

**PERSPECTIVES ON OMEGA-3 FATTY ACIDS AND FLAVONOIDS:
MODULATION OF SYNTROPY AND ENTROPY; TSIM TSOUM
CONCEPTS.**

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Introduction

It is pleasing that this report is presented as the Socratic Method in which the teacher poses the question and the disciples are subjects who make a mental effort to give a response. This report, though, is a Socratic methodological hybrid whereupon the hypothetical interlocutor takes part in the dialogue and the responders; in this case, the authors provide putative answers to questions raised by personal interlocution (*q.v.* Wilson & Cugini. Time and body chemistry: questions and answers. 1991, Ann. Ist. Super. Sanità: 29;4,539-44). The interlocutors in this question (Q) and answer (A) dialogue are placed in context. Although the authors practise their medico-science in the traditional way, focussing on evidence-based experimentation whencesoever possible, they do believe there is scope for less prescriptive even unorthodox research, particularly in the generation of ideas for future research and guardedly view a p-value of 5% or less is not necessarily a demarcation line for success or failure. If the authors moved back in time to 130 years or so ago, being steeped in traditional Newtonian physics at the time, the notion that length (not mechanical) and time could change depending on spacetime would have seemed absurd, as such a theory had stood since its publication in Principia in 1687.

Towards the end of the nineteenth century, Maxwell's theory on æther drag was refuted by the Michelson (using his interferometer, and later with Morley) experiments. Voigt (1887), Lamor (1898), FitzGerald (1889), and finally Lorentz (1899) developed transformations which confirmed these 'absurd' notions. Poincaré (1900) wrote 'The simultaneity of two events or the order of their succession, as well as the equality of two time intervals, must be defined in such a way that the statements of the natural laws be as simple as possible. Thus, now we have no difficulty in understanding the consequences of the Lorentz transformations of Einstein's equations relating to his Special Theory of Relativity (1905), viz. that space and time are permanently entangled and that compared with the rest length there will be a contraction and a time dilation for an observer elsewhere. [Rigour, accelerating reference frames, Einstein's Theory of Gravitation (General Theory of Relativity), light cones, World lines, are beyond the scope of this paper and were not discussed.] One of the consequences being that spacetime diagrams can be constructed which can classify events pairs as

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either ‘time-like’ (absolute future or absolute past) which are causally related, or ‘space-like’ in which it is possible for an event to occur ‘before another’ for one observer and ‘after another’ for another observer. So now we have a spacetime model which is counter-intuitive to the unenlightened, but are there other models of time-events which we could dare to explore? The Tsim Tsoum Institute is our calling card with traditionalist, and entrepreneurial skills and visionary credentials; choosing not to sit on the fence but ready to explore new concepts such as those sought in 1941 by Luigi Fantappiè to integrate physics and biology viz. “The Unitary Theory of the Physical and Biological World”, published in 1942, that life is caused by the future. Our journey, from the Tsim Tsoum Institute (Krakow, Poland), is one of exploration, experiment, evidence-based drivers towards global health for all and the attainment of the omega point: the five attributes of which are beyond the remit of this paper.

TsimTsoum is a concept of the Kabbalah and it concerns creation and the contraction of God to make way for a reality outside of God; during the process, God’s restriction of light to a ray of light, and the formation of Reshimo (footprint) was left in the vacuum. God is essentially one ("Hear, O Israel! Yahweh is our God, Yahweh is one", but it is designing the vacuum itself to accommodate the otherness of the world, by withdrawing himself to himself, that God created the world. It is in this vacuum of God that the world arises and the creation of the empty space allows otherness from the separation. Kabbalah is intended as a tool for understanding the world in that it encourages them to change our perception of the world (reality) despite the subjectivity of our perception). It is the tools of understanding which are sought by the Tsim Tsoum Institute which will help enable a better informed healthier society. The Tsim Tsoum logo in part resembles the Taijitu symbol of yin-yang, representing two opposite or contrary interdependent and interconnected complementary forces (Taoist) but moral dimensions (e.g. love – authors) have also been added to yin-yang (Don Zhongshu): FDM refers to yin-yang and syntropy in the context of nutrition and disease.

