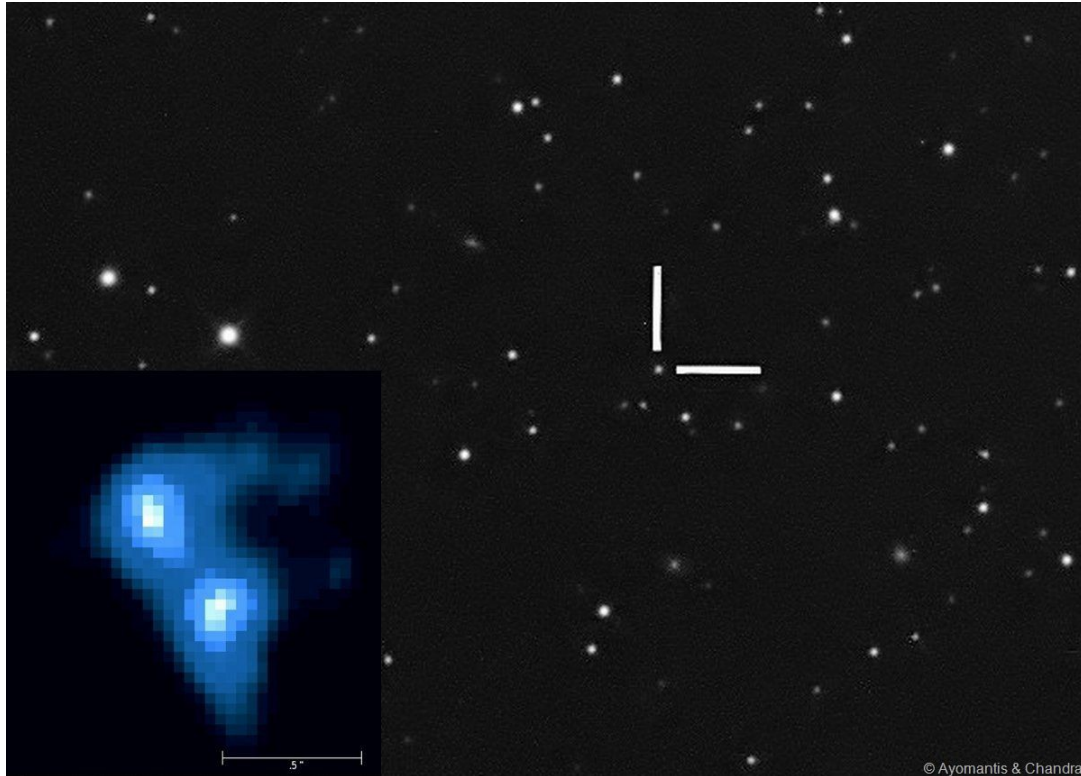
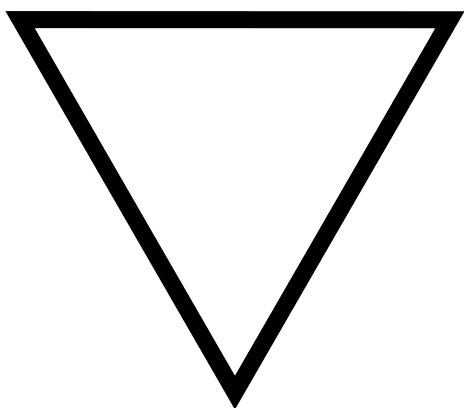


## On Water & Magical Thinking



Satellite image of APM 08279+5255

The phrase blue planet notes our identification with water, which covers 2/3 of the earth's surface. We imagine our uniquely amniotic position in a harsh and arid universe, yet a massive ocean 140 trillion times larger than all those on earth has been recently discovered near a quasar named APM 08279+5255, located 12 billion light years away. Colored crayon blue in the mind's eye, water is scientifically described as colorless and transparent with natural lens-like characteristics that reflect, magnify and distort its surroundings. Perhaps its mutability makes it uniquely positioned as a catalyst for magical thinking and a measure of the progress of rationalism. The rising tide of global warming is bitterly disputed in terms of causality as glaciers calf and temperatures spike. 30 percent of Americans don't believe in evolution; a biblical watery ferment and its creationist timeline has slowly been displaced by Darwinism. The public struggles to replace the heavenly creatures of Adam and Eve with a dim time-lapse version of the evolutionary progress from a primordial soup to single-celled creatures' transformation, from gills to lungs, fins to feet, crawling out of the sea; apes coming out of the caves and trees, dropping our tails, guarding the water hole, lurching toward our present form. They choose to believe in the great flood and parting of the Red Sea. Perhaps we never left the ancient depths, but we evolved in such a way to carry the sea inside us (the human body consisting of 60% water).

