

APPENDIX #6A
TO THE PROPAEDEUTICS FOR
“PHILOSOPHY OF PURE REASON
SUB SPECIA AETERNITATIS.”

TO PHYSICISTS,
BEWARE OF
METAPHYSICISTS, BEARING
GIFTS.

Preface.

Of the things which may be brought within the sphere of the doubtful.

It is now some years since I detected how many were the false beliefs that I had from my earliest youth admitted as true, and how doubtful everything was which I had since constructed on this basis; and from that time I was convinced that I must once and for all seriously undertake to rid myself of all the opinions which I had formerly accepted, and commence to build anew from the foundation, if I wanted to establish any firm and permanent structure in the sciences. But as this endeavor is a very uncommon one, I waited until I had attained an age so mature that I could not hope that at any later date I should be better fitted to execute my design¹.

This appendix is a counterrevolutionary attempt to get out of the difficulties which were created by the 'revolutionary' theory of Galileo and Copernicus, who proposed the heliocentric model of the world. I take the risk of applying the central model² of the universe to all parts of substance, where this center is the center of an *orisphere* of any Given part of substance, all of which can be viewed as a celestial body.

Simultaneously, I will try to offer the metaphysical analysis of quantities in the place of common physical methods, which replacement, of course, does not mean that either the qualitative or quantitative method may be used independently!

Besides that, the cause for this Appendix was an abusive letter, which I received not long ago. This letter treated all my best intentions with indignity. I did not expect such a... reaction from physicists. I reproduce the text of this shocking letter here:

**International Journal of Theoretical Physics
Georgia Institute of Technology
Atlanta, Georgia**

MANUSCRIPT DECLINED

We are sorry to say that after a careful review of your manuscript we find that our current publication program is not suited for it. We thank you for letting us consider your paper for publication in JTP.

We hope that you will not be discouraged by this decision. While physics is an exact science, physics publishing is not. Often

¹ BIB:(3.76)

² I mean the egocentric model of this world because there is no unconscious substance -- any part of substance **is** and **can be** chosen as **the** center of this universe So, the solipsistical model of the universe which is presented by Laconical Cynicism is established on the assertion that anyone's aim of evolution is solipsism -- unconsciousness.

a paper declined by one journal is published by another with different requirement. We wish you success in locating an appropriate medium for your research.

Due to our limited resources we cannot provide you with a review of the paper. We will keep your manuscript on file for your convenience for at least four years unless you request us to return it.

Is physics an "exact" science? How can physicists, by the *Cynic*, the god of the Egyptians, write this to me, to a man, who is a Cynical metaphysician? Would physicists tell me what does "keep your manuscript for at least four years" mean exactly? How do physicists propose to measure four years precisely? How can they accurately define this interval of time? Does time exist independently from an observer? May one observer have a different measure of time than another? How can two observers reach an agreement on what four years means? Do physicists have a universal unit of calculation for time which does not depend on any object of this universe³? Is time a mere appearance of Reality? Do physicists realize that the objection admits that we know what Reality *does*, but it refuses to allow us any understanding of what Reality *is*⁴? Next, does SOMETHING unlimited exist? May one think that SOMETHING is always limited? And what follows from this assumption? Was the physicists' letter written with letters of black color on white paper? Does white oppose to black color? What does follow from the existence of opposites? Does physicists consider the existence of opposites significant to their projects? How do physicists suppose they can deal with opposites? Can 'exact' physicists answer all these questions? And, finally, do physicists realize that when Cynics are injured, they become worse with respect to the virtue of Cynics⁵?! My reaction, as that of a fighting Laconical Cynic, must be quick and extremely offensive, or I am not a Cynic anymore!

Physicists stand between me, a Cynical metaphysician made brutal by them, and the sun of pure knowledge which is deadly beautiful in its absoluteness!

1

"Physics, beware of metaphysics!"

I. Newton, Mathematical Principles of Natural Science, Book III, General Theory

Exercise No.1 for a boy. If Newton really had seen farther than others because he stood on the shoulders of giants, how far can one, who stands on Newton's shoulders, see?

³ "We have not a direct intuition of the equality of two intervals of time. The person who believe they possess this intuition are dupes of an illusion." BIB:(20.01),[p.92;p.224]

⁴ BIB:(3.55),[p.122]

⁵ BIB:(19.52),[22a];(19.53)[335c]

The answer is: one must see much, much farther...

I -- an innocent victim of the physicists' aggression (see the letter above) -- must defend myself and, therefore, the conflict that had been initiated by physicists, must achieve its unavoidable logical end -- the triumph of Cynicism because for the end should not be just any last thing, but the best⁶ -- in this manner: I have to take as my hypothesis in each case the theory that seemed to me the most appropriate and which I would consider as true, to concern cause and everything else, whatever agreed with this, and as equally true whatever did not so agree⁷; all that does and does not agree with the theory of Cynicism I ought to make **NOTHING** or **SOMETHING**. Next, this is my plan: **NOTHING** happens in nature which can be connected with a defect(perfection and imperfection) of it: for nature is always the same and one everywhere, and its ability and power of acting, that is, the laws and rules of nature according to which all things begin to exist and to change themselves and others from one form into another, are everywhere and always the same, and therefore one and the same manner of understanding the nature of all things must exist, that is, by means of the universal Law of nature⁸. Also, insofar as what I see in parts I may imply in the Whole and inasmuch as this is the method of reasoning on which⁹ I have built my theory¹⁰, I must, among others, view the question about the meaning of the term "point" -- indeed, is this universe, as the Whole, the totality of "points"¹¹? Which objects can interact by the rules which Sir Isaac Newton offered? Points? Celestial bodies? Accumulation points?