Undoubtedly, our traditional science will not always be in agreement with issues raised by ‘syntropists’, such as possibly epigenetics, but that is to be expected, leading to healthy debate and enlightenment for all. So the Q & A method begins.

Q. What are the authors’ understanding of “Life Energy, Syntropy and Resonance”?

a. “Life Energy”. An overall answer is not possible because the authors have different cultural, religious, scientific and medical backgrounds and considerations are not given herein to the Gaia Hypothesis, viruses, complex systems biology based on dynamic systems theory, Darwinism, Deism – with its beginnings with Ancient Greek philosophers, etc. All authors have a general traditional understanding of life energy, (and have published on this topic) which may have been forged in a primordial anaerobic oceanic soup, as anaerobic heterotrophs, sometime after the Hadean era probably the Palaeoarchean era (last universal ancestor(LUA) (c3600-3200 Ma),

preceded by abiogenesis - a term of convenience. It is possible that early life began in the Eoarchean era (c3900-3500 Ma); though extra-terrestrial origins are a possibility. For traditional convenience only, as there many definitions of life and life processes, we regard herein that life itself is an enclosure with complex chemical walls, and chemicals within this enclosure which is capable of self-organization, maintaining its integrity, fulfilling basic functions such as its energy needs, and furthermore is self-replicating and functions on negative entropy and consequently could be regarded as self-sustained chemical system capable of Darwinian evolution. The experiments of Belousov-Zhabotinsky demonstrated that for oscillatory systems to occur in a medium it did not have to be far from its 'thermodynamic equilibrium' and it was Prigogine, Nobel Prize Laureate who discussed non-equilibrium thermodynamics and dissipative structures "function as expressed by the chemical equations, and the spacetime structure, which results from the instabilities, and the fluctuations, which trigger the instabilities. The interplay between these three aspects leads to most unexpected phenomena, including "order through fluctuations" which the traditional paradigm portrays as a consequence of the Second Law of Thermodynamics: from which, for cyclic processes, the Kelvin-Planck and Clausius statements apply (*q.v.* Wilson et al. The Origin of Life and the Evolution of Circadian System and the Role of Circadian Rhythms in Cardiovascular Diseases. World Heart Journal, 2013, Volume 5, No 2, In Press). In truth we do not know what energy is though we have advanced from the concept of Aristotle, Leibniz (*vis viva*), Young, Joule, and others and we know it is neither created nor destroyed merely converted to one of many forms such that we can define it as a conserved property of a physical system usually measured in joules. As enunciated by Feynman there is no exception to the Law of Conservation of Energy (Feynman, Richard (1964). The Feynman Lectures on Physics; Volume 1. U.S.A: Addison Wesley. ISBN0-201-02115-3).

b). Syntropy: Using Luigi Fantappiè terminology and that later by Albert Szent-Györgyi, it is regarded as negative entropy; entropy, deduced from statistical mechanics, being a measure of the disorder of a system, and in all natural processes the entropy of the Universe increases: at absolute zero the system still possesses quantum mechanical zero-point energy. Intuition is fraught with difficulty; can we always map mathematical alternatives to real life situations which are evidence based? Will the negative square root of Einstein's Special Theory of Relativity or the Klein-Gordon relativistic version of the Schrodinger equation (which does not take into account Einstein's Theory of Relativity) or indeed the De Broglie wave-particle duality of matter equation map to the real world, in the case where cause lead to an energy event and hypothetically the reverse in which there is an energy 'implode' backwards-in-time to an event in the future; which is difficult to prove experimentally.

