Dangerous Waters: Personal Reflections

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Water is not always the same as you know it. As a young researcher, calculating the possibility of a severe nuclear accident in a mainstream job I learned:

1. After depressurization in the cooling circuit of a reactor pressure falls under the zero line, that is water has some tensile strength for a millisecond.
2. The boiling point of water depends not only on the pressure, but also on the chemical impurities dissolved in the water, and on the surface quality of the wall. Clean water in a clean vessel will not boil below about 150ºC, so clean water has no definite boiling point.
3. The same is true for the freezing point which can be anything down to -40ºC.

1. Poison

There is barely any other molecule which is so vital to life. In this issue there will be many interesting papers about its anomalous properties, freezing point, and the structures of different ices. Strangely, water is also a poison. It contains a little D_2O, or usually DHO. For those suffering an early stage of cancer, even this small amount is indeed dangerous. (One out of 6000 H atoms is deuterium.)

A Hungarian biologist, Gabor Somlyai, found out that heavy water makes cancer cell division more frequent. By eliminating deuterium from water, "real" light water is obtained, which saves lives. It is expensive even for a monthly treatment, but better and cheaper than most cytostatics, and has no side effects.

Hundreds of people were cured with light water—and that's the problem. Behind the curtain, the Hungarian FDA took action: they heavily fined the small company. They wanted it proved that light water is not poisonous to drink. They wanted to repeat the same expensive test series, as is usually done on cytostatics, starting with animals at first... Then they were satisfied with a heavy fine, and forbade any ads about the healing properties of deuterium-free water. At the same time, researchers at CalTech found out why deuterium is so dangerous for cells. It destroys tiny motors made of proteins. Ordinary hydrogen is life giving, but the heavier deuterium just clogs these finely tuned "natural robots" of nature.

2. Water Driven Cars

There are urban legends that water driven cars were invented several times, but later suppressed. They used ordinary distilled water, not heavy water. I happen to know such an inventor, Janos Jekkel, who stumbled onto the effect by accident. I wrote about it in a nutshell in *IE* #107 (2013). There were independent witnesses who saw the water car "in action," an oxigas driven "hacked" in a "Moskvich 407" in the 1970s.

By the time I met the inventor, he was frail, and quite elderly, and already took apart the sensitive parts of his device, and of course, never documented anything. He just remembered the main parameters, but dozens of technical details were lost.

Right after the collapse of the East Block we found a young venture capitalist who wanted to rebuild the device. A small lab was established, and I also recruited staff. But Mr. Jekkel left our group after three or four visits to the new lab—ashamed about losing vital details of the work, or jealousy, or something else? So I was left alone with a shoestring budget, and a staff waiting for guidance. I feverishly researched patent bases and scholarly works about the features of water, published mainly by *Physical Review*.

I came to the conclusion that the extra energy may come from vacuum fluctuations. But what are these fluctuations? Why do they interact only on these pulsed discharge devices? Certainly they are not transverse or even longitudinal electromagnetic waves. Could they be torsional electromagnetic fields interacting only with rotating charges? Transient plasma has shown such strange features, especially in the Correa invention.

We tried desperately to build a water splitting machine, which breaks the chemical bonds between hydrogen and oxygen. After a year of disastrous failures, we had to give up. I fell into deep depression, due to physical and mental exhaustion. I became nothing but skin and bones.

Decades later the answer slowly emerged: an unrecognized kind of LENR is responsible for the significant amount of excess energy.

At about the same time that Jekkel ran his Moskvich, there was another water-driven engine in the U.S., made by Joseph Papp.

At first glance they look different, but Papp's fuel is also water. However, the process is also aided by inert gases. A number of similar, mysterious energy-producing inventions cropped up—and sank. After nearly four decades of working in labs on the problem, I hope I know the answer, and I am going to share this work in a series of papers; readers can then judge for themselves.

But the fundamental effect was published in 1914 by John Collie *et al.* in the *Proceedings of the Royal Society* (Vol. 91-A, No. 623, pp. 30-45, 1914), "Production of Ne and He by the electrical discharge in hydrogen."

Ordinary hydrogen is transmuted into helium and neon, in very high-voltage transient discharges. Indeed, they had not yet mastered transmutation. Some of the results were better (with Pd electrodes) while other tests yielded nothing. If they had more years, probably they would have solved the repeatability problem, and from there the road to practical application would be opened.

