

The Human Face of Water

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Abstract: A close similarity is noted between the human Life Cycle and the Hydrological Cycle in Nature. Water makes up 75% of the body weight (90 % in Blood and Viscera) and every one of us is connected through water. Intra-molecular chemical binding force between Hydrogen and Oxygen in a water molecule and the biotic force (Pranic force) in humans have been compared and considered to be the two faces of the same energy that pervades in organic and inorganic world. The restlessness or molecular vibration of the water molecule as compared to the conjugal turmoil in a unit of the human family, impacts many anomalous properties of water which in turn, is responsible for the Creation, Sustenance, and Annihilation (Species extinction) of life on earth. These multifarious relationships between water and humans justify assigning a Human Face for Water.

Keywords: Hydrological cycle, Biotic force, Bipolarity, Polysialate, Societal pollution.

Preamble

We always discuss water with the sole mission of an Exploitative Model either for Drinking (Domestic use), Industry, Agriculture, Transportation, or Sewage dilution, each vying with the other. The exploitative model invariably ends up with a sceptre of Pollution, Paucity (Draught), and Paradox of Plenty (Flood). This paper is a discussion on a non-exploitative model in "para-scientific" language where one looks into a body of water only to find his/her own face in it: "A Human Face for Water". Primarily, the aim of the paper is to recognize the similarity of intermolecular force (Chemical Bonding force) in a water molecule and the Biotic force (Pranic force) in humans, so that, water, which makes up more than 75% of the human body is looked upon as an integral part of divine elixir in the living system and not just a commodity to use or abuse as one likes.

Introduction

Science recognizes only one Cosmic Force (i.e. Energy in action) and describes it as Gravitation or Gravity, Magnetic or Electromagnetic, Atomic, and Nuclear Binding Force, all of which together run the universe and make things happen., but is squarely silent on the prevalence and properties of the forces in the Living World. Akarsha, Ashakti, Akrosh, Vairagya, and Bhakti (Devotion), etc. expressed as Anger, Love, Hate, Affection, Addiction, Desire, etc. are "microcosms" of the same Force in the anthropic domain of the Living World. The vital force of body and mind, the outward symbol of which is the flow of breath (Prana-yam) in individuals, all the time, is a nano-scale replica of the universal Pranic force. With this, a priori assumption, the chemical bonding forces in a water molecule (electron hunger of Oxygen) and the biogenic desire (biological hunger of humans) are viewed as different micro facets of the same universal energy. Therefore the present effort is to give a human face to water. Compared to the Hydrological Cycle in Geology, the Life Cycle in the poem-let has significant information as follows: (1) The Hydrological Cycle in Geological Science is, in general, azoic, whereas that in the poem-let in the plaque is zoic and includes all, I, We, and Me (Aham in Sanskrit and Meme, the cultural equivalence of biological Gene), (2) The vital element, Water in the Life Cycle is Amrit (immortal or indestructible), whereas the classic Hydrological Cycle remains silent about the immortality of the elemental water. Whereas the mimicry of the Self (Aham or Meme) in the Life Cycle is the primary theme of this paper and will be illustrated subsequently, the indestructibility (Amrit-ness) of the vital element is viewed to have great significance. Geologists believe that the total planetary water – atmospheric & soil moistures, surface & ground waters, continental & polar ice caps, mountain glaciers, and magmatic and mineral held waters, etc. has remained constant since Achaean times. Only one form changes to another and all living beings including humans take and give from this planetary stock to survive. On death, they leave their borrowed content back to the primary stock. To be specific, water circulates and connects all of us humans living or dead. In other words, with 75 % of the human body being exclusively of water by weight (Fig. 2) and 92% in soft tissues and viscera, at least a few water molecules that once circulated in the body of celebrities like Cleopatra, Julius Ceaser, Ram, Ravan or Buddha, are likely to be in the body fluid of any of us. If in the future, Science can recognize a unique signature of each water molecule, that is, if the water molecule has a memory (that it was there) and the memory signature can be decoded like DNA genealogy such a speculation of historical interconnection can be considered a possibility. As such information from fluid inclusion studies in minerals, Carbon and Oxygen Isotope studies, and DNA analyses are but the tip of the iceberg of fossilized information the Geoscientists are retrieving from rocks, minerals, woods (charcoal), and bones.

