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Considerations of This Issue

1. Common Introduction

1-1 T-Consciousness and the New Science of Sciencefact

In the present century, the nature of Consciousness and its place in science has received much attention. Many philosophical and scientific theories have been presented in this field. In the 1980s, Mohammad Ali Taheri introduced new fields of non-material and non-energetic nature, which are called T-Consciousness Fields (TCFs). In this view, T-Consciousness along with matter and energy are the three main elements of the universe and it is different from the other two elements. According to this theory, there are various TCFs with different functions that are a subset of the Cosmic Internet Network called the Cosmic Consciousness Network (CCN).

The main difference between the theory of T-Consciousness Fields and other theoretical concepts presented in relation to consciousness is the application and practical use of TCFs. These fields can be applied to all living and non-living organisms, such as humans, plants, animals, microorganisms, materials, etc. The new science of Sciencefact was introduced in 2020 by Mohammad Ali Taheri, the founder of the Erfan-e-Keyhani-e-Halgheh school, as one of the subgroups of this school. The name "Sciencefact" was chosen because it uses scientific research to confirm the existence of T-Consciousness as a "fact".

Although common science only considers the study of matter and energy, Sciencefact investigates the effects of T-Consciousness Fields (non-material and non-energetic) on matter and energy and all their manifestations (such as humans, animals, plants, microorganisms, cells, materials, etc.). By conducting repeatable laboratory research in various fields of science, Sciencefact has emerged as a common ground between them and uses this capability to investigate "T-Consciousness" and "T-Consciousness Fields" resulting from it. The influence of the T-Consciousness Fields begins with the connection (Etesal) between the Cosmic Consciousness Network as the Whole Consciousness and the studied subject as a component. The connection is established by the mind of the Faradarmangar (a person who has been trained and assigned the T-Consciousness Fields). The human mind has an intermediary role (Announcer) which plays a part by fleeting attention to the subject of study and then the main achievement obtained as a result of the effects of the TCFs. These fields cannot be directly measured by science, but it is possible to investigate their effects on various subjects through reproducible laboratory experiments (1).

1-2 Taheri's research methodology of T-Consciousness Fields

The research methodology in the study of T-Consciousness has been founded on the process of *Assumption, Argument, and Proof,* in which the basic Assumption is: The Cosmos was formed by a third element called T-Consciousness that is different from matter and energy.

The Argument: The existence of TCFs can be demonstrated by their effects on matter and energy (e.g., humans, animals, plants, microorganisms, cells, materials, etc.)

The Proof is the scientific verification of the effects of TCFs on matter and energy (according to the Argument) through various reproducible scientific experiments.

Accordingly, to investigate and verify the existence, effects and mechanisms of TCFs, the following five research phases (Phases

0 through 4), and the aims of each phase are outlined below.

1-3 Study phases in Sciencefact

Accordingly, to investigate and verify the existence, effects and mechanisms of TCFs, the following five research phases (Phases 0 through 4), and the aims of each phase are outlined below.

Phase-0 studies aim to prove the existence of TCFs by observing their effects. The nature of T-Consciousness and what it is will not be addressed in this phase. Phase-1 explores the varied effects of different TCFs. Phase-2 examines the reason behind the varied effects of these fields. Phase-3 investigates the mechanism of TCFs effects on matter and energy. Finally, Phase-4 draws significant conclusions, particularly with regard to the mind and memory of matter and their relation to the T-Consciousness, etc.

