**THE STRUCTURE OF WATER**

**and**

**HOW PSYCHE ENTERS MATTER**

**Part Two**

**Jerry Pollack, and the Structure in Water**

***by***

***Dr. Richard Alan Miller, c2015***

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**Part Two**

**Jerry Pollack, and the Structure in Water**

**Dr. Jerry Pollack** - I first met Dr. Jerry Pollack in 1970, when he hired me to work under him (lead) at the University of Washington, School of Medicine, and Department of Anesthesiology. Boeing had just lost the B-1 Project, and more than 30,000 scientists were left unemployed in a single day, including me.

There was even a sign on the outskirts of Seattle stating, “*Would the last person out of town please turn off the lights?*”

Professor of Bioengineering at the University of Washington, Dr. Gerald Pollack is now an international leader in the field of water research. He received his Ph.D. from the University of Pennsylvania in 1968.

Since then, his research interests have ranged broadly over the scientific spectrum, from cardiac dynamics and electrophysiology, to muscle contraction, cell biology, and more recently to the role of water in nature.



**Dr Jerry Pollack, 2014**

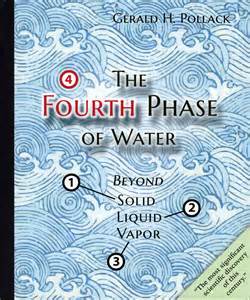
At age 72, Jerry currently runs the Pollack Laboratory at the University of Washington, which focuses on uncovering some of nature’s more deeply held secrets. He is also Editor-In-Chief of the scientific journal *WATER*, a multidisciplinary research journal that brings together water-oriented research from diverse disciplines.

Professor Pollack has earned many distinctions, medals, and honors. He was awarded the highest faculty honor bestowed by his university, the Annual Award Lectureship, at the University of Washington in 2008. Jerry is now in demand internationally as a catalytic lecturer, with a dynamic of presentation style.

In his spare time in Seattle, his joy lies in gardening, cooking, and skiing. He also ruminates on subjects as diverse as the origin of weather, the molecular basis of brain function, and attempting to solve the world’s crises (water, energy, health). He has also built ponds, harpsichords, and tree houses.

**EZ Water** - Water is clearly one of the most important factors for our health—especially when we consider that it is in over 99 percent of our body. Water is a really underappreciated part of the equation of optimal health.

Dr. Gerald Pollack is one of the leading premier research scientists in the world when it comes to understanding the physics of water, and what it means to your health. His book, *The Fourth Phase of Water: Beyond Solid, Liquid, and Vapor*, is a phenomenal read that is easy to understand even for the non-professional.



**Dr Jerry Pollack's newest book**

***The Fourth Phase of Water***

It clearly explains the theory of the 4th phase of water, which is nothing short of ground-breaking. This 4th phase of water is, in a nutshell, living water. It’s referred to as EZ water - EZ standing for “exclusion zone,”which has a negative charge. This water can hold energy, much like a battery, and can deliver energy too.

For years, Dr. Pollack researched muscles and how they contract, and it struck him as odd that the most common ideas about muscle contraction do not involve water, despite the fact that muscle tissue consists of 99 percent water molecules.

*I began to think about water in the context of biology: if water inside the cell was ordered and structured and not bulk water or ordinary water as most biochemists and cell biologists think, then it is really important.*

Dr Jerry Pollack

**The Water in Human Cells**

Gilbert Ling, who was a pioneer in this field, discovered that water in human cells is not ordinary water (H2O), but something far more structured and organized.

Dr. Pollack’s book also touches on some of the most basic features of water, many of which are really not understood. For example, how does evaporation take place? Why does a tea kettle whistle? Also, despite the fact that conventional science tells us water is supposed to freeze at zero degrees Celsius, experiments show that it can freeze at many different temperatures, down to minus 50 degrees Celsius. There’s actually no one single freezing point for water!



**Water Information Transfer**

Other experiments show that water's boiling point of 100 degrees Celsius (212 degrees Fahrenheit) does not always hold true either. There are actually 18 phases of water, which will be part of next month’s article.

Several various states of water can exist (like liquid, gas, or ice) at the same time, under specific conditions. For example, because of the very low atmospheric pressure on Mars, the water discovered by the Curiosity rover was in a slushy-ice form.

*There’s a famous website1 put together by a British scientist, Martin Chaplin. Martin lists numerous anomalies associated with water. In other words, things that shouldn’t be according to what we know about water.*

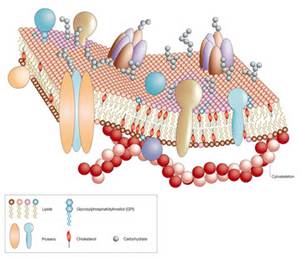
Dr Jerry Pollack

The more anomalies we have, the more we begin to think that maybe there’s something fundamental about water that we really do not yet know.

*That’s the core of what I’m trying to do. In our laboratory at the University of Washington, we’ve done many experiments over the last decade. These experiments have clearly shown the existence of this additional phase of water.*

Dr Jerry Pollack

The reason this 4th phase of water is called the “exclusion zone,” or EZ, is because the first thing Dr. Pollack’s team discovered is that it profoundly excludes things. Even small molecules are excluded from EZ water. Surprisingly, EZ water appears in great abundance, including inside most of your cells. Even your extracellular tissues are filled with this kind of water.



**Cell Membrane Structure**

**EZ Water in the Cell Membrane Structure**

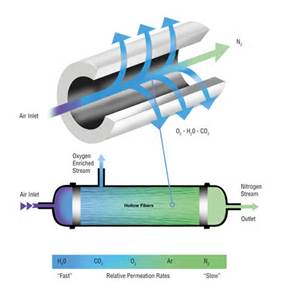
Other inherent differences between regular water and EZ water include its structure. Typical tap water is H2O. But this 4th phase is not H2O, but H3O2. This is a stabilized hydrogen peroxide molecule, with an extra hydrogen.

EZ water is more viscous, more ordered, and more alkaline than regular water, and its optical properties are quite different. The refractive index of EZ water is about 10 percent higher than ordinary water. Its density is also about 10 percent higher, and it has a negative charge (negative electrical potential). This may provide the answer as to why human cells are negatively charged.

*Everybody knows that the cell is negatively charged. If you insert an electrode into any of your cells, you’ll measure a negative electrical potential. The textbook says that the reason for this negative electrical potential has something to do with the membrane and the ion channels in the membrane.*

Dr Jerry Pollack

Oddly, if you look at a gel that has no membrane, you record much the same negative potential, minus 100 to 150 millivolts. The interior of the cell is much like a gel. It’s kind of surprising that something without a membrane yields the same electrical potential as a cell with a membrane.



**Hollow Fiber Membrane Prism**

That raises the question: where does this negativity come from? Well, I think the negativity comes from the water, because the EZ water inside the cell has a negative charge. The same is true of the gel—the EZ water in the gel makes the gel negatively charged.

*I think the cells are negatively charged because the water inside the cell is mainly EZ water and not neutral H2O.*

Dr Jerry Pollack



**Dr Jerry Pollack, 2014**

**Coming Next:**

**Part 3: The 18 Phase of Water,**

**and the Formation of the 4th Phase**

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