

THE NATURAL ORDER

Wittgenstein's Impact on a Scientist

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I.

A) *Man's Presentiments and Prejudices (Paradigms)*

There exists a *knowing* within us that nature (being or natural reality) has not come and cannot come to its fundamental sizes (or dimensions) «*by chance*». Equally we have a knowing that in its roots nature («the world», being, physical reality) cannot be *chaotic*. We have to acknowledge that an absolute chaos is logically impossible! (We are not allowed to conclude from states of disorder of concrete things to the possibility of an absolute chaos, which would be a state of disorder «without concrete things». All concrete things have, of course, to obey natural regularities and there is no doubt that there do exist natural regularities.)

If, in its very beginning, the world was a *single* thing a «singularity» («the original black hole») then we have already a *definite* knowledge of the *logical conditions* of *the world as a single thing*. The world as original singularity cannot be only the material («amorphous stuff») of a future (our) eventful (ereignishaft) world in time and space as a variety of many (of course, regularly related)

things, but it must necessarily also contain (and be) *the code of a world which it is going to become in the future.*

The world, as a single state (the world which is now in existence) can, if it follows its «transcendental» *tendency* to develop, become only *a* world in different states. It can, of course, not become worlds. In other words: one being must remain one being whatever may take place.

Beyond every reasonable doubt the following law is valid :
One being is exactly one being then, if all its states obey one singular regularity: - one natural order.

The logical consequences of this law are :

- a. the world as we know it, has only one identity. Or: the world is identical with itself.
- b. *all states* of a world which has only one single identity are *different* states of that world *within* the everlasting *equality* of one natural order.
- c. thus it is logically impossible not to speak of *a* hierarchical existing order of the world. The connection between more fundamental states of the world and less fundamental states must necessarily have the *logical form*: evolutionary predecessor evolutionary successor. (Two or more «natural orders» would necessarily contradict each other and thus such a world is logically impossible.)
- d. as long as the world is existing as a single state, it can be said that it has not yet *transcended* the threshold to a world «in states». A world, which has become a world as one single state *out of* a world in states by a process of re-revolution, *has lost all relations* to a reality outside of itself, because the formerly existing reality in states has been included in toto into it. Since in the same moment, when the world has become a *complete* single state, it has become an *absolute one*, it has (in accordance with the principle of relativity) to start a new evolution «immediately» for *logical* reasons. «The principle of relativity is *not* «empirical», it is *logical*. It is a most fundamental error to

believe that logics must be «an essence a priori» since it can be *handled* as an essence a priori. On the contrary: reality necessarily must be logical —as far as it obeys rules— and cannot be a-logical. «Earthern heaviness» *does not make logics less logical*. Logic *can* have the property to consume time as essential part of *the* physical reality.)

- e. Since the world as a singularity is different from the world in states it necessarily must have a different «*archetypical*» (original) geometry.

If, what we have said here up to now, is correct, then the world as singularity is the *real code** of the world in states as we know it, obeying like the latter three forms (aspects) of logic:

- I. the *conceptual logic* or the logic of language, which was *transmitted* by nature (being) to us as *its* states - *without* the possibility of «error». The proposition «mankind has developed language» is logically untenable. Rather the proposition «being has developed man and his language» *is correct*. Mankind has acquired language *without any* knowledge of its rules. (See Wittgenstein's Philosophical Investigations.) *To diminish* the natural regularities of language to mere *peculiarities* on the one hand and *to lift* physical regularities up to the *greatness* of «laws of nature» on the other hand is a conceptual *inconsistency* with *severest consequences* with to a correct understanding of the world. A *one-to-one-correspondence* between the logical structure of being as a whole and the logical structure of language *is a necessity*. (If it is not a *physical* impossibility to speak of the essences or the logics or orders of a matter —e.g. the matter «being»— then the reason, why this is the case is: *logical impossibility*. There *are no* «*other kinds*» of necessities or impossibilities *than logical* ones.

We have to lay particular emphasis on the following points:

- a. The *minor distinctness* in the recognizability of *committed errors* within conceptual logic *does not* make conceptual logic «*less logical*».