⁶ BIB:(1.10),[194^α,30]

⁷ BIB:(19.50),[100a]

⁸ BIB:(22.55),[p.84]

⁹ BIB:(11.00),[p.42] "When two species of objects have always been observed to be conjoined together, I can infer, by custom, the existence of one wherever I see the existence of the other; and this I call an argument from experience." BIB:(11),[p.23]

¹⁰ I must say here that it seems like Laconical Cynicism follows Hume and opposes Spinoza who inferred in a part what one saw in the Whole. For instance, Cynicism can say that '**NOTHING** exists from whose nature some effect does (not) follow' even if this assertion looks like an unfounded "words game" with Spinoza's Proposition 36, Part I. BIB:(22.55),[p.29]. Nonetheless, Laconical Cynicism (even if it uses the same Spinozistical conception of the Whole) produces results essentially different from Spinoza's! So, Cynicism implies to the Whole what one observes in a part because of the *Law of excluded middle*: if a part has a defect it means that the Whole should not have it -- *the Whole must either become a part or be the Whole!*

¹¹ "...I would still agree with its negative part -- i.e. with the doctrine that facts in general independent from experience." BIB:(22.04),[p.54]

First of all, the existence of a point -- SOMETHING -- supposes the existence of NOTHING¹². The question arises: how can somebody separate one point from another? Where does SOMETHING finish? Does SOMETHING have a form? Where does NOTHING begin?

It may be informative, before I go on, to regard these questions from the side of the assumption that this Universe is the Whole - Substance; all objects and subjects of this universe are parts of the Whole. Let me, for the sake of argument, assume that these parts can be known only as not isolated from others, due to the fact that they are continuously interacting. Next, I think that if some of them are not interacting at this particular moment of time, they are non-existing things: they are SOMETHING in NON-EXISTENCE -- NOTHING. It means, that a vacuum, which is not NON-EXISTENCE, does not cut the chain of interaction between parts of the Whole¹³. No parts of substance change into the space of this universe, but space of a thing changes because this thing does¹⁴: space exist only for and within particles. This assumption gives me strength to insist that vacuum is neither space nor NOTHING nor SOMETHING¹⁵! May I call it NOWHERE¹⁶? If I may, the next question

¹² The One must be always divided into mutually exclusive opposites if SOMETHING exists.

¹³ For that reason, "it remains, then, that I and it, whether we are or whether we become, are or become for each other. For our being is... tied to a partner; yet we are tied neither to any other thing in the world nor to our respective selves. It remains, then, that we are tied to each other. Hence, whether you apply the term 'being' to a thing or the term 'becoming', you must always use the words 'for somebody' or of 'something' or 'relatively to something'. You must not speak of anything as in itself either being or becoming, nor let anyone else use such expressions." (BIB:(19.54),[160b-c])

¹⁴ In order to make this concept, in the Cynical sense, quite unambiguous, it should be brought to the proposition that space is nothing but a relation of spaces. BIB:(3.55),[p.31]

¹⁵ It must be said that the result of one's becoming NOTHING is not *empty, abstract nothing*, "...but the negation of certain *determinations*, which are contained in the result precisely because it is not an *immediate nothing*, but a result." This result "...is not simple, formal unity, but a unity of distinct determinations." BIB:(8.10),[p.131]

¹⁶ Since nature abhors a vacuum, and all parts must so concur as to prevent the formation of a vacuum, it follows that the parts of substance cannot be distinguished one from the other; that is, substance cannot be divided on parts which are stable and have an edge. BIB:(22.55),[p.14] Here, by a thing Cynicism understands a piece of substance which has Moduses of Inertia (BIB:(22.55),[p.37,Def.I]) and that which is common to all, and that which is equally in a part and in the Whole, is constituted by the essence of all particulars -- their virtue of concurrence. BIB:(22.55),[p.65,Prop.37] Therefore, the idea of vacuum exists

follows: Is time¹⁷ but not eternity the attribute of Substance? Or perhaps, the better way is to say that it is an appearance of the only attribute of substance - Existence, where NOWHERE is the other appearance! It seems that the last alternative can be recognized as an appropriate one. Indeed, the last conjecture transfers the meaning of the term 'vacuum' to the category of indisputable terms, like Existence; it is the characteristic of continuity of Existence into time and... And where¹⁸?!

only insofar as one tries to measure a 'distance between' two parts of the only Reality but not these particles' Meanings of Inertia.

