

# The Total Simultaneity Interpretation

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## Abstract

I argue that Reality is an emergent phenomenon from Total Simultaneity (TS). This emergent phenomenon is to be strictly separated from its underlying structure TS. TS is a concept that can be localised behind the Planck units of space and time and is constituted as the totality of ALL possible emergent realities structured as probabilities (hidden variables). Time is a restriction of our emerged reality, so is space. As ALL time/life-lines of ALL probable (and for us improbable) realities are interconnected inside TS, our own experience of time and space is also interconnected with them through entangled partial consciousness. The what I call Point Zero is the point inside TS from where an agent's emergent reality experience originates. Past and Future are created there through partial Consciousness. The so called "weird" quantum effects are explained this way. The reference of reference in our emerged reality is this partial consciousness: the I". The "Splitting up" from the Many World Interpretation is becoming "Jumping towards" another Time/Life-line inside Total Simultaneity. ALL other "worlds" are already existing as probabilities inside TS. This explains the seemingly retro-causality in our emerged reality.

**Keywords:** Total simultaneity, total consciousness, reality, Planck units, entanglement, flow of time, flow of space, retro causality, reference, entropy, black hole, wormhole.

## 1. Reality: The emergent phenomenon?

"Emergent" means that the phenomenon isn't fundamental, but instead can be derived from some underlying structure. In theoretical physics this means: If phenomenon B can be derived from phenomenon A but not the other way around, then B emerges from A. In our perception it means that Reality(B) emerges from Total Simultaneity(A). How are we perceiving this and what do we mean by "Total simultaneity"?

### 2.1 The Concept "Total Simultaneity"

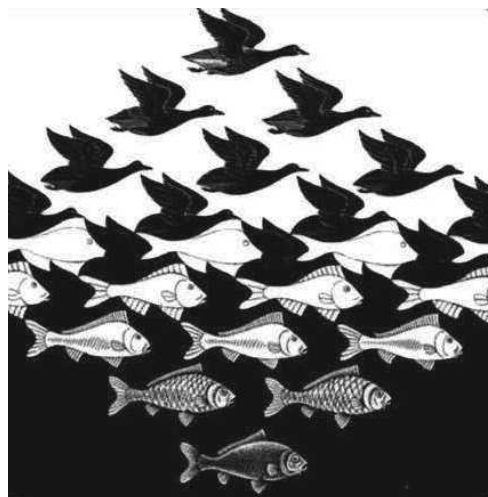
In our perceived reality it is very difficult to find simultaneous events. When we think two events are happening "NOW", they only seem to happen simultaneously. Each event however is separated by space coordinates and time moments. We become "aware" of these events as if they are simultaneous (on the surface of our Subjective Simultaneity Sphere <sup>(1)</sup>, the sphere around us where arrive all signals simultaneously). So, our reality experience is a mix of all kind of events taking place in different space coordinates and time moments. It is our consciousness that is

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gluing all these information's together into a for us understandable subjective unity, becoming the "snapshot" of your life. Each conscious agent is living in its own relative unique reality. The underlying source of this emergent phenomenon is Total Simultaneity, representing the totality of ALL realities from ALL emergent and non-emergent conscious agents. In contrast with The Many World Interpretation (MWI) <sup>(2)</sup> where every decision of a conscious agent leads to a splitting up into two different branches of reality (each one leading again to an infinity of "new" realities...), in the Total Simultaneity Interpretation (TSI), ALL these so-called new realities are already existing as probabilities (hidden variables). Inside TSI there is NO splitting up of wave-functions. The infinity of in the future to be created realities (and their Pasts) is brought back to the "existence" of the Totality as a singularity of time and space less probabilities. The agent's consciousness seems to be "following" one path of an infinity of available paths inside Total Simultaneity (see figure 1). The crossing point of ALL "I's" is Point Zero, this point Zero however is also "part of the Singularity TS. There is a **structural separation** between the emerging reality and its underlying structure. This means that methodological reductionism stops at the border <sup>(3)</sup> of Total Simultaneity. The only connection between these two is consciousness. Total Simultaneity harbours Total Consciousness and an emerging agent harbours partial consciousness, the last one is connected with Total Consciousness through a connection to compared with entanglement.

