The meaning of an infinitely great velocity

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Abstract

An instantaneous velocity where clock at a moment only correponds to any arbitrary distance or position of space can not be indicated in axiom 1, but it indicates that there is only one dimensional existence,space or time, where a certain moment of clock only corresponds to a specific given length of space,not to any other distance.Further,each quantity of space and time correponds only to itself. Instead of Relavity, A velocity definition that consists of two dimensions representing relationship between space and time is not valid and there is only one dimensional space or time that is independent each other in axiom 1 .As an result,the principle of relativity and Principle of constant velocity of light are replaced by the principle of inertial system of axiom 1 and principle of universal invariant velocity of axiom 1. Unlike two dimensions whose magnutide is determined by the ratio,the magnutide of single dimension is determined by the unit values of one dimension,which indicates that an infinitely great velocity is meaningless,instead of ,there is only infinitely great space of one dimension and infinitely long time of one dimension. Further,The extensions of finite quantities of two inertial system in axiom 3 must only stay in the finite range,and do not reach infinite distance. If two such inertial systems are infinite versus finite,then it is known from axiom 3 that the change of direction means infinite great and this extension of infinite great can be defined to be inextensible.

Key words: infinitely great velocity, universal invariant velocity, one-dimension, the unit values of one dimension

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1 Intrduction

The relation between space and time is expressed in terms of velocity. $V = s/t$. Where v is the velocity, s is the length of space, and t is time. The two meanings in the relationship between space and time are indicated in this formula: firstly, s and t are dimensions that can be compared, and Secondly, s and t are equivalent. For example, for two velocity values of 3 m/s and 4 $m/$s, the former 1 second should be equivalent to 3 m, while the latter 1 second should be equivalent to 4 m. From axiom $1^{(1)}$, It is known that each length value is specific (since the unit value is different, each length value can only be itself), that is, the unit second of time is also specific. If 1 second is equivalent to 3 meters, then 1 second is not equivalent to 4 meters, so the definition of velocity is meaningless in axiom 1. Another example is that 1 second is a finite number in axiom 1, so an infinite velocity (infinite number per second) is not valid in axiom 1, because 1 second can be not equivalent to an infinite length. Therefore, in axiom 1, since the condition of the two-layer meaning of formula $v = s/t$ cannot be satisfied simultaneously (that is, the size can be compared, and the equivalence can be held simultaneously), the definition of velocity consisting of two dimensions representing the relationship between space and time cannot be established.

If the two-dimensional property of the permissible velocity is true, the following conditions must be met according to Figure 1. As can be seen from Fig 1, the properties that can be compared are eliminated. In the velocity composed of two dimensions, time and space are reduced to dimensions that cannot be compared, that is, the finite and infinite quantities cannot be distinguished , nor sizes can be compared with each other. For example, 1 meter or 1 second in the common sense can represent any quantity. For the convenience of the following description, this concept is defined as two-dimensions-without-size -axiom 1. two-dimensions-without-size -axiom 1 is a paradox and it is meaningless, so the conclusion is drawn that in axiom 1, only one dimension exists, space and time are independent of each other, and have no relation to each other. Now let's look at some of its basic properties.

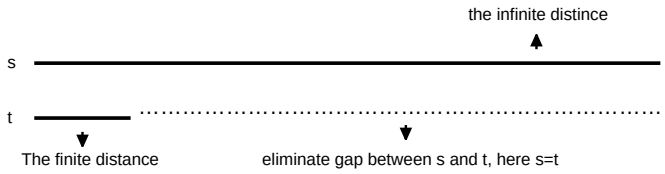

Figure 1. The property of being able to compare sizes is eliminated and space and time turn into the dimension that can not compare in sizes in a velocity consisted of two dimensions.Further,,the finite quantities and the infinite quantities can not be differentiated and sizes can not compared each other .This property ia achieved by s=t.s ,here s is space and t is time. For the convenience of the following description,,I defines this concept as two-dimensions-without-size -axiom 1 .

