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Preface: Looking For The Source of Exist

Notes:

<u>The terms</u> "no", "nothing", "does not exist", "false", "negative", "negation" are synonyms and have a negative meaning.

The terms "yes", "something", "exist", "true",

"affirmative", "affirmation" are synonyms and have a positive meaning.

<u>Unary-logical-operator</u> is an operation with only one operand.

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We are searching for the essential mechanism of creation and wish to know how it all begins. We thus assume some hypotheses to optimize our search. First, we assume that the creation starts from *nothing*, this being that if we assumed the opposite - that the creation does not start from **nothing** but from **something** - we are just shifting the problem from one **exist** to another and thereby not accomplishing anything.

So, *Exist* is derived from *nothing*, from the *non-exist.* and we must assume the derivation from *non-exist* itself to *exist*. The reason for this is that if we assume the existence of a creation mechanism outside the *non-exist*, we are creating an additional, superfluous, entity. Therefore, the mechanism that creates the exist from the *non-exist* also originates in some form of *non-exist*. Here we have to be careful not to enter into a classification of *nothings*, because with such definitions we are assuming an *entity* unnecessarily. Therefore, the *non-exist* from which exist is emanating and the creating of exist from *non-exist* are the very same *non*exist. That is, we are searching for a means by

which *exist* is created from *non-exist* alone without the intervention of an additional factor. In simple words, what we are looking for is endlessly powerful although simple and empty.

<u>The Correct Numerical Essence</u> of the Creator of the Universe

The entity that creates the universe also creates the laws and the numbers and thus precedes them. Then no number should be ascribed to it at all. Therefore, since we are only looking for *exist* and *non-exist - yes* and *no -* we are turning our attention to the realm in which these play a significant role: the theory of <u>logic</u>. The result of any expression in this realm is one of the two <u>truth-values</u>: *false* and *true*, paralel to *non-exist* and *exist*.

The Negation

The *beginning* of everything is the *non-exist:* the *negation*. There is nothing but *non-exist* so the *negation* has **nothing** to *negate* but itself. The *negation* <u>negates</u> itself **limitlessly** as this is its entity and sole meaning. And thus, from the *no* there comes the *not-no* and the *not-not-no* and so on. And from the *non-exist* comes the non-non-exist, which we name exist, and the *non-non-exist* that we, in our intuition, think it to be simply *non-exist*. We imagine that there is no difference between the single-nonexist and the triple-non-exist or pentagonal or heptagonal, etc: any odd-number of negation - because we only look at the absolute-values of the different negations and these absolutevalues are all the same.

Exist is a short name for any even number of

combinations of non-exist. In fact, the entire exist can be defined by using **non-exist** alone. We refer to *negation* of *negation* as to something different from *negation*, and name it "*affirmation*". But this is a one-sided operation: Indeed, from the **negation** alone we can construct affirmation [not-no is yes]; but from affirmation alone we cannot construct any negation. No chain of yes-s, no matter how long, would provide us with the desired **no**. Therefore it is justifiable to link the *beginning* of exist to the *negation* and not to the *affirmation*. But since we construct in our consciousness a dual worldview of affirmation and *negation*, instead of constructing a <u>single</u> worldview of *negation* alone and mistakenly refer to the *affirmation* as a *starting point in discussing* exist, we do not understand the world.

The **non-exist** negates itself to eternity. Thus, from the *nothing* there comes the *not-nothing* that we receive as *exist* and the *not-exist* that we receive as *nothing* although it is <u>not the</u> <u>original</u> *nothing*.

The pre-Socratic philosopher Permanides is credited with the tautological statement "*The exist exists and the non-exist does not exist*", which is interpreted by certain thinkers as there is no affinity between the world of *exist* and the world of *non-exist*. Well, Permanides might have been wrongly interpreted: Since the *yes* derives from the *no*, then the *yes* group is a subgroup of the *no* group and there is a precise affinity between them.