## 2.2 Where is this "Total Simultaneity"?



**Fig. 1:** Sky and Water I. Woodcut by the Dutch artist M.C. Escher, first printed June 1938, representing an interpretation of the border between Planck length and time and Total Simultaneity. Water represents TS and Sky the emergent phenomenon of Emergent Reality.

Total Simultaneity is a concept, so the question "where" is not the right one, it would be better to ask "What". But if we have to give an answer it would be: At every point (everywhere) in the emergent phenomenon of our reality, beyond its Planck length ( $1.616 \times 10^{-35}$  m) and time ( $5.319 \times 10^{-44}$  sec) <sup>(3)</sup>. This border is chosen because of the fact that until now the emergent laws of physics do not apply beyond the Planck units. At EACH point of our emerged reality we can

only **approach** the Planck space and time, a blurry frontier region where TS and emerging realities are fluctuating.

Total Simultaneity however will NEVER be reachable for emerging agents, they have only access through their partial consciousness. Those agents themselves are of the same “structure” as their emergent reality. This is why in our conception Worm-holes and Black holes are indeed entrances towards “other realities” (being of the structure of Total Simultaneity) but will never be able to use as “travelling realm” for agents from this specific emergent reality because of their structure. To our comprehension we enter Total Chaos. When we could enter TS. Maybe it is there where rules The Total Order in the form of Total Consciousness. ALL possible and impossible realities, are melted together into ONE TOTALITY of Time and Space-less PROBABILITYS (Hidden Variables).

In our experience reality seems fluently evolving, but the deeper we go into it, the more insecurities emerge. With Newton gravity was a certainty as were time and space. Einstein went deeper and time and space were no longer acceptable as references, gravity and relative velocity were influencing them. With quantum mechanics even solid matter as we are actually experiencing it, doesn't exist anymore. It brings us to the question “what are we made of?”. We are of the same structure as our “reality”, meaning: the emerging phenomenon of our reality.

We would like to illustrate this with comparing the perception of Stuart Hammerhoff and Roger Penrose in “Consciousness in the Universe, A review of the ‘Orch OR’ theory”<sup>(4)</sup>, and the Total Simultaneity Interpretation. Hammerhoff and Penrose propose that quantum computations in brain microtubules account for consciousness, they don't separate the emerging phenomenon of matter (including the structure of the agent and its brain) and its source. When they say that consciousness emerges from the structure of the brain it is as if you are searching for the announcer inside a radio. **A derived emerging structure can never be the cause of its underlying structure!**

### 2.3 Probabilities

Total Simultaneity is proposed as a complete set of probabilities. Probability theory <sup>(5)</sup> is a separate branch of mathematics and its treats the concept by expressing it through a set of axioms. These axioms formalise probability in terms of “probability space”, which assigns a measure taking of values between 0 and 1 (probability measure), the set of outcomes is called the sample space. Any specified subset of these outcomes is called an event. As there is in our emergent reality no “material” form of stocking up probabilities, we would like to adept here the mathematical approach of the probability theory. Mathematics is a language that is interacting directly with our consciousness. We all try to understand the words probability, zero, infinity, event and consciousness, but they stay intangible. Only in mathematics our consciousness is able to “work” with them. ‘The same counts for understandings like Total Consciousness and Total Simultaneity.

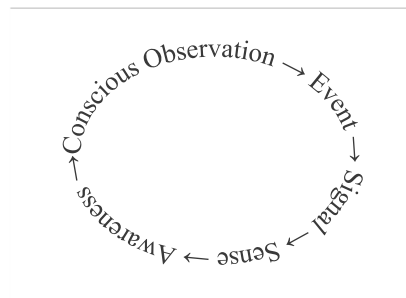
I argue that it is our subjective unique “part” of Total Consciousness in this emerged reality, which is responsible for the Flow of time experience and the awareness of continuity of space (both emergent phenomena).

The source of all emerging phenomena is time and space-less. Both time and space can be compared to its original source TS as properties, but also as “restrictions” because they narrow down the conscious understanding of Totality.

### 3. Observation and “Weirdness”

Since about 100 years we are used to apply results that are originated from Quantum Theory. We are accustomed to the idea that many features of quantum theory are “weird” to our logic and the physical laws.

- a. **When we are NOT looking** “Superposition <sup>(13)</sup>” of different probabilities (being at anyone of various locations in emerging space) is how quantum objects behave.
- b. **When we are looking:** quantum objects suddenly Figure 2 Time-Loop snap(ped) into a single location.



