“The Information as Absolute” conception – some comments to some remarks.

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Abstract: in these notes some answers of Sergey Shevchenko on some remarks to the Shevchenko-Tokarevsky’s “The Information as Absolute” conception at a discussion in the ResearchGate net are given.

An Introduction: In July 2019 the ResearchGate net discussion [1] contained a number of rather rational remarks to Shevchenko-Tokarevsky’s “The Information as Absolute” conception of a couple of the RG members (“WH” and “H-GD” in the text below), which were answered in corresponding posts by one of the authors of the conception. These answers are given below, practically without some editing. The answers are marked by data when they were written at the discussion

July 3

WH,

“*…You clearly regard the mind as non-finite and place the non-finiteness in some ‘information realm’. ….*”

You seems don’t read SS posts attentively enough; and, besides, the papers that are linked in the posts are linked because of explanation in details of rather complex problems in a post is practically impossible, and in the papers one can find more information to understand the post. So it is rather desirable to read these papers, what seems you didn’t also.

Including in the SS post above just it is pointed, that “mind” isn’t some “non-finite” informational system; at that in the linked paper it is explained, that “mind” isn’t some singled out essence, “that thinks”. **Mind is only highest, “verbal”, level of operation of the non-material informational system “consciousness”** [“homo sapiens sapiens” version].

Which [consciousness] in many traits is now an analogue of a "computer+program" system, and, as a such system, is quite "finite" system, i.e. consists of finite number of fundamental logical elements ["logical gates"] from which a few functional modules are made in accordance with finite design, and the system of the modules "consciousness" as a whole operates in accordance with a finite set of basic laws/links/constants and her finite "program shell"; where seems 99.99% of operations proceed outside the "mind level".

Consciousness indeed exists and operates, as that the other informational system, "Matter", does, in the absolutely fundamental and absolutely infinite "Information" Set, which isn't some abstract/virtual "information realm". That is absolutely real Set/System; and Matter and any consciousness are absolutely really only some elements of the Set – the fact that there exist nothing else besides some informational patterns/systems of the patterns isn't some "Shevchenko suggestion", this fact is rigorously proven in the Shevchenko-Tokarevsky's "The information as Absolute" conception
https://www.researchgate.net/publication/260930711_the_Information_as_Absolute DOI 10.5281/zenodo.268904.

So when you write

"…*However, you cannot demonstrate this realm to exist by communicating any result convincingly, since this would require communicating a result and its proof which cannot be done by finite means*….."

There is no any necessity in any demonstration of that everything is/are some informational patterns/systems, again, that is rigorously proven, and in the "consciousness problem" remains only the question – are Matter and consciousness fundamentally analogues, or, by another words – can "consciousness emerge from matter?"

The answer is – see the links in the SS posts above – "No". That understood indeed great scientists Gödel and Schrodinger, however they didn't know – if mind isn't a machine and here is something "vitalistic" – than what is this "vitalistic", and where is it placed?

In spite of that both systems are made from the same stuff, i.e. from information, these informational systems are based on fundamentally different sets of the basic links/laws/constants and operate in essentially different spacetimes, which [spacetimes] are sub-spacetimes of the Set's spacetime that includes spacetimes of seems absolutely infinite "number" of the Set's elements.

So as to

"…*They may make nice beliefs but why should anyone other than yourself believe them*?…."

Here are no beliefs, here are rather reasonable elaboration of the "consciousness problem", which is based/grounded in the rigorous informational conception above.

Cheers

July 4

WH,

"…*If you believe mind is finite then it can be modelled by a Turing machine. If you don't believe it can be modelled by a Turing machine then you believe in some non-finite part of mind...*"

Again you seems don't read SS posts attentively enough. Again, to say about "mind" is necessary before to understand – what is "mind", again, mind is only highest level of operations of fundamentally non-material informational system "consciousness" in "homo sapiens sapiens" version [every other living being has a consciousness, though with much lesser functionally realized "mind"],

Which on this level is "consciously" [not "automatically self-aware" as every material object is] self-aware and is able to analyze logically some obtained information, at that she is "finite" functionally as some her analogue, say, first Stephen Jobs's [though with a rather good "hard disk"] computer+program, where "mind" is appearing information on the monitor, when 99.99% of information is processed besides utilities that display information on the monitor - and "on the mind". As well the "outside mind data processing" in consciousness with rather non-zero probability occupies seems 99.99% of whole consciousness operation, see https://www.researchgate.net/publication/329539892_The_Information_as_Absolute_conception_the_consciousness DOI: 10.13140/RG.2.2.26091.18720.

