

Comment on
“Comment on “The Informa/on as Absolute Concept and Basic Physics””

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I'm grateful to Professor Görnitz for his Comment on “The Informa/on as Absolute Concept and Basic Physics” paper, however necessitate to note that from the Comment it looks as that he didn't read the paper attentively enough, and so writes, e.g., that

“...The “Information as Absolute” model begins by postulating informational elements embedded in a highly structured Planck-scale physical framework... [while] ...There is also a fundamental conceptual distinction concerning the meaning of “information”. It is not sufficient for a physical theory simply to postulate that reality consists of “informational patterns”....”

- “Information as Absolute” concept (ref [3] in commented paper) isn't a physical model, that is a philosophical concept, where, first of all, the fact “that reality consists of “informational patterns” **isn't postulated**.

In the concept **it is rigorously proven** that the phenomenon/notion “Information” is **absolutely general and fundamental, when everything what exists is/are some “realizations” of some information – everything is/are some informational patterns/systems of the patterns that are elements of utmost general and fundamental absolutely infinite “Information” Set.** The Set - i.e. all absolutely infinite “number” of its elements, exists always, “in absolutely long time”, having no Beginning and no End, since all/every its elements **fundamentally – logically – cannot be non-existent**.

At that in the concept a number of fundamental phenomena/notions, first of all “Information”, “Space”, “Time”, “Energy”, “Change”, “Inertia”, “Matter”, “Consciousness”, which for humans, including in conventional philosophy and physics, are really completely transcendent, and so outside the concept are used/treated/studied eventually instinctively, obtain rigorous scientific definitions:

“Information (data, evidences, signals, etc) is something that is constructed in accordance with the set/system of absolutely fundamental Rules, Possibilities, Quantities, etc. — the set/system “Logos” in the concept”

“Matter” and “Consciousness” are *fundamentally different* informational systems/elements of the Set (more about what is “Consciousness” see the concept),

“Space”, “Time”, “Logical Rules”, “Energy”, “Change”, “Inertia” are “Logos” elements, i.e. unlike “simply fundamental” “Matter” and “Consciousness” are absolutely fundamental phenomena, more about what are “Space” and “Time”, and their actualizations in the Set as the Set's concrete elements' spaces, including in Matter as Matter's [4+4+1]-dimensional space, and absolutely universal unique for all of absolutely infinite “number” the Set's elements time dimension, see the commented paper (more see sections.2.2., 2.1.1, 2.1.2., 2.1.3.. in commented paper)

The points above aren't taken into account in the commented here comment; besides, while in the commented paper only a few basic points of the 2007-2026 Planck scale informational physical model (PSIP model) are considered, it looks as that he didn't read the other the model's basic paper - "Planck scale informational physical model and fundamental problems in physics" (ref. [25] in commented paper], where a number of other fundamental problems are solved or essentially clarified.

Thus "Information" is **absolutely general notion** and so really in concrete (besides the fundamental ones above) cases is practically uncertain – any using word "information", if relates to some concrete cases, including when relate to anything in Matter, contains nothing that could be specifically rationally elaborated.

So in the PSIP model title the word "informational" has the sense in the scientific definitions of the fundamental phenomena/notions above, for which in conventional physics some transcendent - and so really having no relation to the reality - properties and effects are postulated (say, for any element in the Set, including - what is principal in the model - the concept **quite scientifically rationally legitimates** the outstanding . von Weizsäcker. "Ur-hypothesis" idea, but not more – real fundamental basic binary elements in Matter principally aren't original quantum Urs

Nonetheless that is practically all - real content just in physical "information" can be only basing on concrete experimental data, including "Ur-hypothesis" .really Is based on experiment fact that Matter's space is $3D_{XYZ}$ one. At that at a physical theory/model development it is necessary to take into account maximum of the data, really scientifically rational points in existent theories, etc.,; all this, though is, of course, some "information", has no relation to "information" specifically/concretely. Physics operates with experimentally discovered material objects and their parameters – particles, bodies, fields, that have masses, charges of experimentally discovered and measured fundamental Forces, energies, momenta , angular momentums, intervals in the space, etc. – all this is/are, of course, some informational patterns/systems, but –and what?

