

# Unified Description of All Force

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**Abstract:** This universe is the so-called “clockwork organization”.

If a metagalaxy is compared to “clock”, each “part” of which that’s composed will be each object (galaxy, star, elements, and atom).

Those have to be equipped with the individuality in the purpose which is the organization. It’s possible to be continuing this universe by existence’s with the peculiar feature in the size, the mass and speed harmonizing in one structure. The natural world is formed by such harmony principle. If it’s so, to elucidate such mechanism of harmony has to be the main purpose of physical science.

Certainly, physicists were approaching mystery of its harmony under the vision as action through medium sharply.

But the try didn’t succeed. Such try was effective by the part, but maybe that couldn’t finish catching the natural true form.

So I stand as the vision as action at a distance and have advanced a study originally. Each members in this world considered to be harmonized each other by exerting the force each other by action at a distance, and “relationship physics” was produced newly.

As a result, I succeed to explain all force which exists in the natural world in one structure.

**Keywords:** Relationship; Individuality; Party concerned; Clockwork organization; Remote theory; Action at a distance;

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## 1 Section

It has been thought that the natural world is formed by simple law which is to the extent it can be described, by only one equation from the past. It's said that there is 4 kinds of force in the natural world present [1]. Those (gravity, the electromagnetic force, the strong force and the weak force) are classified into 4 kinds, but it's thought that it was gathered before as one [2]. Therefore the try to catch 4 of force in unifying way has been formed out of physicists. But a try of unification by proximity theory which is a common view of modern physics is while still coming to a deadlock.

After all the character of "the force (the energy)" is big mystery for a long time, and physicists have suffered from the thing all the while. They have built a typical key about that. That was proximity theory.

That was one of the excellent methodology to interpret truth for certain. The idea that "field" as a medium is necessary for the purpose to which force is transmitted by analogy from existence of a medium like the surface of the water where a wave is transferred (the air which conducts sound) was a natural result.

During standing as such premise, the view which considers a source of force by a model as an exchange of a particle was dominant from the old days [3]. It has been thought a source of the electromagnetic force is exchange of a photon [4], and that a source of gravity is exchange of graviton [5].

But those aren't observed yet.

Therefore it isn't possible to say that proximity theory is right unless those are found.

On the other hand, any technical discovery isn't needed to inspect right of the remote theory.

We have value which should convert into remote theory from proximity theory greatly in view of such point.

Then, I'd like to touch about the difference between the proximity theory and the remote theory here.

Proximity theory handles force by a model as "exchange force". Therefore a concept as reciprocation of gauge particle [6] for such exchange has to be assumed absolutely. And reciprocation needs time. Therefore the spread of force in proximity theory involves limited speed.

It was put on as the primary focus of study that classical physics aims at

movement of an object since birth of a motion equation [7] . It can be said that the essence is “movement model”. Because a position and speed of an object are suitable to describe the condition which changes successively, if the spread of force between the objects is also an action through medium with limited time, such model is dealt with.

Therefore it has been thought that the medium which mediates between that has to exist for force to spread by an action through medium from the old days [8] . It has been expected that force moves space with time successively while being transmitted through a medium.

However, Michelson-Morley experiment proved in 1887 that ether doesn't exist [9] . If becoming it like this, physicists should do rather the modeling of mechanism in which energy (gravity and light) reach without passing a medium, as an action at a distance.

One between the object, the image force reaches with an infinite speed in 0 seconds should be modeled newly without asking an intermediary to ether and gauge particle.

So I stood as remote theory and derived the hypothesis that the energy is “the relationship with which it's tied between the objects” intuitively. I called that “relationship theory” or “relationship physics”.

## **2 Section**

Then, I'll explain an image of the gist of an argument. The energy and the force are handled by a model as “relationship” in this theory. Because the force and the energy are “relationship between the objects”, in the vacuum, it'll spread with an infinite speed in 0 seconds by an action at a distance.

The scholars who stand as a common view to the action image would show disapproval.

However, even if a medium isn't involved, it's obvious theoretically that “relationship” is formed. When premising on remote theory, if “party concerned” (man and woman) is confronted with “relationship” between the man and the woman at the place in the vacuum, “heterosexual relationship” is formed only with that freely. Because I stand as remote theory, such decision can be made.

On the other hand, when we stand as proximity theory, circumstances change. For example when it's merged with an opinion in biology (the way of thinking that

“man pheromone” is “smell material” [10] ) and the gist of an argument of proximity theory and it’s considered, contradiction will form. If a pheromone is a grain of the smell, that isn’t transmitted at space. Because a grain of the smell clings to clothes or only wanders in the space, and doesn’t even reach partner’s body in the zero gravity space.

But then though man and woman are confronted actually, because the information which makes the sexual feature (pheromone) recognize isn’t transmitted, “heterosexual relationship” is failure. Or a relation between two people is in the strange state which can be called neither “same-sex relationship” nor “heterosexual relationship”, theoretically. Of course, that isn’t proper. Man and woman never fall in love each other in the space, so such conclusion is illogical.

Therefore if a man and a woman were confronted in the space, it’s proper sensuously to understand the energy (allure = pheromone) to be transmitted by an action at a distance.

That can end easily by an experiment. In other words, it becomes clear by such meeting experiment of man and woman at the universe about which is proper, remote theory or proximity theory.