¹⁷ "Time, like space, has most evidently proved not to be real, but to be a contradictory appearance." BIB:(3.55),[p.36]

¹⁸ For my present purpose it is, I think, sufficient if I make clear that I can neither say 'there is a vacuum' nor 'there is not a vacuum' one thought apart from another with the same certainty inasmuch as I am not allowed by the theory of Laconical Cynicism to say 'there is no time' or 'there is time'. Neither Russian nor English can satisfy my needs to express the fact that continuity in infinity of interaction exists in 'conventional' terms: Nonpredicative definition of Laconical Cynicism is of and for paradoxes, but the aim of any language's definition is to avoid paradoxes by virtue of using the proper names for things and verbs(adjectives, participles, gerunds), which parts of language are to describe the qualitative changes(appearances) of these things. Any language puts Absolute into words but does not expresses the NON-EXISTENCE of Reality(a language begins to exist if Absolute does but Laconical Cynicism tries to consider *the* Reality which does not exist(act) by itself). The method recognizes that a definition is correct only if it does not have anything to say and does not cause an action at all -- is NOTHING -- does not exist: for example, 'the wolves are sated and the sheep intact' -- wolves do not interact with sheep properly. Also, I can say: "There is no God and there is God" and this statement is absolutely correct from the Cynical point of view: I said NOTHING because a proposition which is separated from others(another) that oppose(s) to it, does(do) exist -- all propositions are to be connected into Nonpredicative definition(which is *the* only statement) and no one proposition can be examined without consideration of all others(another)("For to say that "God exists" is to make a metaphysical utterance which cannot be either true or false." But, according to Cynicism, the sentence which purports to describe the nature of the transcendent God can posses the literal significance -- God is NOTHING!!! BIB:(1.67),[p.115]). Naturally, God exists as NOTHING and NOTHING does not interact -- does not exist! Therefore, "the limits of my language mean the limits of my world"(BIB:(24.15),[5.62]) because if everything is put in definition -- Pure Knowledge is achieved -- if there are words it means that SOMETHING is becoming: "1.In the beginning was the Word, and the World was with Word, and the Word was God". BIB:(2),[John]

Lets consider the next query: if parts of SOMETHING, as the parts of the Whole, are continually interacting, what changes inside these parts of SOMETHING at the time of this interaction? If SOMETHING can take place in a vacuum, how can it move to this place, where it had not been before; where is it now? If SOMETHING can be in NON-EXISTENCE, what does it look like?

For the answers to these questions, we must define the term "distance between" any two points. Traditionally, all laws of physics, such as, for instance, Coulomb's and Kepler's, use this term.

I insist -- though it seems a ridiculous thing to say -- that any force of interaction does not depend on a "distance between", which traditionally is the reverse proportion of the square of (I am not afraid to say this) the mysterious variable (r) - $1/r^2$.

I am not even striving to look like an original. All I am attempting to do is to use Kant's Cosmogony as the basis for Lyapunov's theory of Celestial bodies, and both theories as the reason to begin using the term "orisphere". By the way, even Empedocles of Acragas a few millennia ago thought that divinity is spherical and that the two opposites, Love and Strife, rule this world. I admit, according to my understanding of Empedocles of Acragas, Kant, Lyapunov and Poincare that this argument - $1/r^2$ - can be understood and interpreted, first, as a constant changing variable; in fact, secondly, it is connected to the radius of the *orisphere*, but not to the mythical "distance between" in NOWHERE¹⁹. This maneuver shifted the emphasis of the problem of searching for centers of mass for all interacting parts of the One which are needed as the centers of and for cartesian reference frames, to the problem of examining what the term 'orisphere' means. The most obvious difficulty in this is the attempt to define what begins where the Reality-One finishes. My proposal is: the substance exists forever only in time and it begins to exist precisely in the moment of finishing its existence only in time. Put crudely, the "problem of edge" exists only for parts, which have forms (in Aristotle's meaning) and change in time, but not for substance as for the One, which does not know a form and time for itself²⁰. Who

¹⁹ Zeno's paradox, therefore, does not exist for Cynicism: one must not try to measure the 'distance between' Achilles and the tortoise but only their Meanings of Inertia; where any number always become another because Continuity does not cease to be, nor Infinity to exist. For that reason, I can, through the comparison of both objects' Densities of substance find out the ultimate truth: will poor Achilles finally gain on the tortoise or not!

²⁰ "...it is not nature which imposes on us the concepts of space and time, but we who impose them to nature... Whatever is not thought, is pure nothing." BIB:(20.00) Furthermore, "3. But where there are no parts, neither extension, nor figure, nor divisibility is possible. Thus, these monads are the veritable atoms of nature, and, in one word, the elements of all things." BIB:(15.00)

will look for the edge of Supreme Monad and what will the One try to find at that moment if even this moment does not exist²¹?

It is evident for me that Column's and Kepler's Laws ought to be re-established²² and seen in the following way: any mass has only one strictly determined volume, and vice versa²³. Naturally, the manner in which atoms, planetary systems etc. are arranged in connection with that order, which is determined by Mendeleev's table²⁴, is evidence in favor of this supposition. For example, Einstein in his general theory of gravity presupposed that the path of light is not a straight line near any part of substance. I guess that any path of any part of substance lies in the shell of some *orisphere* and, therefore, can be imagined as a cross line of two surfaces of constant negative curvature²⁵ - each of which is the shell²⁶ of an *orisphere*. On that account, must volume of an *orisphere* have three dimensional space?

2

Exercise No.2 for a boy, who will be tomorrow's genius. If you have three different characteristics for one thing, how many combinations of characteristics can be found?

Even if it takes a very complicated intellectual effort to solve this problem -- the simplest answer could be: more than one!

