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Neutrosophic Principle of Interconvertibility Matter-Energy-Information (NPI_MEI)

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Abstract
The research aims to reveal and prove the thesis of the neutral and convertibility relationship between constituent constructive elements of the universe: matter, energy and information. The approach perspective is a computationally-communicative-neutrosophic one. We configure a coherent and cohesive ideation line. Matter, energy and information are fundamental elements of the world. Among them, there is an inextricable multiple, elastic and evolutionary connection. The elements are defined by the connections between them. Our hypothesis is that the relationship between matter, energy and information is a neutral one. This relationship is not required by the evidence. At this level, it does not give up in front of the evidence intelligibility. Neutral relationship is revealed as a law connection. First, the premise that matter, energy and information never come into contradiction is taken as strong evidence. Their law-like-reciprocal obligations are non contradictory. Being beyond the contrary, matter, energy and information maintain a neutral relationship. Therefore, on the basis of the establishment and functioning of the universe or multi-verse, there is neutrality. Matter, energy and information are primary-founder neutralities. Matter, energy and information are neutral because they are related to inexorable legitimate. They are neutral because they are perfectly bound to one another. Regularity is the primary form of neutrality. The study further radiographies the relational connections, and it highlights and renders visible the attributes and characteristics of the elements (attributes are essential features of elements and characteristics are their specific features). It explains the bilateral relationships matter-energy, information-matter and energy-information. It finally results that reality is an ongoing and complex process of bilateral and multi-lateral convertibility. Thus, it is formulated the neutrosophic principle of Interconvertibility Matter-Energy-Information (NPI_MEI).

Keywords
matter, energy, information, Neutrosophy Smarandache , Neutrosophic Principle of Interconvertibility Matter-Energy-Information (NPI_MEI)

1. Introduction: properties, constituents, elements or ontological principles

In the last half of past century, there has been issued and acknowledged the idea that the world would be made of matter, energy and information. The axiom of foundation of the world issued by Norbert Wiener has already become canonical. Wiener's axiom states that "Information is information, not matter or energy" [1]. Everything in the universe/multiverse is based on matter, energy and information.

The material of "construction" of the universe is matter and energy. In Big Bang, the amorphous matter, the vortex, unstructured and volatile was brought to a form by the energy. In other words, since the birth of the universe/ multiverse, there have existed matter, energy, and "construction", the "form" - information. The energy put the matter into the form "in formae" (in Latin), i.e. energy generated "informatio" (in Latin) - information. The movement of the matter to form is performed by energy. The initial impulse of the universe/multiverse is given by power. (D. Deutsch shows that "the physical world is a multiverse" [2]; D. Wallace states that is an "emergent multiverse" [3]).

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Therefore, the CERN attempt to simulate the initial phenomenon of the creation of the universe started with a huge amount of energy.

Tom Stonier's point of view expressed in "Towards a new theory of information" (1991) is that "information is a basic property of the universe. That is, like matter and energy, information has physical reality. Any system that exhibits organization contains information. Changes in entropy represent changes in the organizational states of systems and, as such, quantify changes in the information content of such systems. Information, like energy, exists in many forms. These are interconvertible. Likewise, energy and information are readily interconverted" [4] [5]. In his turn, Anthony Reading noticed the information as "fundamental property of organized matter" [6].

In the article "Information in the Structure of the World" (2011), Mark Burgin deals with the place of information in the world; he believes that there are four "basic constituents of the World" (...) "matter, energy, mentality and knowledge". He points out that some researchers "relate information only to society", others "include the level of individual human beings", "many presume that information is everywhere in nature". His opinion is that the information is "in the structure of the world" and that the "structure of information processes, as well as relations between information and basic constituents of the world, such as matter, energy, mentality and knowledge" [7] should be taken into account [8]. Mark Burgin and Gordana Dodig-Crnkovic believe that "Information is a basic essence of the world" [9]. On the other hand, they postulate the universality of information: "Information is related to everything and everything is related to information" [10] [11]. David Bawden and Lyn Robinson emphasize that „information is now becoming accepted as a fundamental constituent of the physical universe" [12].

In our opinion, the world is composed of three fundamental elements: element 1-matter, element 2 - energy and element 3 - information. Ontologically, matter and energy are primary natural elements, and information is a secondary element. The Matter and energy are constituent elements. In epistemological order, information is superior, being a constructive element. Information is the computational element of the world. Hans Christian von Baeyer believes that this three are elements [13]. The internal computational principle of information is linked to Wheeler's principle [14]: "It from bit", as the Cover-Thomas axiom states: "computation is communication limited, and communication is computation limited" [15]. Information is the computational principle of the world. Information is the first element and then the onto-computational principle.