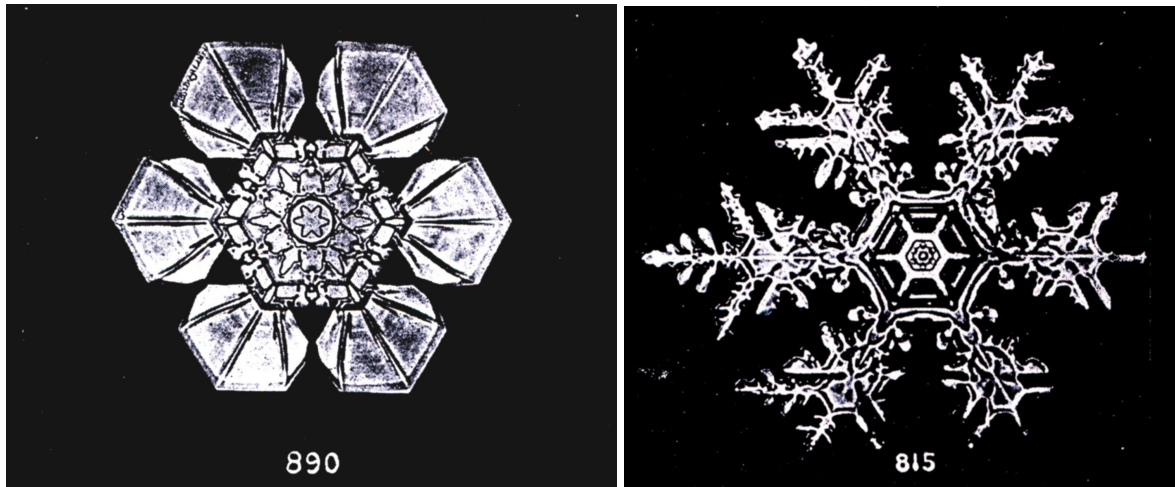


The alchemical symbol for water

Scientific inquiry has evolved from a mystical past of alchemical elementals. Aristotle believed that all things consisted of four elements: earth, air, fire and water. While profoundly different from the periodic table of today, these classical elements lay the foundation for future material differentiations. The four elements were thought to be the primary materials to which everything, given enough time, would eventually return. Water symbolized by a downward triangle represented phlegm, the feminine, the brain, winter the western direction. The aim of transmogrifying these four elements and turning lead to gold carried a parallel meaning for the alchemist: the purification of self and soul. *As above so below*, the alchemical axiom suggests the journey of life surrounded by a system of correlating scales with the microcosmic below and heavens above. By manipulating the elements, the alchemists believed they could control the events of the world. Scientific knowledge is built upon an embarrassing and brilliant successive of failures and success. The alchemist's water element finds its way into contemporary life through the periodic table as well as the practice of astrology where it helps to guide people's lives. Somewhere between the celebrated and the forgotten lies the narrative of magical thinking.

"Storytelling is how humans make sense of the world," according to Michael Dahlstrom. He goes on to explain the causality of narrative overrides facts in the way we view reality. If we are told there is a 1 in 11 million chance of being attacked by a shark while swimming, then we meet a one-legged man on the beach who lost his limb to a shark, the two kinds of information we received are in conflict. The general abstraction is statistically true but is overruled by the particular personal experiential level of the story. We will decide not to go in the water.

16 people a year are killed by falling icicles in the USA—that is a fact. The reasoning behind each of these deaths will send the mind off on endless tangents, provoking our propensity for pattern recognition to solve the unsolvable.



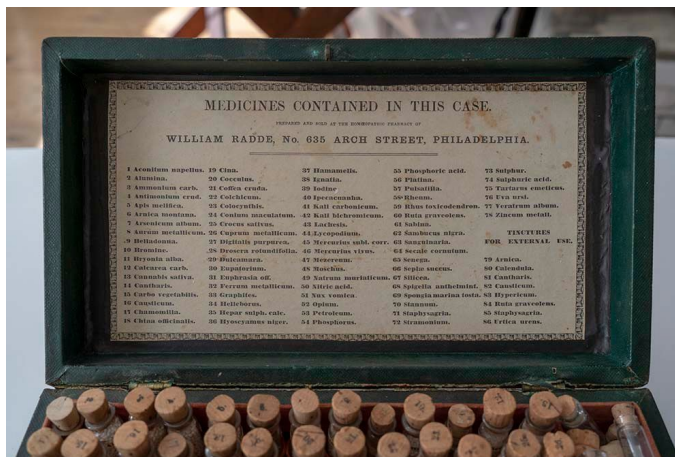
Snowflake photographs by Wilson Bentley

Wilson Bentley was fascinated by ice crystals and lived in Jericho, Vermont, which is known for its long, white winters. He developed a photographic method of capturing images of snowflakes at subzero temperatures which he called “tiny miracles of beauty.” He idealized the symmetrical beauty of the crystals and the concept that “no two flakes are identical,” developed around his work. Others found it very difficult to find such perfectly geometric examples of flakes in nature. Bentley was accused of modifying his subjects to that end, to which he replied, “A true scientist wishes above all to have his photographs as true to nature as possible, and if retouching will help in this respect, then it is fully justified.” After walking home through a blizzard for six miles, he died of pneumonia in 1931.



“Madonna of the Ice!” by Roy E. Evans

Frigid winds jet southward from Canada across Lake Superior, battering the rocky shoreline of the twin harbors of Minnesota, covering it with layer upon layer of ice. When the storm cleared, the lake’s edge was covered with glistening stalagmites with one small cove taking the form of a Madonna and child. Roy E. Evans memorialized the figures in his photograph, “Madonna of the Ice!” taken in 1949. Pareidolia is the name of the phenomena that allows us to falsely interpret stimuli and see a common pattern that is not there. Perhaps the most famous example is the face of the man in the moon. Faces are a commonly produced false positive, but auditory pareidolia is also common. People often hear voices while taking a shower as the brain tries to separate information from noise. Max Ernst took advantage of this tendency visually by using a technique for creating grainy abstractions called frottage to produce a hallucinatory effect in his work as early as 1925. Theories suggest that our brains have evolved these over-active areas to rapidly recognize faces and sounds as a form of protection to quickly separate friend from foe, information from noise. Hallucinations are a feature of our brain’s ability to read, cross reference and suggest connections between disparate elements of the world, which is a feature shared by both poetry and conspiracy theories.