* «The hardware and software together»

Logic is logic and it is *not something*, which could be connected with a «more-or-less-condition». In particular, conceptual logic is *not* inferior to mathematical logic. (The question, whether the conceptual logic or the logic of mathematics has the *higher authority* in respect to a *correct* understanding of *this* world, can be put into a concrete question and *the concrete answer of nature is* : conceptual logic is *superior!* This «new principle of relativity» *underlies* the principle of relativity as it is known to us since Einstein.- The inferiority of mathematical logic in comparison to conceptual logic is based on its «*reality-blindness*»: if «g» in the equation $7g \times 7g = 49g^2$ means «gram», then *conceptual* logic tells us that the result is *unrealistic* with respect to the *special case* «world».)

- b. Since being (nature, the world) is in a state of *conceptual self-understanding*, every conceptually correct proposition *fully taking into consideration the concrete facts of the special case* «world» is undubitably *true*. Thus the logic of language is the *only* and most effective *instrument* in respect to a correct understanding of the world. *Neglecting* this power of the logic of language is the most fundamental *deficiency* in modern science as well as the most fundamental *obstacle* to scientific and «epistemological» progress.

THE LACK OF AN EDUCATION IN «CONCEPTUALLY CORRECT THINKING» IN OUR PRESENT EDUCATIONAL SYSTEM HAS LED MANKIND INTO A DISASTROUS, KNOWLEDGE - INHIBITING POSITION.

The paradigm of philosophy is *wrong* as far as philosophers try to understand the *special case* «world» by a thinking in *generality-neglecting* the very *special* facts of this world.

The paradigm of natural sciences is *incomplete* as far as scientists do *not* make use of the power of conceptual thinking. So far (with the exception Einstein) scientists tried to understand the world by using only the logic of mathematics *diminishing* conceptual logic to a «mere absence of contradictions».

2. The world (nature, being) has to follow the rules of mathematical computing. *Nature* as mathematician *cannot* make use of the rules of computing in another way as *we* make use of them. The form of the cooperation of conceptual and mathematical logic which has to be applied in the sciences is: present a concrete conceptual truth of the special case «world» to the logic of mathematical calculating and you will get a result which necessarily is in correspondence with the physical reality of this world.

For example: Take the concrete conceptual truth that in a world, which has the *property* «to be in motion» *nothing* can exist in a state of rest (nothing can be static), give this truth the form of an equation by using secure scientific knowledge (physical facts) and you will *not* get a «wey theory» *but the correct picture of physical reality!* (To remove all doubt in our conceptual truth: Can one imagine that a star «is lying about in a corner of the universe»? Can one imagine the existence of a *resting* light-ether if one considers that an ether, because of the existence of conceptual logic, necessarily would be a resting thing, like a star, in a universe, which exists by being eventful? Logic can neither know nor allow exceptions! If world has the *property* to be in motion then «mass» as a resting permanent thing is logically *impossible*. If mass *appears* to be «constant» then the only possibility in accord with the *one and single logic* of the world is, that mass is *produced* at the same speed as it is *transformed* into a state (of energy) which is non-mass (field-energy). This «logical assumption» also fulfills the predecessor-successor-condition, which must be valid «throughout the universe». (Here we have to remind ourselves that quantum-mechanics, though in evident accordance with reality *also* leads to the contradiction that the mass of the state «electron» should not be $9,10955 \times 10^{-28}$ g but *infinite*.)

If we further consider that the matter «being in states» *stars* out of a being as singularity and, secondly, that we can only talk of the essence of the «matter» being, then we come rather quickly to see that *at the beginning* of a being in states there should stay *an action* (Wirkung) *and nothing else*. Looking back we are able to assert: because of the one and single identity of the

world only *one* elementary action quantum could be discovered: for *logical* reasons. Since the world is structure and its dynamics and yet must be all the same, the logical structure of the world should equal h^2 (h : Planck's action-quantum). Since a quantum can be permanent only by steady repetition, it follows that $h^2 f^2$ must be valid. Since further $E = mc^2$ is a *logical* truth in the same way as $h^2 f^2$ and thus is a correct description of *the* matter being, it must necessarily equal $h^2 f^2$. (There can exist two forms of a correct description of being, but there cannot exist two truths.) $E = mc^2$ is valid for all material states of being and so it must be valid (within the one order of nature) for the elementary state of being «electron», of course. If so, then we get a definite size for f (frequency of h). The time of f then is the time of the most fundamental material event: one time the production and transformation of the elementary mass 1.