Rafael Capurro appreciates that that there are not elements, there are not properties, but ontological principles aside others; he lists as ontological principles "energy, matter, spirit, subjectivity, substance, or information" [16]. Without the existence of a direct connection between these principled categories, R. Capurro reveals exponential capacity of information to represent the world: "We would then say: whatever exists can be digitalized. Being is computation" [17] [18] [19] [20]. As ontological principle, information is computational. S. Lloyd emphasizes that "universe is computational" [21].

2. Convertive relationship between matter-energy

The first two elements of the triad are those of the Einstein physical formula of mass-energy equivalence. We are interested, first, in the matter connection (mass)-energy. In principle, this relationship was clarified by Albert Einstein.

On the depth axis of Einsteinian thought, the determination of mass-energy relationship is a synthesis of the major ideas launched in the four articles published in 1905. 1905 is known as the miraculous year "Wunderjahr" (German) or "Miracle Year". In Latin it was called "Annus Mirabilis" and the articles published in Annalen der Physik were called "Annus Mirabilis Papers" [22] [23] [24]. They are considered to have significantly contributed to the foundation of modern physics. We could say more: 1905 is the most important year in the history of physics hitherto.

The first article published on the June 9th 1905 introduced the concept of "energy quanta": „Energy, during the propagation of a ray of light, is not continuously distributed over steadily increasing spaces, but it consists of a finite number of energy quanta localized at points in space, moving without diving and capable of being absorbed or generated only as entities". Albert Einstein notes that "energy quanta" is converted "at least partially into kinetic energy of the electrons". Thus he reveals "photoelectric effect", discovery for which he would win, in 1921, the Nobel Prize for physics. Note that from here, the concern for energy is evident.

The second article, published on July (1905), is a specification of Brownian motion: In this paper, shows A. Einstein, according to the molecular Kinetic theory of heat, "bodies of a microscopically visible size suspended in liquids must, as a result of thermal molecular motion, perform motions of such magnitudes that they can be easily observed with a microscope". The article reveals a high consciousness of scientific honesty: "It is possible that the motions to be discussed here are identical with the so-called Brownian molecular motion; however, the information available to me on regarding the latter is so lacking in precision that I form no judgment in the matter". We notice that in this article the orientation is on matter: liquid, molecules [25].

On September 1905, there is published a study that will be the core of what would later be called the "Special Theory of Relativity" [26]. However, a strong emphasis is placed on the speed of light. Entitled "On the

electrodynamics of Moving Bodies", the study analyzes, in context of electricity and magnetism, the major changes that occur in "mechanics", when the speeds are close to the speed of light. A. Einstein shows that the "speed of light" is constant in "all inertial frames of references". Then, he "also introduces another postulate (...) that light is always propagated in empty space with a defined velocity c which is independent of the state of motion of the emitting body". We are interested in the fact that this study is concerned about the speed of light as a constant and that this would be the maximum speed in the universe. In this context it is shown that, as Professor Leonardo F. D. da Motta argues "in 1972, Smarandache proposed there is not a limit speed on the nature" [27]. Initiated in 1972, "Smarandache Hypothesis" was completed by Professor Florentin Smarandache in 1998. Smarandache shows: "We promote the hypothesis that: there is no speed barrier in the universe and one can construct any speed even infinite (instantaneous transmission)" [28]. As Ion Pătrașcu outlined in October 2011, Smarandache's hypothesis "has been partially confirmed by the recent CERN results of OPERA team led by Antonio Ereditato that experimentally found that neutrino particles travel faster than light" [29].

The fourth article of "Wundejahr" - 1905 emerges as convergence of the others. Energy, light and matter are brought within a formula. The article is called „Ist die Träghit eines Körpers von seinem Energienhalt abhänging?" "Does the inertia of a body depend upon its energy-content?" It was sent on September 27th 1905 and published on November 21st 1905 [30]. Because in this article we find the phrase "the principle of energy", we consider that the most famous formula in physics and, perhaps, of human knowledge ($E = mc^2$) formulation may be called "the principle of energy". In the article, for energy there are used three symbolic notations, L, H and E, according to the system and measurement. Strictly, the formula itself, in mathematical language ($E = mc^2$) does not appear, it is presented linguistically: „If a body gives off the energy in the form of radiation, its mass diminishes by L/c^2. The fact that the energy withdraws from the body and becomes energy of radiation evidently makes no difference, so that we are led to the more general conclusion that the mass of a body is a measure of its energy-content; if the energy changes by L, the mass changes in the same sense by $L/9x10^{20}$, the energy being measured in ergs, and the mass in grams".