**Figure 2**

We can only try to calculate the probabilities of locations. The expression “observation” has become questionable. One thing is sure, each observation is a registration from an event from “our” past.

One of the explanations of the collapse of a wave-function when a quantum object is observed is that the “conscious observation” itself is CAUSE of that collapse. This however seems to be leading to a Time-Loop inside the emerged reality... (see Figure 2)

To prevent such Time-Loops the cause of the collapse has to be placed “outside” the emergent reality. Outside our emergent reality is Total Simultaneity with Total Consciousness. We will explain further on how the time-loops are prevented in the “time” paragraph (4.3).

Furthermore, our observations seem to be forming a “Flow”. However, **there is no flow in superpositions**, they are just an amount of probabilities. The insecurity superpositions are creating resulted in the description of quantum objects as wave-functions<sup>(14)</sup>. Even when we are “not looking” we think these wave functions evolve according to a famous equation written down by Erwin Schrödinger<sup>(15)</sup>.

Interpretations of experiments that are conducted by the emergent phenomena Alice and Bob will lead to new perspectives and perceptions with more acceptable correlations to the experience of the agent’s reality. One of these perspectives is our proposition of acceptance that our reality is a separate emergent phenomenon from Total Simultaneity. Total Simultaneity and Total Consciousness, will attribute to a more comprehensive and acceptable reality interpretation. Therefore, a closer study of time and space as we are experiencing, is needed.

#### 4.1 Time

It is continuity and frequency that gives us the experience of the FLOW of time.

When you say “I am living NOW”, you indicate that NOW is a point in your life between past and future. In the mathematical perception the borderline between past and future is a one-dimensional entity that has no volume. So, both the experienced point in your life and the mathematical borderline are not existing as a lapse of time, not even have the duration of the zepto-second that can be measured until now<sup>(6)</sup>, but it resides “inside” the unapproachable Total Simultaneity behind the Planck length and time.

In the Total Simultaneity interpretation, the mathematical point, representing NOW, cannot be reached because it is on the borderline of emerged reality. **This means that NOW can only be approached and only exists as an Eternal Now Moment probability (ENMP) or Point Zero inside Total Simultaneity.** What does this mean for our experience of the FLOW of time?

#### 4.2 Conscious energy?

When ALL time-moment probabilities (of past, NOW and future) are brought together, simultaneously to ONE point, the order and flow as we are experiencing is no longer existing. Is this simultaneous time basket of TS just a singularity? Can we create out of this singularity life-lines? These questions must be answered positively because we are “experiencing” our reality as a sequence of time-moments. This means that our consciousness is able to put Time Moment Probabilities in line (like sequencing text in an article). To put them in line a kind of primal energy that cannot be compared to the energy we are acquainted to inside our emerged reality ( $e=mc^2$ ). This is the energy that gives the illusion of SPINNING electrons, the force needed to MOVE matter (mass) and also the energy needed to make strings “move”.

ALL is the illusion of MOVEMENT (flow) inside the emergent phenomenon of our reality. The illusion derived from Total Simultaneity where only Eternal Probability Moments are

compressed into ONE singularity, without time and space. So, **no energy** there. We argue that the ONLY energy needed to create FLOW of time (and so the difference of coordinates of matter in space) inside the illusion of reality is Consciousness. The FLOW and so energy is also an illusion (emergent phenomenon). What we are experiencing as energy is the verification between two coordinates, meaning two eternal probability points of Total Simultaneity.

This is the kind of “energy” (Power?) that is achieved through consciousness, it is Consciousness itself. The partial consciousness of the emergent “I” is through entanglement interconnected with Total Consciousness inside Total Simultaneity. It is because of this property that our consciousness is able to give us the awareness of the past and the ability to make choices towards the future. The Flow of TIME is created and is becoming a part of our emerging reality experience. Our partitioned consciousness can be perceived as “above” the specific life-line of its agent.

