The discrepancy between the assumption implied in field definition and the objective reality is the main cause of many theoretical errors in modern physics

场定义中隐含的假设与客观实际不符是导致近代物理学诸多理论错误的主因

Author: Peng Xiaotao
作者：彭晓韬
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[Abstract] : The definition of the field (gravitation field, electric field and magnetic field) implies a hypothesis: suppose there is a point field source (mass or positive charge) of one unit on the observation point P, and the magnitude and direction of the force it receives (gravitation, Coulomb force and magnetic force) is the magnitude and direction of the field strength on the point. When the field is further extended into a continuous differentiable function in space-time, the above implicit assumption is further extended as follows: there is a point field source of one unit at all spatial positions in space-time. The objective reality is that the distribution of field sources in space-time is not continuous, nor stable. As a result, many physical theories, theorems and laws based on field and field theory cannot be consistent with objective facts. Such as: electromagnetic induction law, Gauss law, Hubble law, Maxwell equations, relativity, quantum mechanics and the Big Bang theory. This article carries on some discussion and certification, hope interested friends put forward more valuable comments and suggestions.

[文章摘要]：场（万有引力场、电场和磁场）的定义中隐含了一个假设：假设观测点 P 点上存在一个一个单位的点场源（单位点质量或单位正点电荷），它所受到的力（万有引力、库仑力和磁力）的大小与方向即为该点上的场的强度的大小与方向。当将场进一步拓展为在时空中为连续可导的函数时，则上述隐含的假设被进一步扩充为：时空中所有的空间位置上均存在一个一个单位的点场源。而客观实际情况是：场源在时空中的分布并非连续，也非稳定不变的。由此导致了诸多以场和场论为基础的物理学理论、定理和定律就不可能与客观事实相符了。如：电磁感应定律、高斯定律、哈勃定律、麦克斯韦方程组、相对论、量子力学和宇宙大爆炸论等。本文就此进行一些探讨与认证，希望有兴趣的朋友们多提宝贵意见与建议。

I. Definition and nature of electric, magnetic and gravitation fields

一、电场、磁场和万有引力场的定义及本质

1. Definition and nature of electric field

1、电场的定义和本质

1.1. Coulomb's Law

1.1、库仑定律

Coulomb's law is the law of the interaction between charges at rest. In 1785, the French scientist C,-A.d Coulomb obtained from the experiment that the interaction force between two stationary point charges in a vacuum is proportional to the product of their charge quantity, inversely proportional to the quadratic of their distance, the direction of the force on their line, the same charge repulsion, the same charge attract.

The mathematical expression of Coulomb's law:

库仑定律是静止点电荷间相互作用力的规律。1785 年法国科学家 C,-A.de 库仑由实验得出，真空中两个静止的点电荷之间的相互作用力同它们的电荷量的乘积成正比，与它们的距离的二次方成反比，作用力的方向在它们的连线上，同名电荷相斥，异名电荷相吸。

库仑定律的数学表达式：

$$\vec{F} = k\frac{q_1 q_2}{r^2}\vec{e}_r \qquad \text{（公式 1）}$$

其中 r 为两者之间的距离；$\vec{e}_r$ 为从 q_1 到 q_2 方向的矢径；k 为库仑常数（静电力常量）。

1.2. Definition of electric field

1.2、电场的定义

If the point charge q2 in (Formula 1) is equal to 1, that is, if the Coulomb force is normalized above, it is the expression of the electric field intensity. In other words, if the charge quantity of charge q2 is 1 and its position in space is the observation point, the magnitude and direction of the electric field intensity at the point is the same as the magnitude and direction of the coulomb force exerted by the charge. As follows:

假设（公式 1）中的点电荷 q_2=1，即对以上的库仑力进行归一化，就是电场强度表达式了。也就是假设电荷 q_2 的电荷量为 1 且其所在的空间位置为观测点，则该点上的电场强度的大小与方向与该电荷所受到的库仑力的大小与方向相同。如下式示：

$$\vec{E} = \frac{\vec{F}}{q_2} = k\frac{\frac{q_1 q_2}{r^2}}{q_2}\vec{e}_r = k\frac{q_1}{r^2}\vec{e} \qquad \text{（公式 2）}$$

1.3. Nature of electric field

1.3、电场的本质

It can be seen from (Formula 2) that the electric field intensity is essentially the expression of the magnitude and direction of the coulomb force generated by point charge q1 on a unit point charge at a distance r from Q1. That is to say: the so-called electric field is one of the expressions of coulomb force, is a special case of the interaction between point charge and unit point charge Coulomb force. Therefore, the electric field is not an objective entity that can exist independently of electric charge.