A Personal Anecdote:

I was born and grew up in the village Barpali, famous as the birth place of Gangadhar Meher, the “Natural” poet of Orissa, who never had any formal school education. He wrote:

<p>Cycl of Life:(In Odia) ମୁଚ ଅମୃତ ସାଗର କିନ୍ତୁ ନଲେ ଉଠିଥିଲି ଚେନି ସିନ୍ଧୁ ଖସି ମିଶିଛି ଅମୃତ ଧାରେ, ଗତି କରୁଛି ସେ ଅକୃପରେ, ପଥେ ସୁଖୀ ଗଲେ ପାପ ତାପରେ, ହୋଇ ଶିଶିର ଖସିବି ତାପରେ, ଅମୃତ ମୟ ଅମୃତ ରୟ ସହିତ ମିଶିବି ସାଗରେ ।</p>	<p>(Approximate meaning) I am a particle of immortal ocean Left the home and ascend the sky, Descending down as trickles of rain Running down on cosmic blessing If heat of sins dries me on way Will return back as drops of dew On to the land of immortal domain, And join the immortal ocean again. --- Gangadhar Meher.</p>
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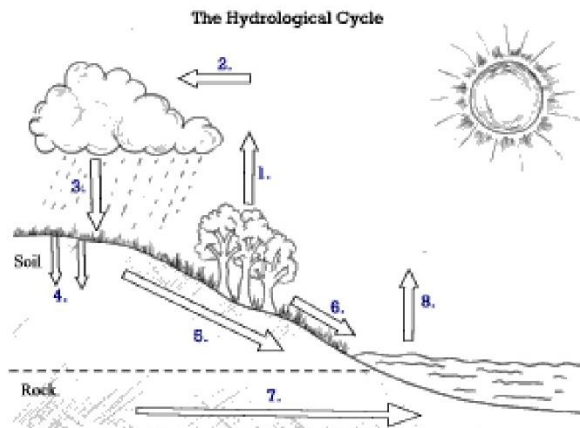


Fig. 1. Similarity of Life Cycle in the poem-let and Hydrological Cycle in Geology

The poem-let inscribed in the marble plaque decorates his Tomb Stone at the burial ground outskirts the village. Every year, on the day of his death anniversary local school children (including myself) would gather around the Tomb Stone, chant the poem-let as a prayer. Later, a decade after pursuing an education in Geology, the poem-let on the Tomb Stone clearly appeared to be mimicry or sum total of the Hydrological Cycle in Geological Science.