The concrete experiment methods are the following contents.

1. An experimental team makes man and woman liked from the opposite sex meet on the earth, and a sign with the excited respective brains is checked using f-MRI.
2. After an experimental team produced pseudo-space (vacuum and weightlessness), the same investigation as the one performed in 1 is done by the same subject.
3. Men and woman in experiment 2 put on penguin suit respectively.

If a man pheromone is a smell material, even if that’s released from a body, that wouldn’t be able to penetrate through thick fabric of penguin suit. Even if it’s possible to go out of penguin suit, it’s difficult that a grain of the smell is transmitted through zero gravity space, and even if it’s possible to be transmitted, a barrier as partner’s penguin suit is still left, so that can’t have reached partner’s body after all.

Therefore man and woman can’t sense a mutual pheromone, and the respective brain aren’t excited. When the man and woman who fell in love each other on the earth come to the (pseudo-) space, they don’t fall in love each other any more.

When proximity theory is adopted, such decision is made certainly. If other conclusions are adopted, that will be logic contradiction.

On the other hand, when remote theory is adopted, circumstances change.

I think essence of a male pheromone loved from women is the “energy” (like near-infrared radiation [11] ). That penetrates through a thick wall. The male pheromone loved from women can penetrate penguin suit at high speed in an instant, and would reach a female body (If both of them don’t wear penguin suit, it’s transmitted through a pheromone with an infinite speed even in the vacuum, and that would spread to a female body).

Therefore when the state of the female brain is measured by f-MRI, it’s probably able to be confirmed that it is excited.

Only remote theory can adopt such conclusion.

On the other hand, because proximity theory is the theory matched with a model as a medium (field), that’s powerless under the conditions which are sheltered by something such as the penguin suit and the zero gravity space which obstruct its function. Therefore it’s clear that the proximity theory is disadvantageous in such experiment (Interestingly, a man pheromone isn’t also found yet like graviton).

Even if there are no medium between the two persons when man and woman are confronted in the space as an image, the energy which will make the gender recognize immediately reaches a mutual body and makes them love.

It’s obvious that remote theory fits in with the spread of force logically like the above.

### **3 Section**

Then, I’ll deepen more demonstration.

The medium to the force transmitted is unnecessary in the relationship theory, but the idea as “party concerned” to compose the force is necessary. For example the earth and the moon are “party concerned” about the gravity which composes between the earth and the moon. Or metal and a magnet are “party concerned” about the electromagnetic force which composes between the metal and the magnet. Or when saying by the example mentioned above, a man and a woman are “party concerned” about the love relation with which it’s tied between a man and a woman.

It’s the viewpoint of the relationship theory to think “the force” doesn’t also form when such “party concerned” don’t exist.

And those have to be more than 2.

If it's so, weak force isn't relevant to "relationship".

A weak boson is itself for weak force according to proximity theory, and that makes a neutron split [12], something appropriate for "party concerned" is because only 1 neutron is found, there.

"Something and something" are need ("Something" has to exist in addition to the neutron.) for the force to act on it in the relationship physics, "no parties concerned" exist in addition to the neutron in the model of weak force. In other words, it's lacking in one more component. So "relationship" can't consist of it.

Therefore weak force isn't relevant to "the energy". That isn't "relationship".

(It can't be asserted) a weak boson may be the "substance" with the unclear roots.

Anyway, it's certain theoretically only that it isn't "the energy".

Further, the bond with which it's tied between more than 2 parties concerned (It isn't visible) has to be called "relationship" there. Bare gauge particle (is visible) in the structure lacking in one of the party concerned, and that's "substance" rather than "the energy" as an image for the type there. If it's visible, that's no longer "the energy" (A visible light is removed).

Therefore weak force has to be excluded from a category of "the energy" in the relationship physics.

Therefore, the force which exists in the natural world should be classified into 3 kinds (gravity, the electromagnetic force and the strong force). Moreover, it's explained in detail later, but all those are the identical force. It isn't stated about weak force here such reason. If weak force is handled in the relationship theory, please understand that it becomes logic contradiction.

#### **4 Section**

Then, I'll return to the main subject again.

Because a medium is unnecessary in the relationship physics as it was mentioned above, time is also unnecessary for the force to act on it between the objects. In other words, speed to which the force is transmitted is infinity. Further, a change in a speed a position of an object is a change in "relationship" between the objects, not movement of an object in this theory.

Dynamics (proximity theory) is one of the excellent theory which can explain truth of the natural world for certain, but unifying description of gravity, the electromagnetic force and the strong force and unifying understanding of a duality

of a particle and a wave motion about light become possible by remote theory's being advocated further.

That would predict electronic behavior in the atomic structure like determinism and moreover also promote development of semiconductor physics and activation of the industrial world.

By the way, the difference in the names such as “the force”, “the energy”, and “work” is only the difference on the forms for dealing with a numerical formula, in the relationship physics, and everything of those is included in the concept as “relationship”. It's because “relationship” is the highest rank concept that the mutual relation between all elements of which the natural world is composed can be lumped together, that it is possible.

Therefore because “the force” and “the energy” are one type of “relationship” together in the relationship theory, each doesn't have to be understood by different interpretation.