It should result, we show, $m = L/c^2 \leftrightarrow L = mc^2$.

Even if the formula was not canonically marked from the beginning, Albert Einstein underlines the energy equation. Contributions to finalize the formula are also brought, through symbolic using, by Max Planck, Johannes Stark and Louis de Broglie.

In 1946, Albert Einstein published the article "$E = mc^2$: the most urgent problem of our time", accrediting the formula for history. The internal subject of the formula is the relationship between "mass" and "its energy-content". The mass of a body and the energy contained by it are defined mutually and are mutual dependent. The formula $E = mc^2$ is neither mass, nor energy. The formula $E = mc^2$ is information. More precisely, it constitutes scientific information: law-like information, grounded, indisputable in terms of a strengthened conceptual reference system.

Mass and energy are inseparable and mutually convertible. There is no mass without energy and no energy without any mass. All energy has a mass. Energy can be kinetic, chemical, thermal energy given by the position in a field of forces, and so on. When there is added energy to an object, this leads to a gain of mass. While it may seem strange in comparison with common sense, scientifically, the body temperature increase causes the increase of its mass. The mass increases insignificantly, but it increases, because any energy has a mass. The body is a complex mass plus energy.

Einstein's formula is available for any type of mass and energy.

Albert Einstein also proved that motion is crucial in the destiny of the world. As far as matter and bodies are concerned, to speak about the "rest mass" and relative mass (motion mass), $E = mc^2$ shows, subsequently, two specific variables.

If we deal with a body at rest $E = mc^2$ becomes $E = m_0c^2$ (m_0 = rest mass). For the rest, the speed is zero. A body has energy also when it is stationary. A solid body, has obviously, at least, one thermal energy.

When the body is in motion, with speed v, $E = mc^2$ becomes $E = m_{rel}\, c^2$ (where m_{rel} is relative mass**,**

$$\mathbf{m_{rel}} = \frac{\mathbf{m_0}}{\sqrt{\mathbf{1} - \frac{\mathbf{v^2}}{\mathbf{c^2}}}}$$).

Another case is the variation of matter and energy: $\Delta E = \Delta m_0c^2$. The formula is valid not only in terms of any type of energy and matter, it is valid in any system. When it is a closed system, there appears a feature: closed systems do not lose mass. On the other hand, in closed systems, the energies are additive, they are cumulative. That means that in closed systems, energy and mass are controlled by each other. Progressively, mass becomes energy and energy becomes mass.

Matter, as it is well known, is defined as something that has mass and volume. Taking into consideration that the mass has as reference system the Earth, and on the planet Earth, the objects are considered in rest, the mass is regularly identified by the rest mass or invariant mass. The volume is measured as the three-dimensional amplitude of

the occupied space. Sometimes, the concept of substance is used for the "matter". Mark Burgin observes that "the matter is the name of all substances" [31].

In relationship with the substance, matter is taken as the substance of which the observed physical objects are constituted. The idea of matter as observed matter is important, because it cannot talk about substance in the case of detected matter only as presence in the fields of forces. In some force fields, besides effects of some visible material elements, there are observed effects of forces due to some objects-matter yet directly unnoticed, even still unknown. Martin H. Krieger states that "matter is matter that is observed" [32]. Scientific discoveries have shown that objects are composed of molecules, atoms, subatomic particles (protons, neutrons, electrons, etc.). At rest, the relationship of matter with energy is measurable, as Martin H. Krieger has demonstrated; at rest, the "matter is energetically stable" [33].

Taking into consideration that in the Universe there are two primary natural elements, element 1 (matter) and element 2 (energy), as we call them, they can be defined, also by one another. Such an understanding of the matter is shown by S. M. Carroll when he asserts that "matter" "contributes to energy" [34]. We observe that the corollary is also true, because energy also "contributes to matter". S. M. Carroll admits that "energy sources are a combination of matter and radiation" [31]. It is generally considered that the radiation is a form of energy. Gary T. Horowitz expresses a similar point of view, contending that "the black hole radiates energy" [36]. Matter and energy are "purely natural elements" fundamental to the universe. They are created and are controlled by each other. It is interesting that $E = mc^2$ has generated along the time no discussion concerning demonstrability, but it has generated debate concerning the positioning. Luce Irigaray shows that $E = mc^2$, as it would favour "the speed of light over the other speeds that is vitally necessary to us", constitutes a "sexed equation" [37].