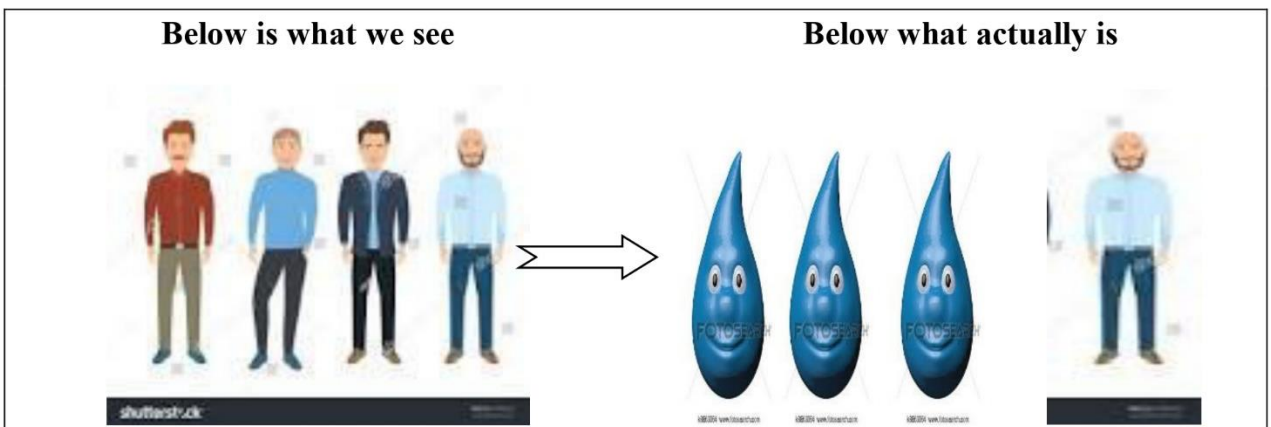


Fig. 2. Man is three-fourths water (Three out of Four Men are but Water).

Beneveniste (1985), discoverer of HIV proved that the DNA of the virus could be recognised in spectral analysis even after infinite dilution that is even if the virus was practically not there in the water. Obviously, a strong believer in Homeopathy where the signature of a therapeutic constituent continues even after a millionth dilution, he emphasized that water can retain the memory of a solute even at infinite dilution (Davenes et al.,

1988) (equivalent to a drop homogenized in the Atlantic Ocean). Such an argument questions the validity of water purification technology in modern Science.

Many great thinkers have said that the products and processes in Nature tend to mimic the parent at various scales. For example, “Ontogeny reflects Phylogeny”, “ Progeny mimics Parents”, fracture boundaries produced by physical rupture or chemical dissolution on rocks and mineral grains, and continental shorelines have identical shapes. Lastly the human breath (Pranayam), planetary breathing, that is the average CO₂ content of the atmosphere shows a regular annual variation in summer and winter (Al gore, 2006) and expansion and contraction (Big Bang and Gravity Collapse) of the universe are matters of mimicry at extreme scales. In view of such manifestation of mimicry in Nature, and the human vessels being 3/4th. Water (92% in viscera), a behavioural analogy of Man and molecule of Water does not appear to be illogical.

Conjugation of Water

As per elementary science, water is chemically H₂O, materially two parts of Hydrogen and one part of Oxygen, and can exist simultaneously in solid, liquid, and gas phases. But, a mixture of two volumes of Hydrogen and one volume of Oxygen, however uniformly mixed, intimately juxtaposed, and homogenized, cannot make water in any sense - clearly, the sum of the parts alone cannot make the whole. The mixture requires ingestion (insolation) of a spark (quantum) of energy (Mantra/Oath) through an “Energy Diviner” to tie the nuclear (nuptial) knot between the two elements Oxygen and Hydrogens for induction (christened) into a species called Water, where-after, the “ Divine Architect” or Nature as if commands: “ Go down to Earth, occupy the ocean, invade the sky and proliferate land and mountains to rule the planet”. Till this sacred ceremony of ignition, however intensely the two elements “live in” together, a sustainable and stable phase of water-family is not attained.

Valency (Valentine?) perturbations in a Water molecule

The bivalent (bigamous?) Oxygen with six outer electrons, two of which are valency electrons, settles down into an apparently stable (neutral) state of water with two Hydrogen held firmly by two strong covalent bonds (hands) through shared electrons (Fig. 3a). Unlike a close-packed tetrahedral packing of spheres, where any pair of the spheres make an angle of 109.50 (Fig. 3b) with the centre of the packing, the bonded Hydrogen in a water molecule are held at a closer configuration of 104.50 (Fig. 3c) with little freedom to move away even to the natural stable configuration of a close-packed tetrahedral packing. Thus the two bonded Hydrogens in the water molecule have less freedom than that of the state of the “Live-in” relationship of the Hydrogen and Oxygen gas mixture and are in a permanently restless state. Also, the two Hydrogen ions, each being positively charged, repel each other, but being chemically (ethically) held by covalent hands of the Oxygen, oscillate continuously within a narrow limit of permitted angle, in order to preserve the family sanctity of the “water status”. With two Hydrogen “spouses”, the Oxygen suffers from a “Love-Hate” relationship with the Hydrogen pairs, such that when one of them is nearer, the other moves away and vice versa.