Correspondingly the PSIP model, though fundamentally bases on the concept, has no any concrete application/mention of word "information" besides the title, it is a set of models of really experimentally observed material objects, fields, etc. that have/are described by the real parameters above

Including the above relates to wording "quantum information", which obtains a real sense only if notion "quantum" is scientifically defined, while it is transcendent in conventional physics. That also is done only in the concept: because of self-inconsistence of "Logos" element "Change" any change of anything is logically prohibited, and this prohibition is overcome by action of "Logos" element "Energy", however on some energy scale this is insufficient and so all **changes happen discretely**, while between the real changes **the states of changing objects are uncertain – "illogical"**.

However **from this general fact (and, of course, from any abstract theory) by no means any concrete parameters of change in Matter follow** - the QM scale and QM objects, first of all particles, can be, and are, discovered, and their parameters are determined, **only experimentally**.

At that, because of the “outside the concept fundamental transcendence” above, the conventional QM is based on principally ad hoc really scientifically ungrounded postulates only since they match with experimental data, while experiments principally prove nothing, and so QM has no rational explanation – for what/by, if non-mystic, reason/way that in Matter is as it is? Say, what is “wave-particle duality” etc. – that is principally impossible in the QM since, again, in it OM objects - particles, further atoms, molecules, etc. are transcendent. In the PSIP model a number of QM transcendent points are rigorously scientifically rationally clarified, basing, first of all, on the rigorously scientifically rational models of the main QM objects - particles. However, again, all this in the model relates to the notion “information” only in that is/are some information patterns and by no means somehow specifically.

Any comments on all concrete points above in the PSIP model are absent in the commented comment; while in the comment mostly “*The Protyposis approach*” is presented, which is based on “*abstract quantum information*” and in which “*AQIs [”Abstract Quantum Information units”] are taken to be the mathematically simplest quantum structures, initially without a specific semantic meaning and without presupposing localization in an already existing physical space. Their state space is C2. Spatial structures, localization, energy, particles and interactions are then to be obtained from increasingly complex states and combinayons of these elementary quantum structures....*” ; and that

“....Long before the present “InformaGon as Absolute” model, the informational program originating with v. Weizsäcker had therefore progressed through the sequence: binary quantum alternatives → quantum information → spatial structure → particle structures → symmetries of interactions...”

Etc., - and all the above in this comment that relates to conventional QM and to phenomenon/notion “information” directly relates to “The Protyposis approach”, “abstract quantum information”, etc, including this

“...: The task is not to describe an already structured physical world as information, but to explain how physical structure can emerge from quantum information. Consequently, the statement that information is fundamental is not new. More importantly, the attempt to transform this philosophical idea into a mathematically formulated physical theory had already progressed considerably before the “InformaGon as Absolute” concept was proposed in 2007...”

- is principally incorrect. Really nothing concrete follows from the approach, and from the von Weizsäcker. “Ur-hypothesis”, which was formulated as some QM hypothesis, though. Really can exist arbitrary number of the Set’s elements “a la Matters”, the constructions of which are based on binary logics, but which at that have quite different numbers and nomenclatures of main particles (as protons, neutrons and electrons in tribal Matter) that interact by quite different numbers and nomenclatures of fundamental interactions; in all a la Matters on some scale the objects states and interactions are quantized and uncertain, the constructions of the objects are based on quite different “Ura” – and all this would be described by quite different QMs and “quantum informations” The approach by any means cannot, and so doesn’t, solves the task in the quote above.

Really that is an attempt **to describe** what is in Matter on QM scale; which looks as isn’t really too successful – the commented here comment doesn’t contain any concrete consequences, say, any example of derived “particle structure”, while **any** “**spatial**

structure”, as that is rigorously scientifically shown in the PSIP model, **fundamentally cannot and so doesn’t, exist - all dimensions of the absolute Matter’s spacetime are fundamentally continues.** Besides note also that the commented comment so doesn’t contain any mentions about experimental validation of the approach.