However what differs consciousness from computers, including "a Turing machine",
even if we don't take attention on that this machine isn't some purely material object, without developed and downloaded by non-material consciousness corresponding program a computer is nothing more than a bucket with some atoms and molecules [though they are very specifically structured by again a consciousness, however any consciousness fundamentally cannot emerge even from such specific atoms… composition],

first of all in that the consciousness indeed is in certain sense "non-finite" in that it hasn't any principal limitations at elaboration of any finite information that she can obtain in the "Information" Set, including from Matter, other consciousnesses, etc.

Consciousness operates with "notions" that have many interpretations depending on a context, when any computer, including "a Turing machine", operates only in limited frame with limited and rigorously enough defined, information. Etc., though note that "non-finite" isn't a good term, since it can imply, say "non-limited" and "infinite", when in different contexts that can have different senses, as in the case above.

"…*I have read "Information the absolute" and I cannot agree with your claim that it proves "there exist nothing else besides some informational patterns/systems of the patterns". …..*"

To understand some proof is necessary before to understand – what is "proof"? After somebody understands last point, for her/him there is no problem to understand that the main inference of the "The Information as Absolute" conception in your quotation above indeed is rigorously proven. Possibly for you would be useful to read comments to the paper also.
Including from that you think that the paper

"…*Indeed it does not even discuss the clearest notion of information - that is that information is simply a measure of correlation. ….*"

- follows that you didn't read the paper attentively enough, in the paper the common definition of the absolutely fundamental phenomenon "Information" is given: Information[al pattern] is something that is constructed in accordance with the set of absolutely fundamental Rules, Possibilities, Quantities, etc., which in the conception is called "Logos" set. That's all,

information only in some specific cases is a "measure of correlation"; which can exist practically only in a simple logical system "Matter", when in other informational systems that isn't true, for example. when mostly the semantics determines an information context.

Cheers

July 5

WH,

"…'Mind' in any way you wish to define it is either finite in nature or infinite in nature… Your reply simply does not address this. So simply do you think mind, with your definition of mind, is finite or infinite?….."

In the SS posts a few times already is written that: (i) – mind is only highest level of operation of fundamentally non-material informational system "homo-two- sapiens consciousness", which is some analogue of a simple computer+program, and (ii) – this system is "finite", i.e. consists of finite number of basic "logic gates" and functional modules that are made from these gates; and is based/organized, exists and operates in accordance with finite number of basic laws/links/constants, having at that finite information processing rate, "random access memory" [short term memory in psychology], finite "hard disk", etc.

As that is finite in any computer+program, including any "Turing machine"; however, in fundamental contrast to any material object, even if an object is made by a consciousness and is able to process information by programs that are developed by consciousnesses, the "finte" consciousness, albeit she cannot process so some "infinite information", can, nonetheless process any "finite" information from the absolutely infinite "volume of information" in the absolutely fundamental "Information" Set. Again - for consciousness there is no any limitation in this case, including she can process uncertain and randomly changing information, etc.

Besides you next time

"…*Similarly when I say that you do not address the clearest notion of information - that information is simply a measure of correlation the term does not occur in your discussion*…"

write about some strange information as a strange "measure of correlation", though in the SS post above it is explained, that **"Information" is anything that is constructed in accordance with the elements of the "Logos" set.** Again **– that is all**; and the main properties of information are given in first pages of the paper "The information as Absolute", link see SS post 2 days ago now.

The list includes "mainstream definitions" of Information, and the properties of Information that are selected as basic, including at practical applications, in the conception. Amid them there is no any irrational "measures" of any irrational "correlations"; if you keep in mind "Shannon theory of information", then it is practically market term [and Shannon frankly tilted his paper "A Mathematical Theory of Communication"]; which can be applied rather rationally only to rather simple and rigorously defined logical systems, including in some cases to the informational system "Matter". But cannot be applied in other cases.

The base of Information is "notion", when to define a concrete notion in the Set is necessary to know absolutely infinite "volume of information" – see the first pages in the paper above. So

Information [i.e. most of possible informational patterns/systems] is very bifurcated and paradoxical phenomenon, which can be formalized - and so processed on some "Turing machine", only, again, in some minority of possible – and so really existent – cases. When, again – the consciousness is able to process and to elaborate, at least in some limits, any information.

"*…As far as not reading your work carefully enough I fear the English version is simply badly written and appears as a sequence of assertion, linked by tenuous s argument, supported by no empirical evidence and with little or no theoretical justification.…..*"

- it seems you try to pose yourself as some "Big Savant", who always says some truth and so can say anything without any arguments. Sorry, that is indeed rather popular practice of members of some "scientific community", but this practice is well known and works only for housewives.
English in the paper isn't Oxford one, however the text is well and rigorously argued and is quite clear for anybody, who is able to think logically and non-standardly. So really from this quotation follows only that you, besides problem with understanding – what is "proof"?, have some similar problems else.