The solution of all problems of ontology and of physics *as far as they are logical ones* should, in principle, be given with the equation :

$$h^2 f^2 = m_e c^2$$

A critic says : All this seems to me reasonable, but it seems to be too simple and I still doubt the *existence and working* of conceptual logic in being. Our answer is: we doubted it also, since we are weak creatures. Since we are weak but not helpless creatures, we tried to prove the truth of our equation. *Have you, who possibly may be a gifted physicist, tried it?*

WE TRIED IT AND WE CAME TO SEE A NETWORK WITHIN WHICH «EVERYTHING FITS TOGETHER PERFECTLY», BUT THIS NETWORK IS, OF COURSE, STILL VERY SMALL.

You, the reader who holds these pages in your hands, have got from me a short-cut version of a «long-way» concept, which unfortunately is written in german language. If you are a physicist, you possibly will be unwilling, and this unwillingness might lead you to a hasty negative judgment of the form: the equation $h^2 f^2 = m_e c^2$ is simply false because it leads «to contradictions in dimensions». In this case I will ask for your generosity, to give me and

nature a chance to make understandable to you that transformations of dimensions *are a logical necessity*. (Perhaps it will help you, if you think of the world *as its own code* in form of the original black hole.) And, please, don't forget that the logic of *verbal attributes* of numbers necessarily must be another one than that of *numbers*.)

Well, there was a third point we promised to mention.

3. The third form of logic with which being has to be in accordance is *the logic of the natural connections between numbers*. We say, the code of the world must be a numerical one and it must be a «united» one. Using the term «united» we want to say that in a code of the world arithmetics and geometry must be one and the same, equally present. Looking in the field of «pure» mathematics we find the equation $e^z i\pi = 1$

This equation has been known since 1748 and was found by Euler. (e is the basis of the system of natural logarithms, i is $\sqrt{-1}$, $\pi = 3, 14159\dots$)

Our interpretation of this formula is: «Pointing at its most beloved number, mathematics tells us that the logic of arithmetics and the logic of geometry *are one and the same*». We justify our interpretation in the following way: It seems to us very reasonable, to take into consideration every surprising, unexpected hint which logic is willing to present to us. We further say: Euler's equation shows a *nearly unbelievable* potency of the basis e in comparison to the basis 10. If natural logarithms *really* are natural, *then nature should make use of them*. Nature as mathematician very likely is a natural-logarithmic mathematician. That this may be the case, is confirmed «somehow» by technical physics: every vibration of every material in solid state is declining within an e-function! We have a conviction, which reads: all mathematicians wherever and whenever they may appear in the cosmos need not necessarily come to the decadic system of numbers but they *necessarily* must come to an e-equivalency.

The results of our work show very clearly «that numbers are *not* mere children of human mind, which enable us to describe

reality», as Gauß and Dedekind believed, *but that they are part of the abstract aspect of the natural order. The arbitrariness of our measurement-system astonishingly is not able to hinder this kind «of entering the picture» of the natural order.* Looking back from the end of our work, our surprise vanishes and it again turns out the we have a logical necessity in front of us! The *general principle*, which we have discovered *by a conceptual analysis* of nature, is the following:

NATURE HAS TO ACKNOWLEDGE ANY MEASUREMENT-SYSTEM NOT ONLY AS A CORRECT ONE BUT IT HAS TO ACKNOWLEDGE ANY MEASUREMENT-SYSTEM AS *THE* CORRECT ONE!

This wording is the most profound formulation of the principle of general relativity. (As we have seen we have made use of the most profound result of the theory of special relativity, $E = mc^2$.) The consequences of our principle are the following :

- a) nature as mathematician is *measure-blind*.
- b) the utterance of this measurement-blindness is of the kind that the numerals (ciphers) of natural constants do get a general validity, independent of all measurement-units.
- c) «physical size» which we introduce into a correct and consequent description of nature by smaller or larger measurement-units does not influence numerals of natural constants (dimensional or not) but influences «*in decadic steps*» only. (The handling of numerals itself is «*reserved*» for nature and its logic.)
- d) because of the general validity of the numerals of universal natural constants, nature is able to tell us which geometrical element it is willing to put 1. Nature shows that it is willing to take the circumference of a circle as 1.
- e) the key to the code of nature and its carrying basis is e
- d) e shows us that the *seemingly* arbitrary value $1/hf = K = 1, 105174 \times 10^3$ is numerically in correspondence *with its decadic logic*: In 1, $105174 \times 10^0 = 0, 1000028$. Here we should see that

e^1 shows merely the identity of e . Thus $e^{0.1}$ is one of the two first deeadic steps for e to get in touch with the realm of numbers *outside of its identity*. $\text{num} (10 \times \ln 1, 105174 \times 10^8) \approx 2, 7183576 \times 10^{80} = e \times 10^{80}$

This result means that 10 times $\ln K$ leads to a deeadic self-reproduction of e . Thus, it is shown that K is also in correspondence with the numerical logic of e vice versa.