从（公式 2）可知：电场强度实质上是点电荷 q_1 在距离其 r 处对单位点电荷所产生的库仑力的大小与方向的表达方式而已。也就是说：**所谓的电场是库仑力的表达方式之一，是点电**

荷与单位点电荷间的相互作用力库仑力的一种特殊情形。因此，电场并不是一种可独立于电荷而单独存在的客观实体。

According to Coulomb's law, when there is no charge (charge quantity is 0) at a certain space position, the Coulomb force at the position is 0, and the intensity of its electric field is also 0. Therefore, if we want the electric field to exist throughout spacetime, we must assume that there is a positive point charge per unit at all places in spacetime. But this is not the case: the distribution of charged bodies in space is neither continuous nor stable. The electrons in the atom are constantly moving around the nucleus at very high speeds, and the nucleus is constantly moving around the center of mass of the atom. Thus it is determined that the distribution of the so-called electric field in space and time is discontinuous and non-fixed. This also determines that the electric field strength is not a continuously differentiable function.

从库仑定律可知：当某一空间位置上没有电荷（电荷量为 0）时，则该位置上的库仑力为 0，其电场强度自然也为 0。因此，如果想让电场在整个时空中都存在，则我们必须假设时空中所有的空间位置上均存在一个一个单位的正点电荷。但实际情况并非如此：带电体在空间上的分布既不是连续的，也不是稳定不变的。原子中的电子无时无刻不在以很高的速度绕原子核高速运动中，原子核也在不停地绕原子的质心运动着。由此决定了所谓的电场在空间上和时间上的分布均是不连续的和非固定不变的。这也就决定了电场强度不是连续可导的函数。

2. Definition and nature of magnetic field

2、磁场的定义和本质

2.1. Biot - Savard Law

2.1、毕奥-沙伐尔定律

$$d\vec{B} = \frac{\mu_0}{4\pi}\frac{\vec{I}d\vec{l}\times\vec{r}}{r^3} \qquad \text{（公式 3）}$$

其中，$\vec{I}$是源电流，dl 是源电流的微小线元素，r 是单位电荷（计算点）到电流元的距离；μ_0为真空磁导率。

将（公式 3）中的源电流及小线元更换为运动速度为 u 的电荷量为 Q 的点电荷，则有：

$$\vec{B} = \frac{\mu_0}{4\pi}\frac{\vec{u}Q\times\vec{r}}{r^3} \qquad \text{（公式 4）}$$

计算点处以速度 V 运动的电荷量为 q 的点电荷受到的磁力为：

$$\vec{F} = q\vec{V}\times\vec{B} = \frac{\mu_0 q\vec{V}}{4\pi}\times\frac{\vec{u}Q\times\vec{r}}{r^3} \qquad \text{（公式 5）}$$

2.2. Definition of Magnetic field

2.2、磁场的定义

The above (formula 4) is the formula for the magnetic field intensity generated by a point charge moving at the velocity u, that is, when the value of the dynamic charge V×q at the calculated point is assumed to be 1, the magnetic force it receives is the magnitude and direction of the magnetic field intensity at the point. That is the result of the normalization of (formula 5).

以上的（公式 4）就是以速度 u 运动的点电荷所产生的磁场强度公式，即：当将计算点处的动电荷量 V×q 的值假定为 1 时，其受到的磁力就是该点上的磁场强度的大小与方向了。也就是对（公式 5）的归一化后的结果。

2.3. Nature of magnetic field

2.3、磁场的本质

It can be seen from (Formula 4 and 5) that the magnetic field intensity is essentially the expression of the magnitude and direction of the magnetic force generated by the moving point charge Q, which is the product of the moving velocity and charge at the distance r (" dynamic charge "for short). That is to say, the so-called magnetic field is one of the expressions of the magnetic force, is a special case of the force between the moving point charge and the unit dynamic charge. Therefore, the magnetic field is not an objective entity that can exist independently of the moving charge.