c. Resonance: Images of the Tacoma Narrows Bridge collapse has been seen by most of us when winds of 40-45 m.p.h caused the bridge to oscillate at 14 vibrations per minute causing it to plunge 190 feet into the river below – a simple unfortunate mechanical example but in biology it amazing how chemical structures organize themselves in response to their environment as if they knew the purpose of their

resonance was stability in multidimensional space. It could also be said life is a dynamic complex system with many parameters which cannot be taken singularly or necessarily consecutively; so how does this potential sharing of energy dovetail with concepts of syntropy? Bioresonance therapy (BRT –Morrel) employs the endogenous electromagnetic fields of the organism and the electromagnetic fields of its stressors and environment. demonstrated the effect of acupuncture in therapy and diagnosis and today there are many devices which use endogenous electromagnetic fields of the patient and those of its stressors and environment. We will focus on solar imprinting, and resonance of electromagnetic vectors with DNA and related structures (*vide infra*).

Q. What attracted the authors to the conference?

A1. Collective experiences by this group using frameworks for mind-brain-body-gene interactions have been based on traditional scientific evidence of causality in the context of hormones, energy balance and disease and nutrition: in particular afferent and efferent neurotransmission e.g. involving the vagus nerve. The outcome of this conference may reveal complementary possibilities that if life is sustained by syntropy, and that the parameters of the autonomic nervous systems may support vital functions the vagus nerve should react in advance to stimuli: evidence is available from Antonella Vannini to support this concept entitled “The intelligence of the heart” <http://www.lifeenergyscience.it/viterbo2013/Vannini.pdf>. We may think of emotional stressors, attractors of love and scripture, implicit in syntropy, affecting mind-brain-body interactions and their effect on obesity and cardiovascular risk, the onset of diabetes, and metabolic syndrome, etc. Moderate intestinal inflammation affects complex behaviour and treatment of such inflammation can influence factors from mind to matter, or brain to gut and the heart. For example, long chain polyunsaturated fatty acids (PUFAs) in the duodenum stimulate the release of cholecystokinin and thence cholecystokinin receptors in the abdominal vagus. Once food is ingested, it stimulates the secretion of incretins from the gut which increase the insulin secretion and initiate a gut-brain-liver axis in response to small amounts of triglycerides in the duodenum.

It is possible that syntropy is involved in gut-brain interactions leading to the initiation and development of IBS and other GI disorders; and similarly the liver-pancreas and the brain connection in the pathogenesis of obesity and metabolic syndrome are important in the context of traditional gut-brain frameworks. Traditional understanding of chronobiological, evolutionary, genetic, biochemical, and clinical knowledge enable us to understand the components in the disease spectrum of IBS and related clinical problems better, with effective intervention with an ω -3 fatty acid rich Mediterranean diet which may be protective by their direct effect as well as by their influence on the hypothalamic and vagal connections wherein syntropy may play a role. However, what are these syntropic phenomena leading to homogeneity, organization, and order which are the very essence of life energy is one reason why

the authors were attracted to this conference. The watchword is caution, and positive progress, otherwise we may justly reap the erstwhile criticism that backward-in-time causality is 'as learned trash' (Heisenberg (1928)). For example, we (especially TT) are also interested in the association of instinct, taste, and mind; and to elucidate the transition in eating history and food palatability associated with diet selection for adults which appears to be influenced by diet in infancy; life energy is not restricted to humans, it is for all, and flavonoid herbivory is just one small example. Of course we do not really know what represents the mind, or instinct and even taste is not without subjectivitye.g... of David Hume's remark from Don Quixote: "Two of my kinsmen (Traditional science, syntropy – authors' comment) were once called to give their opinion of a hogshead, which was supposed to be excellent, being old and of a good vintage. One of them tastes it; considers it; and after mature reflection pronounces the wine to be good, were it not for a small taste of leather, which he perceived in it. The other, after using the same precautions, gives also his verdict in favour of the wine; but with the reserve of a taste of iron, which he could easily distinguish. You cannot imagine how much they were both ridiculed for their judgment. But who laughed in the end? On emptying the hogshead, there was found at the bottom, an old key with a leathern thong tied to it."