2. General concepts

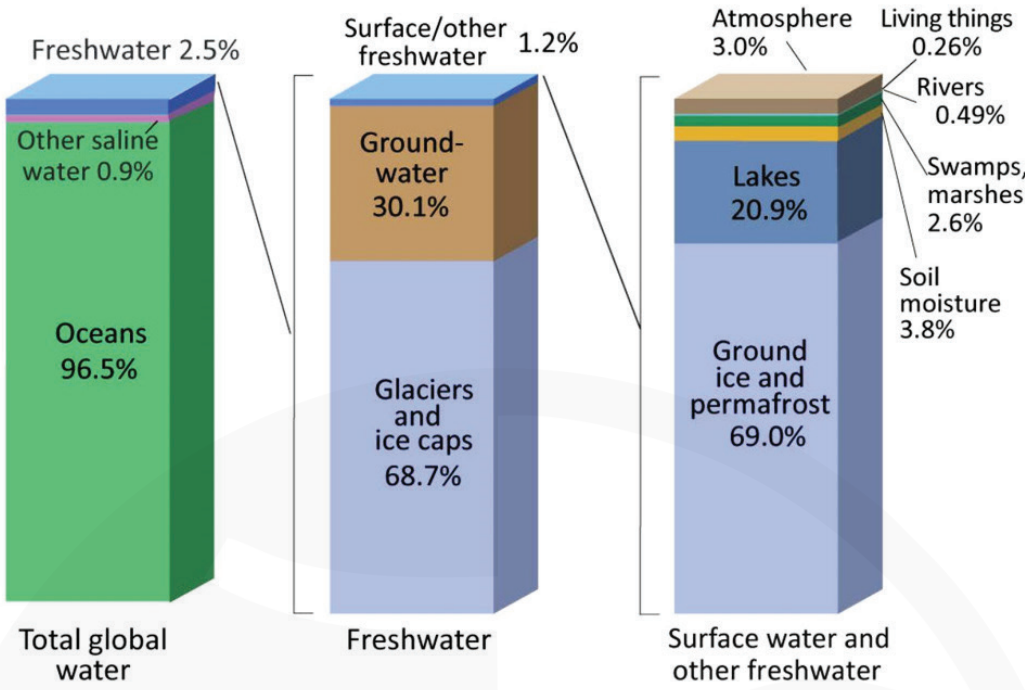
Pure water: Pure water is water that has been mechanically filtered or processed, its impurities have been removed and it has become suitable for specific uses. Distilled water used to be the most common form of purified water. However, in recent years, water is mostly purified by other processes such as capacitive deionization, reverse osmosis, carbon filter, microfiltration, ultrafiltration, ultraviolet oxidation, or electrodeionization (2).

Pure water has many applications, mainly in the production of medicines, laboratories and science and engineering industries. Pure water is a poor conductor. The conductivity of seawater is typically 5 S/m, the conductivity of drinking water is typically in the range of 5-50 mS/m, while the conductivity of highly purified water can be as high as 5.5 µS/m (0.055 µS/cm) (3). Pure water is an approximation of only water molecule, which is used in double distillation form in this research.

Normal saline: Normal saline solution is a mixture of sodium chloride and water (0.9 grams of NaCl in 100 milliliters of distilled water). Normal saline is a crystalloid liquid. By definition, it is an aqueous solution of electrolytes and other hydrophilic molecules.

Normal saline contains electrolytes (sodium and chloride ions) that disintegrate in the solution. The main feature of this solution is its isotonic nature compared to human blood serum plasma, which creates a lower osmotic pressure compared to other types of liquids (for example, hypertonic, and hypotonic) (4).

Water pH: It is a measure of the acidity/alkalinity of the water and is reported in "logarithmic units". Its range is from 0 to 14, and pH 7 is equivalent to water neutrality. A pH less than 7 indicates acidity, and a pH greater than 7 indicates alkalinity. The pH is a measure of the relative amount of free hydrogen and hydroxyl ions in water. Water with more free hydrogen ions is acidic, while water with more free hydroxyl ions is alkaline. Because chemicals in water can affect pH, it is an important indicator of chemically changing water (5).



Most of the Earth is made up of salty ocean water (0.9%); In fact, about 97% of the Earth's surface water is in the oceans. The minimum amount of fresh groundwater (2.5%) and its categories in surface water, underground water, and glaciers are shown separately in the figure above.

https://earthhow.com/how-much-water-is-on-earth

Electrical conductivity (EC): the solution EC shows the capability of that solution for the transmission of electricity. The more the concentration of ions in the solution, the higher the EC. The low electrical conductivity of pure water results from the low concentration of materials dissolved in it [6]. The EC of different solutions are shown in Figure 1.

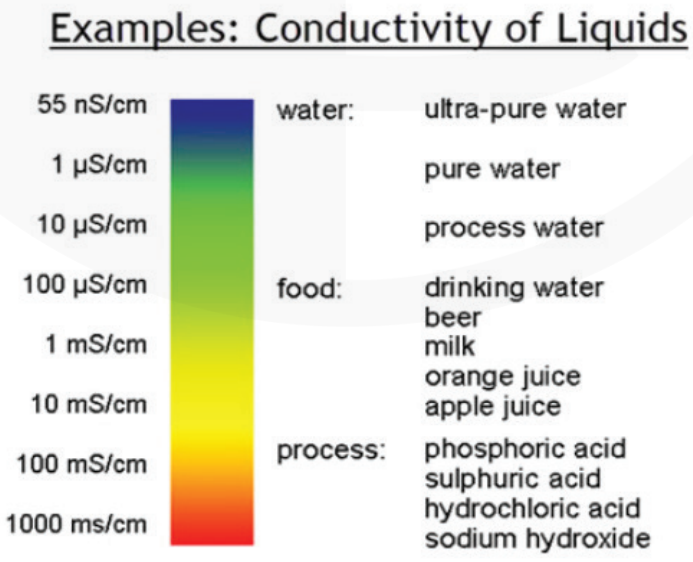


Figure 1- Electrical conductivity of different solutions.