We may maintain that we have found the *missing link* between the logic of *pure* mathematics and the *physical reality* of our world *by the way of a conceptual analysis*. (Should physicists now feel afflicted or even «offended» by philosophy?)

We conclude by repeating: the one and single natural order is resting formally on the one and single logic of e and it is resting on the one and single elementary action h . Our means of proof is: *pythagorean evidence* (since there is no other).

I believe: God has created man as His (logical) image and He couldn't act otherwise.

II.

B) «... *We could not say what an 'illogical' world would look like*»

The world is, of course, *a wonder!*

The world is, of course, *a fact!*

The world as a wonder will, of course, *always* remain a wonder.

The world as a fact must of course, *be understandable*.

The wonderful fact «world» must, of course, be understandable *by means of logic*.

The wonderful fact «world» can, of course, not be *probably* understandable by means of logic.

The logic of the wonderful fact «world» is, of course, static. The logic of the world can, since it is static, of course not know «dimensions».

The world is, of course, dynamical.

The world, since it is dynamical, must, of course, know dimensions. Since the static logic of the world determines the dynamic case «world» there must, of course, take place a wonderful transition from statics to dynamics right in front of our eyes.

What occurs as a logical event right in front of our eyes cannot be seen, but its result can, of course, be noticed, if, by whatsoever means, we have come to a correct external (mathematical) description of that event.

If we go back from the tangential goniometric function of 2π to the corresponding grades and then take the reciprocal value, we get 0,0123522.

The procedure, which we have performed, corresponds, of course, to a logical necessity (which we have put as software into the hardware of our computer).

The value 0,0123522 corresponds to the frequency of a photon (with the dimension sec^{-1}) - which itself corresponds to the energy of an electron - in the following way :

$$0,0123522 \times 1,0003004 \times 10^{22} = 1,235591 \times 10^{20} = v_e$$

Since within this logical relation nothing is arbitrary, logic jumps across the barrier of the arbitrariness of the measure unit «second» obviously fairly exactly, neglecting 22 decades.

That there possibly has occurred «a jump across the hurdle of a measure-unit» is provided by a possible action of the Principle of general Relativity», which we have presented previously :

NATURE HAS TO ACKNOWLEDGE ANY MEASUREMENT SYSTEM NOT ONLY AS A CORRECT ONE, BUT IT HAS TO ACKNOWLEDGE ANY MEASUREMENT-SYSTEM AS THE CORRECT ONE. (We have given a reverse example of this «jumping ability» in the first part of this essay on page7.)

If there does has happened an action of the principle of general relativity, then the nature of the wonder, which we have witnessed, is of the kind that the *static* reciprocal value of the grades, corresponding to $\tan 2\eta$ is a *logical equivalency* to the *dynamical* frequency of a y. «somehow».