A2. Study of the diversity and similarity of function and structure of flavonoids, in particular, even allowing for the vast evolutionary timespan, intuitively seemed to indicate a broad-brush blueprint as if future function was known before the mechanisms were made manifest as if there was an anticipatory element to evolution which had not been accommodated in Darwinism. Flavonoids are signalling molecules in root and shoots; have symbiosis with micro-organisms and are important in nitrogen fixation; as phytoalexins they exert defence against pathogens; they are detoxifying agents and are scavengers of photo-produced active oxygen species in the chloroplast. They act as stimulants for germination of spores exudate from legume roots which stimulates spore germination of soil-borne fungi; act as UV filters to screen against severe sunlight illumination; are involved in temperature acclimation adjustment in plant growth and cellular metabolism; and have drought resistance properties with changes in plasma membranes. As might be expected they are pollinator attractants e.g. red and blue anthocyanin pigments in combination with UV absorbing flavonol co-pigments acts as insect pollinator attractants. Allelochemical agents have adverse effect of one plant species on neighbouring plants through the release of phytotoxins (allelochemicals) into the environment and much more.

In humans, flavonoids have either chemotherapeutic or chemopreventive properties or have been implicated in health benefits, though strict evidence-base confirmatory information is essential. Thus in cardiovascular and related disease or function such effects may ameliorate risk factors for myocardial damage, micro-vasculature and smooth muscle cell, Type II diabetes, metabolic syndrome, and obesity. In relation to the brain and mental health beneficial claims have been made for Alzheimer's disease, Parkinson's disease, multiple sclerosis, cognition and neurodegeneration. From a dental cares and microbiological perspective claims are made for inhibition of

dental cares, it is antimicrobial effect, an influenza infectivity blocker, its use in astringency, it acts beneficially against hepatitis B virus, and inhibits gingivalis. In the fields of cancer, benefits are claimed in breast, prostate, ovary, endometrium, cervix, and Erhlich Ascites tumour. Similarly, benefits are claimed for gastrointestinal issues and related cancer, such as mouth, stomach, oesophagus, colon-rectum, liver, pancreas and they certainly affect gut microflora. Much more stems from the literature. It appears that flavonoids are the panacea for many ills but even if only a third is substantiated, the attribute taken from Panakeia, goddess of universal remedy, is remarkable. Did these properties arise by sequential organization or could it be anticipatory life processes at work. The difficulty is we have little or no tools to investigate these phenomena unlike traditional science with its forward-in-time paradigm.

Q. Can concepts of syntropy and entropy be used in our understanding of glocalization of health such as cardiovascular mortality and well-being?

A.

Human social evolution has been, one may suggest, one of creativity brought about by needs to satisfy engagement by force to subjugate others leading generally to a disparity of wealth in the general population. The development of 'nations', the need for trade to fuel production and influence the world led to empires and further disparity of wealth, and finally, today we have multinational corporations whose wealth exceeds the GDP of many countries. Power is exercised, the people are largely exploited, and ultimately this will have an impact on health dependent on the sector of the glocal population and health issues now concern *Homo economicus*. In a series of papers in the J of Socialomics (e.g. Takahashi T, Singh RB, Meester FD, Wilson D. How the 'West' can Overcome Unhealthy Behaviours to Prevent Chronic Diseases. 2013, J Socialomics 2: e114. doi:10.4172/2167-0358.1000e114.) we have focussed on health education, occupation, family income, and the technological family environment because these are important indicators of the quality of life e.g. food consumption, physical activity and so forth which are important determinants in glocal health; one aspect being non-communicable diseases such as cardiovascular diseases (CVDs) which includes coronary artery disease (CAD), hypertension and Type 2 diabetes mellitus. The situation is not always clear cut, on the one hand lower social classes 3 and 4 have greater risk factors of cardiovascular and cancer mortality, because higher social classes may have resources that allows better health education, more informed choice of a prudent diet, gymnasium facilities and leisure time compared with lower social class 5, who are living often below the 'breadline' because of i.a. poor and irregular employment. On the flip side, urban populations have a complex burden of diseases, related to over-eating, malnutrition, occupational and recreational physical activity and a greater consumption of proatherogenic foods during transition from lower (4-5) to higher (1-3) social classes. Of relevance, is Dr Savage's contribution to the conference, which outlined the future trend in our society