More see the SS posts above and papers that are linked in the posts.

Cheers

July 6

WH,

"*…nor sexist comments about women's intellectual capacities (your"house wives" comment) make your arguments any stronger.…..*"

When in a scientific discussion some accusations in sexism appear, the discussion becomes be rather strange and so I'm forced – to escape some "Tramp problems" further here, to claim, with full responsibility, that I am not against the women's rights on sex and its absence!

Though the word "housewives" is used on the RG; last case when in some this thread's sister some woman wrote about publications of two members, where they solve the "consciousness problem", that for professional neuroscientist these solutions seems just as are some housewives' texts.

"*…Your reply contains the phrase 'Amid them there is no any some irrational "measure" of some irrational "correlations"; ' What is "no any some irrational" meant to mean? …..*"

That meant that you in your posts above used some "non-standard" wording "information is simply a measure of correlation", which contains no any rational explanation – what are these "correlations", why these correlations can be measured, and what is this "measure" and why and by what way this measure measures?; or by the words in the SS post above, these "measure" and "correlation" aren't rational and so are irrational. Nothing else, though indeed "any some" was rather vague wording, and thanks – this SS post above is edited.

As to

"*…To illustrate what is wrong with you arguments I will take the properties of information you referred to in your essay. As example I will take either quoted Weiner definition of information. The most important thing about it is that Weiner does not give it as a definition.…*"

- that is indeed rational and more interesting than above note, though from this note follows that you read https://www.researchgate.net/publication/260930711_the_Information_as_Absolute DOI 10.5281/zenodo.268904 again not attentively enough. This "Wiener's definition" indeed isn't a definition of the phenomenon "Information", and just therefore on page 7 in the paper it is written "….Let's return to the definitions 1-12 (except, of course, Wiener's one)…."

However Wiener, though didn't understand – what Information is - indeed touches fundamental points in Information, so it is worthwhile to comment his/your quotation:

"…"The mechanical brain does not secrete thought "as the liver does bile," as the earlier materialists claimed, nor does it put it out in the form of energy, as the muscle puts out its activity…."

- that is indeed so, but is in this case nothing else than some bare ad hoc declaration, since neither earlier materialists, nor Wiener principally could not to explain – why that is so.
Including in the below [continuation of the quote above]

"*…. Information is information, not matter or energy. No materialism which does not admit this can survive at the present day"…..*"

- again neither earlier materialists, nor Wiener understood what are "information", "matter" and "energy"; again rigorous definitions of these phenomena are given only in the SS&VT conception above; and so really the quotation is also a next some bare ad hoc declaration.

The definition of Information – see the SS posts above; from which, including follows:

(i) - indeed "The mechanical brain does not secrete thought…", that makes fundamentally non-material informational system, in this case "homo-two-sapiens consciousness";

(ii) - information indeed "isn't matter", however Matter, and its every "matters" is/are only some informational patterns/systems;

(iii) – information indeed "isn't energy". However **Energy** – see the paper above - is absolutely fundamental Quantity, i.e. an **element of the "Logos" set**, which is necessary to make every change of every informational pattern/system, including, of course, to create some pattern/system.

And this element is seems utmost weird comparing with other Logos's elements, which are rather understandable or simply are some common grammar rules, as, say, the [Logos's] Rules "Space" and "Time".

But what is "Energy"? - in the conception is known till now only that it is "dull" something, a non-zero quantity of which at every change is absolutely fundamentally necessary to overcome the logical self-inconsistence of the Logos's phenomenon "Change".

Cheers

July 8

WH,

[The post-1] You next time read SS posts and papers not attentively enough; as to

"…*Clearly we differ on the meaning of the word "definition". But the point I made was that the quote "information is information" is not Wieners definition of information.*……", etc.

- what is "Wieners definition of information" in the "The Information as Absolute" paper was quite clearly explained already in the last SS post above. As to other points in your post:

*"…..**On information as correlation***
A correlation is a lawful regularity between two events or the state of two objects (or systems), statistical or otherwise. The notion of correlation is at the heart of rigorous treatment of information, see, for example: Claude E. Shannon "A Mathematical Theory of Communication"…" etc.

More than once again here: there isn't information as "information is the measure of correlation", as you stated, as well as any correlations aren't some "heart of rigorous treatment of information", including, as that follows from the next text, in framework of Shannon's "Theory of information" that you have in mind.