Property 1 There is only one dimension, space or time, independent of each other. For example, for an event moving at an infinite distance of 1 second, time 1 second is a finite quantity, and space at an infinite distance is an infinite quantity. The two quantities are neither equivalent nor dependent of each other. In any other velocity-describing event, the magnitude of space or time is neither equivalent (except for each magnitude itself) nor correlated.

Property 2 There is no instantaneous velocity at infinity. Instantaneous velocity is defined as moving to any point of length in space without time, that is, 0 point correponds to any point of length in space, and so on, moment 1 second correponds to any point of length in space, a certain distance in space (for example, 1 meter) correponds to any point in time, and so on. In axiom 1, the absence of instantaneous velocity has two meanings. First, as mentioned earlier, a single dimension means that there is no velocity of two dimensions that can be compared. Second, the independent existence of space and time does not mean that a certain moment of the clock only correponds to any distance or position in space, but means that there is only one

dimension, space or time. Each value of space corresponds only to itself, not to other quantities, and each value of time corresponds only to itself, not to other quantities, and space or time are independent of each other and have no relation. For example, 0 points only correspond to 0 points and does not correspond to other quantities (such as infinite), 1 meter only corresponds to 1 meter and does not correspond to other quantities. Different from the concept of simultaneity or non simultaneity in relativity, this independence is given a new definition. Further, the independence of relationship of space and time can aslo illustrated as follows: If we talk about space, it makes no sense for us to talk about time, and if we talk about time, it makes no sense for us to talk about space. For a given interval of time, it doesn't correspond to any length of space, and for a given distance of space, it doesn't correspond to any interval of time. Thus it can be said that for two different locations in space, whether they are simultaneity or non simultaneity in time is of no significance, and vice versa, for two different intervals in time, whether they are the same or different locations in space is aslo of no significance.

The absence of instantaneous velocity does not mean that infinite space and infinite time do not exist, but the latter two exist independently and are not related. The absence of instantaneous velocity does not mean that an infinite velocity does not exist, nor does it mean that there is only a finite velocity, such as the velocity of light. Because in axiom 1, the velocity of light is only a finite speed (300,000 kilometers and 1 second are both finite), it is neither an infinite velocity nor an limit velocity. In axiom 1 ,the single dimension defines that each value corresponds to itself, did not correspond to the amount of other, explaining why clock at some point in the theory of relativity only correponds to a certain space with equal distance or the position itself, does not correspond to the concept of the distance or position of the others.However,different from the description of the theory of relativity, the single dimension do not deny that a infinite value exists, there is no so-called concept of time shortening or space lengthening, The detailed of this content will be described in the later paragraph.

2 Principle of relativity and principle of constant velocity of light

Now some concrete meanings of single dimensional properties of axiom 1 are described. By comparing the understanding of time and space in common sense , the understanding of the properties of a single dimension becomes clearer.

Principle of relativity Now the concepts of inertial frames and relativity principles is discussed. These concepts apply to Axiom 2. In common sense if K is defined as a Cartesian frame of reference system(inertial frame), then another Cartesian frame of reference K', which is moving uniformly in a straight line with respect to K, is also an inertial system. There are three meanings here: Firstly, for any one coordinate system K' , all space-time quantities (or called spatio-temporal variables)can be expressed in this coordinate system, and all quantities are static relative to K'. For example, two velocity event $\boldsymbol{s=ct}$ or $\boldsymbol{s=vt}$,, both of which can be expressed in K' ,where c is the velocity of light, v is any velocity. If K and K' without comparison, then the principle that the spatio-temporal variables at rest with relative K cannot distinguish the motion state from the spatio-temporal variables at rest with relative K'. This is called relativity principle. Secondly, the coordinate system itself and the quantity expressed in the coordinate system can be described by different quantitative terms respectively, such as K' moving with the velocity v_1 , The any number of values different from v_1 can be described in the *x,y,* and z axes of the coordinate system , such as $s_1=ct_1$,or $s_2=v_2t_2$,where c is the velocity of light and is any velocity. Thirdly, in a static coordinate system K with a velocity of 0, the velocity at all points is 0. In a coordinate system K' with a uniform velocity of v; , the velocity at all points is v. The difference between K'and K is a quantitative difference, that is, the difference between v and 0.