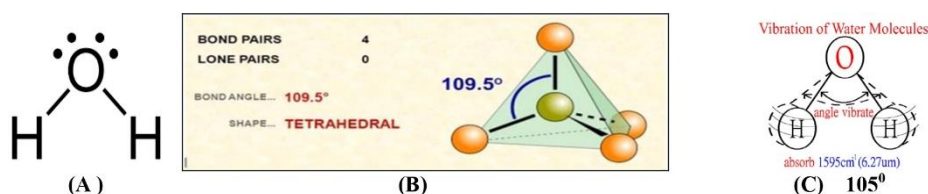


Fig. 3. (a) – Chemical symbol of a water molecule with the two isolated electron pairs above. (b) – 109.5° angle for a normal tetrahedral close pack configuration, (c)-105° angle in water molecule “which tightly squeezes the Hydrogen pairs”.

The extent of this “Love-Hate slip” is again within a permissible limit of 0.954 AO (about 100 pm) (Fig. 4).

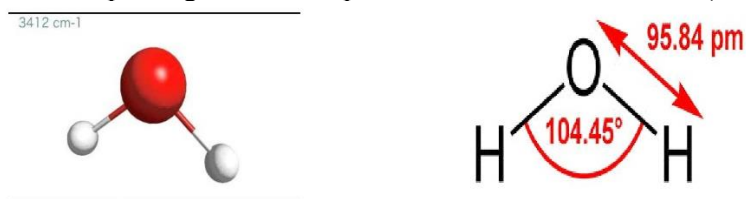


Fig. 4. “Love-Hate slip” of Hydrogen (slip within 100 pm limit).

Thus the three-member family of the water molecule suffers from continuous “valentine (valency) perturbances” through three different symmetrical movements, namely, translation (slip), rotation, and gyration by the two Hydrogens (Fig. 5). This symmetrical movement of the Trio, obviously recognized through molecular spectroscopy, is synonymous to any classical dance or the cosmic dance of Shiva (the ultimate supreme) depicted in ancient scriptures.

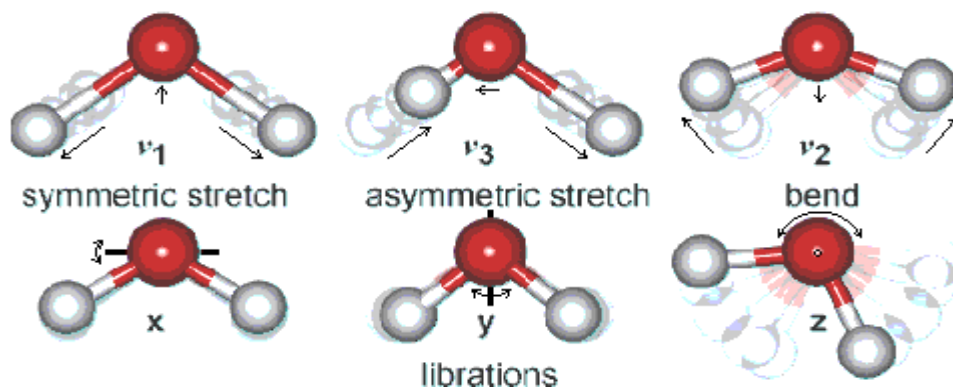


Fig. 5. Integrated dancing movements of water.



Fig. 6. In a Ball-dancing hall, the dancers exchange partners amongst themselves or pick up from onlookers seated around.

A Water Cluster is like a Dancing Hall

A cluster of water molecules may be looked upon as a crowded Ball-dancing hall where each dancer (Oxygen) with two partners (Hydrogen), instead of one in the normal course, swirls around and occasionally exchange partners with the adjacent ones. Exchange can also take place from the non-dancing onlookers, seated around the Ball-room and imbibe them into the spirit of dancing and take part in the game (Fig. 6). This mechanism is described below as water-rock interaction, where the “dancing” water molecules kick start inert rock-forming minerals to produce active residues like clays, alumina, and zeolite.