In this theory indeed some measure exists, but that is the "measure of quantity of information", which is determined for, say, N independent events as $-\Sigma p_i \ln p_i$, i=1…N, p are probabilities of the events, and the unit of this measure is information that is contained in simplest binary system of two equally probable events – "bit". If events in a system are correlated, than in the formula above some conditional probabilities appear, nothing more, here are no some "hearts.
However, again more than once again here – "Shannon information" and its measure above relate to a minor traits, applications, etc. of the phenomenon "Information". Again the **common definition of Information is: information[al pattern] is something that is constructed in accordance with the system/set of absolutely fundamental Rules, Possibilities, Quantities… "Logos" [**as it is called in the conception**]. That's all.**

At that, again, content of information is defined practically completely by semantics, information operates with notions, which have concrete senses. An example:

Now there are two informational objects: (i) – the mainstream philosophy, and (ii) – the Shevchenko-Tokarevsky's paper "The Information as Absolute"
https://www.researchgate.net/publication/260930711_the_Information_as_Absolute DOI 10.5281/zenodo.268904.

The object (i) is seems a million pages of publications in, say, last couple of hundreds of years; the object (ii) is 36 pages paper.

Publications in the object (i) are fundamentally nothing more than some sets of meaningless or banal allegations [more about what is the mainstream philosophy see the attached PDF, which, though is a few last pages (Annex) in the paper
https://www.researchgate.net/publication/329539892_The_Information_as_Absolute_conception_the_consciousness DOI: 10.13140/RG.2.2.26091.18720].

The object (ii) contains the indeed philosophical conception, which solves so most of fundamental indeed philosophical problems, and, so further a number of fundamental problems in science. Examples:

- the conception transforms the existent neuroscience, which is now an eclectic set of arbitrary data about neurons and brain, into indeed science – see the last link;

- in physics the conception clarifies fundamental Meta-physical problems and from the conception follows the Shevchenko-Tokarevsky's the informational physical model https://www.researchgate.net/publication/273777630_The_Informational_Conception_and_Basic_Physics DOI 10.5281/zenodo.16494; where a number of "simply fundamental" physical problems are solved or clarified, a few examples see the SS posts in the threads, an example see https://www.researchgate.net/post/Why_is_the_notion_of_Big_Bang_convenient_appropriate_for_you_question_for_physicists_chemists_and_researchers_working_in_related_sciences

- etc.

At that the object (i) contains "quantity of Shannon information" in "bits" [which are necessary, e.g., at transmitting this object through some communication channel] which in millions times more than such "informational content" of the object(ii); however the object (ii) contains millions times more indeed information, than the object (i).

This post is rather long already, so the comment of other points in your post is in the next SS post.

Attached PDF
https://www.researchgate.net/profile/Sergey_Shevchenko/post/Can_we_mathematically_model_consciousness/attachment/5d2353f8cfe4a7968db30bc6/AS%3A778399639420931%401562596344394/download/aa_1_Phil_last+pag_Consc.pdf

Cheers

July 8

The post-2 in comment of the Will Harwood post [post-1 see the SS post above]

"…***On the continuum hypothesis***

The non-provability of the continuum hypothesis in ZF set theory is not an example of Godel incompleteness. If it were the hypothesis would be true but unprovable. However, with respect to ZF this is not the case as either the continuum hypothesis or its negation can be consistently added to ZF to form a consistent theory. ……"

Authors don't claim in the "The Information as Absolute" paper that the continuum hypothesis is an example of the Gödel incompleteness, in the paper it is written "possibly" in ZF set theory; though that seems as indeed an example since it is proven that proof of its truth/false in framework of the ZF set theory is impossible.

When that "either the continuum hypothesis or its negation can be consistently added to ZF to form a consistent theory" has no relation to the Gödel incompleteness which relates to concrete

mathematical theories. To understand that if to add in some mathematical theory an additional axiom then some other theory appears there is no necessity to be Gödel.

"…***On science***… *A scientific law is a sceptically held hypothesis that is never 'proved' but rather is regarded as the least explanation compatible with the current experimental data*…"

That is indeed so, and just that is written in the SS&VT paper above "….the postulates in Nature sciences ("Nature laws")..the latter, rigorously speaking, "have no right to be laws". In reality they always remain be as some hypotheses…" – as you correctly quoted.

Any experimental data principally cannot prove any humans' inference, including, say, postulates in some theory of something in external to the "verbal level" consciousness operation environment; though it is sufficient to have one experimental outcome that is inconsistent with a theory to prove that the theory is either wrong or its application is limited. However that

"…*But in your case we have axioms without contact with the physical world. There is now empirical content. So it is a mathematical theory not a physical one*…."

- has no relation to the "The Information as Absolut conception. It isn't a mathematical theory [though mathematics is abstract product and in it there are usually no principal problems with proofs] and isn't a physical one.