3. The convert relationship information-energy

Rolf Landauer observed a conversion information-energy: Landauer's Principle shows that erasure of one bit of information augments physical entropy, and generates heat [38]. As regards the relations between the elements of the fundamental triad, Mark Burgin and Gordana Dodig-Crnkovic believe that "the most intimate relations exist between information and energy. (...) Energy is a kind of information in the broad sense" [39].

The formulation of the "second law of thermodynamics" by Ludwig Boltzmann was one of the great intellectual challenges of the nineteenth century; the law says that entropy in an isolated system should not decrease [40]. James Clerk Maxwell, Scottish physicist and mathematician, tested foundations of the law, including the foundations of statistical mechanics and thermodynamics. He thought of an event of physical nature that would contradict the content of the law. He imagined a box with two compartments communicating between them through a hatch. In the box there is a gas at a particular temperature. In relation to the average temperature some molecules are cooler and some molecules are hotter. The hotter molecules are moving faster, and the cooler molecules are moving slower. The hatch is activated by a being who decides when the molecules move from a side to other side. After a certain interval and a number of openings of the hatch, the hot molecules will gather in a compartment, cold molecules, in the other. By opening the hatch the being separated the cold molecules from the warm molecules and modified the thermodynamic entropy. That is, initially the gas was a mixture of hot and cold molecules; it was in a state of disorder, it had a higher entropy. Once the molecules were separated and thus a state of order was introduced, it generated a lower entropy. In other words, the entropy of an isolated system was modified. It was proved that, against the law provisions, entropy in an isolated system should decrease. Furthermore, this being was called demon, Maxwell's demon. What we observe today is that the demon decreased the entropy, i.e. it produced information. Apparently the demon contradicts the law, because the functioning of the law compulsorily implies that there is not and there cannot be built a perfect heat engine which can extract energy from an isolated system and use it almost entirely; such a heat engine is not possible because the container itself containing the gas consumes heat to heat as container. The demon has knowledge of the idea of temperature and, without introducing energy into the box, it separates the molecules. The temperature was used as a separator engine, as the perfect heat engine. That is the demon that "seems" to turn information into energy, violating the rules induced by law.

In 1929, in the study "On the reduction of entropy in a thermodynamic system by the intervention of intelligent beings", Leo Szilard proves that the law is not violated. He describes the demon as "intelligent being". He laid aside the qualitative contribution of the demon and put in quantitative terms its activity (intervention of intelligent being). He pointed out that the demon (being) turns the knowledge in thermodynamic energy [41]. Our remark is that Szilard makes from even the intelligence of the demon a consumer of energy: to determine which of molecules are hot and which molecules are cold, the demon exerts some energy. He showed that the law would not be violated if the entropy S of a system increased by an amount $\Delta S = k \ln 2$; k is Boltzmann's constant = $1{,}38 \times 10^{-23}$ joules per degree Kelvin. On the other hand, it is known that the information is the inverse of the entropy. This implies that $\Delta I = \Delta S = - k \ln 2$ [42]. By the description that is made of a dynamic system, a certain observer intervenes in the evolution of the system. The intervention consists in the description of the induced instantaneous dynamics and irreversible discontinuity;

intervention generates a change. In fact, by its description, the observer selects a certain state of the system. The number of unknown states of the system is reduced by choice and the stream of possibilities of the system decreases. So a reduction of entropy takes place. Leo Szilard notes in the observer action "how entropy in a thermodynamic system can be reduced by the intervention of intelligent beings" [43]. With a point of view related to the content of Szilard's article, L. Brown, B. Pippard and A. Pais assert that "the decrease of entropy caused through the observation of a thermodynamic system (by an intelligent being) must be compensated by an increase of entropy imposed on the observed system through the procedure of measurement" [44]. Through this demonstration, Leo Szilard formulated a law of relation energy-information, called Szilard's engine or "information heat engine" [45].

Today, we say that the law is not violated, since intelligence constitutes energy consumption. Our thesis is that intelligence always converts information into energy and energy into information.