But, if “the force” is the value into which “the energy” was divided by “the distance” strictly, it can be defined [13] . If it's expressed in the system, it'll be the following shape.

$$F[N] = \frac{E[J]}{2r[m]}$$

## 5 Section

Then, I'll put it in order more about this theory.

I stood as remote theory and built “relationship model” newly, and defined the energy as “relationship”. It's because that's considered as “relationship between the objects”, not that it's “substance” in view of all energy's being invisibility (except for visible light [14] ). Because the dominance idea to include 2 features (a wave motion [15] and particulate [16] ) is “relationship” surely when aiming at the nature of the light.

Such concept is most basic and universal explanation method which can cover all indicated features with the experimental result which checks light, heat and the force. A wave motion and a particle can be integrated without contradiction because of such broad.

It was a beginning that it was different in the feature between the double slit

experiment [17] and the experiment of photoelectric effect [18] that such duality has been recognized in the physics originally.

In the double slit experiment, when light is applied for the board 2 loopholes of light hold, the striped shadow is made on the installed screen ahead of it. This makes them think of light's having the feature of the wave. Because the square thick shadow equal to the shape of the slit should be formed on the screen if a grain of light just goes straight.

On the other hand, when light of a high frequency like X-rays and ultraviolet radiation is applied to metal in the experiment of photoelectric effect, an electron is flicked from there. This makes them think of light's being a grain like a bullet. It's because it's able to be guessed at that a minute particle like an electron was shaken off because the interaction has generated to small one point intensively.

A common view in the modern physics grasps image different in 2 kinds about light like the above by a concept as a duality of a particle and a wave motion. It's because an experiment was made double, and a result was taken out double. Now that both were taken out, that couldn't help be disposed of as a duality.

Such interpretation isn't always wrong. But that can't also grasp the natural form sufficiently.

So the further essence by which such duality can be included has to be picked out. In my view, light is the energy, and the energy is "relationship". Therefore it can be said that light is "relationship".

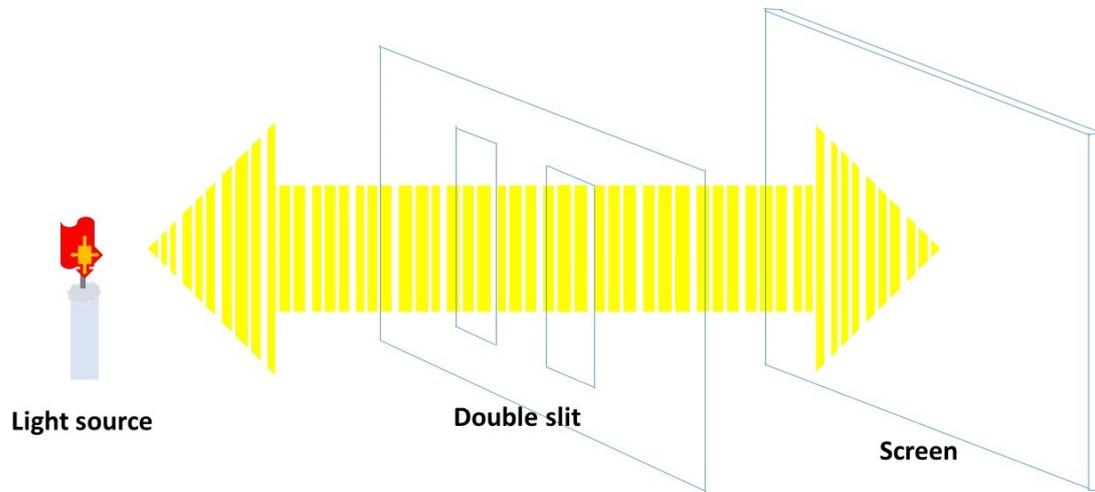
If it's so, "party concerned" to compose light has to exist there. It meant that "party concerned" is more than two element to compose the relationship which catches the energy from the end.

Every experimenting that will be different composition.

When it's different in experiment method, "party concerned" is being also different. And "relationship" is being also different in the experiment from which "party concerned" is different.

Then, after being based on the thing, I'll describe conversantly about a double slit experiment. "Party concerned" there separates big, and it's tri-party which consists of light source, slit and screen. In other words, "three party concerned relation" is formed there (Fig.1).

Figure.1



Relationship of the wave level

It can be said that it is a relation thinner than “two party concerned relation”. Such “relationship” is the form as the wave motion, and it’s a double slit experiment that it appeared out. A double slit experiment made “relationship” the wave motion level. A thin relation between the tri-party appeared out as a wave motion with some degree expanses.

I’ll also describe an experiment of photoelectric effect conversantly. “Party concerned” there separates big, and it’s two-party which consists of a light source and metal. In other words, “two party concerned relation” is formed there (Fig.2).

## Figure.2



Relationship of the particle level

It can be said that it is a relation thicker than “three party concerned relation”. Such “relationship” is the minute form which makes them think of a particle, and it is photoelectric effect that it appeared out. An experiment of photoelectric effect made “relationship” the particle level. Because a relation is thick just like “red thread of destiny”, the area on which that acts is settled in the area where for one electron is determinative and small. A thick relation between the two-party appeared out as a particle.

When 2 kinds of different experiment is made like the above, “party concerned” is also different and “relationship” is also different and an experimental result is also different.