从（公式 4 和 5）可知：磁场强度实质上是运动的点电荷 Q 对在距离其 r 处的运动速度与电荷量的乘积（简称“动电荷量”）为 1 的运动点电荷所产生的磁力的大小与方向的表达方式。也就是说：**所谓的磁场是磁力的表达方式之一，是运动点电荷与单位动电荷量间的相互作用力磁力的一种特殊情形**。因此，磁场并不是一种可独立于运动电荷而单独存在的客观实体。

It can be known from the Biot - Savard law: when there is no charge (charge quantity is 0) at a certain space position, the magnetic force at the position is 0, and its magnetic field intensity is also 0. Therefore, if we want the magnetic field to exist throughout spacetime, we must assume that there is one unit of positive dynamic charge at all points in spacetime. But this is not the case: the distribution of charged bodies in space-time is neither continuous nor stable. All the time, the electrons in the atom are traveling very fast around the nucleus, the nucleus is traveling very fast around the center of mass, and the whole atom is in constant motion. Therefore, the so-called magnetic field distribution in space and time is discontinuous and non-fixed. That's why the magnetic field strength is not a

continuously differentiable function.

从毕奥-沙伐尔定律可知：当某一空间位置上没有电荷（电荷量为 0）时，则该位置上的磁力为 0，其磁场强度自然也为 0。因此，如果想让磁场在整个时空中都存在，则我们必须假设时空中所有位置上均存在一个单位的正点动电荷量。但实际情况并非如此：带电体在时空上的分布既不是连续的，也不是稳定不变的。原子中的电子无时无刻不在以很高的速度绕原子核高速运动中，原子核也在绕质心高速运动中，整个原子也在不停地热运动中。由此决定了所谓的磁场在空间上和时间上的分布均是不连续和非固定不变的。这也就决定了磁场强度不是连续可导的函数。

3. Definition and nature of gravitation field

3、万有引力场的定义和本质

3.1. The Law of gravitation

3.1、万有引力定律

The law of gravitation is a law of the interaction of objects. It was discovered by Newton in 1687. Every object has a mutual attraction, and the magnitude of this force is directly proportional to the mass of each object and inversely proportional to the square of the distance between them.

The mathematical expression of the Coulomb law of gravitation:

万有引力定律为物体间相互作用的一条定律，1687 年为牛顿所发现。任何物体之间都有相互吸引力，这个力的大小与各个物体的质量成正比例，而与它们之间的距离的平方成反比。

万有引力库仑定律的数学表达式：

$$\bar{F} = -G\frac{m_1 m_2}{r^3}\bar{r} \qquad \text{（公式 6）}$$

式中：m1、m2 表示两个物体的质量，r 表示它们间的距离，G 称为万有引力常数也可简称为引力常数，G 由卡文迪许使用扭秤装置测出，其值约为 6.67×10^-11 N·m^2/kg^2。

3.2 Definition of gravitation field

3.2、万有引力场的定义

Suppose that the mass m2 of the point object in (Formula 6) is 1, that is, normalize the gravitation above, and that is the expression of the strength of the gravitation field. In other words, if the mass of the object m2 is 1 and the space location of the object m2 is the observation point, then the magnitude and direction of the intensity of the gravitational field at the point are the same as the magnitude and direction of the gravitational attraction received by the object. As follows:

假设（公式 6）中的点物体的质量 m_2=1，即对以上的万有引力进行归一化，就是万有引力场强度表达式了。也就是假设物体 m_2 的质量为 1 且其所在的空间位置为观测点，则该点上的万有引力场强度的大小与方向与该物体所受到的万有引力的大小与方向相同。如下式示：

$$\bar{W} = -G\frac{m_1}{r^3}\bar{r} \qquad \text{（公式 7）}$$

3.3. The nature of gravitation field

3.3、万有引力场的本质

It can be seen from (Formula 7) that the strength of the gravitational field is essentially a way of expressing the magnitude and direction of the gravitational attraction generated by point mass ml at the distance r from the mass of a unit point. In other words: the so-called field of gravitation is one of the expressions of gravitation, is the interaction between point mass and unit point mass a special case of gravitation. Therefore, the field of gravity is not an objective entity that can exist independently of mass.

从（公式 7）可知：万有引力场强度实质上是点质量 m_1 在距离其 r 处对单位点质量所产生的万有引力的大小与方向的表达方式而已。也就是说：**所谓的万有引力场是万有引力的表达方式之一，是点质量与单位点质量间的相互作用力万有引力的一种特殊情形**。因此，万有引力场并不是一种可独立于质量而单独存在的客观实体。

According to the law of gravitation, when there is no mass in a certain space position (mass is 0), the gravitation at the position is 0, and the strength of its gravitation field is also 0 naturally. Therefore, if we want the gravitational field to exist throughout space-time, we must assume that there is a point mass of one unit at all spatial locations in space-time. But this is not the case: the distribution of objects with mass in space-time is neither continuous nor stable. The electrons in the atom are constantly moving around the nucleus at very high speeds, and the nucleus is constantly moving around the center of mass of the atom. Therefore, it is determined that the distribution of the so-called gravitational field in space and time is discontinuous and non-fixed. This also determines that the strength of the gravitational field is not a continuously differentiable function.