At that the **main principle in the conception** above: **there don't exist anything else than some informational patterns/systems of the patterns that are elements of the absolutely fundamental and absolutely infinite "Information" Set** has no relation to "the physical world" - this principle **is just purely empirical**, it follows from experimental detection of any information, and – what is fundamental difference of such experiment from any other experiments – only one experiment at that is sufficient to infer that any information absolutely fundamentally – logically - cannot be non-existent, from what follows the principle above; that so the Set exists principally forever, it hasn't a Beginning and End, etc.; and that is logically true.

Again – see the paper above – that turns out to be possible just because of the phenomenon "Information" is absolutely fundamental, unlike, say, "simply fundamental" informational systems "Matter" and "Consciousness" to which other humans' inferences relate.

"…***On what sets exist***

With respect to the null set you say "This set, unlike any other sets, is unique – null set exists as the single set, irrelatively of how many and whatever sets exist anywhere"
But if you accept the concept of set and the null set, you get the cumulative hierarchy of sets, all of which exist in the same sense as the null set and all of which are unique by construction. …."

The null/empty set indeed is unique/common for all possible sets, and is for every set as "there is no [elements of concrete set]; for example zero in any arithmetics and the null set of a set of caws are the same set; and that is quite independent on any "cumulative hierarchy of sets". Though indeed, in concrete cases sometimes is convenient to define/to call concrete null sets for concrete sets.

And the null set, as any other element in the Set, contains in its "not-I" section complete information about all other elements in the Set. More see the "The Information as Absolute paper linked in the first SS post of this comment.

"…***On absolutely infinite sets*** *…But we should ask what an absolutely infinite set would be if such exists. First we would have to avoid Russell's paradox in introducing it. It could not be the set of everything including all sets and obey unrestricted comprehension. Mostly this is tackled by separating out proper classes from sets and introducing a call, the universe V, which includes all sets.…*"

In the reality there is no any necessity to avoid Russell's paradox for understanding that the "Information" Set is the "set of all sets".

The paradox
[https://en.wikipedia.org/wiki/Russell%27s_paradox] "*Let R be the set of all sets that are not members of themselves. If R is not a member of itself, then its definition dictates that it must contain itself, and if it contains itself, then it contradicts its own definition as the set of all sets that are not members of themselves*"

by no means meant that "set of all sets" doesn't exist. The paradox appears only because of additional condition that such set must not be "member of itself" also. However, for example, if there are sets A of numbers (1,2) and B of (3,4), then the set C (1,2,3,4) is, of course, the set of A and B sets – and that is true for any number of any sets, including for the set of all sets, which is quite evidently a set;

and for truth of this fact [and existence of the Set; in the SS&VT paper above there are some reasons else, though] there is no necessity in any "*proper classes from sets*", introducing of any "*universes V*", etc.; when the paradox's problem in this case really is only a private problem of Russell and ZF theory.

Cheers

July 10

WH,

"……*There is so much to comment on in your reply that the my reply would be even longer than your own. ….*"

In the SS posts above indeed a number of your assertions are commented, which are mostly misleading; but, nonetheless, are non-trivial, and so the posts are useful for those, who want to understand what happens in Matter, humans, and outside. Who are able also to think logically and non-standardly, and are able, when reading a next text's passage, to remember what is written in previous ones, though.

The last your post contains essentially lesser scientific points, however next time contains some allegations, from which next time seems follows that you read the SS posts and SS&VT papers attentively enough:

"…*I can agree with you that your essay constitutes neither a physical nor mathematical theory of information. ……*"

-?

In the "The Information as Absolute" conception paper, and in any SS post on the RG, never was written that the conception "constitutes neither a physical nor mathematical theory of

information". On the contrary, everywhere it is written, that the "physical theory of information" ["Shannon" one] indeed relates to the Information, however in minor and simplest cases, which are, nonetheless important because of Matter is a simple logical system with highly universal laws/links/constants, and applications of this approach in practice are useful; when Matter is indeed fundamentally important thing for humans, including for physicists.

As well as "mathematical theory of information" [about what you didn't write earlier], i.e. such mathematical branches as mathematical logic, theories of complexity, of formalized languages [and linguistic outside mathematics as well, though]; and the whole mathematics essentially as well, though, are also theories of information, which, of course, are valid in the conception.

And as to

"*…Your weakness seems that you do not have good grasp of mathematical logic and set theory.* …."
That is so, authors of the conception are physicists, however their level in this case isn't zero level, and, say, that

"…I have illustrated this already with my reply about the incompleteness results and the continuum hypothesis…"

- wasn't take place, see the corresponding passage in the SS post-2 above.