It’s about a part equivalent to its difference that modern physics points out (through concept as a duality of a particle and wave motion). If it’s compared, it’s the following feeling, when a man is confronted with a woman, “heterosexual relationship” is formed, and when a man is confronted with a man, “same-sex relationship” is formed. Because “(in a narrow sense) relationship” is different by which gender to be confronted with though it’s itself of the same one person, the viewpoint will be “the same sex” and be “the opposite sex”. Indeed this can be called “duality of the same sex and the opposite sex”. Both viewpoints are right.

Or when one is confronted with an older person, one is “junior”, and when one is confronted with a younger person, one is “senior”. Though it’s itself of the same person, “(in a narrow sense) relationship” is different by whom to be confronted with, so the viewpoint will be “senior” and be “junior”. Indeed this can be called

“duality of senior and junior”. Both viewpoints are right. One is also a senior and oneself is also a junior. Because the viewpoint is different by who is a partner, that can’t be limited to one of one. In other words, it’s a duality.

It’s also same in case of a duality of a particulate and wave motion. Because every experimenting “party concerned” is different it’s natural to be also different in “relationship (in a narrow sense)”.

It’s natural for two kinds of “relationship (in a narrow sense)” to be shown double, because that was experimented on by two kinds of component.

Therefore if essence of a particulate and wave motion is picked out, that can be called “relationship (in broad sense)”. That’s because it’s the wide concept that it’s able to be applied in both experiments.

Therefore I thought I could explain all force which exists in the natural world universally using a model as “relationship”.

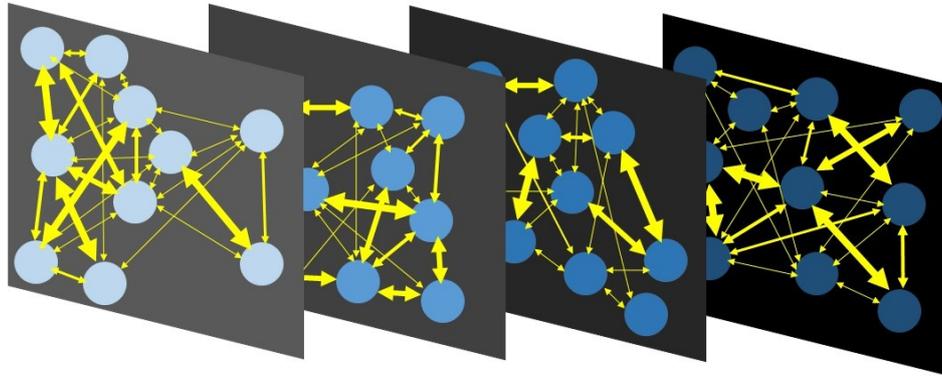
## **6 Section**

Then, I’ll enter detailed statement about that.

The spatiotemporal image I imagine is the one like a cartoon film book. A cartoon film book is the “film collection” which consists of the manuscript much continued. When those are turned over, a drawn picture seems to be moving to a manuscript at all.

I guessed from there and modeled a space image. Space is equivalent to one and one of a cartoon film book there, and time is equivalent to those successive changes (Fig.3).

# Figure.3



It's understood from this spatiotemporal model that “relationship” is an indispensable important matter about time and about space. Space is a concept which consists of all elements of which some one are composed and the “relationship” with which those are connected, and time is “relationship” with which some one and the following one are connected.

But, a formation important matter is different from spatial relationship with temporal relationship. It doesn't take time for the former completion, but it takes time for the latter completion. The former ties one between the object with 0 seconds, and the latter ties one between the object with spending time longer than 0 seconds. If the present object and the future object are linked in 0 seconds, a flow in time stops, but that doesn't become real so. On the other hand, the “relationship” with which it's tied between the objects of which space is composed is always formed in 0 seconds.

When thinking by comparing to a cartoon film book, it's easy to understand. When it's tied in 0 seconds each other between all manuscripts, that isn't the first cartoon book, it's connected in 0 seconds between the components in each manuscript, originally.

A model as “the organization of the clockwork” fuses for the space image I imagine, too. In other words, the respective films are equipped with the organic structure. The state that it's harmonized in one (limited) order by agreeing in relation to mutual and having an influence each other between the various elements is “It's organic”. It consists of various parts in case of a clock, and the autonomy is

produced by between each parts harmonizing. Such feature also applies about global environment and a human body as well as the whole universe.

The universe as “clock”, each original object as “part” and the energy as “source of power” are defined in the model.

Terminology like “clock” and “part” was a metaphor of course, but I concluded remote theory by such viewpoint. In other words, I compared all force which exists in the natural world to “connection” between the gears inside the clock, and defined as “relationship between the objects”.

Therefore the concept as “the individuality” that an object has it is deriving by the thing.

A component in this universe is designed so as not to bite each other when it isn't individual. As if a long hand, a short hand, a big screw, a small screw, a big gear and a small gear are inside the clock at all, each “part” of which this world is composed is also an individual member wealthy in a variety.

And it's repeated, but the “relationship” with which it's tied between such individual objects is force, and it's the energy.

When thinking by comparing to Coulomb's law [19] , “electric charge” is equivalent to “the individuality”, and “Coulomb force” is equivalent to “relationship”. The part is a point of similarity of relationship physics and Coulomb's law.