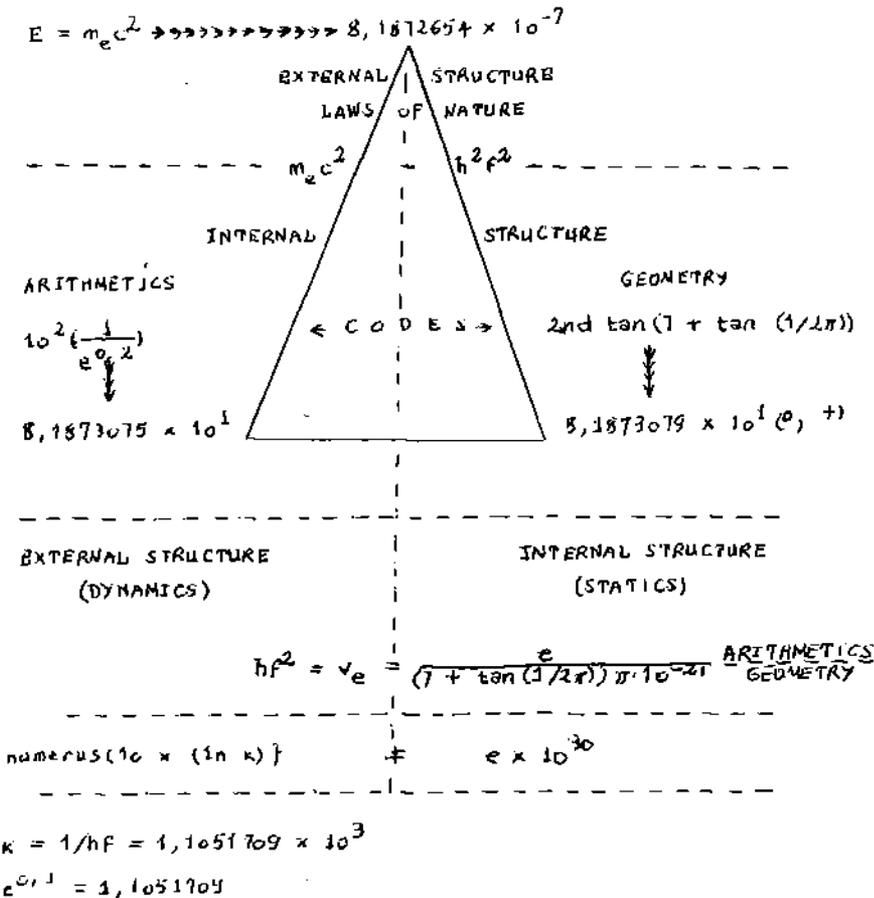


Figure p. 85, showing the dependence of the «outer world» (physical reality, laws of nature) on an internal logical structure working on the basis of geometric and arithmetic codes.

What makes the shown numeric correspondence between the numbers on the left and the right side *untrustworthy* (as basis of the internal logical structure of the world) to the reader, depends on *his prejudice* that he imputes *arbitrariness* to the 360°-division. But in contrast to all measure-units, the size of which had to be chosen arbitrarily, this *graduation* was not chosen arbitrarily. Mathematicians had good reasons to introduce *it* - and not another one. We will show in the fifth part of our essay that the 360°-division is *the logically distinguished* one. Therefore Nature - as the original mathematician - *had to make use* of this logically distinguished (*unique*) case in its working - in its «making physical reality».

At the moment we will, what has led us to the following formula, call logical intuition, completed «somehow» by a taking into consideration *concrete facts and conceptual* characteristics of physical reality.

The equation, which we will present now, is an *exact external* (mathematical) *description* of an (*at all times miraculous*) logical event, *establishing world*, as we have claimed, out of a code, which is *pure natural* mathematics :

$$v_e = \frac{e}{(7 + \tan 1/2 \pi) \pi \cdot 10^{-21}}$$

The left side of the formula represents a *complete dimensional reality*, which seemed to be *arbitrary* because of its dependence on an arbitrary measure-unit.

Under point (c) on page 6 of the first part of this essay we have said that a logical consequence of the principle of general relativity necessarily is of the kind that the numerals of universal natural constants can be influenced by the arbitrariness of a special measurement system *in decadic steps only*.

Since we have introduced the «decadic step 10^{-21} » to the right side of the equation (which is *special* for the number 0, 1235590) the left side of the equation *has got the dimension 1/sec for logical reasons and* and thus has really «become» a reality of the world.

The construction of the number-sequence 123559 is, as it is demanded by the principle of general relativity, a matter of the working of nature as *the original mathematician* (see point (b) page 6).

We have to emphasize now that from the foregoing three propositions (describing the working of the principle of general relativity) *a new kind of logic has appeared*, which was not (and could not be) taken into account by physical mathematics up to now

We will draw a

now, because the demands of our self-criticism in respect to the external (mathematical) correctness of the «world-formula» are already fully satisfied.

What we will present in the following is given with the intention, to facilitate the seeing of the *inherent logic of the formula*.

What we will present in particular is primarily given, to enlighten also the differences between the logic of numbers and the logic of the *verbal attributes of numbers*, which as *dimensions* have to be connected with numbers in the description of physical reality.