The outbreak of World War I stopped this line of research. Maybe they went to the Western front or got military research projects; hydrogen transmutation experiments stopped in academic circles. So when lonely inventors discovered transmutation of hydrogen (in water vapor) and consequent release of energy without oil, they alone found the "big secret."

The neglect (suppression?) of hydrogen transmutation is among the worst deeds that science as an institution has ever done.

World War II was a thinly disguised resource war. The coal and oil embargo of the U.S. against Japan clearly led to Pearl Harbor and the Pacific War. With plenty of non-polluting energy around, there is simply no reason for war. Water cars could have been just one useful application of LENR in transient dusty hydrogen plasma.

3. Trout in Fast Creeks

There is a very troublesome observation by millions: trout don't swim in fast mountain creeks—they are practically motionless, while the water passes by. The first person to realize this as a principal problem was an Australian forester, Viktor Schauberger. He thought cold water had special properties when it implodes and rotates in a spiral manner, and quite different if hot water is spiraling outwards.

Part of a hydraulic test stand with a 3D printed twisted flow channel.

He made special double twisted conical tubes over years of diligent work, to simulate water flow around a trout. After decades of arduous work, he finally succeeded: the flow resistance was significantly reduced in his flow channels. At special, discreet velocities, the friction disappeared altogether, even produced a little extra push. That is what the trout does most of the time.

In principle we can learn a lot from nature, if we keep our eyes open. Schauberger did just that, while most people have overlooked it. But the same problem turns up in all spiral-shaped fluid flow, not just for water but for any gas. Here on Earth, tornadoes are self-generating power houses, and giant atmospheric vortexes are observed on each gas planet.

The giant red eye of Jupiter has kept on whirling without interruption for centuries. The source of its energy is hotly debated. No one dares to face the truth: it is an unrecognized source of energy and angular momentum as well. In my opinion, it is all about symmetries, conservation principles and violation of the law of conservation.

Why not check out again the lost Schauberger twisted spiral channels? I started with a friend of mine, Cs. Csőkör on a desperate shoe string budget project, with a 3D printer. It is quite difficult to print such channels, and the sea of parameters is endless. (See photographs.)

Nevertheless we have tried, and there are sometimes embarrassing unstable flow regimes, which should not be there.

If we persevere, after printing and testing dozens of such channels, maybe we shall hit on the right one. Of course, we use good old water as test fluid, which is better than air.

The spiral, vortex type of movement is not restricted to water or gases. Ferromagnetic media can be excited in a similar manner, and rarely were over-unity test results observed.

Thus testing a water vortex flow might give useful insight for other systems as well.

4. Rotating Water: The Force of Life

John O'M. Bockris would agree with me that nature is practically unexplored. There are vast white areas on the map, especially on the biology/"paranormal" borderline. For me, energy-related observations were always of interest, like the physical features of "chi" or "prana." These concepts are familiar to hundreds of millions of people, especially in the Far East. Acupuncture is widely used, and "laying on the hands" type of healing is on every second page of the New Testament. In there any testable truth behind it? As a young researcher of energy at the Nuclear Energy Research Lab of the Hungarian Academy of Sciences, I was skeptical but wanted to have a look in a fair, unbiased test series.

I read a lot of books on paranormal phenomena, from the Eileen Garrett Library in New York, and the Society for Physical Research library in London, about table tilting, and table levitation. I thought that it was definitely wrong, and could not be real. I believed all descriptions were either lies or just hallucinations.

But my spine chilled when it turned out that eyewitnesses described the phenomena on different continents and in an identical manner. Dozens of case studies were the same. Sadly, I had to admit, I was wrong, and prejudiced. However, if it worked then, it must work now.

On the basis of the case studies, especially by the scientific investigation of Crookes, I was able to make a heuristic model of the "life energy" coming out from our fingertips. The first simple test device was just a shallow Petri dish, filled with water. The water must rotate near the hands if held in an asymmetric manner.

The experimental device, with rotating water, seems simple but I had to map its movement. At first I tried myself. I spent weeks watching the rotational movement of water. Then family members came, then friends. It usually worked, but not after a tough work day.

The rotation of the water was unusual, and uneven. Under the fingers there were stronger local vortexes if a hand was held just 2-3 cm above the water. But if the hands were a bit farther from the water, the whole surface seemed to rotate.

Tiny aluminum particles or fine pepper floated on the surface, and traced the movement of the water.