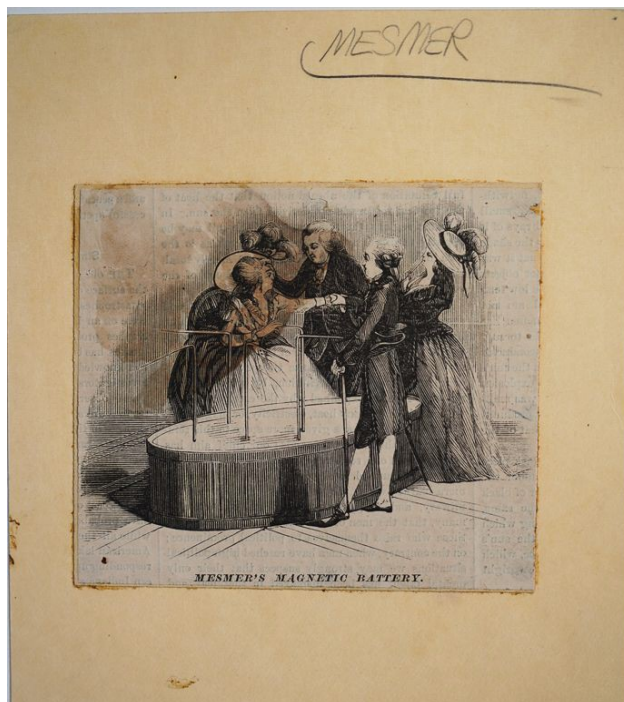
Homeopathy Kit

Taking the form of any container, water is talismanically positioned to mimic any system of belief. Homeopathy is a pseudoscience, a belief that is incorrectly presented as scientific. 'Homo,' meaning same, 'path' meaning sickness, introduced the concept of battling like with like ([similia similibus curentur](#)) within a system of medical treatment. Formulated by Samuel Hahnemann in 1796, this system relies on an asymmetrical interaction between the sickness and the sick, whereby a preparation of pathogen highly-diluted in water is consumed by the ailing individual. Dilution is done by adding a tiny drop of pathogen to one container of water, mixing and removing one tiny drop from that and putting it into the next container of water and repeating. Finally one drop of the diluted substance is added to a sugar pill which is consumed by the patient. Despite any scientific proof, homeopathy's popularity grew into the twentieth century. This may be due to the fact that early medical cures were often worse than the disease. Doing nothing at all is better than bloodletting. With the use of antibiotics, homeopathy finally dwindled in the US by the 1920s. The new age movement of the 1970s, and more recently, the

anti-vaccination movement saw the development of alternative medicine. The FDA cites sales of over-the-counter homeopathic medicines at \$2.7 billion for 2007. Physicist Robert L. Park, while commenting on how much medicine remains in a homeopathic pill, stated, “To expect to get even one molecule of the ‘medicinal’ substance allegedly present in a 30X pills, it would be necessary to take some two billion of them. The dilution is so extreme that it leaves the preparation with virtually no molecules of the original substance. However, the homeopathic practitioner believes the water mysteriously “remembers” the pathogenic substance.”

The belief in this animistic and unproven water memory may have its antecedents in the dim twilight of empirical observations. Picture the connection between the discovery of a dead animal upstream and its invisible and deadly effect downstream in drinking water. Could memory have become a stand-in for the spread of impurities before the discovery of microscopic germs or toxins? Our ancestors could not be sure exactly what would happen after taking a drink from the stream—only time would tell, and during the wait the mind would wander.

An illustration of Mesmer’s magnetic battery




Self-fulfilling prophecy is a narrative twist that also relates to a perplexing scientific phenomenon known as the Placebo Effect. At first, variations of the term were used by doctors to describe treatments used to make a patient feel better and was considered distinctly separate from a cure. Placebo seems to have defined a territory between two different spheres of action: body and mind. In the 1780s, Franz Mesmer experimented with treatments using trance states (which bore his name) involving his theory of animal magnetism. He developed positive results and a brisk business by using a battery-like system of water-filled “banquets.” Patients would “induce a crisis” by grasping metal rods inserted into the water to become part of the circuit causing

them to moan, convulse and blackout. His popularity disturbed the medical establishment of Paris and provoked an investigation which involved the first blind experiment and the debunking of Mesmer’s magnetic theory. The commission proved that animal magnetism was not operational, but could not explain the effect that mesmeric treatment had upon people. Rather, the panel wrote, “the imagination singly produces all the effects attributed to the magnetism.” Mesmer’s disciple Charles d’Eslon, opined on the commission’s results, “the imagination, directed to the relief of suffering humanity, would be a most valuable means in the hands of the medical profession—a subject to which these august

scientists might wish to apply their methods.” Eventually the term ‘placebo,’ meaning “I shall please” in Latin, has come to refer to an effect triggered by the absence of anything except belief. In 1985, Irving Kirsch suggests that placebo effects are a product of response expectations, which seems to be closely related to the production of salivation on command in the Pavlovian effect of conditioning.<sup>1</sup> Today, the placebo effect factors into all drug testing. For example, in a clinical trial, unbeknown to the patients, half are given real medicine while the others receive sugar pills or placebos. Big-Pharma has grappled with the fact placebos seem to work as well as some medication. The effect has been consistently measurable in at least two categories: pain and depression. The failure of science to fully explain how “nothing” can do “something,” or that the mind can alter its own physical reality is a quagmire that has spawned endless magical thoughts.

A patent by Benveniste for “Producing Signals from a Substance, Biological and/or Chemical Activity”



US0006541978B1

(12) **United States Patent**  
Benveniste et al.