Principle of constant velocity of light It has been proved by Michelson's experiment that the speed of light remains constant in cartesian coordinates with uniform linear motion at any velocity. A moment of a clock corresponds only to a certain distance or position in space equal to itself, and does not correspond

to any others of distance or position. For example, one second only corresponds to 300,000 kilometers (one second is equivalent to 300,000 kilometers) and does not correspond to other distances.

Now the meanings of transformation of cartesian coordinates based on these two principles are discussed as follows.

In the cartesian coordinate system that allows instantaneous velocity,the relative velocity are meaningful,which indicates that the quantity of velocity in a given cartesian coordinate will vary in the cartesian coordinates with different velocity,that is, the quantities of some given velocity depend on motion velocity of cartesian coordinates.Since a certain moment of the clock corresponds to an arbitrary distance in space ,and a certain distance in space corresponds to an arbitrary time of the clock,the coordinate transformation between the two cartesian coordinate systems K' and K is arbitrary.The essence for this concept is two-dimensions-without-size -axiom 1.

In the cartesian coordinate system with constant velocity of light , the velocity of light is used as the basis for defining space and time(namely light time and light space).An optical space coordinate $\boldsymbol{X1}$ given in frame K (stationary coordinate with velocity 0), and the corresponding optical space coordinate in frame K'(coordinate system with velocity v) is ,

$$\boldsymbol{X'_1 = 1/(1-v/c)X_1 \, (X'_1 > X_1)}$$

Unlike the relativistic principle,which describes the coordinates of K' and K as identical, Here the coordinates of K' and K are different due to the fact that the only all quantities within K'frame are stationary with respect to K' frame, but all the quantities within K frame are not stationary with respect to K' frame.

The formula $\boldsymbol{X'_1 = X_1 - ct}$ can not be established for coordinate comparison between two frame K' and K because a relative velocity is non-existence in Relativity ,namely the minus sign '-' in formula is non-existence.

It is known from that the same proportional extension of K' and K coordinates of the two coordinate systems is carried out in the way of,

$\boldsymbol{X'_1 : 1/(1-v/c)X_1}$,

here $\boldsymbol{X'_1 = 1/(1-v/c)X_1}$,

the purpose of this formula is to facilitate the comparison of the corrdinate transformation of the two coordinate systems, so that the two corrdinates are compared at the same length value and scale value of time.

Accord to , $\boldsymbol{X'_1 = 1/\{1-(v/c)^2\}^{1/2}(X_1 - ct)}^{(2)}$

in lorentz transformation is meaningless,instead of, $\boldsymbol{X'_1}$ are given in the formula of

$$\boldsymbol{X'_1 = 1/(1-v/c)X_1}.$$

So the notion that K' frame and K frame coincide at the origin 0 is meaningless and K' frame does not start at origin 0.

From , Since K' and K coordinates are different, the two lorentz transformation formula

$$\boldsymbol{X'_1 = 1/\{1-(v/c)^2\}^{1/2}(X_1 - ct)}$$

and $\boldsymbol{X'_1 = 1/\{1-(v/c)^2\}^{1/2}(X_1 - ct')}$

is not valid,and they are replaced by the two formula

$\boldsymbol{X'_1 = ct'_1}$ and $\boldsymbol{X_1 = ct_1}$

Here $\boldsymbol{X'_1 = 1/(1-v/c)\ X_1, t'_1 = 1/(1-v/c)t_1}$.

The main characteristic of the last two formulas that differs from the lorentz transformation are that their coordinates are given in $\boldsymbol{X'_2 - X'_1 > X_2 - X_1}$. Seeing figure 2.