### 4.3 Conscious energy → emergent phenomenon of matter?

The partial consciousness being above its life-line means that past (our memory) and future are creating “reality”. So, consciousness is able to “materialise” a reality for the agent. This materialising is effected through the creation of memory of the past inside the emerged agent. **This “past” is an elementary referential component of the NOW**, it is all compressed in ONE unreachable point Zero. Our perception of events and its awareness are two different things. There is always a time-laps between event and awareness of 13-80 milliseconds <sup>(7)</sup>. Essentially this means that our emergent reality is always 13-80 milliseconds behind of what our partial consciousness is arranging in our life-line inside Total Simultaneity. The Time Moment Probability of TS can be called point ZERO, the moment of perception (observing) point ONE by Consciousness. The becoming aware of an event is always taking place in the past! Our consciousness is already part of the future when we are becoming aware of the NOW, the FLOW is created.

So is the perception of our emergent reality. The so-called collapsing of the wave-function <sup>(8)</sup>, that is pinning the coordinates of a particle after observation, **is just an event from the past**. The wave-function (probability) of a probable particle just continues after our observation. The “unobserved” time-line in TS is staying available as probability (but NO splitting up into emergent realities like in MWI). The complete uncertainty of the future continues in the emerged phenomenon of reality. No more time-loops resulting in collapse of the wave-function. A clear explanation of our reality/time experience through the entangled partial consciousness of the agent that is placed “above” its emergent reality. Results from experiments won’t determine the future. This is the responsibility of the ability of our Partial Consciousness to overview time/life lines in Total Simultaneity. Would it be possible for this ability to overview to realise time-travel?

#### 4.4 Time-travel from Point Zero?

Going back in time is compared with a film turned back, but you have to remind that while turning it backwards your time-line is going “forward”. So, time-travel (backwards and forward, relative to point zero) should be devised in different probabilities:

1. Going back in time on the time-life line that is actually forming your reality experience. When this is performed (if possible) your memory would also diminish, all memories (referential elementary past moments) that you achieved after point A in the past until point zero, vanish. Your material (body) will become younger. The result is that you will NOT be aware of this kind of time-travel, **it could happen any moment without you experiencing it**. Your reality time-life line starts at a new Point Zero.
2. You go back to point A with ALL the memories you acquired until point Now(zero), your body is not becoming younger. At point A you start a new time-life line, together with your younger ego. That ego will have a life-line including the (different) ego from the life-line that was travelling to point A that is the point zero from that specific “I”. You can kill your earlier self but your life will continue (it is just a different hidden variable)). The life line from your earlier ego will stay as a probability (without the time-travelling) in Total Simultaneity.
3. Going into the future. As the future is still unsecure there is an infinity of futures where you could arrive. Making a choice is not possible. Suppose you undertake the voyage anyway, and take a period (relative to the time experience of your past) of 10 years to go to (point C). Then the referential basis of this voyage is your memory (your time-line until the Now moment), at the point you are **expecting** to arrive at the moment you leave is that there will be recognisable subjects (buildings, people...) in this future. If there are, then your voyage into this future was just only one of the infinity of targets you could reach, where you remained with your “old” referential memories. But it could also be that you just arrive at another life-line with whole new memories and then you just will not be aware of the voyage you made. (**Could happen any moment (new point zero) ...without you experiencing it**).

Considering the abovementioned, it is not at all sure for a conscious agent to be aware that his life-line hasn't changed compared to just a moment before. This could mean that each moment we are able to change of life-line, **without being aware of it**. Each moment our consciousness could create a whole “new” past (memory), that seems flowing logically into its new future, without US being aware of the change. Reality can be changing each moment without you knowing it...so can memory! Point Zero in Total simultaneity is the base of ALL our “I’s”.

## 5. Space & Gravity

Space is an experience where we can apply coordinates in order to retrieve a location of an event. ALL events are simultaneous and without coordinates in Total Simultaneity. Therefore, TS is space-less. Our emergent space is part of the awareness of the “I” experience, which needs space (location) and time duration, if both were not present there was no “I” experience, no partial consciousness...Space and its coordinates (subject to Albert Einstein’s relativity theory) is acting as the same restriction as time, both needed for a conscious agent to observe and experience reality. Gravity can be interpreted as the same kind of restriction as space (and time). Imagine a reality without gravity... A Universe as we can’t imagine, no galaxies, no solar system, no earth and moon. A whole new kind of “life” as organisation of matter should be needed, maybe without the illusion of matter as we are experiencing. Just Consciousness as a whole new manifestation and appearance. Gravity is an essential part of space-time, it can influence time and space just as Einstein argued already in his Special Relativity Theory. This means that gravity is an emergent phenomenon from the emergent space-time phenomenon (causal emergence).