(16) Patent No.: **US 6,541,978 B1**  
(45) Date of Patent: **Apr. 1, 2003**

(54) **METHOD, SYSTEM AND DEVICE FOR PRODUCING SIGNALS FROM A SUBSTANCE BIOLOGICAL AND/OR CHEMICAL ACTIVITY**

(75) Inventors: **Jacques Benveniste, Paris (FR); Didier Guillonnet, Cagnes-sur-mer (FR)**

(73) Assignee: **Digibio, Paris (FR)**

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/787,570**

(22) PCT Filed: **Sep. 23, 1999**

(86) PCT No.: **PCT/FR99/02270**

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(87) PCT Pub. No.: **WO00/17638**  
PCT Pub. Date: **Mar. 30, 2000**

(30) Foreign Application Priority Data  
Sep. 23, 1998 (FR) ..... 98 12058

(51) Int. Cl. **G01V 3/08, G01V 3/10**

(52) U.S. Cl. **324/329, 324/441**

(58) Field of Search **324/232, 210, 226, 262, 204, 71.1, 663, 692, 668; 340/627, 631; 436/66, 627**

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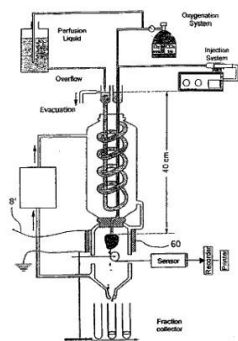
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*Primary Examiner*—Edward Lefkowitz  
*Assistant Examiner*—Subhash A. Zaveri

(57) **ABSTRACT**  
The invention concerns a method, a system and a device for producing, from a substance, electric signals characteristic of the biological activity of an active element contained in the substance. The method consists in: placing the substance in a zone subjected to a specific electric, magnetic and/or electromagnetic excitation field. The method further includes a step which consists in transforming the fields resulting from the interaction between the specific excitation field and the substance, into signals, in particular electric signals, using a first transducer receiving the resulting fields.

45 Claims, 6 Drawing Sheets



In 1988, immunologist Jacques Benveniste published, “Human basophil degranulation triggered by very dilute antiserum against IgE,” positing that water structures were able

to retain a signature of an antibody.<sup>2</sup>

Benveniste observed, “Water molecules somehow retained a memory of the antibodies that they had previously been in contact with, so that a biological effect remained when the antibodies were no longer present.” Philip Ball of *Nature* magazine states, “This, it seemed, validated the claims made for highly diluted homeopathic medicines. Water could act as a ‘template’ for the [antibody] molecule...”

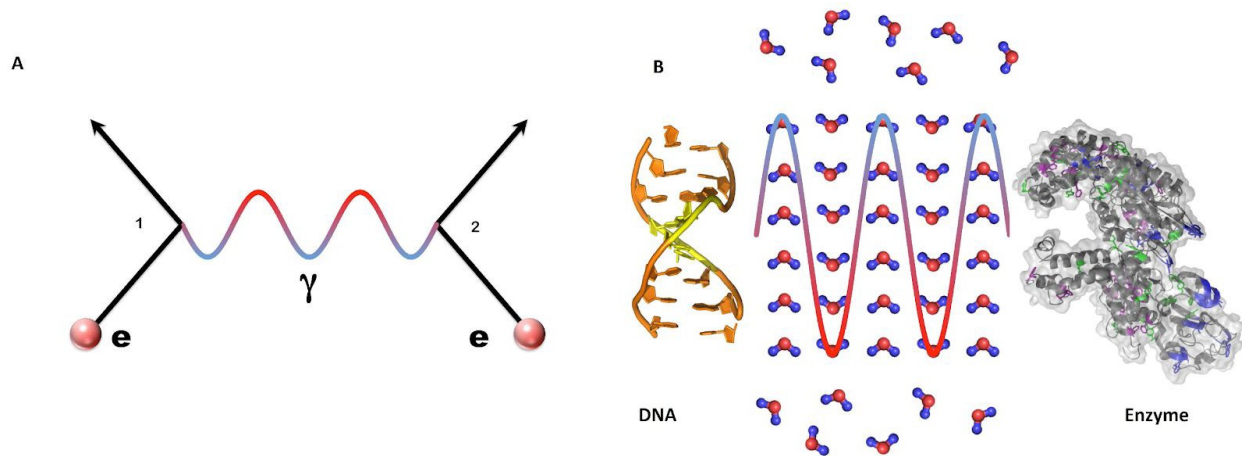
Homeopathic theory suggests that H2O somehow records the environment and perhaps even the conditions that it is exposed to much like a computer. In the late 90s, Benveniste would hypothesize that these signatures are transmitted between water molecules. “Biomolecules,” he said, “communicate with their receptor molecules

by sending out low-frequency electromagnetic signals, which the receptors pick up like radios tuned to a specific wavelength.” Benveniste went further claiming that he was able to record

<sup>1</sup> Response expectancy as a determinant of experience and behavior". *American Psychologist*. **40** (11): 1189–1202.

<sup>2</sup> *Nature* (?)

these signals digitally, and that by playing them back to cells in the absence of the molecules themselves he could reproduce their biochemical effect, including triggering a defense response in neutrophils, which kill invading cells <sup>2</sup>.” Neither Benveniste nor any other laboratories were able to replicate any of his findings, leading to public humiliations. He lived an embattled existence defending his results until his death in 2004.