as we add another billion population people in the coming 12-15y. Amidst our successes, we find increasing global strife, NCDs, stress, obesity which was demonstrated, in part, by our presentation of WHO health statistics for 2012. Also presented was 'Our Dream for their Future (children)' with interventions leading to better urban planning and good housing and access to healthy food (antioxidants, vitamins, minerals and fibre; fruits, vegetables, green vegetables, seeds, eggs and honey; fish, and wild meat (pre-agricultural humans); etc.) - important goals for the Tsim Tsoom Group. To alleviate such pathogenesis we need to think in the future, invoke unitary time where past, present and future interact like Venn diagrams. Increase entropy and reduce the entropic trap of the industrial revolution developed by Adam Smith, working and joining hands together (q.v. Dr Savage's presentation sharing similar ideas, re-invigorate individual and group consciousness, leading to institutional and governmental consciousness and hopefully humans will approach the omega point). We invoked at our presentation contrasts within our society using art as a means of comparison, e.g. Puvis de Chavannes', L'Été, The Summer and Francis Gruber's – Winter foreshadowed. Concerned with the wretched in our society viz. 'Our Lost Souls' we contrasted André Masson's Heraclitus – the weeping philosopher – pessimistic about human nature and La Fenêtre by Guy de Malherbe with one of Christian hope-Frontline study – by Pastor Fritz Folz; the emphasis being well-founded hope and optimism. Syntropy and art could be important weapons in the fight to improve health for all.

Q. a) Creation of the Universe, b) Paradoxes and syntropy, c) Creation of life, d) Who am I?

A.

a. Creation of the Universe.

This answer was initially couched in the Big Bang theory and ensuing theoretical processes, which supposedly began at an infinitesimal point of infinite density and cause is beyond our traditional understanding. Supersymmetric quantum theories on gravity apparently are so different to that of general relativity, and as the Universe cooled in 10^{-43} s, the Planck temperature (10^{31} K) and mass (10^{14} Jm³) were reached, thermalization ensued until the symmetry-breaking energy level of 10^{27} K or 10^{14} GeV at which time separation of weak and strong forces and their electromagnetic interactions took place and immense inflation 10^{-32} occurred. Pretentiously we were not on the horizon yet unless there was a backwards-in-time mechanism to design life processes on Earth (Virgo supercluster/Virgo cluster/Local Group/Milky Way/Sun - 110 million light years diameter of VSC) and elsewhere in the Universe but what a privilege it is to be here. Subsequent cooling over the ten minutes or so when the temperature had reached 10^8 K light nuclei had formed and by one hour most fusions had subsided but for the next 10,000 years the energy density was more than that for matter; today the reverse is true e.g. our Sun. Before 300,000 years nothing exciting happened as nuclei and electrons were still interacting separately in an opaque

environment and then at 10^{13} s at 3000K neutral atoms appeared as the decoupling of matter and energy took place, the universe was transparent and the only radiation emitted was the 21 cm spin line of neutral hydrogen. These Dark Ages occurred between about 150million to 800 million years after the Big Bang, and then cloud-energy 'condensed' under gravity to form stars, galaxies, clusters of galaxies, etc. The evolution of the Sun and solar system was shown including the Theian impact that gave rise to the moon; as well as weak and strong forces in physics: and then paradoxes on creation followed by biological evolution were briefly described, and the question posed 'Who am I?'