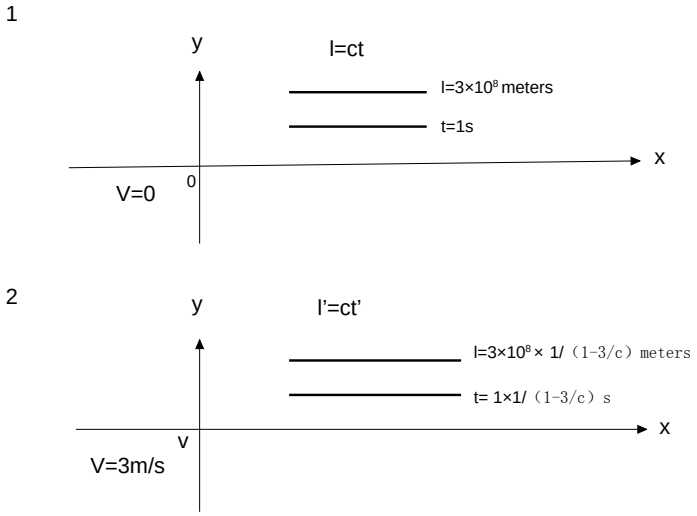

Figure 2 (1) In a stationary cartesian coordinate,3×10^8 meters is equivalent to 1s,Time beat is given in 1s (= 3×108 meters). (2) In cartesian coordinate with a velocity of 3 m/s , 3×10^8 × 1/(1-3/c)meters is equivalent to 1x1/(1-3/c)s ,Time beat is given in 1/(1-3/c) s (= 3x10^8 x1/(1-3/c) meters). It is concluded in Relativity that a velocity of 3 m/s will be given in a form of3 x10^8x1/(1-3/c) meters / 1x1/(1-3/c)s .

3 The principle of inertial system and principle of universal invariant velocity of axiom 1

The principle of inertial system of axiom 1 It is known from axiom1 that the above is not true.Seeing Figure 3. In axiom 1, each inertial system is described by a unit value, such as 2,3,4, etc. Now let's look at the properties of proportional extension of two inertial frames. For example, two inertial frames 2 () 1 are compared, and the next extension ratio is 4 (), 2, 6 (), 3,8 (), 4, etc. In this comparison of inertial frames, we also consider the unit extension of 4 () 2 to the same ratio, the next extension ratio is 8 () 4, the next extension ratio is 12 () 6, and so on; Consider comparing 8 () 4 to the same scale unit extension, the next 16 () 8, the next 24 () 16, and so on. Although the ratio is 2/1, the two units extend differently and cannot replace or offset each other because of the different units (the former is in units of 4 and the latter is in units of 8), that is, relative velocity is meaningless in axiom 1,which means that a given quantity, as distinct from the other units of quantity, can only be itself and not any other quantity, that this particular quantity represents only one state, not any other state, and therefore the Cartesian coordinate system does not apply in axiom 1, and the properties of the inertial system of the relativity need to be revised.

Firstly, in the principle of inertial system of axiom 1, an inertial system is a specific quantity and only represents a state, so the motion state of all different quantities is absolute, and the comparison of the motion state of two quantities is also absolute.

Secondly,The absoluteness of the above motion negates the relativity principle of relativity theory. Thus it can be said that in axiom 1 inertial system principle, the concept of stationary is also meaningless. In the principle of relativity, if K is a stationary cartesian inertial system (coordinate all space and time variables

are statiionary relative to K), K'is relative to K with velocity v movement Cartesian inertial system, so in axiom 1 inertial system principle, it is meaningless to talk about all space-time variables at stationary relative to K', and K does not exist as an inertial system at stationary . It can thus be said that the Cartesian coordinate system cannot describe the distribution of the quantities in space and time, and that the all-embracing variables in space and time that stand stationary relative to a coordinate system do not exist.

Thirdly, unlike the coordinate system, which must be described in two different terms (as mentioned above), the inertial system in axiom 1 only has a quantitative term description(or, such as the inertial system whose space units are 1, 4, 8, or N, etc. (all are multiples of 0). An inertial frame represents only a specific quantity, that is, only a state.

Fourthly, what is more,, Considering the comparsion of two inertial system in axiom1,such as 4()1 proportionate extension,inertial system 4 extends in units of 4, inertial system 1 extends in units of 1 .The extension of two inertial systems is an infinite number of difference comparsions except that the relation of extension of 4:1 is fixed. For example, the extension of inertial system 4 is 4,8,12,16,and so on(infinitely many different quatities), the extension of inertial system 1 is 1,2,3,4,and so on(infinitely many different quatities),So the difference between the two inertial systems is not a difference of one quantity,but an infinite number of quantities.