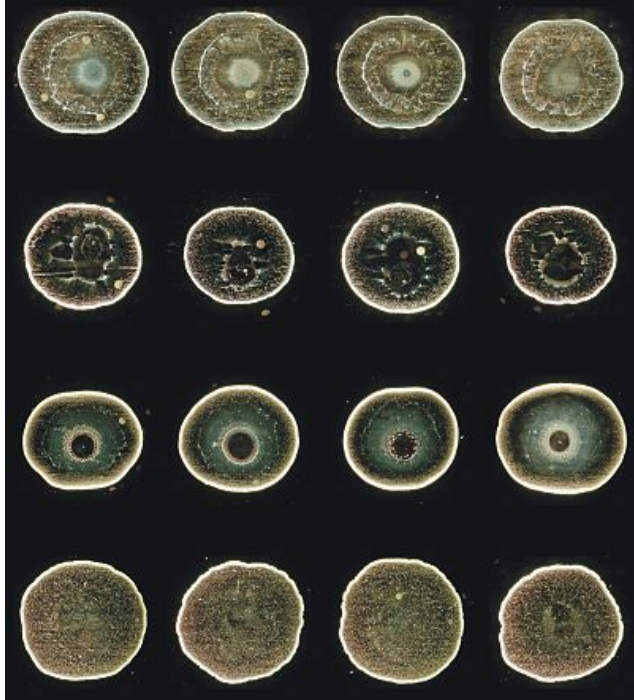
Graphic in a paper by Benveniste and others titled “Water Bridging Dynamics of Polymerase Chain Reaction in the Gauge Theory Paradigm of Quantum Fields”  
<https://www.mdpi.com/2073-4441/9/5/339/htm>

France's leading virologist, Dr. Montagnier, who won the Nobel prize in 1983 for his co-discovery of the HIV virus, considered Benveniste “a modern Galileo,” and continued his research trajectory conducting numerous controversial experiments that were published in 2009. His sweeping claims include the discovery of low-frequency electromagnetic wave emissions from bacterial DNA sequences and the apparent ability of these waves to organize nucleotides into new bacterial DNA by mediation of structures within water.[1] The signals detected by Montagnier, he claims, appear to be a property of most bacteria infecting humans, as well as many viruses, and can be recorded and played back to effect the structure of water. Regarding the similarity of homeopathy and his theory, Montagnier states, “High dilutions of something are not nothing. They are water structures which mimic the original molecules. We find that with DNA, we cannot work at the extremely high dilutions used in homeopathy; we

cannot go further than a  $10^{-18}$  dilution or we lose the signal. But even at  $10^{-18}$ , you can calculate that there is not a single molecule of DNA left. And yet we detect a signal.”<sup>3</sup> No third party has replicated this work and Montagnier, age 86, continues his research in China at Shanghai's Jiaotang University.

<sup>3</sup> He claims that by demonstrating the interaction of living organisms with electromagnetic waves, perhaps including the low-frequency Schumann resonance in the Earth's atmosphere, the work has revolutionary implications for biology and our whole understanding of the universe, and extends the work begun in the 1920s by such figures as Alexander Gurwitsch, who detected ultraviolet radiations from growing plant cells.





Photographs of individual water samples by Bernd Kröplin

In a lecture titled “The Communication of Water – Water and Sympathy” recorded at the Aerospace Institute in Stuttgart, Professor Bernd Kröplin demonstrates that water is affected by each individual in its proximity. Under his guidance each person submits their personal vile of water to be photographed microscopically and the results are graphically impressive. Each image is unique. According to his website, the public can submit water samples to be photographed. He is quoted on the site:

*“What if sympathy would be due to the attraction of water molecules? Over a distance of approx. 1.5m in the laboratory water droplets exchange information and influence each other. Adults with up to 70% body water sitting in a bus or lecture hall, for example, have already exchanged information before they have welcomed each other. They are a great ‘water soup of information.’ An unconscious communication, which one can’t escape voluntarily! Man is probably perceiving information and his environment quite differently from what we previously believed: through the cell water.”<sup>4</sup>*

Any sufficiently advanced technology is indistinguishable from magic.<sup>5</sup> The caveman’s club and the nuclear bomb is the magic show that comes to mind when trying to understand our current and future relationship to technology. Born a blank slate, with no knowledge of how the world functions, each person is faced with the task of understanding all the scientific advancements

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<sup>4</sup> Prof. Bernd Kröplin and team – an interview for ManagementRadio by Ulrich Hinsin in 2016. [http://www.weltimtropfen.de/forschung\\_kommunikation\\_english.html](http://www.weltimtropfen.de/forschung_kommunikation_english.html)

<sup>5</sup> “Hazards of Prophecy: The Failure of Imagination.” *Profiles of the Future: an Inquiry into the Limits of the Possible*, by Arthur C. Clarke, Victor Gollancz, 1982.

made by all the previous generations. Technology becomes more powerful and more complex yet each generation must start the relationship anew. This is a personal journey taken by the individual and paralleled collectively by humanity. Science constantly rewrites itself, deleting misconceptions, focusing on achievements and often overlooking what can be learned from these dead ends. A mire of failure and contradictions often surrounds the shining beacon of discoveries and discoverers. While Darwin constructed his theory over decades, his little know co-author, the mystically inclined Alfred Russel Wallace, arrived at the theory of evolution during a fever dream. Newton, as it happens, was also an alchemist. William Crookes, inventor of the cathode ray, was a spiritualist. Artificial intelligence suffered an AI winter as algorithms were thought to be impractical. Ironically, Galileo's persecutions have been taken up as a justification of fringe activities. Gray zones of human mutability, in the form of beliefs, morality and subjective reasoning surround the massive aggregation of hard facts of science which continually grows and challenges our cultural preconceptions. We live a techno-paradox; by using sophisticated tools to explain and shape the natural world, it has become permanently altered and largely indecipherable from other perspectives. In the *Invisible Gorilla*, Christopher Chabris and Daniel Simons comment on Darwin's observation that "Ignorance more frequently begets confidence than does knowledge." In fact, those who are the least skilled are the most likely to think better of themselves than they should. They disproportionately experience the

illusion of confidence.<sup>6</sup> Our daily lives rely on tools most of us have only a dim understanding of in terms of functionality. This modern condition holds true for the ubiquitous cellphone, social media and the flush toilet; we may know how to use them, but not all of us comprehend the basics of water pressure, electricity, computer chips, telecommunications, or their ramifications.