b. Paradoxes and syntropy

Now we consider cosmogony and its paradoxes. Thomas Aquinas produced his cosmological proof on the existence of God (Thomas Aquinas, Summa Theologiae, I, q, 2, art. 3.) as A is followed by B; but this 'cause' is inadequate because although it may be His purpose and deed, we cannot gain an understanding of the process so we are left wondering if cause has any useful meaning. In the quantum world of physics we say, for example, that there is a 50% chance of A and 50% chance of B; in radioactive decay for example in which A is not the assigned cause of B and may reflect cosmological syntropy. There is a second paradox of creating something out of nothing. Edward Tryon of Columbia University in the 1970s suggested putting gravity on the negative energy scale because it seemed to equate with total matter and energy in the universe: so the paradox may appear solved in the sense that one zero energy system is being obtained from another zero energy system. A third paradox is that our Universe must come from another system which must have an origin but what is their origin. However, like one of Zeno's paradoxes on counter-intuitiveness of spacetime, such as Achilles not passing the tortoise, it could be that time and space were more fragmented and we are stuck in an infinite temporal situation wherein fragmented time exists.

c. Creation of life.

....."Standing back to examine life what do we see? We see an enclosure with complex chemical walls, and chemicals within this enclosure is capable of self-organization, maintaining its integrity, fulfilling basic functions such its energy needs, and furthermore is self-replicating. The origins of life are murky but a reasonable approach seems to be biopoiesis.....Non liquet; non omnia possumus omnes (Wilson et al. World Heart Journal 2013 Volume 6)). The presentation described events of life energy processes from the Palaeoarchean times to the present time i.e. from the Last Universal Ancestor (3600-3200 Ma) to modern times when they have characteristics of interdependence of nucleic acids with its information storage and metabolism; replication; cellular units; and they exist within a range of environmental conditions. Also presented were evolution from stromatolites, and also mammalian phylogeny starting with ancestral arm-feeding echinoderms to modern man and the Tsim Tsum

concept of *Homo economicus* and the role syntropy might have played in evolution – Darwinism and epigenetics.

d. Who am I?

“Make it thy business to know thyself, which is the most difficult lesson in the world” (Cervantes: *Don Quixote*, Part II, Chapter 42 –taken from J.D. Brown; *The self*. McGraw-Hill, Boston). Several times the speaker (DWW) corrected himself for disdainfully using the first person singular rather than first person/third person plural as knowledge being presented was that of the Tsim Tsoum group. It was emphasised that such was the similarity wherever one looked in the plant and animal kingdom it was hard to imagine that it all could have happened by mutations alone even allowing for the long evolutionary timescale, but could it be complemented by a blueprint with retrocausal properties such as syntropy? Traditionally, natural selection is not a purposive process but random variations occur which may be adaptive and selected for endurance and reproduction. Could amphibians, for example, use life processes to instinctively think that by ultimately laying eggs on land they could change into reptiles- is this sensible question? Currently there seems to be no way of exploring this concept.

The changing role of RNA and DNA, endosymbiosis, gene properties e.g. how *Drosophila melanogaster* has c60% of human genes were briefly explored. Chronobiology and chronomics were discussed in the context of life processes and the changing circadian time structure from Silurian times (21 h days) to the present time and the potential effect of melatonin production and secretion. Much more could have been discussed from a psychological viewpoint, the “I” an awareness property and the “me” which encompass self-referent thoughts: but syntropic interactions in psychology were not discussed further.

Q. Does the Sun have an effect on imprinting upon life processes?

A.