In "A Mathematical Theory of Communication" (published study in numbers 3 and 4, 1948, of the Bell System Technical Journal), Claude E. Shannon defines information based on entropy. The second of the 23 theorems formulated contains one of the most important and most cited formulas in the history of science. It is comparable to Einsteinian $E = mc^2$ or formula of entropy given by L. Boltzmann (and the latter has engraved it on his grave from Vienna). In its development, Shannon starts from the question: „Can we find a measure of how much 'choice' is involved in the selection of the event or of how uncertain we are of the outcome?" [46]. From here, he formulates „theorem 2": (...) $H = - K\Sigma p_i \log p_i$ [47]; H is entropy. Shannon explains: „Quantities of the form $H = - K\Sigma p_i \log p_i$ (the constant K merely amounts to a choice of a unit of measure) play a central role in information theory as measures of information, choice and uncertainty. The form of H will be recognized as that of entropy, as defined in certain formulations of statistical mechanics where p_i is the probability of a system being in cell of its phase space. H is then, for example, the H of Boltzmann's famous theorem. We shall call $H = - K\Sigma p_i \log p_i$ the entropy of the set of possibilities $p_1, ..., p_n$" [48].

Generally, entropy represents the disorder of a system. As we observe H (entropy) is the minus of the information measure - that is information is the reverse of entropy, minus entropy, as such, as we'll later see with Louis Brillouin. "Entropy" goes in the same direction with "uncertainty": „this quantity measures how uncertain we are" (...) „entropy (or uncertainty)" [49]. In relation to channel time (continuous, discrete, mixed), "continuous and discrete entropies" are registered: "In the discrete case, the entropy measures in an absolute way the randomness of the chance variable. In the continuous case, the measurement is relative to the coordinate of system" [50].

Later, in 1962, Leon Brillouin (1962) notes that information is "minus entropy", that information is negative entropy, and information means "entropy", i.e. "negentropy" [51]. He formulated the Negentropy Principle of Information, designating the idea that aggregation of information associated to states of a system is directly proportional to the decrease of entropy. Also, he stated that in this situation there is no violation of the second law of thermodynamics; that there is a reduction of the thermodynamic entropy in an area of a system and an increase of entropy in another area of it that do not constitute a violation of the second law of thermodynamics.

On the line of L. Brillouin, S. P. Mahulikar and H. Herwig (2009) consolidated Negentropy Principle of Information. They observed that the reduction of entropy may be understood as a deficiency of entropy; thereby reduction of entropy of a sub-system is a deficiency of entropy in relation to surrounding sub-systems [52].

Further researches cleared the doubts demon entered. Even more, it was demonstrated the possibility of converting information into energy [53] [54] [55] [56]. Starting from Szilárd-type information-to-energy conversion and the Jarzynski equality, S. Toyabe, M. Sagawa, E. Ueda, E. and M. Sano Muneyuki sketched "a new fundamental principle of an 'information-to-heat engine' that converts information into energy by feedback control" [57].

Mihaela Colhon and N. Tandareanu speak about "sentential form", referring to those forms which include propositional information formulated in a natural language [58]. Thought has several forms: language thought, geometric thought, thought, digital thought, pictorial thought, musical thought etc. Each type of thought has one type of efficiency called intelligence. Efficiency is effectiveness in unit or time interval. Howard Gardner asserts that there are 9 types of intelligence: naturalist intelligence (nature smart), musical intelligence (musical smart), logical-mathematical intelligence (number/reasoning smart), existential intelligence, interpersonal intelligence (people smart), bodily-kinesthetic intelligence (body smart), linguistic intelligence (word smart), intra-personal intelligence (self smart), spatial intelligence (picture smart) [59].

On conditions in which the informational process consists mainly of computation, there is easy to deduce that man is a "computer" that converts energy into information. It is the most efficient converter of the blue planet: "Man is the most complex information-processing system existing on the earth. By some estimates, the total number of bits processed in the human body every second is 3.4×10^{19}, but it uses only 20 watts power" [60].

Information means computation [61] [62] [63] [64] [65] [66]. Intelligence is a computational quality of information converting into energy. Information-energy converters can operate on the principles of computational intelligence.

4. The relationship matter-information

Forms, patterns of the information core are the materials, are material nature. That is in the information core lies matter. Immanent relationship between matter and information is represented by the forms, by patterns. Matter has form, it has information. Rolf Landauer shows that „information is physical" [67]; on the same idea, V. Vedral argues that material, physical „universe" is „quantum information" [68].

Formula $E = mc^2$ is twice impregnated informationally. The first impregnation consists of the fact that the formula which contains the principle is an equation information. Any equation is a piece of information. A second informational impregnation of the formula consists of that c^2 is information. The relationship between energy and matter is informationally mediated.