Repulsion acts on it between the objects with an electric charge of a similar sign in Coulomb's law (electromagnetism), but repulsion doesn't generate at all between the objects with the individuality in the relationship physics. That's a point of difference between two opinions.

For example I'll think by an example of a magnet. There are a S pole and N pole in the magnet, and when it's brought close between the different poles, those are pulled each other, but when it's brought close between the same poles, those rally each other [20] . When only such phenomenon face is seen, one between the same poles seems to rally each other certainly.

But such interpretation isn't done in the relationship physics. “Relationship” between a same poles of a magnet is handled with “unrelatedness” there.

Because this universe is “the organization of the clockwork”, all components inside it have to be individual. In other words, constitution in this world has to be rich in a variety.

It's because there is abundance of such variety, that force and the energy can be generated in this universe.

If it's so, "relationship" which consists between a same pole of a magnet isn't rich in a variety at all and that's is "the super-unrelated world". So an attraction isn't generated at all.

On the other hand, it seems to generate seemingly about repulsion. But the force which showed out isn't repulsion there. That's "force by the movement to which man brings one between the magnet close by hand" and is "kinetic energy which derives from man". That isn't the force a magnet has in original way.

If it's compared to relationship physics, repulsion in the electromagnetism is the phenomenon by which a magnet is forced away to a far place by force's being poured by a human hand to the "super-unrelated space" which generated between a same poles.

That just seemed to be repulsion at all.

The difference in "the individuality" has to exist there for force to be generated. But if it's confronted between the objects from which "the individuality" isn't different, "relationship (all force including repulsion)" isn't formed at all there.

Therefore it'll be the conclusion that repulsion doesn't exist in the natural world at all.

## **7 Section**

Then, I'd like to state more conversantly about relationship theory.

All force and energy are "relationship".

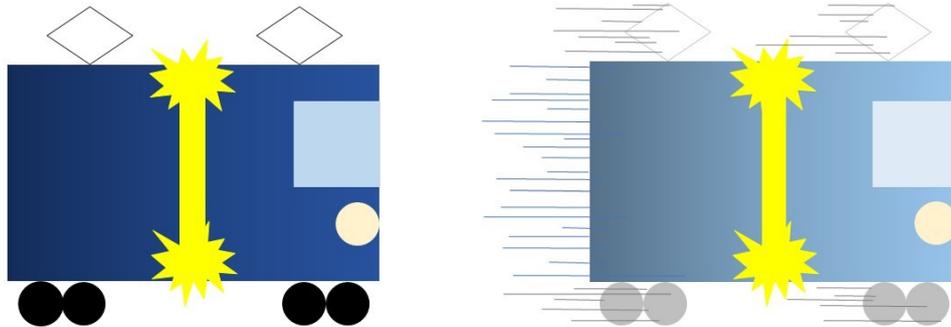
More than two "party concerned" around that has to exist in the purpose which can be called "relationship", and each "party concerned" has to be individual, and speed to which each "party concerned" is related each other has to be infinity.

I tried a thought experiment using light for the purpose of showing such important matter contents as a numerical formula. Because light is one form of the energy, light is also "relationship".

Therefore it can be said that the speed of advance is infinity.

Please see Fig.4.

# Figure.4

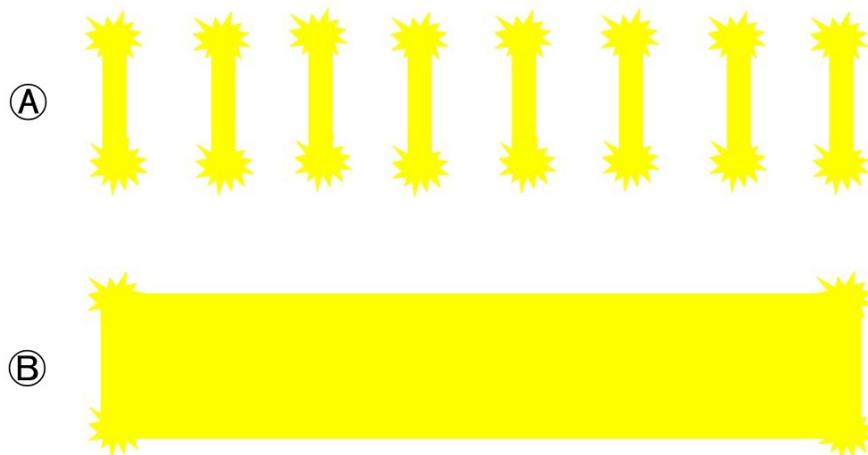


It reaches to a floor in 0 second, and the line of a lengthwise direction will form a straight line, however vehicles may move to a transverse direction at high speed, when light comes out from the light source installed in the ceiling in a train. In my coined word, this is called “light pillar formation”.

Then, if a train in Fig.4 ran at 299792.458 [Km/s] [21] , what kind of shape is a light pillar seen as?

How to be seen two ways can be assumed about that (Fig.5).

# Figure.5



If it was considered which was more appropriate out of those, it'll be ③. This is called “optical belt formation” by my coined word.