²¹ "As long as there is duality, one sees *the other*, one hears *the other*, one smells *the other*, one speaks to *the other*, one thinks of *the other*, one knows *the other*; but when for the illumined soul the all is dissolved in the Self, who is there to be seen by whom, who is there to be smelt by whom, who is there to be heard by whom, who is there to be thought of by whom, who is there to be known by whom?" BIB:(24.45),[*Brihadaranyaka*, p.89]

²² It should be noted that Kepler in his '*Astronomia nova*' said: "For we see that these motions take place in space and time and this virtue emanates and diffuses through the space of the universe, which are all mathematical conceptions. From this it follows that this virtue is subject also to other mathematical necessities(BIB:(4.31),['Kepler'])." Here, I see that the initial idea of Kepler's research was also an attempt to define: what does virtue mean? and I believe that Kepler's virtue may be equated to the Cynical virtue of concurrence: "things are not relative to individuals, and all things do not equally belong to all at the same moment and always, they must be supposed to have their own proper and permanent essence: they are not in relation to us, or influenced by us, fluctuating according to our fancy, but they are independent, and maintain to their own essence the relation prescribed by nature." BIB:(19.63),[386e]

²³ Definition 4.

²⁴ periodical table of the elements;

²⁵ constant positive curvative for *Li* condition;

²⁶ It explains the phenomenon of diffraction and interference of light.

Although I should not mention rope in the house of a hanged man it will not be a surprise, I hope, that from my point of view the idea of *Mincovski space* cannot be evaluated as a paradox -- it does not arrive to the form of Nonpredicative definition! Only the Cynical theory of space can pretend to be a paradoxical one! So, I think that the space of the universe has three dimensions exclusively due to the limitations of human experience²⁷. Starting from this as the base I may insist that the space of any *orisphere*, for different conditions of substance, has different quantities of dimensions if one goes beyond one's common experience. For instance, if I am allowed to suppose that the **SOMETHING**'s way of and for evolution is the way of and for the becoming Reality -- I must say here: it can have three, two or one dimensions but not more than three, and the process of these dimensions' transformation goes from three dimensions to one through two but not vice versa! After all, space is a Moduse by definition, but Time in an yet unclear combination with the vacuum, and in its turn, is the only appearance of the attribute of substance -- eternity. It is the appearance of attribute of Existence of substance at large, where if time-vacuum does not exist, the form(space) and matter(mass) do not ever exist²⁸. At the same time, if a form and matter are not existing Moduses for the Given part of substance right now, it does not exactly mean that time also does not exist²⁹. Some part of substance may not have a form and matter right now because they are **SOMETHING** in **NON-EXISTENCE**, but other parts of the Whole may exist and the appearance of attribute also exists for them. I presuppose that even if all parts of substance unite to become the Whole, Continuity does not cease to be, nor Infinity to exist because the Whole must lose its condition as soon as it begins to be in time.

²⁷ "It is, therefore, solely from the human standpoint that we can speak of space, of extended things, etc. If we depart from the subjective condition under which alone we can have outer intuition, namely, liability to be affected by objects, the representation of space stands for nothing whatsoever. This predicate can be ascribed to things only in so far as they appear to us, that is, only to objects of sensibility. The constant form of this receptivity, which we term sensibility, is a necessary condition of all the relations in which objects can be intuited as outside us; and if we abstract from these objects, it is a pure intuition, and bears the name of space. Since we cannot treat the special conditions of sensibility as conditions of the possibility of things, but only of their appearances, we can indeed say that space comprehends all things that appear to us as external, but not all things in themselves, by whatever subject they are intuited, or whether they be intuited or not." BIB:(12.00),[B43-A27]

²⁸ see Appendix 8A.

²⁹ see Kant's arguments and Moore's comments. BIB:(18.70),['Proof of an External World',p.147-171]

Why not change three-dimensional space to mass in *Mincovski space*? It will be the "space" of the Moduse of Inertia mass and the appearance of attribute, Existence. Matter-mass cannot exist without form-space and vice versa³⁰! Both preceding ways of representing the space of Reality are good only insofar as they are both used simultaneously, which makes this way of thinking absolutely useless. This theory of *Mincovski space* is not nonsensical as long as their roots are in the wrong understanding of *infiniti*!

And, further, is the space of the Whole metrical topological space? Yes, it is! But only for the *Li* and *Yin* conditions of substance can a metrical unit be determined³¹! All *Axioms* of separation can be useful for only these two conditions of substance, but not for the *Yang* condition. In the *Yang* condition of substance no one part of substance can be separated from another³², and, after all, in this particular moment of time all three conditions cannot exist independently but simultaneously: a change of one must be reflected as a change of others. And that is the general conclusion with regard to the Best to which I am driven: three different kinds of points exist, two of which exist as **NOTHING!**

3

Exercise No.3 for a smart boy. If you cannot find a black cat in a dark room, is there one? Is it still there?

Physicists, who rest on their laurels, use the term "force" and all of them are still sure that it depends on... On what?

It is not necessary to be as smart as, for example, the idol of all physicists, Einstein, to see that, according to the old

³⁰ BIB:(20.01),[p.210-276] It follows that this way of thinking is senseless and, therefore, it is the way Pure Reason *should* think(the One does not know contradictions and does not have **SOMETHING** to think about -- it does not think at all and this definition is **NOTHING**): only the Best may define a part of the Whole definition through other parts of it without falling into the necessity of using the modifications of all parts, which attempt must end in nonsense(nobody exists who can perceive substance itself). It is impossible to grasp the moment of certainty: one always analyzes **SOMETHING** which has existed but never what is existing right now.