Alexander Leonidovich Chizhevsky (1897-1964) stated "Perhaps even our feelings and thoughts are just a weak echo of the vibrations of the cosmos

Involuntarily an old idea comes to mind: our knowledge of natural phenomena will not be different from an echo received by our organs, of the real

processes of the universe”. Coronal mass ejection, and sunspots, often many times the size of Earth, contribute to the solar wind which is a form of ionized gas which interferes with planetary bodies depending on the strength of their magnetic field. Firstly the diversity of the electromagnetic waves (non-photic and photic) which humans are exposed to range from extremely very low frequencies (1-1kHz), to very low frequencies and radio waves, the microwave spectrum, infrared, visible spectrum, ultraviolet, X-rays, gamma and cosmic rays: and examples of biological adaptation to terrestrial magnetic fields was demonstrated (pigeons, butterflies, bees and possibly

humans). Also demonstrated was the range of non-ionising, thermal and ionizing radiation. Fundamentally, the cosmos comprises, i.a. cycles of mass (e.g. terrestrial, lunar and solar rotational periods) and electromagnetic energy, just described, from nuclear fusion arising from gravitational pressure. Also there is a constant stream of predictable patterns of electron and protons with speeds of about 400km/s. This solar wind is referred to as Aeolian, from the Greek god of wind Aeolus. These cycles exert fundamental influence on the biosphere which probably responds in a congruent way, thus is an echo of the Sun. Halberg in a series of papers on congruent biospherical solar-terrestrial cycles indicated that such cycles exist in humans (arising from decades of monitoring of heart rate and blood pressure, in relation to the Horrebow-Schwabe, Wolfe/Hale, BEL (Brückner, Egeson and Lockyer c35y) cycles. The methodology associated with assessing congruence (pairing) was beyond the remit of the presentation. However, not only biological imprinted cycles occur but there may be sociological impacts such as mood, war, conflict, etc.; and syntropy/resonance may be part of this process. What was also demonstrated was that several studies have shown an association between magnetic storms and myocardial infarction. For example, analysis of the ambulance call data in Moscow were correlated with myocardial infarction, sudden death, and hypertension crises over the timespan 1979-1981 which was more pronounced in winter (Seasonal variation of magnetic storm influence on myocardial infarctions. Kleimenova, Kozyreva, Breus & Rapoport. "Physics of Auroral Phenomena", Proc. XXXI Annual Seminar, Apatity, pp. 203- 205, 2008), paradoxically it was during the equinox when maximum magnetic disturbance occurs. However, geomagnetic micropulsations, comparable with heart beat, may be maximal during winter and mediated by melatonin, the dark hormone. One of the most comprehensive papers on magnetic storms was that by Halberg (Neuroendocrine Letters 2000, 21, 233-258). It is pertinent to note that Halberg's team have produced a paper relating to possible mechanisms of action of magnetic fields and resonance: a topic of relevance to this symposium (Waldemar Ulmer; Germaine Cornélissen, Franz Halberg. Interaction among (quantum mechanical) resonance-coupled electromagnetic circuits relevant to a natural week. World Heart Journal. □2012; 4(1):35-70).

Q. What role does omega-3/omega-6 have in Life energy?

A.

The Tsim Tsoum concept i.a. is one of an early evolutionary diet that was enjoyed by *Homo sapiens* in Palaeolithic times. It is still somewhat ignored in the West, yet when it comes to chronic degenerative diseases, mind-brain-body interactions partially reflect human response to the environment. The rhythmically evolving interaction between mind and body has led to the inception of modern chronobiology and chronomics, a Western time-structure evidence-based approach to environment-led and -controlled human mind and body health. The alarming explosion of non-communicable diseases (NCDs) means that mind stress gives rise to body strain

leading to tissue injuries. The omega-3/6 fatty acids are now being recognized as playing crucial roles in the health of mind and body.

In conclusion, the Tsim Tsoum team were delighted to have been invited to participate in this Viterbo Conference on Life Energy, Syntropy and Resonance with its congenial hosts and participants. From a scientific perspective, it is true to say our boundaries of traditional science have been extended and we contemplate that “All truth passes through three stages. First, it is ridiculed. Second, it is violently opposed. Third, it is accepted as being self-evident.” Arthur Schopenhauer (1788-1860) http://en.wikipedia.org/wiki/Arthur_Schopenhauer (FDM).

There is much more to learn, hopefully in Colorado next year will be an enlightening experience: and a workshop on priorities for experiment design would be desirable.