The Cartesian coordinate system which thus describes the difference of a quantity does not apply to describe infinitely many differences. In addition, in The Cartesian coordinate system, the characteristic that all points in the inertial frame of velocity v are velocity v is meaningless, because in axiom 1, the point 0 only represents the point 0 and cannot be endowed with other concepts, such as point 0 is moving with a velocity tha is the two-dimension.

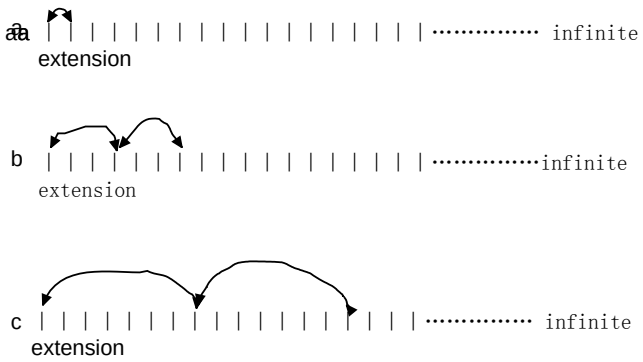

Figure 3 In axiom 1 each inertial frame can be described by an unit quantities,such as 1,2, 4,and so on . Although the ratio is 2/1,but because the units is different(b is in 4 units, and c is in 8 units),so the two proportional extension of units is different,and can not replace or offset each other .

Principle of universal invariant velocity of axiom 1 In axiom 1,each quantity is specific quantity,that is , it is itself, rather than any other quantities. Thus we reasonably conclude that,in axiom 1,any velocity is itself, not any other velocity(where the essence of concept of velocity is single dimensional space or time).That is,each velocity is constant relative to the other velocities, not just velocity of light. This property is defined as the principle of universal velocity invariance of axiom 1.

4 The velocity is one-dimension

Now let's see how clear up some of the common sense misconceptions about velocity is cleared up by these two principles.

The velocity is two dimensional, there is an instantaneous velocity going to the infinite distance. Here space and time are independent of each other, that is, a certain moment of the clock corresponds to any distance or position in space. For example, 1 second corresponds to any length, which is the so-called Newtonian absolute space-time view. Since a moment in a clock corresponds to any distance or position in space, this means that speed is variable, that is, we are talking about how much one speed depends on how much it corresponds to other speeds, that is, speeds can be added up or reduced. The concept of a specific velocity does not exist here. The single dimensional properties and universal velocity invariant properties of axiom 1 deny the correctness of this concept. This property is essentially two-dimensions-without-size -axiom 1 that means that a Galilean transformation is meaningless.

The velocity is two dimensional, there is no instantaneous velocity extending to infinity, the velocity can be compared in sizes and thevelocity of light is a finite magnitude of the velocity and is aslo a limit velocity. Here the principle of relativity applies. Because the invariable of the velocity of light (it remains constant in cartesian coordinates at any velocity) has been experimentally confirmed , the velocity of light has a privileged position as the basis for defining space and time (light time and light space), which is known as relativistic space-time. Here, one second of the clock corresponds to a space length of only 300,000 km (one second is equivalent to 300,000 km), two seconds to 600,000 km (two seconds is equivalent to 600,000 km), and so on. One second does not correspond to other distances, such as three metres. So the notion of a velocity of three metres per second (one second is equivalent to three metres) makes no sense in relativity. Speed events of 3 m/s are so given in light time and in light space, as shown in Figure 3. As a result, the space-time properties of two inertial systems K 'and K (for example, the inertial system with a velocity of 3 m/s is compared with the inertial system with a velocity of 0) have the following characteristics. From the observation of K', the time of K is prolonged and the space is shortened. As observed from K, the time of K 'is shortened and the space is elongated, as shown in Figure 4. The single dimensional nature of axiom 1 and the infinity of space-time deny the correctness of this concept.