³¹ The *Li* condition of substance has the metrical topological space which satisfies both axioms(first and second) of countability and is perfectly separable, where a Quantum constitutes the countable base for the Whole. The *Yin* condition satisfies only the first axiom of countability(for things-in-itself) and *Yang* does not satisfy both axioms. BIB:(1.00)

³² The metrica(a Relict part of substance) is the subject for changes if it exists.

style metaphysics of both Leibniz and Hume³³ the Force of Interaction depends on a defect of the Given part of substance. Or put another way, perfection or imperfection³⁴ of the Given part of the Whole, which I call the positive and negative Meanings of Inertia³⁵. The defect³⁶ of mass in this universe is the main evidence in favor of this guess³⁷.

Coulomb's, Kepler's and Newton's Second Laws use such terms as a weight but not mass; as an energy, but not a charge for the describing of two interacting parts of substance, where weight and energy are indeed the composition of all Moduses of Inertia and the appearance of attribute of substance -- Existence. The cause for this is that physics, as the science with the aim of evaluating experiments *a posteriori* -- in past perfect -- has to use a qualitative measure of substance, such as, for instance, energy: human needs especially call for qualitative but not quantitative analyses which is useless (how one can operate with NOTHING?). Passing from this point I can imply that differential mathematics underwent a tremendous development in this century because of humanity's need for approximate calculations! In this case, Cynicism states that energy expresses a proportion between changes of the Meaning of Inertia of the Given part of substance -- by the changes in the radius of the *orisphere* of the Given part of substance -- but not by an already traversed path of the Given part of substance between some points in the Universe.

Note. *The culmination of this qualitative solution to the quantitative problem is stated in the "Theory of Relativity":*

$$E=mc^2$$

What expresses this formula? May I refuse to use the term "energy" for an explanation of any event generally? Can I take a piece of energy? Does energy have a form? Is energy substance? No, it is not at all! Is this, perhaps, a measure of the changes in condition of the Given part of the Whole? Yes, it is! If, however, we have the Meaning of Inertia, what do we need such a predicative measure as "energy" for? Thus, Cynicism assumes that the new

³³ It is my opinion that the main point in both metaphysics is that they examine two conditions of substance: the defected and simple ones.

³⁴ The Best cannot be described both as perfect or imperfect -- it does not exist.

³⁵ Definition 16.

³⁶ "4. Hence no dissolution is to be feared for them, and a simple substance cannot perish naturally in any conceivable manner." BIB:(15.00)

³⁷ It is impossible to separate a defect of mass from a defect of space, as well as separate electrical and magnetic properties of any part of substance. Consequently, we can say that this universe has a defect of space.(see Axiom #9, Propaedeutics)

terminology is more convenient than that which has already been used.

By the way, the meaning of the term "energy" is indisputably connected to and cannot exist without the phenomenon of "entropy". Entropy is absolutely incompatible with the conception of the Whole! It is absolutely impossible in the frame of Nonpredicative definition to infer that any part of it can be lost forever! After all, the term "energy" is the specific term for that which is already separated from all other Given parts of substance. In the theory here presented I recognize that there is no exact measure for and into the Yang condition of substance and any part of substance in the Yang condition of substance is an "accumulation point" which does not have an edge.

I think that it is easy to figure out that only the Li and Yin conditions of substance are those conditions of substance where one part of substance can be separated from another. Am I permitted to ask: How can **NON-EXISTENCE** have a measure, such as "energy"? The term "energy" is not useless at large but it is not necessary for the understanding of the Absolute!

Suppose that this remark is true and, therefore, if a Meaning of Inertia manifests its changes constantly; and if, consequently, the Force of Interaction does change its meaning permanently, the above shows that at any time it is impossible to extract an exactly precise meaning of Inertia. The Meaning of Inertia for any interacting part of substance must be a transcendental or algebraic Irrational number which transforms one to others³⁸. Due to this, mathematicians use what I call the "Measure of Abstraction": almost any calculations are approximate calculations, where only a fixed number of numbers after a comma(period) is usually taken into account. For instance, the Maxwell equations use vectors in calculations, which usually are not Natural or Rational numbers. Even if this is almost pure demagoguery, I have to mark that the use of these methods must give cause to doubt the accuracy and conscientiousness of physics. It follows that it is only the thought that all experiments are possible only in non-metrical topological space³⁹ and with Irrational numbers can eradicate the

³⁸ Otherwise, Leibniz's idea about "...the roaring of the sea with which one is assailed when near the shore" must be considered as sufficient and the continuity of interaction must consist of many smaller interactions. Indeed, to hear the seas' noise "...as one does, one must hear the parts which compose its totality, that is, the noise of each wave, ...although this noise would not be noticed if its were alone." Cynicism states that any action is continuous and that Irrational numbers converts one to another. The case of a part's of the Whole spectrum, that will be examined later, gives proves in favor of this assertion.

³⁹ "...there is nothing... which in itself is just one thing; all things are coming into being relatively to something. The verb 'to be' must be totally abolished -- though indeed we have been led by

fear of missing a correct result⁴⁰. Blind faith in the absolute perfection of physics' methods, like blind faith in anything else, is an unsophisticated use of abstractions, especially in the absence of any general theory. May I recommend to physicists from time to time to read books, which were written by physicists⁴¹?

Thus, the Meaning of Inertia of the Given part of substance can be viewed as a Natural or Rational number for the conditions of substance which Newton's First Law necessarily and sufficiently determines: "Every body perseveres in its state of rest or of uniform motion in a straight line unless it is compelled to change that state by forces imposed thereon."