## 6. The Reference of Reference

The potential of creating partial consciousness for agents EXISTS ETERNALLY (because it is timeless) in Total Simultaneity/Total Consciousness for any form of consciousness (existing and/or non-existing which means in our perception: **emerging or not emerging**). In Total Simultaneity coordinates don’t exist, coordinates need references and these are only created by partial consciousness in an emergent reality by a conscious agent. In our emerging reality we are always searching for the reference of reference but...this POINT doesn’t exist here and now, because the reference of reference is the unreachable time and space-less TS. In our emergent reality each chosen reference needs another one, ad infinitum. Therefore, in our emerged reality the only true relative reference is the partial consciousness of the “I”, (the centre of the Subjective Simultaneity Sphere) because of its relationship with (its entanglement to) the reference of reference in Total Consciousness.

Without Total Consciousness Total Simultaneity would just be “Total Probability” without the possibility of perceived emerged realities. **When there is no consciousness there is no observation no experienced reality.** We argue that this is the proof that the sparkle of consciousness as we are aware of is only a fluctuation inside Total Consciousness (Point Zero). There is the probability of an infinity of different emerging realities, each with its own shape of consciousness. And, not only outside our perception these shapes of consciousness exist, but also around us in our very own reality through animals and plants, the whole emergent phenomenon is penetrated with consciousness.



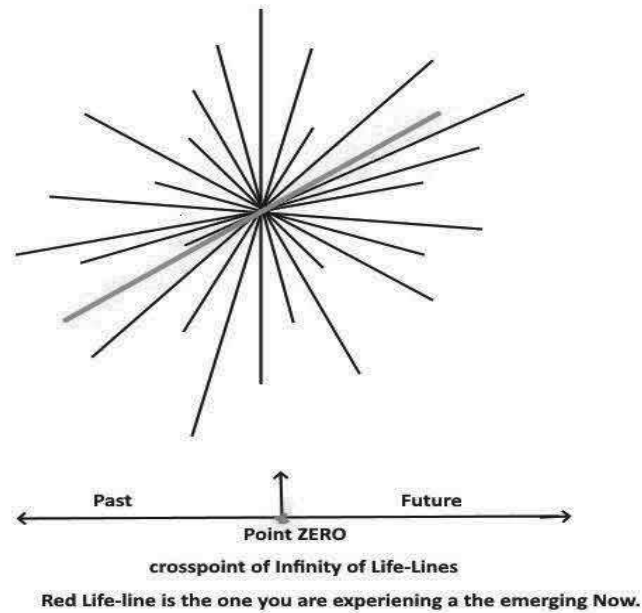
## 7. The specific “I” coordinates and references

To illustrate the vast infinity of emergent forms of consciousness it is useful to observe the chances of probability of your specific existence in our emerging reality.

The chances that you are alive at this very moment are becoming almost zero the further we dive into the past. The infinite sequence of IF’s (points Zero) that are preceding your actual place in this emergent time and space makes it a wonder that BOTH of us (the reader and I) are alive and that YOU are actually reading these words. Take for instance the chance (the IF) that your father and mother met, which is 1 in 20.000 (20.000 IF’s), and the probability that they stayed together adds another 2.000 IF’s, which gives 40.000.000 IF’s. The amount of IF’ that are influencing the egg of your mother, receiving the specific (You) sperm from your father is 400 quadrillion (400 with 15 zero’s!) and we are not talking about the IF’s that your other ancestors would meet... Dr Ali Binazir illustrates this extreme unlikely strain of events that would have to occur for the result of you being alive in his blog<sup>(9)</sup> and comes to the conclusion that the amount of IF’s to be fulfilled is  $10^{2,685,007}$  !!! (the number of known atoms in the universe: about  $10^{80}$ ).

When we add to this the idea of the incredible fast branching of the wave-function ( $10^{-21}$  per second) which is the perception that our reality is splitting up  $10^{21}$  times per second (this time-scale is an emergent one) and that this specific YOU is at the final branch of these splitting-ups after 10.787 billion years (also an emergent time-scale, with its reference point Zero, then we become aware of the amount of IF’s inside Total Simultaneity., because in TSI it is not splitting ups of realities outside TS but choices inside). At any IF (point zero), , there is a choice in the sequence that is necessary for creating your “I reality”. The chance for the existence of your specific consciousness becomes more and more improbable the further you are thinking in the past, it approaches zero.