An optical belt consists of a light pillar, its light pillar of length ( $2r$ ) increases to  $N$  pieces, and since that is the result of running for a definite period of time at the velocity of light, it can be denoted by the following formulas.

$$2Nr = ct \dots\dots\dots ①$$

It will become the following forms if this is transformed.

$$c = 2Nv \dots\dots\dots ②$$

“ $N$ ” expresses the number of the light pillar and doesn't express the number of the party concerned which composes a light pillar. The different system should be devised to describe it. A light pillar has 2 party concerned structure which consists of one point in the ceiling and one point in a floor. Therefore the system which shows a relation between the number of the light pillar and its number of party concerned is given by the following shape.

$$n = 2N \dots\dots\dots ③$$

When this is substituted for system②, the following formula is obtained.

$$c = nv \dots\dots\dots ④$$

Description about “party concerned” has been completed by this first. By the way, the reason that the light which passes in the water loses speed beyond in the vacuum can be explained by system③ and system④ [22] . That's because the value of “ $n$ ” was increased by the thing to which water has been added as “party concerned” (It was mentioned earlier, but the reason that it wasn't stated that a male pheromone spread to a female body with an infinite speed in the

meeting experiment of man and woman by which penguin suit was put on is also same).

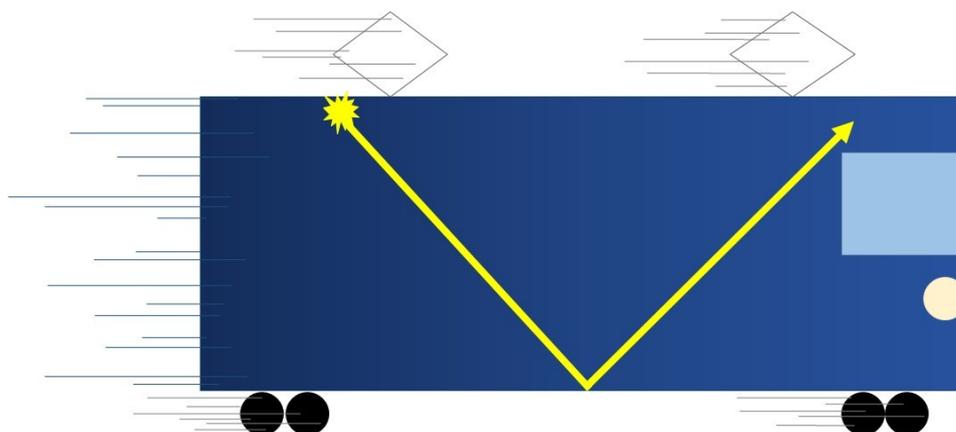
Originally, although it was infinite, the velocity of light was that man measure, and since the party concerned, such as a half mirror and a gear [23] , were made to intervene and the value of “ $n$ ” was increased, it carried out the speed down even at 299792.458 [Km/s].

After speed was made limited artificially, a concept as velocity of light was born. That seems to show the sign in which a photon is moving quickly seemingly, but that’s misunderstanding. Light is shown as one of “relationship” with which it’s being connected originally between the two parties because a light source and the acceptance destination are tied with an infinite speed.

It should not realized that the grain of energy moves from end to end, and it should be realized that energy (relationship) has connected both ends (between the parties) in 0 second from the first.

If a photon moves in the space with the limited speed and time, image of a train experiment will be the image different entirely (Fig.6).

Figure.6



When Fig.4 and Fig.6 are compared, the difference between the proximity theory and the remote theory would be revealed clearly.

Now, if remote theory is adopted, it turns out that it is common in that the gravity committed between a fixed star and a planet and the electromagnetic force committed between a proton and an electron are the “relationship” which connects

between the parties [24] .

And about each party concerned, it turns out that one side stands it still and another side is turning around the circumference [25] . The difference in speed is also there, and there is also difference in the sizes. In other words, the strength of “individuality” can be understood there.

Conversely, in the space filled with “relationship”, the object in which “individuality” differs always existed in the both ends, and it has induced force because they have influence mutually.

When thinking so, it can be said that “force” is “attraction between individuality”. Therefore as the distance between the two individuality is small, its degree will become bigger. Small of the distance is because “relationship” is strengthened. Therefore when the distance between 2 of individuality is shown with “ $2r$ ”, the concept that 2 of individuality was crossed is shown with “ $i^2$ ” and force is shown with “ $F$ ”, the following system stands up.

$$F = \frac{i^2}{2r} [N] \dots\dots\dots \textcircled{5}$$

Then, essence of individuality must be clarified concretely. First, the degree of the individuality of the object in a population is inverse proportion to the number of the parties concerned in there. Next, since a solar system model and atomic structure are the models that one side turns and another side does not carry out it, it is clear that their speed is a factor which influences the degree of individuality. Therefore, the following formulas can be drawn intuitively.

$$i = \frac{1}{nv} [H] \dots\dots\dots \textcircled{6}$$

(The unit was named from my name [Hashimoto] which is an inventor of this system)

Moreover, it will become the following form if formula② is substituted to formula⑤.

$$i = \frac{1}{c} [H] \dots\dots\dots \textcircled{7}$$

Therefore when transforming system⑤ using system⑦, the system of the electromagnetic force and the system of the strong force will be completed by the following shape.

$$F = \frac{1}{2rc^2} [N] \dots\dots\dots \textcircled{8}$$

The difference between the electromagnetic force and the strong force is decided only by the distance between the object. Therefore it can be said theoretically, that the electromagnetic force and the strong force are the same force.