An ADE 651 dowsing device

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<sup>6</sup> Chabris, Christopher F., and Daniel J. Simons. *The Invisible Gorilla: Thinking Clearly in a World of Illusions*. Crown Publishers, 2010.

Old world technology finds its way into the new world in the form of dowsing. Also known as divining, it is a method of finding ground water using a rod or Y-shaped twig to direct the seeker. The method can also be used to find all forms of buried treasure including graves, precious gems and metal deposits. The dowser holds the device by hand and follows the movements as the rods point in the direction of the desired material. Debunkers claim that Water Witches, as the practitioners are sometimes known, cause the motions of the rods by ideomotor response or unconscious body movements. Innumerable studies have shown dowsing to have no more accuracy than random chance. Many farmers choose to hedge their bet when drilling water wells by employing the ancient technique along with contemporary methods. In the arid desert, the ADE 651 dowsing device was marketed by a British firm and widely used by Iraqi police as a bomb-sniffing device, resulting in the conviction of its producer, James McCormick of fraud in 2013.

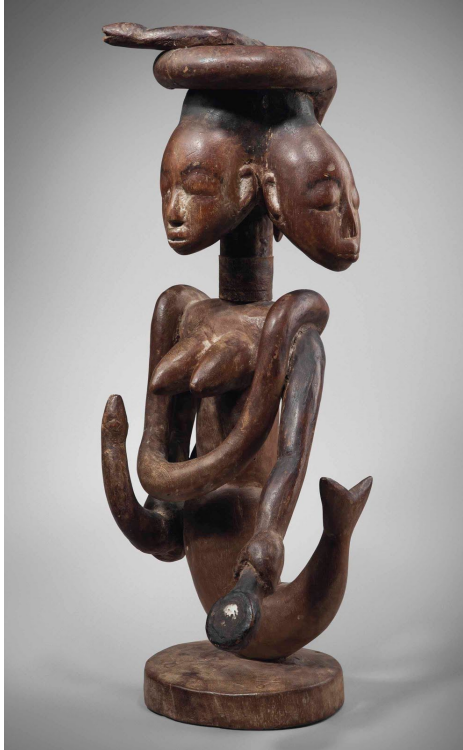


Bottles of Hoodoo war water

War Water is used in Hoodoo rituals. Hoodoo is a religion which formed as a result of transatlantic slave trade and is still practiced on both sides of the Atlantic.

*“War Water is basically a suspension of iron rust in water... the Roman god Mars was the god of war and his symbolic metal was iron, it seems pretty clear that War Water is a European contribution to Hoodoo. It may have originally been compounded as a blood tonic or strengthener of courage, but in the hands of African-American folk-magicians, it became a tool for laying tricks against an enemy by means of hostile foot-tracking magic causing ‘poisoning through the feet’ and making everyone in the household quarrel and fight one another.”<sup>7</sup>*

<sup>7</sup> Yronwode, Catherine. “Hoodoo in Theory and Practice.” *Hoodoo in Theory and Practice*, 1997, [www.luckymojo.com/hoodoo.html](http://www.luckymojo.com/hoodoo.html).



A Nigerian sculpture of Mama Wata



A float tank designed by John Lilly

Waterways of the world were once populated by deities with characteristics that fused religion and narrative. The storied gods of the Nigerian Owu Mmiri and Mama Wata of Africa, Anglo-Saxon nix, greek nymph, Japanese Kappa, Celtic Kelpie, all dwelled in bodies of water and occupied sociological functions eradicated by Christianity. Lost were the pan European Naiads, a type of female spirit presiding over fountains, wells, springs, streams, brooks and other bodies of freshwater. The complex position of these gods once held involved elaborate coming-of-age ceremonies, animal drowning sacrifices and oracles. With the introduction of monotheism in the west, these water Gods have receded and were replaced by Christian icons and their organized religious structure. The Christian religious authoritative voice was slowly eroded by the social and scientific thought of the Enlightenment, and displaced by secular rationalism. With further transformations of moral relativism and intersectionality, the individual has taken the position of the deity. Neuropsychiatrist, John C. Lilly introduced the isolation tank which employed salt-saturated water, in which the subject would float in controlled sensory deprivation as a means of therapeutic introspection. Deprivation studies show that normal brains hallucinate in isolation and the psychedelic effect may be the brain's attempt to recreate the missing stimuli of consciousness. Lilly, popularly dubbed a psychonaut, was also associated with LSD and the 1960s counter cultural belief that enlightenment could be attained via an inward gaze. In 1966, John Lennon claimed the Beatles more popular than Jesus and in 2013 on the album *Yeezus*, Kanye West proclaimed, "I am a God." Materialism inevitably yields the failure of the self, revealing the human condition of curiosity, perpetual conversion and the need to transcend through spirituality. These cascading transitions have the unforeseen result

of a return to pre-christian beliefs and a reliance on phantasmagorical virtual entertainment industries.