Mineral ions such as chlorides, alkalis, carbonates, and dissolved salts play the main role in the transfer of electric current. Metals also help to increase EC due to having a large number of free electrons. It should also be noted that electrical conductivity depends on temperature and changes in temperature cause changes in the value of EC [7].

In addition to the direct relationship with temperature, the electrical conductivity Mineral Mineral ions such as chlorides, alkalis, carbonates, and dissolved salts play the main role in the transfer of electric current. Metals also help to increase EC due to having a large number of free electrons. It should also be noted that electrical conductivity depends on temperature and changes in temperature cause changes in the value of EC [7].

In addition to the direct relationship with temperature, the electrical conductivity of water is proportional to the concentration of Total Dissolved Solids (TDS) in water and is a function of the ionic strength of water (number of cations and anions in water). Electrical conductivity is measured with the unit of micro Siemens per centimeter. Electrical conductivity and concentration of TDS are not related one-to-one. But in dilute solutions like natural water, the relationship between these two factors is as follows (8):

$$TDS\ (mg/L) = EC\ (\mu S/cm) \times K$$

TDS refers to all ions present in water, which indicates the total concentration of solid impurities dissolved in water. K is the conversion coefficient of electrical conductivity. The unit of measurement of TDS is milligrams per liter, which is also referred to as parts per million (ppm). We know that each liter is equal to one million milligrams, so each milligram per liter is one part per million. The conversion coefficient of electrical conductivity to the concentration of all dissolved solids in reference water and two famous salts are given in Table 1.

Table 1. Conversion coefficient of electrical conductivity to the concentration of total dissolved solids in fresh water, KCl and NaCl*.

Conductivity at 25 °C	TDS KCl		TDS NaCl		TDS 442	
	ppm Value	Factor	ppm Value	Factor	ppm Value	Factor
84 µS	40.38	0.5048	38.04	0.4755	50.50	0.6563
447 µS	225.6	0.5047	215.5	0.4822	300.0	0.6712
1413 µS	744.7	0.5270	702.1	0.4969	1000	0.7078
1500 µS	757.1	0.5047	737.1	0.4914	1050	0.7000
8974 µS	5101	0.5685	4487	0.5000	7608	0.8478
12,880 µS	7447	0.5782	7230	0.5613	11,367	0.8825
15,000 µS	8759	0.5839	8532	0.5688	13,455	0.8970
80 ms	52,168	0.6521	48,384	0.6048	79,688	0.9961

* TDS 442 – This solution best represents natural freshwater. The 442 standard was nearly 50 years ago and it is still the world's most accepted standard. TDS NaCl – This sodium chloride solution best represents seawater, brackish water, or other high saline solution. KCl TDS – This potassium chloride solution is a very stable salt and is an international calibration standard for conductivity measurements [8[.

Optical Spectroscopy/Solution Optical Absorption:

Optical spectroscopy is a tool that is widely used today for quantitative and qualitative tests. Among the various methods of optical spectroscopy, colorimetric or absorbance methods are widely used in clinical and research laboratories. The principles of this method are based on the combination of the substance to be measured with a specific reagent and color creation.

The effect of the created color on the amount of light that has been absorbed or the amount of light that has passed is a measure that is used to calculate the amount of the desired substance compared to the standard solution [9].

According to the Beer-Lambert law, with the increase in the concentration of a substance that is in the path of light, the amount of light absorption in a certain wavelength increases and the amount of transmitted light decreases [10]:

$$A = \log\left(\frac{I_0}{I}\right) = \varepsilon \iota C$$

Where A is the amount of light absorption, I_0 is the intensity of light emitted, I is the intensity of light passing through the sample, ε is the molar absorption coefficient of the desired substance, ι is the length of light absorption, and C is the concentration of the desired substance. The passage of light through the sample and the parameters effective in measuring the amount of absorption are shown in Figure 2.