### 8 Section

Then, next I'll move to statement about gravity.

Gravity is the force which acts between the objects with the mass according to Newtonian theory of gravity, and its degree is proportional to the mass [26] . That's expressed in the following system.

$$F = G \frac{m_1m_2}{r^2} [N] \dots\dots\dots \textcircled{9}$$

“G” is the system is called gravitational constant, and it's said that correctness of its numerical value was confirmed by an experiment using a twist scale by Chavendish [27] .

But a moot point is forming here. Two lead balls used in the experiment were different in weight and size extremely (The weight of the big ball was 160 [Kg], and the weight of the small ball was 0.73 [Kg]) [28] .

Because gravity is proportional to the mass in Newtonian theory, the researcher who would like to make strong gravity act between two lead balls should use something with the big size of two same degrees from an efficient point of view. But Chavendish didn't do so. It's because a generation important matter of force (in relationship theory) isn't satisfied when making both mass even similarly. Each party concerned which composes that has to be individual for the force to be generated. In other words, it's necessary to hold a gap between each party concerned about the size and the mass of object. Therefore he used two lead balls with the different mass extremely in the experiment.

It's because when not meeting, space between the two parties seems to make one between the same poles of a magnet close at all, and is "the unrelated world", and an attraction isn't generated.

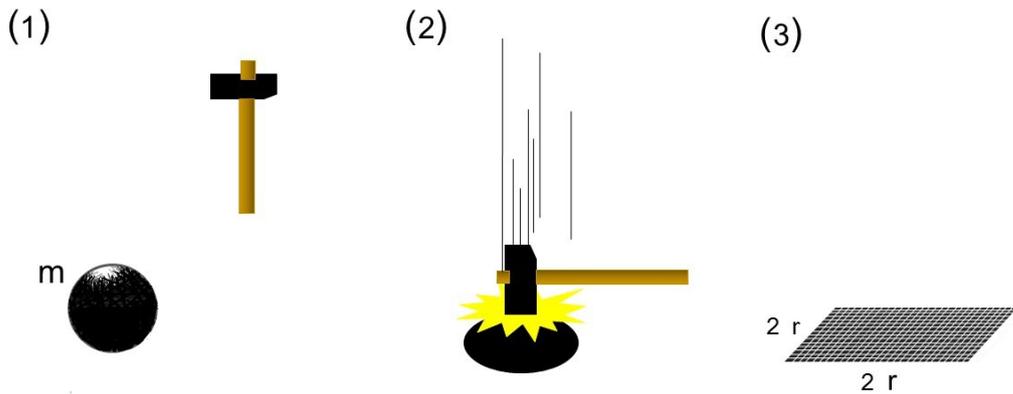
That's also only the just expedient introduced by Newton compulsively about the gravitational constant according to another view to balance a right side with a left side in system⑨, it's doubtful whether a law of the natural world is expressed faithfully [29] .

If it's so, it'll be necessary to contrive the completely new system instead of Newtonian theory of gravity and model gravity again more.

So I tried in order to derive original theory of gravity by a thought experiment.

Please see Fig.7.

Figure.7



First, the mass of the metagalaxy is assumed with "m". God adds striking force ( $F$ ) by a hammer and stretches thin, and that's changed to one seat which consists of enormous numerical party concerned ( $n$ ). That's called "mass seat formation" by my coined word.

If the radius of the metagalaxy is assumed with "r" here, the area of the universe is shown with " $(2r)^2$ ". When it's based on the point, and the system is led, that's given by the following shape.

$$m \times F = \frac{(2r)^2}{n} \dots\dots\dots \textcircled{10}$$

If that's transformed, the following system will be completed.

$$F = \frac{4r^2}{nm} [N] \dots\dots\dots \textcircled{11}$$

This is the new theory described about a relation between gravity and the mass (Gravity is in inverse proportion to the mass according to this system).

Further, the gravity, the electromagnetic force and the strong force are common by the point which is "relationship" in the relationship physics. Therefore that's expressed in the system, the following shape is created.

$$\frac{i^2}{2r} = \frac{4r^2}{nm} [N] \dots\dots\dots \textcircled{12}$$

This is the system of the whole creation theory which can handle all force in unifying way.

By the way, it should be shown as follows to describe that by the form as the energy because this is the system expressed in the form as the force.

$$i^2 = \frac{8r^3}{nm} [J] \dots\dots\dots \textcircled{13}$$

The difference between system $\textcircled{12}$  and system $\textcircled{13}$  is only whether that was transformed.

Then, I'll create the system to handle it about the mass.

This also needs only to transform system $\textcircled{12}$ . Then the following shape is given.

$$m = \frac{8r^3 c^2}{n} [g] \dots\dots\dots \textcircled{14}$$

When system $\textcircled{14}$  is substituted, this can be transformed as follows.

$$m = 8r^3 cv [g] \dots\dots\dots \textcircled{15}$$

Then, I'll certify equality of the left side in system⑫ and the right side in system⑬ (the electromagnetic force and the case that gravity is identical) by calculation.

First, I'd like to ask gravity between the proton in the hydrogen atom and the electron in the hydrogen atom using system⑪ as an example.