*Many people have children and have taken them to see the movie the Mermaid or how about other items of the Mermaid. The Entertainment have bewitched your children with the cartoon shows called the Mermaid cartoon. These are African water spirit gods. Many people affected and possessed by marine spirits, and some people are marine agents, and others are actual marine demons pretending to be humans, according to the testimonies of people who have had dealings with this kingdom. These spirits seduce men and women and steal their power and blessings.*

Note. Item 23 is Marine Spirit Demons  
Touch of God Intn'l Ministry, Grapevine, Texas  
Teresa Morin April 4, 2018

Jerome Tobacyk wrote the Paranormal Belief Scale in 1983 and revised it in 2004. It's an attempt to register "a measure of degree of belief in each of seven dimensions: Traditional Religious Belief, Psi, Witchcraft, Superstitions, Spiritualism, Extraordinary Life Forms, and Precognition." He tested high school students and found that their grades were proportionate to their magical thinking. The more they knew, the less they believed in the magical.

#### Revised Paranormal Belief Scale

- 
- 1=Strongly Disagree 2=Moderately Disagree 3=Slightly Disagree 4=Uncertain 5=Slightly Agree 6=Moderately Agree 7=Strongly Agree
1. The soul continues to exist though the body may die.
  2. Some individuals are able to levitate (lift) objects through mental forces.
  3. Black magic really exists.
  4. Black cats can bring bad luck.
  5. Your mind or soul can leave your body and travel (astral projection).
  6. The abominable snowman of Tibet exists.
  7. Astrology is a way to accurately predict the future.
  8. There is a devil.

9. Psychokinesis, the movement of objects through psychic powers, does exist.
  10. Witches do exist.
  11. If you break a mirror, you will have bad luck.
  12. During altered states, such as sleep or trances, the spirit can leave the body.
  13. The Loch Ness monster of Scotland exists.
  14. The horoscope accurately tells a person's future.
  15. I believe in God
  16. A person's thoughts can influence the movement of a physical object.
  17. Through the use of formulas and incantations, it is possible to cast spells on persons.
  18. The number "13" is unlucky.
  19. Reincarnation does occur.
  20. There is life on other planets.
  21. Some psychics can accurately predict the future.
  22. There is a heaven and a hell.
  23. Mind reading is not possible.
  24. There are actual cases of witchcraft.
  25. It is possible to communicate with the dead.
  26. Some people have an unexplained ability to predict the future.
- 



An image of Bigfoot

*In follow up studies, it has been found that in a normal population, dissociative tendencies contribute to many types of paranormal thinking. Psychological dissociation, even at a subclinical level, is an important factor in the cognitive processing that leads to belief in the unreal. However, in these studies, the most important of the characteristics predisposing us to paranormal thinking was dissociation. Not only did subclinical levels of dissociation predispose people to beliefs in everything paranormal (whether UFOs, aliens, cryptids or ghosts), but it also predisposed them to see these things. In a study in which we used Internet pictures of "paranormal" creatures and objects (Sharps 2012), the dissociated tended to see them as real. Where everybody else saw a teenager in a Halloween gorilla suit with extra monkey hair, those with subclinical dissociation saw Bigfoot. Odd lights in the sky (a helicopter with a broken landing light, for example) readily became UFOs for the dissociated. In short, those with subclinical dissociation tended to see the prosaic as real evidence of the paranormal. It is crucial to emphasize the word subclinical. People with dissociative characteristics are emphatically not "crazy." All human beings experience some levels of dissociation in their*

*everyday life without clinical significance. But those with more of these tendencies tend to see their world in vastly more paranormal terms. They not only believe in these things; they see them in stimuli that other people would immediately perceive as non-paranormal in nature.*<sup>8</sup>

Could dissociation be a distinctly contemporary state of mind? Could magical thinking be escapist or a means of controlling the prosaic, day to day descriptors of life? Could dissociation possibly be a third state, developing parallel to the binary power struggle of conflicting epistemological world views of religion and rationalism? Is the psychological conditioning inherent in the popularity of media culture taking advantage of the same mechanism as rituals?

Religions have ritualistically employed water as a conduit to the spiritual world, using it to thwart evil, heal, purify and connect to the divine. Holy water is a contemporary link which shows us how the inner logic of ancient rituals operates. Through following specific actions, anyone may communicate with deities and produce something magical, in a seven-step process:

- Gather and consecrate salt.
- Read Psalm 103.
- Obtain natural water.
- Sprinkle holy salt into water and pray.
- Pray.
- Exorcise water.
- Add more salt and pray.

Holy water imparts blessings and is a protector against evil. It must be handled with care and not be disposed of through ordinary plumbing; it must drain directly into the ground. While holy water may be divine in nature, in reality it is not immune to bacterial infection. Parishioners dip their hands in the holy water font, often located at the entrance of a church, and form the sign of the cross. According to Ethiopian authorities, the water itself became a pathogenic vector during a cholera outbreak that killed 10 people in 2018. The Medical University of Vienna tested 18 fonts and found samples contained up to 62 million bacteria per milliliter of water, none of it safe to drink. In India, the Ganges River is thought to be sacred, personified by the goddess Ganga, and religious zealots can be spotted drinking not far from smoldering corpses which float nearby.

Legend has it that Emperor Leothracian witnessed a miracle there when he met a blind man in need of water and was instructed by a disembodied female voice to moisten the eyes of the man with water originating from a nearby spring. Immediately the blind man recovered his eyesight, cementing the miraculous stature of the springs. The miraculous quality of springs could possibly have its origins in the fact that the purity of the water would be reliable to our ancestors.