It should be noted that the Beer-Lambert law is valid when the diffused light is monochromatic and the concentration of the dissolved substance is in the linear range; this means that the amount of absorption increases linearly with the increase of the concentration of the solvent. If the concentration rises above a limit that the relationship is not linear, it cannot be used to calculate the parameters in the Beer-Lambert formula. In other words, this law is only successful in describing the absorption behavior of dilute solutions and is usually not valid in concentrations greater than 0.01 M due to molecular aggregation.

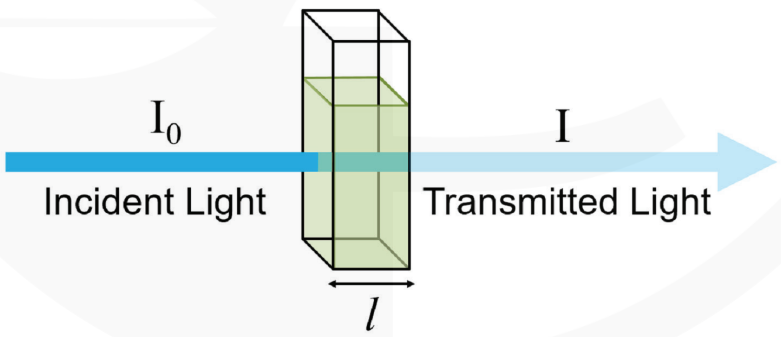


Figure 2.- Schematic of the basis of optical absorbance and parameters in Beer-Lambert law.

Refractometry and refractometric index determination of solutions:

Plato was the philosopher who first described observations that were important for the subsequent understanding of the index of refraction and the law of refraction related to it; He observed that the paddle of the boat looked normal in the air, while they appeared to be twisted underwater.

The first special demonstration of light refraction was invented by the Iranian mathematician and physicist Ibn Sahl in the 10th century [11]. He investigated the refraction of light in his treatises on burning mirrors and burning glasses, and through this work, he is considered the discoverer of the law of refraction. However, his findings were forgotten and not noticed again until six centuries later. Subsequently, Professor Willebrord Snell van Royen formulated a new version of the law of failure in 1621. His findings on the refraction of light at the interface of two transparent media with different refractive indices paved the way for the invention of the refractometer. Ernst Abe subsequently presented his refractometer to the scientific community in 1872.

Abe used refractometers to examine balsam and resin, as well as for immersion fluids needed in the production of microscopes. His invention is still used in educational, research, industrial and pharmaceutical fields today. Nowadays, digital refractometers are used for detailed studies. They use Light-Emitting Diode (LED) light sources, prisms, and Charged Coupled Device (CCD) sensors [12]. The calculation of the refractive index is based on measuring the refractive index of light. The refractive index is the amount of bending of a light beam when passing from one medium to another medium. If i is the angle of incidence of a ray in space (the angle between the incoming beam and the perpendicular to the surface of a medium, which is called normal) and r is the angle of refraction (the angle between the beam in the medium and the normal). The refractive index n is defined as the ratio of the sine of the angle of incidence to the sine of the angle of refraction (13). These angels are shown in Figure 3.

$$n = \frac{\sin i}{\sin r}$$

The index of refraction is also equal to the speed of light c of a given wavelength in vacuum divided by the speed v in a material.

$$n = c/v$$

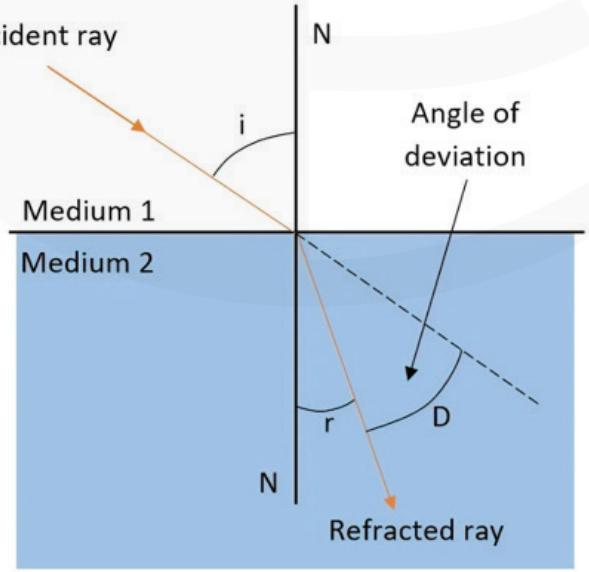


Figure 3. The refractive index of light passing from vacuum to material medium.