The same with ALL the I’s around you... that is linked to your Now experience of reality through the “soap bell” micelle like structure, formed by the aggregation of Subjective Simultaneity Spheres. What does this mean for the existence of our Universe, our reality? It means that the emerged reality as we are part of, at this very moment is unreal, chance almost Zero, maybe it doesn’t even exist anymore (because we left Point Zero). Our reality is just one of a infinity of realities that can come to “existence” (meaning: that can emerge at point Zero of our Life-line). ALL the IF’s are simultaneous probabilities in Total Simultaneity. ALL the IF’s are choices that can be made by ALL probable (and for you mostly improbable) conscious agents. This means that the unapproachable NOW, that we are calling point Zero, is containing ALL probable “I’s”, only ONE “I” with its specific past-line (that is your actual memory) is experiencing reality.



**Figure 3.** Point Zero, with infinity of “I’s”.

The probable life-lines are however staying available in TS. We could even say that each point Zero of your life is infinite/eternal. As for the Many Worlds Interpretation where it is posed that at each ‘Choice’ there is “created” a new world. I argue that the opposite is happening. The specific “I” reality pursues its own line and all the other “non chosen” realities(lines) are remaining inside TS. Remark that the choice of this life-line (at point Zero) is again a gate to another infinity of life-lines. Is each of these lifelines pre-existing? Each one is existing as a probability. The aware conscious I chooses between these probabilities at each Now Moment Probability (ENMP, point zero). Although EVERY life-line, at point Zero is pre-existing as a probability the experienced life-line however is not pre-determinate because the partial consciousness from the “I” has an infinite choice of futures (that could be called: Free-Will) but also an infinite choice of pasts (to create memory).

What is the essence of a life-line? A life(time)-line is the resultant of an imaginary sequence of ENMP’s “inside” TS. Compare it to the signs of the Zodiac, there are millions of stars and the imaginary lines between them form the “Zodiac”. Each one is a unique sequence of probabilities of Eternal Now Moments. It is our “partial consciousness” of Total Consciousness that realises the emergence of its specific life-line reality. Your Point Zero is shared with an infinity of partial consciousnesses, each one an “I” with his own unique memory and future (See Figure 3).

## 8. When the future influences the past...?

Being Unique means that when it is altered by an agent's efforts to travel towards a point of another unique time/life-line, the new constituted time/life-line is just as unique as the former one. This would mean that the alteration is just merging into a new unique reality also (already) existing as probability in TS. As we have seen in the time-travel part in this article ALL time-lines are interconnected (compressed as probabilities). The Wheeler's delayed choice thought experiment <sup>(16)</sup> where a photon that starts a billion years ago and passes a star gives a clear explanation of how the future **seems to** influence the past. When the photon is observed in the now experience of an agent (billions of years later...), it is passing as a particle, when not...it will pass as a wave. It seems as if our observation in the now is influencing the past. So...the future (looking or not looking) seems to be influencing the past.

Even if the decision to look is taken in the last femtosecond, this decision is still taken in your past and the "looking" time-line is taken. The "not-looking" variable is staying "hidden" in Total Simultaneity. The looking or not looking are just two available time-lines in TS. So, it is not so that the future is influencing the past, it is just one time-line effectuated while the other remains (eventually with another partial consciousness) available as probability. The **separation** between emerging reality and Total Simultaneity is essential for the comprehension of this kind of contradiction events. The same reasoning can be applied for the Young's double slit experiment. <sup>(18)</sup> In this experiment a single photon is fired at a half-silvered mirror (beam splitter). The photon is either reflected or transmitted with equal probability (it can take one path or the other), so can either go to detector D1 or D2. When we place a second beam splitter at the point where path 1 and 2 are crossing, the photon then suddenly changes to be wavelike, as if it was **always** going down BOTH ways.

