a lower dimension is fixed. Different dimensions combine to form new dimensions, for example,  $2.1+2.3=2.2$ , but the newly generated higher dimension cannot be produced by the original single dimension, for example,  $2.23$  cannot be produced solely by  $2.2$ . However,  $2.23$  can affect the motion of  $2.2$ , but this effect is minimal. Although  $2.2$  has a significant impact on  $2.23$ , due to the huge energy of the two-dimensional vibration itself, it cannot directly change the vibration direction of  $2.23$ . So  $2.2 + 2.23 = 2.2\dots\dots 2.2$  and  $2.23$

have the same vibration direction but are different types of substances. Due to the principle of collision, assuming the energy of three-dimensional matter is 1, in the process of forming three-dimensional matter, the energy of two-dimensional matter is  $n$  times that of three-dimensional matter, but the curvature in the collision may create a closed loop, so the new dimensional matter produced by two-dimensional matter is always an integer multiple of the final dimension.

If collision times  $\pi$  can generate curvature, vibration transmission process can form a closed loop, non-integer dimensions will arise. Dimensions are not fixed but variable. When an object vibrates as shown in Figure 9, new vibration directions will be generated. Due to collision times, curvature will occur during the motion process, leading to the emergence of new dimensions.



**Figure 9.** A two-dimensional substance.

A zero-dimensional point vibrating into an infinite-dimensional point will eventually come to a complete stop, until all points vibrate into infinite dimensions without colliding. However, the imbalance of positive and negative energy will still exist, leading to vibration occurring again.

Assuming the first two dimensions of 2.2 and 2.3 have exactly the same vibration direction, these two substances can combine to form a new dimensional substance. This new substance has a characteristic that it can exist as a single substance rather than a combination of two substances, at this point entanglement occurs.

It is difficult to accurately raise the dimension from 2.19 to 2.2 in large quantities of producing a certain dimensional energy. If we want more 2.2 energy, we need more 2.1 and 2.3, which means higher and lower dimensional energies need to become more. This way, the probability of producing 2.2 will also increase. We need to know that when a certain dimensional energy is abundant, its anti-energy will also be abundant.

Now we go back to the Wheeler delayed selection experiment, and after the photon passes through the half lens, it is possible to produce another moving particle with a higher dimension. For example,  $3.01+3.29=3.15$ , before incident on the second half lens, the photon may be divided into two parts, but the two energies are very different. As a result, the photon appears to take only one path. The reason why this merger is so simple is that they come from the same photon and vibrate in the same direction. The previous dimensions caused particles to have an infinite number of vibrational directions, which prevented matter from transforming at will.

With some inspiration, we can solve problems or diseases in our lives, such as paying attention or not thinking similar to not using substances to reduce the dimension of matter, thinking about problems or using substances to increase the dimension, changing the dimension can fundamentally change matter.

When we think about the energy of matter we think about the kinetic energy of matter, and that basis only includes velocity. However, any substance contains positive and negative energy, and a static material mass is the negative and positive energy difference. This result is abstract.

### 13. Goldbach Conjecture

By the definition of prime numbers, we know that all prime numbers satisfy a relation [10]. Let  $y$  be a multiple of 2. The prism numbers are of size  $a$ , and even the numbers are of size  $b$ .

$$\text{All prime numbers except } 2: 2 \times y1 + 3 = 2(y1 + 1.5)$$

$y1 \neq$  multiples of 3. Because you cannot add 3 to  $y$  if it is a multiple of 3. If the ones place is 1 or 6, the result is a multiple of 5  $y1 \neq 3.5X + 2$ . This includes the result of multiplying two large prime numbers, but the result can still be written as a prime number plus an even number, without affecting the result, and can be ignored.

$$\text{even number: } 2 \times y2$$

Therefore, any even number greater than 6 can be expressed as the sum of two prime numbers.

**Acknowledgments:** I express my sincere gratitude to all the individuals who provided assistance and support during the course of my research. It is my aspiration that my paper will be of assistance to a wider audience.

**Financial and/or conflict of interest/competing interests:** No funds were received to assist in the preparation of this manuscript. The author does not have a competing interest statement related to the content of this article. No code and experimental data are available in this paper. This article is ethical and independent.

**Data availability Statement:** No data are available in the manuscript.

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