An additional point to emphasize is that if a part of substance cannot interact with another one, its Meaning of Inertia must not exist at this moment and it does not, in traditional terms, have acceleration at all. This is the cause of DEATH for any Monad and "Thing-in-itself".

Due to the conjecture that a part of substance, which does not interact with another one, does not exist and is SOMETHING in NON-EXISTENCE, any boy smart enough can formulate the solution to Exercise No.3 like this: if I cannot interact with a black cat inside a dark room, then it does not exist and its NON-EXISTENCE increases the Force of Interaction or it has already moved out of the room.

4

Newton's second Law gives us a proportion:

$$F - m * \frac{l}{\text{---}} = 0,$$

habit and ignorance into using it ourselves more than once..."
BIB:(19.55),[157b]

⁴⁰ "When it is said then that we 'localize' such an object at such and such a point of space, what does it mean? *It simply mean that we represent to ourselves the movements it would be necessary to make to reach that object; and one may not say that to represent to oneself these movements, it is necessary to project the movements themselves in space and that the notion of space must, consequently, pre-exist. When I say that we represent to ourselves these movements, I mean only that we represent to oneself the muscular these movements... None of our sensation, isolated, could have conducted us to the idea of space; we are led to it only in studying of laws, according to which these sensations succeed each other.*" BIB:(20.01),[p.70]

⁴¹ "...it is clear that the causes which produced a certain effect will never be reproduced except approximately. Then we should modify our postulate and our definition. Instead of saying: 'The same causes take the same time to produce the same effects,' we should say: 'Causes almost identical take almost the same time to produce almost the same effects.'"BIB:(20.01),[p.227]

where it is assumed that F is a force, m is mass, l is the already traversed distance(path), t is an interval of time between a moment of beginning of an experiment and a present moment of time, and 0 is **NOTHING**.

What does all this stuff really mean? The mass of what? Is F the Force of Interaction? If the answer is yes, then the Force of Interaction of what with what -- does **SOMETHING**, if it exists, interact with **SOMETHING**? The already traversed distance between what and what? And how can all this be connected with changes of the content and form of a part of substance? Furthermore: though Newton's Law expresses the general connections between all these variables, why is it useless in practice? Indeed, Kepler's Law is used in astronomy, but where is Newton's Law used? What does $1/t^2$ mean? I can understand what the variable $1/r^2$ is for, but where does this variable $1/t^2$ appear from? Is this really a variable? Why is this variable inversely proportional to the square of time? Is this t an interval of time? If so, an interval of time between what and what? What does 0 (**NON-EXISTENCE**) mean here?

I suppose that this Law expresses the general connections between all that exists: all parts of substance which are interacting with a Force of Interaction (which is the Measure of the Ether at this particular moment of Time in sum with own Force of Interaction of all other parts of substance), have to constantly change their form and matter in time -- exist and be **SOMETHING**.

The stumbling block for any metaphysical theory is: Does it have a point of absolute calculation? Does it have an absolute measure which is connected to the "distance between"? The 'Theory of Relativity' seems like it can offer this absolute measure -- the speed of light.

The suggestion that in this universe, where **NOTHING** is stable and invariable in eternity and cannot be taken as *the* standard, a part of substance of Limit, which has the biggest possible speed, exists, is a contradiction, which exists even independently from the question: "what is a speed?" How can the presupposition that a maximum velocity exists be reconciled with the conjecture that this *constant(!)* concept must not exist? I think the solution of this contradiction lies in the suggestion that "speed" is the derivation of an Increment of the form or/and matter of the Given part of substance. Positively, if I suppose that a modification of the Meaning of Inertia of the Given part of the Whole, which is continuous in Time, is Movement, the Movement must refer to and be the manifestations of changes of the Given's form or matter.

As long as the conjecture that any Monad has only one Pair of meanings of Moduses of Inertia mass and space, which is intrinsic to it, exists, it determines, sufficiently and necessarily, the limit to increasing and decreasing the Increments of the Given part of substance. The Increment of the Moduses of Inertia mass or space of the Given part of the Whole must be less than the meaning of the interval between the present meaning of this Moduse of Inertia and

the next or preceding meaning of this Moduse in the Set T. In fact, if this Given part of substance has a Moduse of Inertia which has another number in the Set T, it becomes not the Given part of substance, but another one! Due to this presupposition, the speed of a part of substance of Limit is maximum: first, it has the maximal large meaning of the Moduse of Inertia space; second, it is limited only from one side by the next meaning of the Moduse of Inertia space and is not limited by the preceding meaning from another side. As may be inferred light-- a quantum -- can have an Increment of the Moduse of Inertia space almost equal to its Moduse of Inertia space. Therefore, some of the metaphysical questions to physicists are: does light have a mass of rest and why does not it have it?

The contradiction inherent in the suggestion that **SOMETHING** invariable and stable exists in the Universe, where it must not exist, is evidence in favor of the conjecture that the parts of substance of Limit exist until they have an Increment of the Moduses of Inertia; when they do not have it, they *must* be **SOMETHING** in **NON-EXISTENCE**.

As mentioned above they are Ether. In effect, the Big Bang of the Whole happens from time to time, then Ether stops its **NON-EXISTENCE**⁴². For instance, I think that the cause for any supernova's explosion is that somewhere and somehow substance becomes the One -- **NOTHING** in **NON-EXISTENCE** cannot hold **SOMETHING**, which became **NOTHING**, in unity. In the case of the nuclear bomb a small Big Bang takes place in the medium of the Earth, which has an influence on its results.