Etc., there can be other remarks on the commented comment, but the above looks as is enough, and so only one a remark else. As that is rigorously scientifically shown in the PSIP model utmost universal “kinematical“ Matter’s space has 4D metrics ($c\tau, X, Y, Z$) where is additional to 3 XYZ (“von Weizsäcker’s” – and principally “The Protopyosis approach”) dimensions the $c\tau$ -dimension.

The **space dimensions** of any/every informational patterns/systems’ spaces fundamentally relate (more see section 2.21.1.8n commented paper) to digresses of freedom at changes of basic patterns/systems’ elements’ states **providing possibility of the changes.**

As that rigorously scientifically, and in complete accordance with all reliable experimental data is shown in the PSIP model, in the system “Matter” the basic elements are fundamental binary logical elements (FLE), and in its space above 3 XYZ dimensions relate to 3 digresses of freedom at changes of FLE state – FLE binary flip. The $c\tau$ -dimension relates to FLE degrease of freedom to make reverse flips, what provides possibility of antiparticles existence and the energy conservation law;

- whereas the $c\tau$ -dimension really in conventional physics – and in principally 3D_{XYZ} “The Protopyosis approach” as well -, fundamentally erroneously is postulated as the time dimension; and so, say, in conventional (classical and QM) physics and “The Protopyosis approach” antiparticles really don’t exist.

So, though QM objects are really essentially based on binary logics – first of all that relates to fermion existence and interactions, and so it was quite natural that yet in 1920s Paili described electrons interactions with EM field and Dirac described electrons existence and interactions by using the spinors presentation, however the predicted positron existence was substantiated by postulating really transcendent “sea of negative energies”, which really doesn’t exist. And, besides, fermions cannot be fundamental basic elements, in, say, bosonic systems that is inessential.

Really, as that rigorously scientifically, and in complete accordance with all reliable experimental data, FLEs form the ultimate base of Matter – the dense FLE-lattice, which was created and formed at the “inflation epoch” (more see ref. [25]) and placed in the fundamentally already existent 4D space above. At the creation a portion of energy was, of course, spent, however this has no relation to energy that is contained in Matter’s matter. This energy huge portion was pumped into lattice just after the (initial version of) lattice was formed, what resulted in creation of primary particles and further of observed now ones, which is stored in the particles and only distributed/redistributed at the particles interactions, forming next and next diverse pictures is the kaleidoscope “Matter” always remaining constant.

The objects matter consists of – really particles and system of the particles - are specific disturbances in the lattice (more, including what is the particles structure see section 2.3. in the commented paper) that were/are created by/at some concrete 4D momenta impacts on any the lattice FLE, and transmission to it some energy, which, again, has no relation to energy at the lattice creation – FLE, if is fixed at rest in 4D space or is

flipping in a FLE-by-FLE sequential flipping along 4D straight line . has no energy/mass, including, of course, " 2.2×10^{-5} g" in the commented comment.

Conclusion

The commented comment has practically no relation to the commented "The Information as Absolute Concept and Basic Physics" paper, while the presented in the paper basic points in rigorously scientific solutions or essential clarifications of a number of fundamental physical problems have no relation to presented in the commented comment "*The Protyposis approach*" - and vice versa – anything in the approach that "*had already progressed considerably before the "Information as Absolute" concept was proposed in 2007*" and after principally have no relation to the PSIP model, which is essential base for next after classical physics and QM – Planck scale physics - development.

I shared the commented paper with Professor Görnitz via RG "Share" option first of aimed to info him, since he worked with C. F. von Weizsäcker, that the outstanding C. F. von Weizsäcker idea is alive, and is one of fundamental cornerstones in the Planck scale Physics; and hoping that if this will be interesting for him and his colleagues, they would take part in the development of the PSIP model into comprehensive theory. Let's hope that will happen despite this vexing comment.