The conclusion until now is that: Either the addition of the beam splitter "sent a signal backwards in time" to **influence** the photons initial behaviour or photons do not have definite intrinsic properties when they are not being observed. The last conclusion almost touches our Total Simultaneity Interpretation, we argue that ALL definite intrinsic properties of the emerged photon is a specific time/life-line existing as probability inside TS. (in this case the 1. The presence and 2 the absence of the second beam splitter) ALL of them can be compared to an infinity of hidden variables inside Total Simultaneity, so separated from our emerging reality.

## 9. Entanglement and the speed of light <sup>(10)</sup>

Total Simultaneity being Time AND Space-less, the emergent phenomenon space is also an illusion created by consciousness. ALL imaginary points representing space are together forming ONE imaginary POINT, are interconnected, they ARE ONE in TS. In our through seemingly space and time restricted reality entanglement leads to expressions like "spooky", but it is in origin a logic quality. In TS there is an infinity of reality lines where two or more objects are entangled as if they were one object. It seems to us that entangled objects are exchanging

“information” at a speed that is higher as the speed of light. Because of the time restriction in our emerging reality entanglement is just an emerging **quantum** quality in our reality.

The speed of light (c) is also just an emerging limit in our reality (go faster and you will be able to overtake the information signals, so be able to look at signals that already at an earlier point crossed your subjective simultaneity sphere). The speed of light has in principle the same boundaries as the Planck units, time is “standing still”, length is becoming zero and mass infinite. So are the boundaries in our emerging reality for the transmitting of information. ALL information is “compressed” into a singularity in Total Simultaneity. When observed by a conscious agent, it is through the entangled partial consciousness of the specific agent that seemingly two entangled particles (each with different space coordinates) share this source of information simultaneously. The information shared is from point ZERO, so for the emerged agent from a point in the past.

## 10. Wormholes and Black Holes.

What is described as a wormhole (Einstein-Rosen bridge) in science is a spacetime tunnel, a subspace shortcut that is physically linking distant locations of the emergent phenomenon reality. Could they timeless connect different coordinates of our emerged reality? Can this phenomenon be compared with quantum entanglement of particles (see above)? These spacetime tunnels are said to be a projection of the “fifth” dimension in theoretical explanations. In the TSI, the connection between two coordinates inside an emerged reality (time and space restricted!) exists only inside Total Simultaneity, the point where EVERYTHING is interconnected without space and time. For quantum entanglement interconnection through TS is a valid explanation. The “explanation” wormhole as a means to transport another emerged event or agent through Total Simultaneity however, is until pure theoretical phenomenon because it is about transportation of an illusion that consists of a time and space restricted sequence (or sequences) We argue that the wormhole perception could only exist as a causal emergent entity (so an emergent phenomenon) that causes (is derived from) another emergent phenomenon (reality). Causal emergence <sup>(19)</sup> is just a theoretical element of the emergent phenomenon of Reality. Wormholes and Gravity could be treated like that. Each theoretical thought like causal emergence where the novel causal powers are more influential as the base emergent properties (TS) are pure theoretical, however, they ARE a probability of Total Simultaneity. Each probability EXISTS..

Black holes are described as having a singularity at their core. In the TSI perception, a **singularity cannot exist** in the emergent phenomenon reality because its frontier is the Planck length and time. EACH coordinate inside a Black Hole is a point where these units are approachable but cannot be reached. The ER=EPR conjecture <sup>(20)</sup> which is stating that entangled particles are connected by a wormhole (or an Einstein-Rosen bridge), comparable to a pair of maximally entangled black holes (because of their singularities in the core) is in our perception not a valid one. The singularity is NON existing phenomenon in our reality, it is only existing in Total Simultaneity. The connection of entangled particles is through Total Simultaneity. There is a “wormhole” at every coordinate of our emerging reality, because our reality emerges from it..

In this perception Black Holes, Wormholes and the connection of entangled particles also become united but without ER=EPR. Probable Theory of Everything?

### **Total Simultaneity interpretation versus Many World Interpretation**

The physically created parallel “YOU” as needed in a splitting up of the MWI is in our perception not real because the infinite amount of parallel YOU probabilities is always already available at any moment inside TS. When measuring the path of an (emerged) electron you don’t have to erect an entire parallel universe around it. You just become “aware” of the infinity of probabilities of universes available in the TSI through its wave like properties. Although Max Tegmark<sup>(17)</sup> is a proponent of the MWI his remark “All possible states exist at every instant” is still valid in TSI, only we have to add “inside Total Simultaneity with validation of the structural separation between emergent reality and Total Simultaneity.