从万有引力定律可知：当某一空间位置上没有质量（质量为 0）时，则该位置上的万有引力为 0，其万有引力场强度自然也为 0。因此，如果想让万有引力场在整个时空中都存在，则我们必须假设时空中所有的空间位置上均存在一个一个单位的点质量。但实际情况并非如此：带质量的物体在时空上的分布既不是连续的，也不是稳定不变的。原子中的电子无时无刻不在以很高的速度绕原子核高速运动中，原子核也在不停地绕原子的质心运动着。由此决定了所谓的

万有引力场在空间上和时间上的分布均是不连续的和非固定不变的。这也就决定了万有引力场强度不是连续可导的函数。

2. The nature of gravitational, electric and magnetic fields makes many laws and theorems unusable

二、万有引力场、电场和磁场的本质决定了诸多定律和定理是不可用的

1. Gauss's Law

1、高斯定律

Gauss's Law: In an electrostatic field, the flux of the intensity of the electric field through any closed surface depends only on the algebraic sum of the charges in the closed surface and is equal to the algebraic sum of the charges in the closed surface divided by the capacitance in a vacuum. The relationship between the charge distribution in the closed surface and the generated electric field is shown. The electric flux through any closed surface (called Gaussian surface) S in an electrostatic field is equal to the algebraic sum of all the charges in the closed surface, independent of the charges outside the surface.

高斯定律：在静电场中，穿过任一封闭曲面的电场强度通量只与封闭曲面内的电荷的代数和有关，且等于封闭曲面的电荷的代数和除以真空中的电容率。表明在闭合曲面内的电荷分布与产生的电场之间的关系。静电场中通过任意闭合曲面（称高斯面）S 的电通量等于该闭合面内全部电荷的代数和，与面外的电荷无关。

$$\oiint_{\partial V} E \bullet dS = \frac{1}{\varepsilon_0} \sum_{q_i in V} q_i \qquad \text{（公式 8）}$$

But the actual situation is that the electric field of a point or small area on a closed surface is zero when there is no charge, but is not zero when there is a charge. Therefore, when the distribution of charge in spacetime is not continuous and uniform, the so-called electric field intensity fluxes of different closed surfaces are different, and their surface integrals will not be equal. Gauss's law naturally breaks down.

但实际情况是：当闭合面上的点或小面域没有电荷时，其电场为 0，而有电荷时才不为 0。因此，当电荷在时空中的分布不是连续和均匀的时，不同的闭合面的所谓的电场强度通量就是不同的，其面域积分就不会相等。高斯定律自然就不成立了。

2. The law of electromagnetic induction

2、电磁感应定律

The law of electromagnetic induction is also called Faraday's law of electromagnetic induction. The phenomenon of electromagnetic induction refers to the phenomenon of induced electromotive force due to the change of magnetic flux. For example, when a part of the conductor of a closed circuit cuts the motion of magnetic sensing line in the magnetic field, current will be generated in the conductor, and the generated current is called induced current and the generated electromotive force (voltage) is called induced electromotive force.

电磁感应定律也叫法拉第电磁感应定律，电磁感应现象是指因磁通量变化产生感应电动势的现象，例如，闭合电路的一部分导体在磁场里做切割磁感线的运动时，导体中就会产生电流，产生的电流称为感应电流，产生的电动势（电压）称为感应电动势。

But the actual situation is: because the so-called magnetic flux and magnetic inductance do not really exist, there is no magnetic field at the space position without the amount of dynamic charge, naturally there is no so-called magnetic flux or magnetic inductance. Therefore, the law of electromagnetic induction does not hold. In fact, it is the time-varying magnetic force that causes the charge in the wire to change its state of motion in a directional manner that produces what is called an induced current or induced electromotive force.