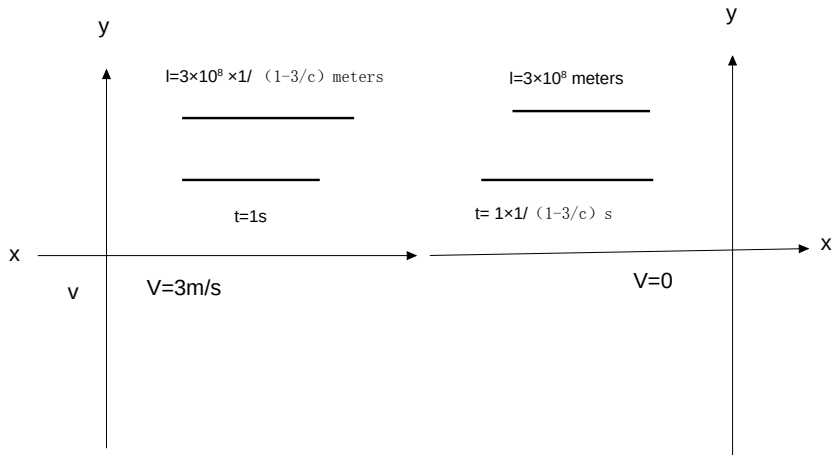

Figure 4 The space-time properties of comparson of the two inertial systems K' and K .For example ,When the inertial system K' with a velocity of 3 m/s is compared with the inertial system K'with a velocity of 0 , the following characteristics is shown: Observed from K', the time of K is lengthened and space is shortened, Observed from K, the time of K' is shortened and space is elongated .

The velocity is two dimensional, there is an infinite velocity, but not instantaneous velocity. The inertial system principle and universal velocity invariant principle follow axiom 1, and do not follow the relativity principle, that is, a certain moment of the clock only corresponds to a specific distance in space, and does not correspond to other distances. For example, the infinite time only corresponds to the infinite distance, not to the finite distance (such as a distance of 1 meter), and the finite clock scale only corresponds to the finite distance, not to the infinite distance. Being different from ,Here the velocity of light is not the only basis for defining space and time, allowing for the existence of arbitrary values of velocity. The two implications are included for this arbitrary velocity, Firstly, it is meaningful that the space-time is not equivalent. For example, although one second is equivalent to 300,000 kilometers, it is not equivalent to 3 meters in 3 meters per second, but the velocity value of 3 meters per second is meaningful. Secondly, the magnitude of the velocity can be compared. For example, the velocity of light has the same quantitative value as the unit of time of 3 m/s. The stationary state of it, unlike cartesian coordinates of relativity, should be given as 0/[?]. The single dimensional nature of axiom 1 denies the correctness of this concept. (2)and of the essence are still axiom 2.

There is only one dimensional space or time, and there is no concept of velocity, regardless of whether it is infinite or finite. Space and time are independent of each other here, that is, a certain moment of the clock only corresponds to the moment itself, not to other moments, let alone corresponds to any distance or position in space; A certain distance in space corresponds only to its own distance, not to any other distance in space, let alone any time in a clock. Therefore, the inertial system principle of axiom 1 and the universal velocity invariant principle are followed here. Here velocity has become a single dimensional space or time and it is only talked about the finite and infinite of space, and the finite and infinite of time. If the concept

of velocity are being talked about, two values (distance in space and time in time) are neither equivalent nor dependent of each other. The essence of (4) is axiom 1 and $3^{(3)}$.

5 The meanings of one-dimension velocity

By comparing (3) and (4), we can see some of their specific features. Let's look at the feature 3, the velocity is determined by the ratio of the two dimensions. There is an infinite velocity, and we'll call it infinity /dl, infinity means infinite, and dl means infinitely small. The state of velocity zero is denoted by dl/[?], and

There is an infinite great velocity ,expressed by [?]/dl, here [?] is infinite great and dl is infiniesimal small.The state of zero velocity is denoted by dl/[?], note that dl does not equal zero here (by the nature of axiom 2). (3) follows the inertial system principle of axiom 1 and the universal velocity invariant principle, does not follow the relativity principle, so the Cartesian coordinate system does not apply to (3), for example, a velocity of 0 (static) Cartesian coordinate system does not exist. Motion is absolute and there is no static state, so a comparison of two inertial frames is a comparison of specific two states. For example, let the inertial system K 'be the infinite velocity and the inertial system K velocity be 0. See Fig.5. for comparison of the two inertial systems. Their spatiotemporal properties are determined by two points (a and b). When observed from K ', K's time lengthens and space shortens. From the point of view of K, the time of K prime is shortened and the space is lengthened. Because Cartesian coordinates do not apply to(3), so the Lorentz transformation does not make sense here. The transformation of the magnitude of spacetime is a universal transformation, which is determined by the magnitude of any a and b.