3- Methods

3.1 Using T-Consciousness Fields

The samples under study were subjected to T-Consciousness Fields (TCFs) according to the specified protocol on the website of Research Management on T-Consciousness Fields (www.cosmointel.com). The request for *Etesal* (connection) to the Cosmic Consciousness Network (CCN) to use TCFs can be submitted through the Cosmointel website in the "Assign Announcement" section. This access is freely available to everyone. Researchers can register on this website anytime to experience TCFs and conduct research in this area. Detailed information about the experiment needs to be provided to the research center; for example, the number and name of samples and controls must be specified.

The studies in this issue were conducted in a double-blind manner, where lab technicians were completely unaware of TCFs theory, and the *Faradarmangar* at the COSMOintel research center who established the consciousness bond was unaware of the details of the study (except for the use of TCF 2, as explained below). Double-blindness is a gold standard that is common in science experiments in the field of medicine and psychology, involving theoretical and practical testing.

The T-Consciousness Fields applied in the studies of this issue, apart from the two studies of physicochemical properties of water, which were only the TCF type 2, were TCF types 1, 2, and 3. Based on Taheri's theory of Consciousness, the effect of TCF 1 is to optimize the subject under study based on the laws of the ecosystem. To apply TCF2, a detailed "Announcement" is made by the Announcer, according to the known rules of the desired field and introduced by the relevant expert. The function of TCF3 is to remove negative and destructive factors affecting the behavior of the sample to adapt to its optimal conditions.

3.2 Details of tests, materials, and equipment used:

- These tests were carried out in the reference laboratories of the Food and Drug Organization.

- The temperature of the laboratory was 22.7±0.5 degrees Celsius and the humidity was 21%.

- Measurement of pH and temperature of pure water and normal saline (0.9%): according to the standard water and wastewater measurement method No. 2550B and 4500-H*B, respectively.

- Measurement of electrical conductivity of pure water and normal saline (0.9%): according to the standard method of measuring water and wastewater No. 2510B

- Measurement of dissolved oxygen in pure water and normal saline (0.9%): according to the standard method of measuring water and wastewater No. 4500-OG

- Measurement of the amount of chlorine ion in normal saline (0.9%): according to the standard method for measuring water and wastewater No. 4500-Cl-B

- Optical absorption measurement: Carry eclipse spectrophotometer from Varian (Australia); A range of 200-800 nm and a speed of 1 nm per second

- Refractometric index measurement: SCHMIDT HAENSCH ATR-L refractometer; Accuracy: 0.00002 refractive index

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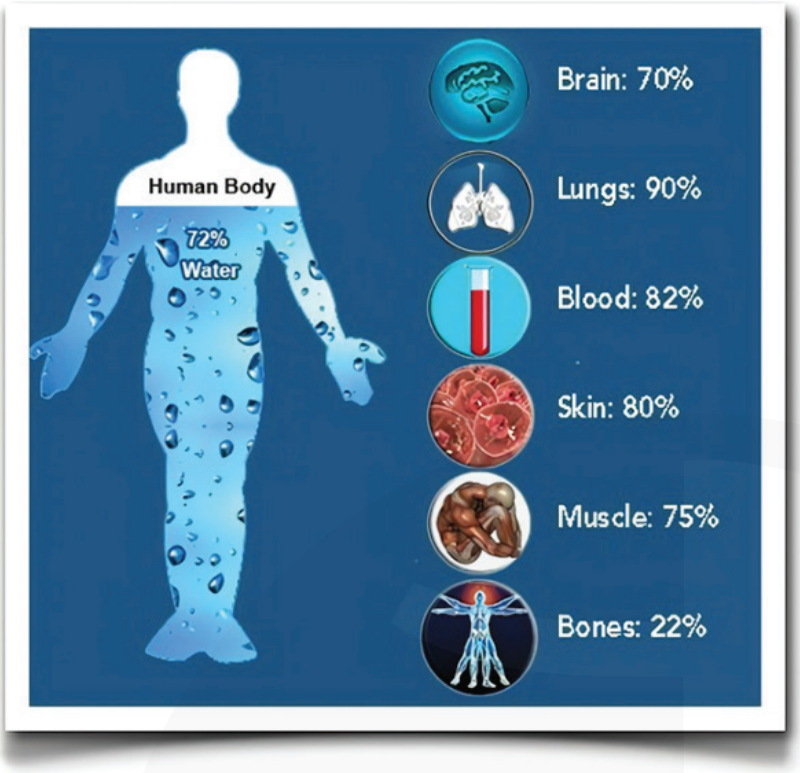
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The percentage of water that makes up some organs of the human body. The range of changes is between 20-90%, and on average, 70% of the weight of the human body and each of its cells is composed of water.

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