As for the creation of realities by observations in MWI, the TSI propagates “separation” out of the infinity of availabilities. The split-up universes of MWI continue on their own separate ways inside the TSI because in TSI any available universe has its own time/lifeline.

Decoherence<sup>(12)</sup> is how a microscopic quantum effect gives rise to a macroscopic classical effect. Wavelike states of quantum systems become uncoordinated and scrambled through their interactions with their environment. Once decohered they become split-up universes in MWI. In the TSI a microscopic quantum effect is one of the Eternal Now Moment Probabilities (point Zero’s) of a specific time/lifeline inside TS. We are just experiencing this specific emerging time/lifeline (only this specific single branch) and ALL others are staying as availabilities. The MWI must be multiplying physically by the trillion every moment. This doesn’t seem very logical. The idea trillions of parallel physically “I’s” that are differentiating each physical moment is indicating already that the perception of an infinity of partial consciousnesses each with their own probable/available time/life-line representing ALL non-physical “I’s” is a easier to understand concept.

## **11. Entropy**

Entropy is a quality in our emergent reality that seems always to be increasing and is apparently irreversible. As our reality is emerging from Total Simultaneity where there is no time and space, where everything is interconnected seemingly in ONE dimensionless POINT, the entropy (there) would be the maximal achievable. Our partial consciousness is entangled with Total Consciousness inside Total Simultaneity where Entropy is infinitely high. Through this entanglement that is also the reason of our experience of the flow of time, it is possible that it is influencing our emergent reality, in a way that the experienced life-line has a tendency towards its underlying structure (where it is derived from).

## 12. Quantum Computing

We are leaving our dual one or zero algorithmic reality, leaving the bit and entering the qubit reality. The qubit can be one, zero or anything in-between, like the Bloch sphere <sup>(11)</sup>. The insecurity of the quantum realm is approaching. Qubits are in a probabilistic superposition of all their states. The measurement of the final state is only ONE of the possible configurations they were in BEFORE the measurement. They are in a Point Zero state. It is the same as we argued before, each measurement, result of an experiment is only revealing one of the probabilities of the PAST. The branching up of the “wave-function” is continuing after the unreachable Now, the point Zero. The “collapse” of the quantum state into the classical state is a result from the past and so becomes part of our conscious past life-line in one of the specific “I’s” out of point Zero. Quantum decoherence <sup>(12)</sup> is the problem that qubit states are influenced by their surroundings, which means in our perception that the Now experience in our emerged reality is not the same as the unapproachable Now (point Zero), it is already the past. **The more we are approaching Total Simultaneity and our point Zero the more probabilities are emerging and the more insecure our quantum device is becoming.** The fact that the 1000 qubits ( $2^{1000}$  configurations) quantum computer would contain all the answers of questions we are able to pose, (without putting it “on”) is giving the indication that we ARE approaching Total Simultaneity where ALL answers and ALL questions are available. The question is only: “Can we pose the right question”? But also for the quantum computer counts that Artificial Intelligence is NOT Artificial Consciousness.

## 13. Conclusion

Strictly separating our emerging phenomenon “reality” from its underlying structure Total Simultaneity, gives clarity of diverse so called “strange” quantum effects. The only connection between the two of them is the partial Consciousness of an agent through entanglement with Total Consciousness in Total Simultaneity. This is the source of our reality experience. Chronology and Continuity are emerging phenomena (illusions) that we are imagining ourselves in order to make sense of our “existence”. The unreachable NOW moment (point zero) of an agent serves as the “I” marking point (inside TS), where it is interconnected with its infinite number of probable pasts and futures. One of these pasts is forming the reality of each unique (and improbable) agent.

Total Simultaneity and Total Consciousness are understandings that have always occupied humanity (conscious agents) as religions that were actually for them “Theories of Everything”... It has always been the unreachable “ALL”, the Origin of Everything that intrigued us. For the question: Is it possible to create an experiment, in order to find proof of this Total Simultaneity Interpretation, I could propose that once we have created a quantum device of 1000 qubits (the one that could answer ALL our questions) and we ask the question “Are you Conscious?”, that answer will give us a DEEP view of our reality and the answer on the question “Can an emerged reality cause a new form of partial Consciousness”.

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