但实际情况是：由于所谓的磁通量和磁感线并不真实存在，在没有动电荷量的空间位置上并不存在磁场，自然也就不存在所谓的磁通量或磁感线。因此，电磁感应定律是不成立的。实际上，是时变的磁力使导线中的电荷定向改变运动状态才产生所谓的感应电流或感应电动势的。

3. Maxwell's equations

3、麦克斯韦方程组

Maxwell's equations are a set of partial differential equations established by British physicist James Clerk Maxwell in the 19th century to describe the relationship between electric and magnetic fields, charge density and current density. It consists of four equations: Gauss's law, which describes how electric charges produce electric fields; Gauss's law, which states that magnetic monopoles do not exist; Maxwell-Ampere's law, which describes how electric currents and time-varying electric fields produce magnetic fields; and Faraday's law of induction, which describes how time-varying magnetic fields produce electric fields.

麦克斯韦方程组，是英国物理学家詹姆斯·克拉克·麦克斯韦在19世纪建立的一组描述电

场、磁场与电荷密度、电流密度之间关系的偏微分方程。它由四个方程组成：描述电荷如何产生电场的高斯定律、论述磁单极子不存在的高斯磁定律、描述电流和时变电场怎样产生磁场的麦克斯韦-安培定律、描述时变磁场如何产生电场的法拉第感应定律。

$$\oint_l H \cdot dl = \int_s J \cdot ds + \int_s \frac{\partial D}{\partial t} \cdot ds \quad ①$$

$$\oint_l E \cdot dl = -\frac{d}{dt}\int_s B \cdot ds \quad ②$$

$$\oint_s B \cdot ds = 0 \quad ③$$

$$\oint_s D \cdot ds = \int_s \rho dv \quad ④$$

$$\nabla \times \boldsymbol{H} = \boldsymbol{J} + \frac{\partial \boldsymbol{D}}{\partial t} \quad ⑤$$

$$\nabla \times \boldsymbol{E} = -\frac{\partial \boldsymbol{B}}{\partial t} \quad ⑥$$

$$\nabla \cdot \boldsymbol{B} = 0 \quad ⑦$$

$$\nabla \cdot \boldsymbol{D} = \rho \quad ⑧$$

（公式 9）

From Maxwell's equations, it can be deduced that electromagnetic wave travels at the speed of light in vacuum, and thus the conjecture that light is electromagnetic wave. Maxwell's equations and Lorentz force equations are the basic equations of classical electromagnetism. From the relevant theories of these basic equations, modern power technology and electronic technology have been developed.

从麦克斯韦方程组，可以推论出电磁波在真空中以光速传播，并进而做出光是电磁波的猜想。麦克斯韦方程组和洛伦兹力方程是经典电磁学的基础方程。从这些基础方程的相关理论，发展出现代的电力科技与电子科技。

But the actual situation is: from the discussion on the nature of electric field and magnetic field in the previous section, we can know that the so-called electric field and magnetic field only exist in the space where electric charge exists. In the physical world, the distribution of charge is discontinuous and changes over time. Therefore, the closed line integrals of electric and magnetic fields in Maxwell's equations do not have any concrete physical meaning. At the same time, the integral results of different closed circuits cannot be constant. The divergence and curl of electric and magnetic fields in equations of differential form are also of no practical physical significance. Because E and H are discontinuous differentiable functions, there can be no divergence or curl. This fully proves that Maxwell's equations are not a description of the real existence of the objective world, and are not applicable to the objective reality.

但实际情况是：由上一节对电场和磁场本质的论述可知：由于只有存在电荷的空间位置上才存在所谓的电场和磁场。而客观世界中，电荷的分布是不连续的且随时间不断变化的。因此，麦克斯韦方程组中对电场和磁场的闭合线路积分是没有任何具体的物理意义的。同时，不同闭

合线路的积分结果也不可能恒定不变。微分形式的方程组中的电场和磁场的散度与旋度也是没有实际物理意义的。因为电场强度 E 和磁场强度 H 是不连续可导函数，也就不可能有散度和旋度。这就充分证明：麦克斯韦方程组并不是对客观世界真实存在的事实的描述，是不适用于客观实际的。

On the other hand, since electric and magnetic fields are not objective entities that can exist independently of electric charge, there is no possibility that a changing electric field can induce a magnetic field, or that a changing magnetic field can induce an electric field. Electromagnetic waves formed by the mutual excitation of changing electric and magnetic fields are naturally impossible to exist.