Besides:

"*….In your reply in relation to Russell's Paradox you seem unfamiliar with either the history of the paradox or it's relation to ZF. The paradox is essentially the problem of admitting unrestricted comprehension in either higher logic or set theory.……*"

Again, in the "The Information as Absolute" conception there is nothing super-fundamental and unpredictable in existence of the Russell's Paradox; again – Information, including mathematics, is very bifurcated and paradoxical phenomenon, and existence of paradoxes is quite natural.

Including simple ones, such this paradox, which appear if there is some dichotomy – and so the notion "all" becomes be sometimes inconsistent in some logical schemes. An example of two well known such paradoxes:

– the Liar paradox: an Cretan says "all Cretans are liars ", and

– the Russell paradox that there cannot be a "set of all sets", because of

"*…If we look at this in more detail your problem is that you want an "absolutely infinite" set, but what does this mean? Do you mean a set which contains everything? If so then it contains all sets which are not members of themselves. But if this is a set it contains itself*!…..", etc.

These two paradoxes are similar, however they are principally different. In the Liar paradox Cretans can be objectively really either liars or not, and, say, the assertion < a Cretan says "all Cretans always say truth"> isn't paradoxical. So this paradox is indeed - objectively real - one.

However the Russell paradox appears only because of in a concrete subjective abstract human's mathematical theory for the set the attribute "member of itself" is assigned, what creates some problems in this theory and, as you write

"*…It is a problem the permeates almost all higher logic and different set theories and type theories avoid it in different ways but, in general, following what has become known as "the doctrine of limitation of size"….",* etc.

However objectively really the phenomenon/notion "**set**" is **absolutely fundamental** notion.
"**Set**" and the phenomenon/notion "**Quantity**", are elements of the "Logos" set; and so, again, if, as that is in the example in the SS post above, there exist at all only two sets A (I,2) and B (3,4), then the set C(1,2,3,4) is without any objective restrictions just a set, which, at that is the "set of all sets", in spite of is non-legitimate in the some human's theory.

Just so the phenomenon "**set**" – see the paper - **is the unique mode of existence of information**, which [information] exists as elements of the absolutely fundamental and absolutely infinite "Information" Set, which is "set of all sets" also [though if the "number" of sets is infinite the notion "all" becomes be essentially uncertain, when we have absolute infinity, that becomes be much more essential].

And in the Set every element contains absolutely true and complete information about every other element of the Set, including dynamical elements "know" everything about their states in past and in future, i.e. every element is the "set of all sets" that contains completely the Set as a whole….

Cheers

July 11

"*…The article Consciousness as a Physical Process Caused by the Organization of Energy in the Brain by Robert Pepperell appears to discuss the energetic processes in the brain with a 18-19th century physics view. … With all due respect this article does not connect at all to the current state of the art towards formulating a modern Physics of the Mind.….*"

Consciousness is fundamentally non-material informational system, which is fundamentally different from the informational system "Matter", and which mostly exists and operates in own spacetime outside Matter and Matter's absolute [5]4D Euclidian spacetime.

"**Mind**" **is simply highest, "verbal", level of the consciousness operation**, on this level the consciousness operates practically completely outside Matter.
Physics studies Matter and so there cannot be principally any "Physics of the Mind" in any physics – either 18-19th century, or 21-th century, or 22 century…

Cheers

July 11

WH,

"*…Your reply suggests that you accept the existence of the Russells' paradox in the set theory that you are using...*"

Again – see the SS posts above – the Russell's' paradox is private problem of Russell and concrete completely subjective human's consciousness's abstract "ZF set theory", from which,

again, by no means follows that “set of all set” doesn’t exist objectively really – simply as the union of different existent concrete sets, again example see SS posts above.

At that the phenomena/notion “Set” in the Shevchenko-Tokarevsky’s “The Information as Absolute” conception is, practically for sure correctly, introduced as absolutely fundamental phenomena/notion, an element of the “Logos” set, which [Logos set, including the element “Set”] “makes something be some information”; and this set exists and acts absolutely really and independently on – what paradoxes appear in what humans’ mental construction.

Which – “paradoxes”, “Gödel’s incompleteness”, etc., etc., etc., are quite naturally appear in any complex enough mathematical theory quite naturally – the phenomenon “Information” is very bifurcate and paradoxical phenomenon.

Including, also, in the text above indeed there exists an apparent contradiction - a “set of all sets” formally is a next set, and so the wording in quotes [with “all”] becomes be allegedly incorrect. However that isn’t a contradiction by at least two reasons:

– first one is that this “contradiction” becomes be solved formally if is as “ the set of all sets is set of all sets besides the union of these sets and the set that is union of these sets”;

and, what is more important,

- in the conception the phenomenon “Set” is the absolutely fundamental mode of existence of information, it cannot exist by some other way. When, again, information is based, first of all, on semantics, and so in this case any union of any sets of informational patterns/systems isn’t a mechanical “set theory’s union”, in the unions really some new additional interconnections between elements appear; so the formal solution above becomes by quite rational really. Including that is true for the really existent absolutely fundamental and absolutely infinite “set of all sets” “Information” Set.