Information has a quantitative dimension and a qualitative dimension. On the quantitative dimension, information is a function of probability [69] [70]. On the qualitative dimension, information is a function of meaning.

We associate to our opinion about internal form, the position expressed by Anthony Reading related to "intrinsic information". This shows that he caught up Norbert Wiener's concept and "intrinsic information" is "the way the various particles, atoms, molecules, and objects in the universe are organized and arranged" [71] [72] [73] [74].

The cognitive organization of the matter, energy and information itself takes place through information. The modelling core of information is represented by the form. The forms are concepts that bring in convergence the observing of the informational object and its structural thought. They are places of objective finding meeting with subjective internal computation. The forms are active patterns. The computation takes place by the designing of forms on informational objectives apparently amorphous and through their structural magnetization. Through information, the mental forms find their modelling resonance in the informational medium [75] [76] [77] [78].

"Intrinsic information" is the finding of a way of organization for the matter, energy and information itself. Like world itself, the informational medium has an intrinsic structure, irrespective of the relation to the informational subject. This objective configuration creates the internal form of the informational object [79] [80] [81].

On the other hand, in its projective approach, the radiant, radiographic, resonator and infusive, informational subject designs on medium of interest the external forms. The external conceptual forms can resonate with the internal forms of informational object or they may not resonate. When the informational medium is structured, the forms resonate and the subject objectifies them. When the informational medium is not structured, the external forms do not find resonance in the amorphous medium. Then the external forms magnetize the amorphous medium and structure it informationally. The subjective is charging the objective. The informational subject infuses itself with forms, the subject "pattern-izes". In the first case, the extrinsic information is brought within range of the intrinsic information. In the second case, the extrinsic information is required as modeller and intrinsic information.

If in the intrinsic information core stands the objective organization discovery of the informational medium, in the centre of extrinsic information there is meaningful structure induced from exterior, an external form. Intrinsic information means discovery of meanings. Extrinsic information is assigning of meanings.

As critical informational tools, forms are active nuclear structure, radiant. Forms are previous informational constructions with which the informational medium is exploring and exploiting. As attested models, the forms are themselves seeking the informational space.

In fact, the forms are forms because they form (form-s). They are inserted in "amorphous and disorganized pyrite" and formally structure it. Like language, information is the discourser of computational process of commensuration with conceptual forms. Information is a putting in discourse on putting in order.

In the intrinsic information, putting in order is noticeable, because organization belongs to inventory domains. In the extrinsic information, putting in order is infused-modelling, because the organization belongs to the implementation order, it is induced by the informational subject. The extrinsic information is of the impression type. The impression-able form is found as impression. In these cases, the forms bring and radiate meanings. Intrinsic information deals with a recognition of meanings-forms. The difference between intrinsic information and extrinsic information comes from central computational operation: recognition, through forms, of meanings organization *vs.* assigning, through forms, of meanings [82]. The extrinsic information is more visible and meaningfully marked. Therefore, it is reasonably thought that they could also be called "meaningful information". Anthony Reading shows that besides intrinsic information there is also meaningful information. He states: "Meaningful information is defined as a detectable pattern of matter or energy that generates a response in a recipient" [83].

The detectable pattern is a "form".

5. Conclusion

Relationally, the neutral relationship between matter, energy and information is not primary, but secondary. The fact that the three elements of the Universe/Multi-verse do not contradict results in a liminal manner from interconvertibility. The primary relationship, principled, law-like, liminal, fundamental to the world is the

Interconvertibility of Matter-Energy-Information (I_MEI). The Matter-Energy-Information interconvertibilility renders the world permanent and dense, more and more dense inter-elements emerging in the conversion process. The unavoidable law that controls any process that takes place in the world is the law of the permanent conversion Matter-Energy-Information. Each process has an index of interconvertibility and a formula of existence, of reality.

The reality is the reality of interconvertibility. Man is the main instrument of conversion and computability. We got to illuminate some of the bilateral and non-contextual (in the absence of the third element) conversions. Reality is the place of the permanent interconversion, simultaneous and multiphase of M-E-I. What happens today contains all the history of interconversion at the beginning of the world. There remains to be investigated how to convert M into I in presence of I (in the context of I), a M in I in the presence of E (in the context of E) and an E in I in the presence of M (in the context of M). Furthermore, there is yet to be clarified how to convert M to E in the presence of I, a M "in the presence of E (in the context of E) and an E in I in the presence of M (in the context of M)" and so on. However, any presence and any context light and shadow the neutral war of the convertibilities.

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