I have built portable cages above the Petri dish, so the rotation of water should not be disturbed by breath or any air movement in the room. I started experiments "en masse" with hundreds of high school students. Later I improved the method again. I stretched three cross-shaped thin platinum wires one above the other into the Petri dish, and poured an indicator electrolyte into it. When the wires got a short electric impulse, the color changed around them along a thin layer. It mapped the movement of the water at three different levels. As their distribution was not linear as a function of depth, it became apparent that the liquid was driven by the whole volume, not just on the surface. As a side effect, I realized that the electrical conductivity of the liquid also changed during a successful run.

There were clear correlations between the rotation of water and the weather. On a nice, sunny day, results were better than on gloomy rainy days, or after a tough math written exam. Then results were worse than after gymnastics.

Of course, I have made many control tests with artificial hands.—rubber gloves filled with warm water, hand-shaped vessels filled with hot water and covered textiles by evaporating water, etc. They barely made the water rotate.

It seemed, the movement—the rotation—of water mapped a real force field around our hands. But this force field was unusual, because it kept a continuous rotation which was different from the known finite rotation of a dipole.

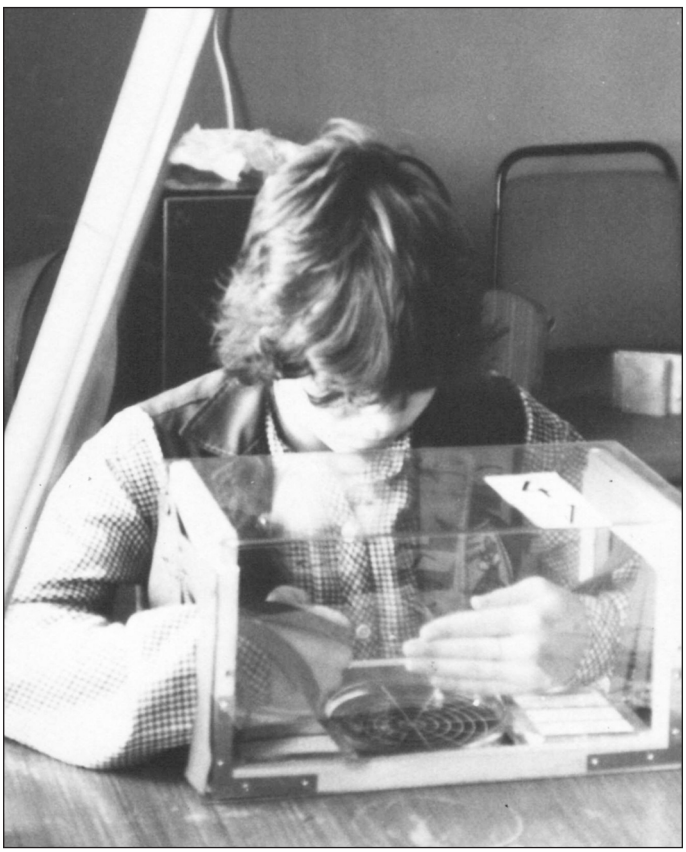
This force field acted as some sort of magnetic current would act. It verified my postulated hunch: conscious life produces a sort of magnetic current which we can't produce in our technical devices.

Indeed, in the vectorial form of the Maxwell-Heaviside equations, there were no magnetic charges, or magnetic current. Of course, rotational symmetry is excluded from textbook physics. Static charges yielded the electric field, linear charge movement and acceleration while current yielded magnetic fields. But there was no place for a rotating electric charge. Indeed, our technology, based on copper wires just can't do it. Electrons are free to move with a perceptible velocity only in high vacuum or gas discharges, and may rotate at a measurable angular velocity.

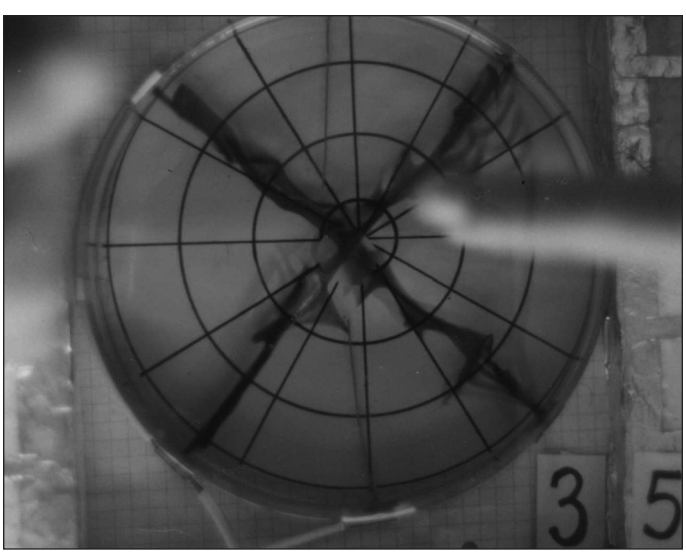
But in biology, the case is different. As we are built from chiral molecules, like sugar or proteins, these charges are forced to rotate if they move with a perceptible angular velocity.