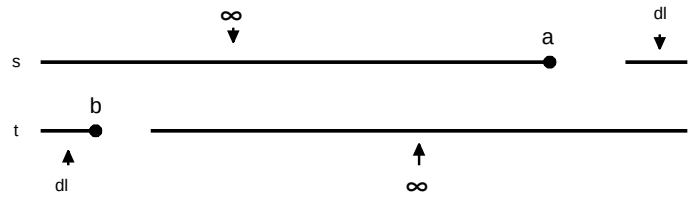

Figure 5 The comparison between two inertial systems in . For example,The inertial system K'is the infinite great velocity,and inertial system K is zero velocity(stationary state),then their space-time properties are determined by two points (a point and b point). Observed from K',the time of K is lengthened([**?**]) and space is shortened,(dl), While observed from K,the time of K' is shortened (dl)and space is elongated([**?**]).

Now let's consider the following: (4). The single dimensional nature determines its spacetime nature by one point, not two points (A and B). So instead of two dimensions being determined by the ratio, the size of a single dimension is determined by a one-dimensional unit value (which varies by unit number). Therefore, it is meaningless to lengthen or shorten the spacetime of two inertial systems under two dimensional state.

.Now let's see how the extension of velocity representing two dimensions differs from the extension of space or time representing one dimension. It is suggested in axiom 2 that the space-time extension of a velocity can reach infinite distance,the ratio of the velocity is arbitrary ,either finite or infinite.As shown in Figure 6.As the comparison of two cartesian inertial systems moving at different velocity,their space-time extension can aslo reach infinite distance. In axiom 1, quantitative values extend in units of 0 points (1 0, 2 0, 3 0, and so on). The extension of two different values (two inertial frames) is carried out by an arbitrary integer () 1, which an arbitrary integer is an integer multiple of 0 and it is carried out in units. The minimum magnitude value is one 0 . Unlike in , where there is an inertial system with an infinite approach velocity of 0 (dl/[?]), the nearest 0 inertial system in axiom 1 is two 0 inertial systems. In axiom 1, the uniqueness of infinity determined that the formula 1/0=[?]/1=[?] is not true, only the formula that infinity /0=[?] is true, so the formula that 300,000 km /0=[?]/ 300,000 km =[?] is not true. For each finite length (for example, 1 meter) there is a finite, not an infinite , so 300,000 kilometers is not enough to carry an infinite amount of burden. Therefore, the velocity of light is not an ultimate velocity, and putting the velocity of light into a special superior position lacks any profound basis of physics.

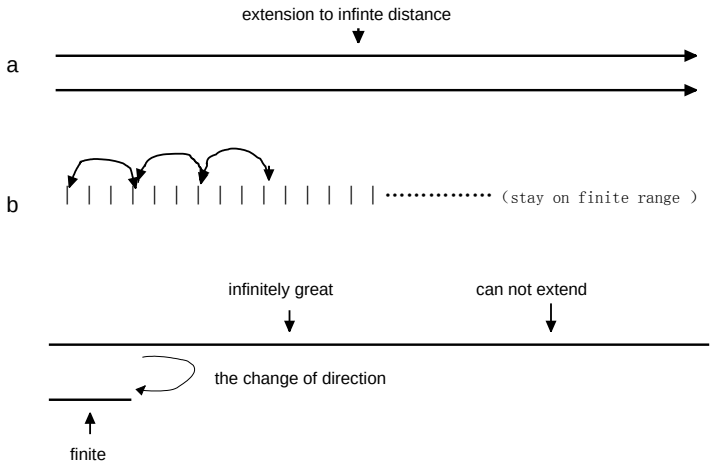

Figure 6 (a) It is suggested in axiom 2 that the space-time extension of a velocity can reach infinite distance ,the ratio of the velocity is arbitrary ,either finite or infinite. (b) It is known from axiom 3 that if two inertial system are finite quantities comparisons, then the extensions of quantities of two such inertial system must only stay in the finite range, and do not reach infinite distance .(c) If two inertial systems are infinite versus finite, then it is known from axiom 3 that the change of direction means infinite great and the finte is not parts of infinite great , so this extension of infinite great is defined to be inextensible .