Note. *Observation of an event from two different frames of reference moving with a relative velocity, v, along the z axis would be related by the Lorenz transformation:*

$$\begin{aligned}
 x' &= x \\
 y' &= y \\
 z' &= (1 - v^2/c^2)^{-1/2} (z - vt) \\
 m' &= m(1 - v^2/c^2)^{-1/2}
 \end{aligned}$$

Thus, the Lorenz transformations confirm that a motion of any part of substance means changes in its form and/or matter. In my interpretation, Lorenz Transformations begin to sound like this: the least Constant Meaning of the Moduse of Inertia of space corresponds to the greatest Constant meaning of the Moduse of the Inertia of mass, and vice versa.

5

To the preceding can be added that a change of an Increment of the Moduses of Inertia of the Given part of substance is an attempt

⁴² "Motion, then, being eternal, the first mover, if there is but one, will be eternal also; if there are more than one, there will be a plurality of such eternal movers." BIB:(1,10),[259^α,5]

of this part of substance to restore its constant Density of substance.

If something must have a form and matter, and if one cannot exist without another, it is a Nonpredicative definition: form and content are parts of the Whole Definition that exist *only* for a part of substance, and the changes of form consequently change the matter of the Given part of the Whole, and vice versa.

It is perhaps necessary to note that things-in-themselves are three-dimensional parts of substance. But a part of substance strives to be a two-dimensional object as long as it is in constant motion but Lorenz transformations force it to have a form in three dimensions: x , z and y (for instance, a man has different sizes in different directions). According to the Lorenz Transformations and presupposing that any body is a Celestial body I propose that in reality the sum of these three variables - x, y and z is constant. I suppose that their sum is the sum of the axis of the ellipse in which the Given part of substance can be inscribed⁴³; I suppose that Monad is the ideal *orisphere*, or absolutely solid body; I suppose that the Supreme Monad is the Point of Absolute accumulation, which does not have any size -- does not have any dimensions, and therefore, must not exist!

6

"To every action there is always opposed an equal reaction...", "if you press a stone with your finger, the finger is also pressed by stone...": Newton's Law is Nonpredicative definition by itself⁴⁴.

Hoewer, what I am interested in is not only this confirmation but rather in the suggestion that in one time interval dt , Increments dm and/or dl of two interacting parts of substance are not exactly identical. For an observer this should seem like unequal changes of condition of substance in bodies with different Moduses of Inertia mass and space. Due to the fact that any part of substance is an open set of parts of substance, I think that the bigger the quantity of parts of substance of Limit with defects in them, united into the Given open set, the smaller the changes of the Moduses of Inertia mass and space of each part of the Given open set of these parts in an interaction with another, and vice versa. For example, a part of a man who is falling on the Earth changes its condition much quicker than the condition of any part of the Earth, but to an observer it seems like time for the Earth changes much more slowly than for the man, if the man travels with great velocity; this is not true: the appearance of attribute of existence, Time, is not subject to changes, but an observer is: "Time is therefore a purely subjective condition of our(human) intuition (which is always sensible, that is, so far as we are affected by objects), and in itself, apart from the subject, is

⁴³ Definition 21

⁴⁴ Definition 0.

nothing. We cannot say that all things are in time, because in this concept of things in general we are abstracting from every mode of their intuition and therefore from that condition under which alone objects can be represented as being in time.⁴⁵"

7

MICHELSON - MORLEY EXPERIMENT⁴⁶. Somebody must somehow begin to clean the Augean stable of physics. And with this necessity in mind I am brought to a well known and much-debated question: does Ether exist? The revival and development of the wave theory of light at the beginning of the 19th century, principally through the contributions of Young and Fresnel, posed a problem which proved to be of major interest for physics throughout the entire century. The question concerned the nature of the medium in which light is propagated. This medium was called the "aether" and an enormous amount of experimental and theoretical work was expended in an effort to determine its properties. It became the accepted view that the earth's motion through the ether could not be detected by laboratory experiments. With the development of Maxwell's electromagnetic theory of light, and especially with its extensions by Lorenz in his electron theory, theoretical explanations for the null results obtained in the early ether drift experiments were provided. These results were in harmony with the Galilean-Newtonian principle of relativity in mechanics, which explains why the essential features of all uniform motions are independent of the frame of reference in which they are observed. In Maxwell's electromagnetic theory, however, the situation was altered when quantities of the second order in (v/c) were considered. According to Maxwell's theory, effects depending on $(v/c)^2$ should have been detectable in optical and electrical experiments. The presence of these "second-order effects" would indicate a preferred reference frame in which the ether would be at rest. At first, this feature of Maxwell's theory implying observable ether drift effects of the second order in (v/c) raised a purely hypothetical question, since the accuracy needed for such experiments was a part in a hundred

⁴⁵ BIB:(12.00),[A35-B52]

⁴⁶ "...I mean the people who think that nothing exists but what they can grasp with both hands; people who refuse to admit that actions and processes and the invisible world in general have any place in reality." BIB:(19.54),[156a] "For Empiricism, what is true is quite generally what is external, and even if it concedes something supersensible, no cognition of it is supposed to be possible. We have to confine ourselves to what belongs to perception. The full working out of this principle, however, has produced what was latter called "Materialism" -- the view in which matter as such counts as what is genuinely objective." But substance is itself NOTHING abstract, NOTHING which cannot be perceived as such. BIB:(8.10),p.79]

million, and no experimental technique then known could attain this sensitivity.