Since we felt entitled to name «our» formula «world-formula» (we will name it G in the future), we have to justify this wording, since indeed only one fundamental value seems to be given. This purpose leads us back to the formula

$$h^2f^2 = m_0c^2,$$

whose truth rests on the correctness of an *exclusively conceptual consideration*. Within this equation (B) there is *no speaking* of what could be called «geometry» or «code-likeness». On the other hand it is a *fact* that we would have *never* come to G without B. But since further G fulfills *all* logical demands of the principle of general relativity (PGR) - which we have to call «ours» to distinguish it from the PGR as it was understood up to now - the truth of B is fully *confirmed*.

Having arrived at that point we come to the *important philosophical conclusion*, that a *vicious circle is avoided by nature* by a triangular

or V-shaped cooperation of $(B \rightarrow G) - (PGR \rightarrow G) - (G \rightarrow B)$. Without the rightness of the logic of B it would have been (logically) impossible to arrive at G, the correctness of G is beyond reasonable doubt confirmed by PGR and since we can come to physical reality in its entirety only by applying B to G, B and its logic is *not only confirmed*, but it is also *installed* as indispensable element within the integrity of the working of logic in Being. To this working there does not exist an *alternative!*

Thus, by the authority of nature itself, we are entitled to declare the philosophical stream of *Critical Rationalism* as a knowledge-inhibiting flow of «unrealistic» ideas!

To underline this assertion and to complete the triangular relation B-G-PGR-B we have to state the working of G in the constitution of «world» is only possible, because we were able to *unite* the non-relativistic part of *quantum theory* «quantum mechanics» (within which the relation $\lambda = h/p$ is significant, but not velocities close to the speed of light) with its relativistic part, «the theory of special relativity» (within which the speed of light plays an important role) *by the relation*

$$m_e c^2 = h^2 f^2 = h\nu \quad h\nu = h \cdot (h.f.f)$$

Furthermore we have to repeat that the value $K (= 1/hf)$ as an element of $h^2 f^2$ (B) (since it is able «to perceive» the decadal as well as the numerical logic of e, which is an element of G) is able to show a logical correspondence between B and G on «an elementary level». There does exist not only a logical triangle, but even a logical *network*. (We know quite a lot more about the logical network of Being but we are unable to present this knowing here.)

We have claimed that our *formula G is the correct description of the logical fundament of reality*. So let us make a description of the *elementary reality* «electron» out of it, according $hf^2 (v) \times h = m_e c^2$. But now we come to see that we can produce only a description of *an elementary (material) reality*, which suits the electron and its *antiparticle* «positron» *likewise*. Physicists *have marked* the electron with \acute{e} and the positron with e. It is evident that nature *cannot read these symbols*. They are exclusively marks of a human *conven-*

tion. The only signs nature is able «to read» must correspond to a *logical* difference *between the two particles*. If one of the particles «spins» to the right side and the other to the left, then this is again an *empirical but no logical* reason for the *different ways of behaviour* of the two *complementary* but otherwise completely *equal* «realities». An electron is *attracted* with very special consequences by a positron. Electrons, like positrons, «do not like each other»: a mere «*repelling*» takes place. Thus by the way of a conceptual analysis we come to the conclusion that the action «*attraction*» (and its consequences) *necessarily* must depend on a *logical complementarity*, which can be *recognized by nature*. Since this complementarity is a *logical* one, it must be possible to *grasp it* as a writing (as we have grasped the logic of G for example). Since *all values* of the electron and its anti-particle are *numerically fixed equal*, the complementarity we are looking for, *can only exist as a dimensional one*. It *cannot* be the case that the dimensions of the elementary charges of the two particles *are one and the same*, as *presupposed* by the teaching of physics. Physics has *assumed* that the dimension of *every* elementary charge is $\sqrt{\text{erg}} \cdot \sqrt{\text{cm}}$.