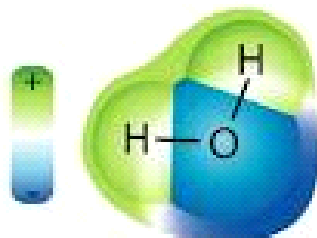


Fig. 7. Bipolarity in water molecules generates amphoteric (hermaphrodite ?) instinct in water molecules.

Bipolarity and Hydrogen Bonding in Water

A significant character of the water molecule is its Bipolar property, consequent to a negative charge at one end due to the two isolated electron pairs and a residual positive charge at the other end consequent to the bonded

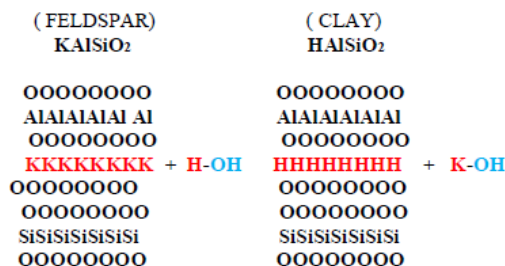


Fig. 9. The K atoms of the closed-packed Silicate structure is replaced by H of the Bipolar Water molecule producing a caustic solution KOH.

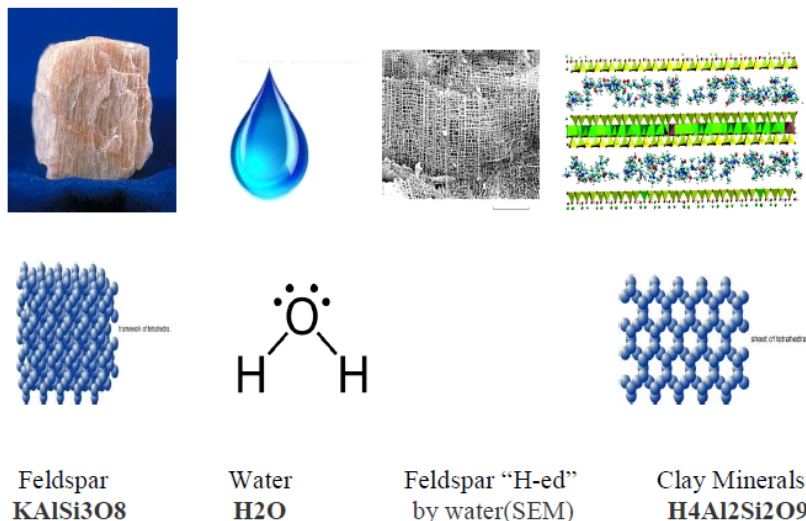


Fig. 10. Schematic presentation of rock-water interaction First Row: Feldspar, a drop of water, semi-altered (H-ed) mineral, and clay in sketch. Second Row: Atomic structure of Feldspar, Water, and Clay mineral.

Epilogue

Besides triggering the leap from a nonliving to a living state, the primeval motions of the water molecule develop many anomalous properties in the water, including a strange varying density, large heat capacity, high surface tension, universal solvency, bipolarity, etc. and can strip, cleave, zip or unzip, fold or bend organic or inorganic molecules, design and shape the planet and life and ultimately become an Apocalypse for destruction and mass extinction (Sahu, 2003).

Assignment of a “Human Face” reconnects humans through the water, the parental material, and to a realization that water is not a commodity to live on but a community to live with. All humans are connected through water. Being what we are (75 % of water in whole body weight and 90 % in blood) exploitation and abuse of water in any form is exploitation and abuse of self. In short, when we pollute water, it ends up with “Societal pollution” and when we interfere with the natural hydrological cycle in the name of development and progress we fiddle with the “Societal genome”.

Note: All figs., except 9 and 10 are taken from the internet.

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