“*…Also your reply fails to say what you mean by an ‘absolutely infinite set’. So although despite all your words you fail to address the argument. …..*”

-?

In the paper https://www.researchgate.net/publication/260930711_the_Information_as_Absolute DOI 10.5281/zenodo.268904 two approaches are given – how some absolutely infinite set can be constructed; and on first pages.

Cheers

July 12

Dear WH,

You next time write about some points, which, when relate to the discussion that you started “is the SS&VT “The Information as Absolute” conception valid or not?”, are well clarified already – see the SS posts above.

Including that Russell's paradox [in contrast to, say, real “Liar paradox”] is indeed a "private problem of Russell and concrete completely subjective human’s consciousness’s abstract “ZF set theory”’ as well; as, say, the “Gödel incompleteness” is that in mathematics also, etc., - in the

conception above it is shown that time-to time appearance of some paradoxes in mathematics is quite natural, inevitable; since the phenomenon "Information" is highly bifurcated and paradoxical phenomenon. That doesn't mean, of course, that mathematics is some useless human's consciousness's toy, that – as that follows just from the conception – is ultimately important science.

However when from that, say, in ZF theory the Russell paradox "prohibits" existence of a "set of all sets", that, again, meant nothing relating to the conception – the "Information" Set is absolutely fundamental and absolutely infinite "set of all sets", which can be constructed by at least two ways; more see the SS posts above.

That above relates also to the notion "Information" – again see the SS posts above:

- in the conception the correct common **definition of "Information" is given: Information is something that is constructed in accordance with the set of absolutely fundamental Rules, Possibilities, Quantities, etc. – "Logos" set in the conception**. Including the phenomenon "Set" is an element of Logos set. That's all, this definition includes "Shannon theory of information" – till it is applicable; mathematics, first of all logics, is really just a next, and utmost usable, "theory of information", etc.

So let us don't return to these points more, and return to the indeed discussion, as that are your other, in this case indeed concrete propositions:

"*…I will add to this that (**I6**) any set as a set is discrete since discreteness is not a set theoretic property in the sense of set theory in which things are defined via properties of the membership relation. Discreteness i(versus continuity) s a topological property define diva additional structure on sets. ….*"

- in this case again the set theory isn't applicable. The absolutely infinite "Information" Set isn't, of course, a "countable set", however because of the Logos's element Rules/Possibilities "Space" and "Time", which, as Rules, establish that between different informational patterns/systems must be principally non-zero space and time intervals, the Set is principally "**discrete**".

That is actualized in the Set because of different patterns/systems either are placed in "discrete" points in common spacetimes [every concrete space/time/spacetime is concrete actualization of Space and Time as Possibilities for concrete patterns/systems] of some concrete – always not absolutely infinite – system, or in simply different spacetimes of fundamentally different patterns/systems.

By another words Space and Time are simply common language grammar Rules/Possibilities, an example: to write some text in any language is necessary to have a space, for example a paper sheet, at that between words must be space intervals. In other case the text will be non-understandable, i.e. will not be some information in concrete informational system "some group of humans".

Though, say, in German there are some words that have, in fact, a number of words [in other languages], which occupy a whole strings on a sheet. Nonetheless Germans understand the language, for that their consciousnesses use for the "discretization" additional to the sheet space dimensions in the consciousness's own spacetime; which [the consciousness's spacetime], again, is mostly outside and only partially intersects with Matter's absolute [5]4D Euclidian spacetime.

So, because of the "number" of at least space dimensions in the Set is [absolutely?] infinite, the Set can be, and is, a discrete set.

"…*The speculation in (**I8**) that the elements of a set are expressible ins any language, provided that the language is capable of infinite development), amounts to saying that provide we have a way of creating generalised stings in the language so that the cardinality of the set of generalised strings is a least that of the set of elements we we wish to name. Semantics then has the job of constructing the mapping. In this for it is obviously a trivial assertion.……"*

The property of Information (**I8**) was essentially considered in this discussion earlier – see corresponding WH-SS posts about "finite" and "infinite" in consciousness [now 7 days ago]

"…(***I7***) *appears to be meaningless since no definition is given of absolutely exact……"*

[in the conception paper] Property **I7:** (At least true) information in the "Information" Set, as well as in any of the Set's limited (by some attributes) subsets, can be "absolutely exact"

- that is indeed some vague in certain sense, assertion. However it is explained, again, in certain sense, further in the paper: . For example two identical texts contain absolutely identical implications. I.e. informational patterns can be exactly identical - in contrast to what humans observe in the environment, where everything is different and constantly changes.