<u>The assymetry in the emergence of the YES</u> <u>from the NO</u>

So far we have acknowledged that the beginning of *exist* is the *non-exist*. By referring to the negation-of-negation as to something different from **negation** and naming it **affirmation**, with the absolute-value *true*, our intuition leads us to mistakenly treat the affirmation as the starting point for any discussion about the *exist*. Since affirmation is constructed by negation alone [**not-no** is **yes**], and **negation** is not constructed by any combination of **affirmation**, then negation precedes affirmation and therefore affirmation is not the initial starting point. We should attribute the beginning to the **negative** rather than to the **positive**. Following our intuition we construct a dual-worldview of positive and negative and give to positive a

status equivalent to that of **negative**, and mistakenly attribute the beginning to **positive** instead of to **negative** alone. Our intuition, which builds logic and mathematics to rely upon, treats the <u>absolute-value</u> of any **negation** as that of any other **negation**; therefore we reach situations that we cannot understand and name them *paradoxes*, for example the *liar-paradox* that presents an impossible reality but is actually an endless oscillation between states: if he is lying then he is telling a **truth** that comes from a lie; but because he is telling a truth he is lying and therefore he is telling another truth that originates in this lie and the lies that precede it, and so on.

Asymmetry is a factor that makes it difficult for the *intuition* and the so-called *common-sense* to accept the creation of the *exist* from the **non***exist*. The asymmetry is obtained from the fact that the **exist** is created by the **non-exist** but not the other way around: the **non-exist** cannot be created by the **exist**; and so, the <u>truth-values</u> **true** and **false** are not good for creating *symmetry*.

Our cognitive world is limited. The logic we learn and teach is good only for the limited world in which we live. In order to better understand the world we have to expand logic.

Root of Negation

Expanding logic would be done by adding a <u>truth-value</u> to the set of <u>truth-values</u> *true* and *false*. The <u>truth-values</u> serve as **unary-logicaloperators**. The <u>truth-value</u> "false" serves as the **unary-logical-operator** "not"` [not true is *false*, not false is true]. In the same way the <u>truth-value</u> "*true*" could have served as the **unary logical-operator** "yes". However,

because applying it to any object results in the same truth-value of the applied object, it may be considered neutral and has little or no interest for those engaged in logic. Affirmation may arise from both affirmation and negation; but we have never found a **negation** that is resulting from any combinations of affirmation. We need such a unary-logical-operator by which it would be possible to create the two known truthvalues *true* and *false* symmetrically. A unary**logical-operator** that we may use is such that when applied to itself yields **false**. Such a unary-logical-operator is not present in the conventional theory of logic, but we can easily invent one and add it to the known truth-values. Since applying this made-up unary-logicaloperator to itself results in negation, we shall name it "ROOT-OF-NEGATION" - "RON" for short. It precedes **negation**, thus eliminating

negation from being the primal source of **exist**. It makes the traditional truth values *true* and *false* redundant since it alone produces them both. It also fits our requirement that **true** [*yes*] is created from *false* [*no*] and *non-exist* [*no*] is the source of *exist*. It is a <u>truth-value</u>, and as such it is a **unary-logical-operator**.

Logicians to this day have not paid much attention to such a <u>truth-value</u> that when applied to itself yields **false**. But mathematicians, some hundreds of years ago, have already found a number whose multiplication by itself gives **negative-one**. For historical reasons it was decided to name this number **"imaginary"** and define it as **"unreal"**, but in the physical reality this number is **totally real** and absolutely **not imaginary**. In the same way there is an "*imaginary*" <u>truth-value</u> whose application to

itself gives **false**. we have named This <u>truth-</u> <u>value</u> **RON (ROOT-OF-NEGATION)**.

Hereinafter we can see how **RON** creates all the **unary-logical-operators (**and their <u>truth-values</u>) by applying it several times until obtaining **TRUE**.

1 ROOT-OF-NEGATION

Applying **RON** to itself yields **FALSE** [Negation].

Applying **RON** to **FALSE** yields **NON-RON**.

Applying RON to NON-RON yields TRUE [not false].

2 FALSE

Applying **RON to FALSE** yields **NON-RON**.

Applying RON to NON-RON yields TRUE [not false]

3 NON-ROOT-OF-NEGATION

Applying **RON** to **NON-RON** yields **TRUE** [NOT FALSE].

4 TRUE

Applying **RON to TRUE** yields **RON**.