另一方面，由于电场和磁场并非可独立于电荷而单独存在的客观实体，因此，也就不可能有变化的电场感生磁场，变化的磁场感生电场的可能性。由变化的电场和变化的磁场相互激励而形成的电磁波也就自然不可能存在。

3.Gravitation, Coulomb force and magnetic force are the most basic factors that determine the law of motion of objective things

三、万有引力、库仑力和磁力是决定客观事物运动规律的最基本因素

I have already pointed out in the article "Holographic Physics" that except for elementary particles and inside the nucleus, the most basic factors that determine the motion of objective things are gravitation, Coulomb force and magnetic force. That is to say, all the physical phenomena and experimental results related to the motion and change of objective entities in the objective world (except elementary particles and the interior of the nucleus) can be fully explained only by using the law of gravitation, Coulomb's law and Bio-Savar's law. But the law of gravitation, Coulomb's law and Biot - Savard's law need to be corrected properly: the three forces are not transmitted at infinite speeds, and the problem caused by the finite speed of the force needs to be corrected. The transfer

velocity of gravitation needs further measurement and test. The Coulomb force and magnetic force transfer velocity is basically clear → The Coulomb force and magnetic force transfer velocity between static charges in vacuum should be the so-called speed of light in vacuum C. The Coulomb force and magnetic force transfer velocity between moving charges is directly related to the magnitude and direction of the relative motion velocity between them, and cannot be constant.

本人在《全息物理学》一文中早已指出：除基本粒子和原子核内部外，决定客观事物运动规律的最基本的因素是万有引力、库仑力和磁力。也就是说：只需用好万有引力定律、库仑定律和毕奥——沙伐尔定律就能全面解释客观世界（除基本粒子和原子核内部以外）所有与客观实体的运动与变化规律有关的物理现象与实验结果。只是需要对万有引力定律、库仑定律和毕奥——沙伐尔定律进行适当修正：三种力的传递速度并非无穷大，需要修正因力的传递速度有限带来的问题。万有引力的传递速度到底是多少还需要进一步实测与检验；库仑力和磁力的传递速度则基本上清楚→真空中静止电荷间的库仑力和磁力传递速度应该就是所谓的真空中的光速 C，运动电荷间的库仑力和磁力的传递速度与两者间的相对运动速度的大小和方向直接有关，不可能是恒定不变的。

Since objective entities are basically made up of electrons and protons that carry both charge and mass (as do neutrons), interactions between objective entities are also related to gravity, Coulomb, and magnetism: An electron is subject to the gravitational, coulomb and magnetic forces of all the other electrons and all the protons (neutron-containing electrons and protons) in the universe simultaneously. In the same way, a proton is simultaneously subjected to the gravitational, coulomb and magnetic forces of all the other protons and all the electrons in the universe (neutron-containing electrons and protons). At the same time, the electrons/protons also exert gravitational, coulomb and magnetic forces on other electrons and protons. This is the basic idea of holography expressed by me in the Physics of Holography.

由于客观实体基本上都是由同时携带电荷和质量的电子和质子构成的（中子也是），因此，客观实体间的相互作用同时与万有引力、库仑力和磁力有关：一个电子会同时受到宇宙中所有其他电子和所有质子（含中子中的电子和质子）所产生的万有引力、库仑力和磁力的作用。同

样地，一个质子也会同时受到宇宙中所有其他质子和所有电子（含中子中的电子和质子）所产生的万有引力、库仑力和磁力的作用。同时，电子/质子也会对其他电子和质子产生万有引力、库仑力和磁力的反作用。这就是本人在《全息物理学》中所表达的全息的基本思想。

Except for gravitation, Coulomb force, and magnetism, there should be no other force or factor that can change the state of motion of mass and charged matter (electrons and protons/atoms). Therefore, the so-called concepts of energy, momentum, impulse, heat, electromagnetic radiation, temperature, humidity, velocity, quantum, etc. are as completely superfluous, extrinsic, and superfluous physical concepts as electric and magnetic fields. These quantities are only descriptions of the appearance of the existence of mass and charged matter during some particular motion or interaction, and have nothing to do with the lowest and most fundamental forces, gravitation, Coulomb, and magnetism, which determine the law of motion of mass bodies.

除万有引力、库仑力和磁力外，应该没有其它可以使有质量和有电荷的物质（电子和质子/原子）改变运动状态的力或因素了。因此，所谓的能量、动量、冲量、热量、电磁辐射量、温度、湿度、速度、量子等概念与电场和磁场一样是完全多余的、节外生枝的、画蛇添足的物理概念而已。这些物理量只是对有质量和有电荷物质在某些特殊运动或相互作用期间存在的表象的描述而已，与决定有质量物体运动规律的最底层、最基本的力→万有引力、库仑力和磁力全都无关。