And this property is very important; for example from it follows the explanation of what is purely ad hoc postulate in quantum mechanics that "all particles of given type are identical", which exist in QM to fit the theory with experiments. At that, though, from the conception firstly follows explanation of another fundamental problem – what is a "particle" at all? – that are some informational patterns/[close-loop algorithms, see the SS&VT informational physical model https://www.researchgate.net/publication/273777630_The_Informational_Conception_and_Basic_Physics DOI 10.5281/zenodo.16494]

– and further in the conception this QM fundamental postulate is trivial – particles are identical clones of the same informational pattern.

Cheers

July 12

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H-GD post:

Sergey Shevchenko I quote you "Consciousness is fundamentally non-material informational system, which is fundamentally different from the informational system "Matter", and which mostly exists and operates in own spacetime outside Matter and Matter's absolute [5]4D Euclidian spacetime; "

Look , with all due respect, I will not discuss on that level. If we want to stay at a scientific discussion, there is no room for "outside Euclidian spacetime" or "fundamentally non-material informational". These are esoteric key words. They belong to pseudo science. Most modern philosophers of the mind will agree that the mind sits physically in the brain or in order to

embrace extended cognition our behavior is caused by the unit of body and mind. We think with our neural networks and the system of chemical signals in our body including the brain. What you call non-material is a pattern of substrate-independent information processing to paraphrase Max Tegmark, see chapter 8 of his book Life 3.0 . In that sense, the relevant entities are patterns of signals in space and time. Never the less, the pattern formation takes part in the soft tissue of our brain.

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July 12, the answer on the H-GD post above

H-GD,

"*…Look , with all due respect, I will not discuss on that level. If we want to stay at a scientific discussion, there is no room for "outside Euclidian spacetime" or "fundamentally non-material informational". These are esoteric key words. They belong to pseudo science. Most modern philosophers of the mind will agree that the mind sits physically in the brain or in order to embrace extended cognition our behavior is caused by the unit of body and mind.…*"

You seems a new member on this thread, and didn't read the earlier discussion, where it was shown that what "Most modern philosophers of the mind" think about mind has no any relation to the objective reality, by evident reason – in the mainstream philosophy the basic utmost fundamental phenomena/notions "Matter" and "Consciousness" are principally transcendent/uncertain/irrational. Correspondingly when these modern philosophers write something about mind, than nothing besides in better case banal and well observable by every human "properties of mind" – that mind thinks, feels, etc. - is rational in their "findings", all the rest is/are some often fantastic non-scientific – and always principally non-grounded - allegations.

And, of course, they at that don't understand – what is mind? at all; and are, including, so "agree that the mind sits physically in the brain or in order to embrace extended cognition our behavior is caused by the unit of body and mind".

Though not all philosophers think so, for example – as that was discussed here, such indeed Great Scientists as Gödel and Schrodinger, though didn't understand – what is mind, understood, nonetheless, that "mind is more than a machine" and mind operation cannot be reduced to some physical processes in human's brain.

However that indeed are rare cases in the mainstream, and, say, practically all "modern neuroscientists" simply place some material instruments in in fact arbitrary points in the brain, though understanding – as that WH quoted above in Wiener's wording: "…The mechanical brain does not secrete thought "as the liver does bile," as the earlier materialists claimed….", but seeking, nonetheless, for so what the brain secrets so that a thought appear?

In the reality the answer on – what is consciousness? is possible only in the Shevchenko-Tokarevsky's "The Information as Absolute" conception https://www.researchgate.net/publication/260930711_the_Information_as_Absolute DOI 10.5281/zenodo.268904; when rational first approximation "consciousness on Earth" version model is given in https://www.researchgate.net/publication/329539892_The_Information_as_Absolute_conception_the_consciousness DOI: 10.13140/RG.2.2.26091.

When “mind” is the highest - “verbal” - level of the informational system “consciousness”, which fundamentally differs from the informational system “Matter”, operation; the brain is nothing more than a “hard disk” as for the long term memory, and source of energy for the whole consciousness’s operation, which [the operation] “unconsciously” proceeds on seems 99.99% outside mind.

So, if you indeed want to participate in this discussion rationally, then for you would be useful before to read the previous posts and the papers above, and, if you will participate further, it would be better if your posts will contain rational propositions with rational arguments; and don’t contain senseless wordings, as, say, “pseudo science”, “esoteric”, “pattern of substrate-independent information processing”, etc.

Cheers

References

[1] ResarchGate thread
https://www.researchgate.net/post/Can_we_mathematically_model_consciousness#view=5d370531c7d8ab1b2b12f5c4