Before we proceed with our solution of the problem, we have to acquaint the reader with two important constants, which follow out of our *logical* understanding of nature. I have taken the liberty to name one of these constants «W» derived from Wittgenstein's name, to honour his (unintended) contribution to the science of physics.

$$W = 2\sqrt{r_e \pi c} = 0,9999227 \times 10^5 \text{ cm}\sqrt{\text{cm}/\text{sec}}$$

The second constant I have marked with C (for private reasons)

$$C = \text{mec}/f = \text{me}\lambda e = 1,9999218 \times 10^{-40} \text{ gcm}$$

By applying these two constants to G we are (in full correspondence with PGR) able to find out *one* of the two *complements* of the dimension of a *numerically squared* elementary charge: ergcm ($\text{gcm}^2/\text{sec}^2$). We perform :

$$(7 + \tan 1/2\pi) \cdot 10^{-21} \cdot f^2 \cdot C \cdot W/2e = e = 4,803252 \times 10^{-10}$$

Since we have introduced the decadic step 10^{-31} into G and thus have applied the PGR, the dimension of $(7 + \tan 1/2\pi)$ is «*second*». So

the dimension of *this* elementary charge (e) is constituted in the following way:

$$\text{sec} \cdot \frac{1}{\text{sec}^2} \cdot \text{gem} \cdot \frac{\text{cm}\sqrt{\text{cm}}}{\text{see}} = \frac{\text{gem}^2\sqrt{\text{cm}}}{\text{sec}^2}$$

(Though at the moment, we do *not* know, whether this dimension belongs to the electron *or* the positron - *or* *proton*).

The missing complementary dimension is $\sqrt{\text{cm}}$. How can we get it as a *logical consequence*?

Before we go on here, we should emphasize that - *because* the *decadic* steps of C and W *did fit* to get the correct «*decadic*» of e - the dimensions of these constants *had to fit* also, since that is *again* an *action of the PGR* in concretis.

To find out, whether the dimension $\sqrt{\text{cm}}$ is attached to the charge of the electron or the positron, we can take into consideration a very special *physical fact*. We know: *electrons* exist in large amounts as «free» particles. They are not bound to *another material structure*. Positrons, on the contrary, are always *bound* to a material structure. They can be set free only by force. Now, since we have a V-shaped proof that our equation B is fully (and not partially) correct, we are allowed to assume that one of the two «hf's» within this formula, namely that which represents «structure», is *not in the possession of a dimension*. If this is a correct assumption, then a charge, which is bound to structure *has* to make allowance for that circumstance! Derived from B a charge is given by

$$hf\sqrt{r_0} = e.$$

Thus it follows that we have good reasons for the view, that the dimension of *every positive* elementary charge is $\sqrt{\text{cm}}$:

$$e+ = 4,80325 \times 10^{-10} \sqrt{\text{cm}}!$$

(That a dimension $\sqrt{\text{cm}}$ should exist, is not a *larger* «wonder» than a «*classically*» assumed dimension $\sqrt{\text{erg}}$. $\sqrt{\text{cm}}$. Naturally nature is and will always remain *wonderful*!)

We recall that: what had to be proved *philosophically* was, that *different* entities (like numbers and the verbal attributes of numbers) have to follow *different* regularities, to make possible a one and single logic of the world.

We will draw another

now, and show to the reader a wonderful small hit of the inherent logic of our formula G , as far as *it was shown to us* by nature:

If we take the code $(7 + \tan 1/2\pi)$ in itself as a tangent goniometric function, how large may the corresponding angle be? We take at hand our computer:

$$2\text{nd } \tan 7,0027778 = 81,87308^\circ$$

The *numerals* of this *angle* are wellknown to us. The energy E_e of an electron is:

$$E_e = 8,1872654 \times 10^{-7} \text{ erg}$$

The correspondence is

$$81,87308 : 8,1872654 \times 10^{-7} = 1,0000052 \times 10^8$$

Who jumps across the border-line of *all* arbitrary measure-units, may they be centimeters, seconds, grammes, or *grades*? We know only one entity of this magic power: it's PGR! We have got a hint that there does exist a «*world-angle*» in a numerical correspondence to the energy of the most fundamental material state of being «*electron*» of 1×10^8 .

Before we proceed to show to the reader in another part of our summary that the wonder of our dynamic world depends on a static geometric-arithmetic structure, which can be called *the logic of the world* we want to ask our critics for the *alternative* of this *logical* kind of a wonder (which can be made evident to us because of the acting of the Principle of general Relativity).

Our answer to this question is: as rational beings, whose ratio depends on the reason of God, we are well-prepared to believe in wonders,

which are logical, but we are not prepared to believe in logical (irrational) wonders.

One world has, of course, to obey *one* static logic. If we have found a logical, networklike fundament of the world, it is, of course, *the* correct one. (We sincerely hope that this distinct wording of ours will not be understood as an ungoverned expression of intellectual arrogance.)