Vitality is therefore measured as the degree of rotation of charges in our body. The more overall electrical activity we have, the higher is the degree of rotation of water.

Later, after years of further development, our Egely "vitality meter" was born. But it all started with an inquiry into



A student rotates water near her hands, under a glass box.



The water starts moving. The dark stripes are painted by electrolysis.

"chi" energy with the help of rotating water.

The rotating water led me to the missing magnetic monopole/magnetic current question. A footnote led me to the experiments of Felix Ehrenhaft, a curious experimental physicist in Vienna, Austria, who discovered what are really magnetic monopoles. In his experiment on colloids, he irradiated with light small metal droplets floating in air. They really behaved like southern or northern magnetic monopoles. Why? Because they became charged due to a photoelectric effect, and the charge was able to rotate on the droplet with very high angular velocity. This can't be achieved in a wire, or even in a gas discharge.

However, this magnetic charge is not an elementary particle, but a pseudo particle, assembled from ordinary matter. Not only can droplets behave as pseudo particles, this strange feature carrying spin was recently found in graphenes as well. Graphene can host "massive chiral fermions," another type of quasi-particle, having mass and handedness—spin. Thus this rotation can be conducted in living beings along "meridian lines," well known in Chinese medicine. In fact, the electrical properties of our skin along these meridians, and acupuncture points, are quite different electronically. (This is one way to find them.)

The rotating water led me to the strange world of quasi-particles, for example to plasmons, or polaritons. That was very useful when I started to dig deeply into the physics of LENR, because neutrons may be produced in this manner by high-energy electron waves and protons.

I compiled a research report about the rotation of water but theoretical nuclear physicist and academician L. Keszthelyi had them banned. In his opinion this work "cast doubts" on our accepted knowledge in biology. But this is the very purpose of research, I presumed. But he had the power, but never had any time to look at the films where the experiments were recorded on rotating water.

An elliptical hole bored into the wall.
Ball lightning seeks out grounded wires in the wall.

Mind/consciousness researchers still chase the dream of finding out what is memory, or how we think. These hopes are based on 19th century electrodynamics and chemistry. My firm opinion is that this is far from enough. Since physicists lost interest in the fundamental symmetries of nature, they cannot help biology any longer. My research report was banned and destroyed. Only a few copies survived of "Experimental Investigation of Biologically Induced Energy Transport Anomalies" (KFKI-1986-94/K, Hungarian Academy of Sciences, Research Centre for Physics).

5. From Under the Water

Ball lightning is a weird natural phenomenon, if not the weirdest of all. I came to learn about it in the library of Brookhaven National Laboratory. I was there on leave from the Hungarian Academy, with a scholarship from the International Atomic Energy Agency, an arm of the United Nations. It was very hard to get it, especially from the East Bloc.

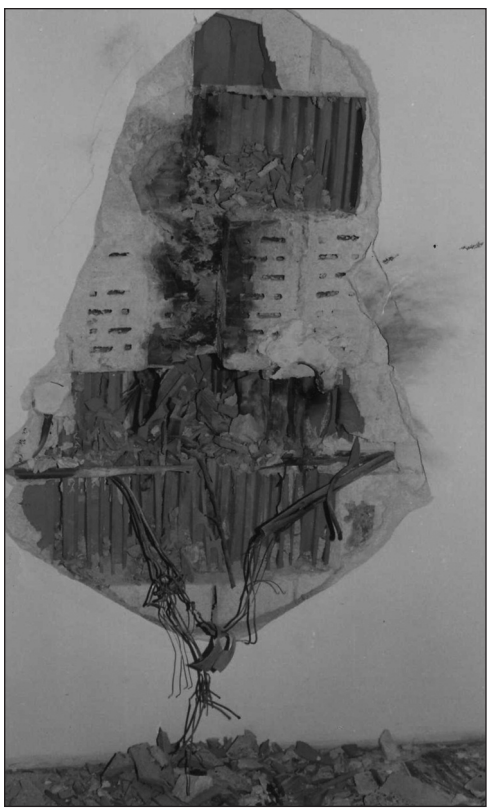
In all my life I have been interested in energy transport calculations and measurements. When a pressurized water reactor is broken (due to the loss of cooling water) and starts to boil, it forms bubbles, making a two-phase flow. Over the years I have specialized in heat transfer around boiling bubbles in water. When I read an observation at the library at Brookhaven, it really shocked me. There were repeated cases, when fiery ball lightning was observed emerging from under the sea.