Michelson pondered this problem and it led him to invent the Michelson interferometer, which was capable of measurements of the required sensitivity, and to plan the ether drift experiment which he carried to completion in collaboration with Edward W. Morley at Cleveland in 1887. This famous optical interference experiment was devised to measure the motion of the earth through the ether medium by means of an extremely sensitive comparison of the velocity of light traveling in two mutually perpendicular directions. The experiment, when completed in 1887, gave a most convincing null result and proved to be the culmination of the long nineteenth century search for the ether."

In the theory, which I have the pleasure of representing, the null result of this experiment is the major evidence in favor of the existence of Ether. Crossing swords with physicists I have to say that if the Relict parts of substance are SOMETHING in NON-EXISTENCE, and in the effect of their becoming SOMETHING all other parts of the Nonpredicative definition of the Whole must change themselves equally. NOTHING has the same 'equal right' to exist as SOMETHING has, where a modification of NOTHING to SOMETHING cannot be found because there is only **ONE** Substance-Whole which can be simultaneously either SOMETHING or NOTHING, and the connection between these opposites exists and cannot be cut at all. What is even more, there is not a portion of Ether which may influence the path of the motion of a part of substance without becoming SOMETHING -- the 'ether medium' does not exist.

10

Exercise No.13 for a progressive physicist. If Newton had not really seen farther than others because he stood on the wrong shoulders, what can one, looking for truth, do?

The answer: one can do whatever one wants to do!

Searching for the explanations of all the preceding problems pushed me to suggest that Newton's Second Law is nothing other than an expression of the fact that it must also be, according to Nonpredicative definition, the Law of interaction between at least **TWO** parts of substance of the Whole⁴⁷! Indeed, the Whole cannot have less than two parts! Also, I propose that a constant velocity, or velocity without acceleration, does not exist at all. Other suppositions I try to present are: there is a loop of changes for any part of the Whole; the Force of Interaction depends on the Defect of the Whole; there are parts of the Whole of Limit. In addition to the preceding ideas I have such presuppositions as: four harmonical functions depending on one argument must be represented in the Second Law for any loop of changes because there are two signs for Meanings of Inertia for two properties of

⁴⁷ "Clearly, then, all in some way agree that opposites are the principles." BIB:(1.10), [188^α, 25]

substance (magnetic and electrical), where only *cos*, *sin*, *sec* and *cosec* satisfy this requirement⁴⁸; the Factor of the Event Associativity of Substance, which I call the Zolt Factor, and which is the common manifestation of the Lomonosov-Lavoisier Law of Preservation of Substance must be represented in Newton's Second Law; the parts of Nonpredicative definition: **SOMETHING** (form and matter) and **NOTHING**, have to be parts of Newton's Second Law. Thus, after carefully examining whether consequences that follow from my research agree with one another and contradict one another I have no choice but to formulate Definition 17.

11

Now listen!

If stars shine,
doesn't it mean that somebody needs them?
Doesn't it mean that somebody wants them?
Doesn't it mean that someone calls these little gobbets
Pearls?

V. Mayakovsky, "Now Listen!"

Looking on Physics' gorgeous and complete palace I am forced by the power of facts to "call a spade a spade" and, therefore, to say that what I see now in physics can be summarized in this true story: one physicist from Princeton asks another one: "Why are you hitting the detonator of an atomic bomb with a hammer? Don't you know that it can explode?" "Don't worry!", answers the second, "I have another one!" Who was certain: whether the atmosphere would or would not explode after the first atomic explosion? Who could or tried to predict results of further experiments? Only because physicists can produce a bomb for every criminal government who can pay for one, are they favored by these governments?

As a result of this private investigation I found that those who had the highest reputation were as usual nearly the most deficient, while those who were thought to be inferior were more knowledgeable⁴⁹. Even more, I am forced by facts to see that physicists think that because they appear wise to many people and especially to themselves, they are wise beyond any doubt, but they are not⁵⁰!

My present intention, of course, is not to argue that physics is a useless science⁵¹, but rather to point out the idea that a

⁴⁸ The presence of these functions in Newton's Law can explain why the phenomena of waves exist and how a part of Supreme Monad remote from another must change its condition even through the absence of a medium -- vacuum.

⁴⁹ BIB:(19.50),[21d]

⁵⁰ BIB:(19.50),[21d]

⁵¹ "But since physics is one of the disciplines dealing with a particular genus of thing-that-is(for it deals with the sort of substance in which the origin of change and of keeping-the-same is

posteriori (qualitative) analysis of the properties inherent to parts of substance demands to be completed by the quantitative (metaphysical) method of analysis, which can help to avoid the consequences of the strongest specialization in science, because only the differential method views all sciences as one⁵².

12

Look people! The Emperor has no clothes⁵³! And, to speak honestly, was that the Emperor?

in itself), it is plain that this discipline is neither practical nor productive...([1025^β,20])" because "...clearly to say that something comes to be out of what is not, is to say that it does so out of what is not, as something which is not. We too say that nothing comes to be simply out of what is not; but that things do come to be in a way out of what is not, namely by virtue of concurrence." BIB:(1.10),[191^β,5-15].

⁵² Let me now say at once that "about the Unity of Science I have set down that 'Whatever you know it is all one'" -- *autarky* is of the Whole. BIB:(3.55),[p.X]

⁵³ BIB: Hans Christian Andersen, "Emperor's New Clothes", 1837