Applying **RON** to **RON** yields **false**

Applying RON to false yields NON-RON

Applying **RON** to **NON-RON** yields **true**.

To summerise: the different truth-values that obtain TRUE:

(1) **RON**.

- (2) **FALSE**.
- (3) **NON-RON**.
- (4) **TRUE** (Yields only **TRUE**)

The repeating applications of <u>truth-values</u> obtain infinite <u>truth-values</u>, but their <u>absolute-values</u> are only four: one **neutral** (**true**), one active (**false**) and two <u>truth values</u> that although not being neutral, we do not treat them on a daily basis (**RON** and **NON-RON**).

The <u>truth-value</u> *true* is neutral **in the applying** operation and there is <u>no application</u> of *true* to **itself** that returns a <u>truth-value</u> other than *true*; thus, **true** never yields **false**.

Root-Of-Negation in Reality

We shall try to show that **RON** is not just a product of academic thinking. We will check if there are natural **phenomena** that in our thinking are considered axiomatic but, however, can be produced using **RON**. We will check here why of all infinity of possible dimentions the universe is <u>three-dimensional</u>; and why the **time arrow** is <u>one-directional</u>.

Three-Dimensionality of the Universe

Let us assume that the fundamental entity of the universe has the quality of **RON**. This is a reasonable assumption because **RON** produces **negation** which produces **affirmation**; and it is consistent with our requirement that **exist** is produced by **non-exist**.

The <u>truth value</u> *true* is obtained by the other *three* <u>truth-values</u>, but does not obtaain any of them from within itself; and so, **exist** is created by **non-exist** but does not create it.

Each cycle of **RON** is made of four phases. The <u>absolute-value</u> of each of the four differs from that of each of the other three and therefore the <u>truth-value</u> of each phase has its own <u>unique-characteristics</u>. We shall name each one of those <u>unique-characteristics</u> "*Dimension*". The **neutral** <u>truth-value</u> *true* serves as the

description of **Exist** and is composed of the other three different <u>truth-values</u>; thus, the **dimension** of **Exist** is composed of the other <u>three</u> dimensions. Therefore, out of the infinite dimensions that we know how to deal with (mainly through Mathematics), the **universe** "has chosen" to be <u>three-dimensional</u>.

One Directionality of Time

Root-Of-Negation (RON) creates a <u>cycle</u> as follows: RON, False, NON-RON, True. RON acts on itself to infinity and thus creates <u>infinite</u> dimensions. However, the <u>absolute-</u> <u>value</u>s of each of the dimensions are the same as their counterparts in every cycle.

When a cycle ends, there begins a new cycle. **Four** different <u>absolute values</u> are obtained in a cycle. Those <u>absolute-values</u> of the <u>truth values</u> are repeated endlessly in cycles that are **separated** from each other. Let us grant the cycles the name "*time*". Each cycle is a <u>unit</u> of <u>time</u> which includes the four different <u>truth-</u> <u>value</u>s that are created by **RON**. Each cycle is a continuation of a previous cycle and the beginning of the next. Since there are infinity of cycles, <u>time</u> is endlessly long.

RON is the only active force in each cycle and its action is **unidirectional**; Therefore, each cycle is **unidirectional**. Since **RON** operation is infinite the time dimension of the universe is infinite. And since **RON's** operation is **unidirectional**, time is **unidirectional** (to the disappointment of those who aspire to move back and forth through time). From this it follows that the **universe** is <u>three-dimensional</u> within the dimension of time

Following the discovery of the gravitational

lensing phenomenon (light changes its trajectory when it passes near a massive body), physicists decided to give this phenomenon a mysterious and unclear definition: **curvature of space-time**, in which time is presented as <u>twodimensional</u>. Today we have found the existence of the so-called <u>dark-matter</u> which is responsible for the **gravitational-lensing** and does not require the definition of time as <u>twodimensional</u>.

Instead of a summary

Although the known reality and the common theory of logic are built by the root of negation, it is not the desired source. Questions still remain, such as what creates the root of negation and what creates that which creates the root of negation, and so on ad infinitum. On the other hand, we know how to set a limit to infinity and accept it as a finite quantity, and therefore we might be satisfied with the root of negation as the source of all sources.