Since axiom 3 is a modification of axiom 1 (that is, axiom 3 retains some of the properties of axiom 1), if two inertial systems are a comparison of finite values, then two such inertial systems extend only in a finite

range and cannot extend to infinity (derived from axiom 3).If the two inertial system is unlimited (infinite) compared with limited amount of, so learn from axiom 3, that the direction of change means infinite great and the finte is not parts of infinite great,is infinite, then for infinite has two meanings:Firstly, it is the largest unit (with infinite great unit), there is no bigger than it nor its smaller amount, and therefore this extension of infinite great is defined as inextensible , See Figure 6. Secondly, the change of direction means that it cannot be added, subtracted, multiplied or divided, and that it is not a finite component, so it does not vary with the corresponding value of a finite number. Therefore, the Lorentz transformation in the two inertial systems of relativity and the modified Lorentz transformation (corresponding changes in time and space length), or other magnitude and value transformations (which apply to axioms 1 and 2), are meaningless in axiom 3. Instead of the spatio-temporal coordinate transformation or numerical transformation of the two inertial systems defined in Axiom 1 and 2(only in a motion of the uniform linear velocity), the spatio-temporal transformation of the two different inertial systems in Axiom 3 only changes in one direction, which is the unique quantity-value transformation and represents all quantity-value transformations(not only in a motion of the uniform linear velocity).

6 Conclusions

The existence of axiom1 and axiom3 have indicated that there are only a finite number quantities to choose from 0 to 1 second or from 0 to 300,000 kilometers ,and there must are only a infinite number quantities to choose from 0 to [?] (units of second or kilometers). .Furhter,it is known that from axim1 that a velocity definition in Relavity that consists of two dimensions representing relationship between space and time is not valid and there is only one dimensional space or time that is independent each other in axiom 1 .As an result,the principle of relativity and Principle of constant velocity of light are substituted by the principle of inertial system of axiom 1 and principle of universal invariant velocity of axiom 1. Unlike two dimensions whose magnutides of space and time is determined by the ratio between the two,the magnutides of single dimension is determined by the unit values of one dimension,which indicates that any velocity (including infinitely great velocity)is meaningless,instead of ,there is only infinitely great space of one dimension and infinitely long time of one dimension.For instance, As for the velocity event moving to infinite disance in 1 second, it can be seen from the above definition that 1 second is not equivalent to infinite distance, that is, the concept of a single event of infinite speed associated with time and space is meaningless, instead of , 1 second and infinity exist independently, they are two events ,an event of infinitely great space of one dimension and another event of 1 second long time of one dimension. What is more,since axiom 3 is a modification of axiom 1, there are some new properties for axiom 3 in spite of retaining some properties of axiom 1. Unlike axiom 1in which the transition from finite to infinite is a continuous change process, In axiom 3, the transition from finite to infinite goes through a leap process, Therefore, If the extensions executing in the range of finite quantities for two inertial system in axiom 3 ,they must only stay in the finite range,and do not reach infinite distance. If two such inertial systems are infinite versus finite,then it is known from axiom 3 that the change of direction means infinite great and this extension of infinite great can be defined to be inextensible.

Above we are talking about the concept of inertial system in Axiom 1 (i.e. uniform linear motion), so the reader may ask, how does axiom 1 define the concept of non-inertial system (acceleration or curved motion)? Since two dimensions do not exist in Axiom 1, so do many dimensions, how does a single dimension define a non-inertial system (acceleration)? I will focus on and discuss this issue in detail in my next paper.

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The [DATA TYPE] data used to support the findings of this study are included within the article.

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