It's necessary to make the value of the radius of the hydrogen atom and the number of parties concerned of the hydrogen atom clear for it. System⑮ should be used about the former and system④ should be used about the latter respectively.

Then, I'll lead the radius of the hydrogen atom. There is a careful point here. That's how to decide about speed of the hydrogen atom. It should be considered as follows about that.

A hydrogen atom on the earth is going around the sun as well as the earth by speed of 29.8 [Km/s] [30] . When thinking so, the following calculation result is led.

$$\begin{aligned}
 r^3 &= \frac{1.674 \times 10^{-24}}{8 \times 299792.458 \times 29.8} \\
 &= 2.3422243933 \times 10^{-32} [m^3] \\
 r &= 2.86116453518 \times 10^{-11} [m]
 \end{aligned}$$

This is the radius of the hydrogen atom.

And the number of parties concerned of the hydrogen atom is given by the following calculation.

$$\begin{aligned}
 n &= \frac{299792.458}{29.8} \\
 &= 10060.1496
 \end{aligned}$$

Then, I'll substitute the above mentioned value for system⑪ and ask gravity between the proton in the hydrogen atom and the electron in the hydrogen atom. That's given as the following calculation result.

$$F = \frac{4 \times (2.86116453518 \times 10^{-11})^2}{10060.1496 \times 1.674 \times 10^{-24}}$$

$$= 0.19444007 \text{ [N]}$$

Then, next I'll find the electromagnetic force between the proton in the hydrogen atom and the electron in the hydrogen atom using system⑧. That's given as the following calculation result.

$$F = \frac{1}{2 \times 2.86116453518 \times 10^{-11} \times (299792.458)^2}$$

$$= 0.19444007 \text{ [N]}$$

Both values were identical perfectly like the above.

Therefore it was revealed that gravity and the electromagnetic force are the same one.

Because it's in the position where gravity is in inverse proportion to the mass, that's possible.

On the other hand, gravity was proportional to the mass in Newtonian gravity theory, so that couldn't explain the difference in the force which draws a clip between the earth and the small magnet man held in his hand closer. If gravity is proportional to the mass, the earth which is easily exceeded in the mass can't fall readily by an attraction of a magnet far indeed. Newtonian theory was violating such fatal logic contradiction.

When a magnet draws a clip closer, it can be said that it's the experimental fact which proves that gravity is rather in inverse proportion to the mass to have a strong attraction beyond the earth.

## 9 Section

Then, I'll inspect the thing using system⑩.

Then, first I'd like to ask the mass of the earth from the beginning using system⑮.

Because the revolution speed of the earth is 29.8 [Km/s], and the radius of the earth is 6378140 [m] [31] , the following calculation result is led.

$$m = 8 \times (6378140)^3 \times 299792.458 \times 29.8$$

$$= 1.854424 \times 10^{28} \text{ [g]}$$

On the other hand, it's a small value so that it can be ignored about that of a clip, so it won't be considered.

And next when a clip separated 0.01 [m] from the earth ground, I'll ask the attraction which acts there using system⑩.

The number of global parties concerned is calculated with  $n = 10060.1496$  based on system④. Because you can understand to unite with the earth about that of a clip, it won't be considered. When it's calculated after being based on such point, the following result is led.

$$F = \frac{4 \times (0.01)^2}{10060.1496 \times 1.854424 \times 10^{28}}$$

$$= 2.144107 \times 10^{-36} \text{ [N]}$$

This is the degree of the force to which the earth attracts a clip.

Then, next I'll find the mass of the magnet.

The magnet is being also different in mass according to the difference in the kind and the size [32]. I'd like to assume a samarium-cobalt magnet [33] (the size is  $8 \times 10^{-6} \text{ [m}^3\text{]}$ ) here. That can presume a magnet on the earth to be going around the sun as well as the earth by speed of 29.8 [Km/s] about its number of parties concerned, so that's calculated with  $n = 10060.1496$  based on system④. Then, when the mass is calculated after being based on such point, the following result is obtained.

$$m = 8 \times (0.01)^3 \times 299792.458 \times 29.8$$

$$= 71.470522 \text{ [g]}$$

Then, finally, I'll ask an attraction in the state that the distance between the clip and the magnet is 0.01 [m] using system⑩. That's given as the following calculation result.

$$F = \frac{4 \times (0.01)^2}{10060.1496 \times 71.470522}$$

$$= 5.56325 \times 10^{-10} \text{ [N]}$$

This is a value of the force to which a magnet attracts a clip.

It was revealed between the earth and the samarium-cobalt magnet like the above that about  $2.6 \times 10^{26}$  times are partial in the force which draws a clip closer.

If relationship physics is used, it can also be explained about the reason that an airplane can fly in the air. Or an object with the big mass flying at high speed weakens relationship between the earth based on system④ and system⑪, and as a result, an attraction weakens, so it can fly in the air.

## 10 Section

Then, I'll enter a summary of this paper.

This universe is the so-called "organization of the clockwork".

There are such nature-views (the monism-like organization theory) in a basis in the background where I emphasize an element such as "relationship" and "the number of parties concerned" in physics research.

The reason that I invented relationship physics is the case by which "unification of 4 of force" was coming to a deadlock by proximity theory in one, but it's because there was such space look surely, that it was the biggest opportunity.

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