It really shocked me, because that is in principle impossi-

A 50 cm hole bored through a 20 cm thick concrete ceiling.

ble. Water must quench the plasma, it just can't be stable for seconds, not even milliseconds. I started to collect observations from different continents, in different times. The ancient Chinese knew it as the "fire of dragons" because it was different from real fire. When a poor Chinese poured water on them, they were electrocuted. The dragon fire melted the metal blades of swords, but did no harm to a wooden sheath.

When I returned home to Hungary, I started to collect ball lightning observations in my spare time from eyewitnesses. For several years each summer there were a number of fresh destructive cases. I usually got them from insurance companies, and as letters. Over the years, I have assembled the largest collection of cases, with some photographs and field studies. These cases just verified what I read first. There were cases when ball lightning sat into a bath tub, boiling off half of the water, or making glass in a millisecond of wet sand down to the depth of 10 cm. The observations were consistent, but the plot thickened. What is the source of energy, and electric charge of ball lightning? It tended to melt (explode) long copper and aluminum electric wires in the walls, or burn out electric wires in grounded appliances.



Wires exploded out of a wall. In this case about 5 kgs of copper wires were instantly evaporated.

Strangely, in half of the cases it appeared suddenly out of nothing—just before or after a passing thunderstorm. Ball lightning violated everything that is sacred to physics:

a) Conservation of energy, because even a tennis-ball sized ball lightning produced lots of energy (not always), with no apparent external or internal source of energy.
b) Conservation of electric charge (this was the worst) because it melted wires, but nearby eyewitnesses never felt heat, like microwaves or RF heating.
c) It chased sometimes fast cars even airplanes, without a visible external drive. Thus momentum conservation was violated.
d) When standing close to it, observers noted that it rotates continuously, without slowing down. Thus it violated the conservation of angular momentum.
e) Strangest of all, the conservation of mass seemed to be violated. In one case about 10 liters of water poured out of a tennis-ball sized ball lightning. In another case a 10 cm diameter stone fell out of a floating ball of fire, or 2-3 kgs of sand poured out of a small ball in a kitchen. Rarely it happened in the opposite way, when objects disappeared near to it, like a window handle, or newspaper, or a key from the table, etc.

The incinerated body of a woman. Upper body charred but legs were intact.

Much later I struck the solution for all these apparent violations. All these problems are solved, if we assume space has at least four dimensions, but we observe only three of them. Then ball lightning is a four-dimensional charged ring, twice penetrating our 3D world.

To cut it short, there was one more related, strange sort of consistent set of observations—spontaneous human combustion. During the last three centuries, hundreds of such cases were collected, when a person died due to partial and sudden combustion. Usually just part of the body is burned, and the rest is completely unharmed.

Hungarian police sought me out with a similar case, some decades ago, when a lady was incinerated from the waist up but her legs remained intact. It happened on an open field, in daytime, without a storm but on a cloudy, rainy afternoon, near Budapest.

For awhile I speculated: can spontaneous human combustion be LENR driven? We know biological transmutation does exist. Can it be a runaway effect, like "heat after death"? Or in this case: "death after heat"?

I doubt it. Biological transmutation is slow and orderly, never explosive. Heat after death happens (if it happens) at much higher initial temperature, and is strictly associated with palladium.

So if someone observes a fiery ball of fire emerging from under the water, that is surely not LENR driven.

My ball lightning research reports are as follows:

1. "Hungarian Ball Lightning Observations (case 1-278)," Hung. Acad. of Sciences, Centr. Res. Inst. for Phys., 1987-10/D
2. "Energy Transfer Problems of Ball Lightning," Hung. Acad. of Sciences. Centr. Res. Inst. for Phys., 1986-13/D

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