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<sup>8</sup> Sharps, Matthew J., Liao, Schuyler W., and Megan R. Herrera. "Dissociation and Paranormal Beliefs, Toward a Taxonomy of Belief in the Unreal." *Skeptical Inquirer* 40.3 (2016)



A supposed spirit photograph of Saint Bernadette Soubirous



Plastic Lourdes water bottles

In 1858, a young girl, Bernadette Soubirous, was wandering in Lourdes, France, whereupon she experienced a miraculous Marian apparition, insuring that millions of pilgrims would make their way to Lourdes to take the area's waters in many forms. Since the incandescent figure of the Virgin Mary appeared to the girl, more than 7,000 miraculous recoveries have been reported at the site although the Catholic Church recognizes only 70 cases. Visitors submerge themselves in pools and carry away water from the spring in containers shaped in the form of the apparition. Etienne Verneersch coined the term *The Lourdes Effect* to describe the phenomena of inconsistencies of miraculous activities at the site. He suggests that if direct intervention from god was taking place, it would be much more ambitious and spectacular. Statistically its been shown that more people die on the way to Lourdes than are healed at the site. Emile Zola's novel, *Lourdes*, charts a pilgrimage, describing the site at the end of a long day, "*All manner of things were found in it, so that it was like a frightful consommé of all ailments, a field of cultivation for every kind of poisonous germ, a quintessence of the most dreaded contagious diseases; the miraculous feature of it all being that men should emerge alive from their immersion in such filth.*"





Illustration by Leeuwenhoek



Stanley Miller in his lab

In a letter of September 7, 1674, Antonie Philips van Leeuwenhoek described observations on lake water, including an excellent description of the green charophyte alga *Spirogyra*: "*Passing just lately over this lake. . .and examining this water next day, I found floating therein divers earthy particles, and some green streaks, spirally wound serpent-wise, and orderly arranged, after the manner of the copper or tin worms...*" Leeuwenhoek, using single-lensed microscopes of his own design, capable of 200x magnification, which far exceeded any apparatus of the day, was the first to experiment with microbes, which he originally referred to as animalcules or little beasties. He observed multicellular organisms in pond water and made numerous drawings which circulated widely. At the time, it was believed that life spontaneously generated from pure water. The creation of life was mistakenly demonstrated by experiments of the day, showing the fermentation of water inside a sealed container as proof. Louis Pasteur's 1859 experiments repudiated this although the question of how life formed in the primordial soup of earth lingered. In 1952, chemist Stanley Miller's experiment to determine the origin of life, attempted to reproduce the conditions thought to exist on early lifeless earth: turbulent oceans of compounds covered by a perpetual stormy atmosphere. He modeled earth by filling a flask with an atmosphere of water, methane, ammonia and hydrogen, and with a distinctly Frankensteinian flare sent, sparks of electricity through them. Miller found that his experiment had generated five different amino acids considered to be the building blocks of proteins and essential components of life. Scientists now disagree with the conditions Stanley thought to have existed on earth and question how DNA, with its ability to replicate, could have evolved from Miller's oceans. "*Even if you can make amino acids (and nucleic acids) under soup conditions, it has little if any bearing on the origin of life.*" The problem is that replicators don't spontaneously emerge from a mixture of their building blocks, just as you wouldn't hope to build a car by throwing some parts into a swimming pool.<sup>9</sup> ( Nick Lane, *Life Ascending*: )

<sup>9</sup> Lane, Nick. *Life Ascending: The Ten Great Inventions of Evolution*. Profile Books, 2010.

## Pesticide Registration



### What's New

- [Clarification and Time Extension for Water-Soluble Packaging Instructions](#)
- [Nitrogen Stabilizer Products that Must Be Registered under FIFRA](#)
- [Pesticide Submission Portal within EPA's Central Data Exchange \(CDX\) Network in production](#)
- [Documents Open for Comment](#)
- [Pesticide News](#)

EPA pesticide registration website

Ocean dumping is still common today. Water pollution remained largely unchecked from the industrial revolution until the 1960s, but by most predictions the resource of clean water will become a point of conflict; global warming will cause rising waters, the resource of clean water will become a point of conflict and more scarce for numerous reasons. Potable water has been a challenge for developing countries, causing disease and death statistics that are a distant memory in the first world. Yet corruption and ecological ignorance in the industrial world has led to notable backsliding. Forty percent of the deaths in Pakistan are attributed to drinking water which was safe as recently as the late 1990s. A combination of faulty infrastructure, and lax environmental oversight has led to scandals in the US, most notably in Flint Michigan where the drinking water is shown to be toxic. Historically, fluoride was introduced on a mass scale in Grand Rapids, Michigan in 1945 as a method of decreasing tooth decay; however, this was done without its citizens consent. The rate of cavities in the area's schoolchildren declined by 60%, but the anti-fluoridationists have provoked 73 cities around the US to remove it from the water supply. The group claims this treatment has caused lower IQs, cancer and other illnesses and conspiratorial theories abound involving communist mind-control, and a new world order using fluoride dosing to produce amiable, docile population. These narratives parallel equally paranoid true horror tales of chemicals such as DDT which promised better living through chemistry and delivered a toxic stuttering ecosystem, near extinction of birds of prey, and untold illness in the population. The stories of warning are ignored as profit is valued over safety. As new material science improves, endless variations on the periodic table prove that the smallest of substances may have a dramatic effect. In the USA, new law requires the EPA to test tens of thousands of unregulated chemicals currently on the market, and the roughly 2,000 new chemicals introduced each year, but quite slowly. The EPA will review a minimum of 20 chemicals at a time, and each has a seven-year deadline. It could take decades for the EPA to get through the most dangerous chemicals on its current list. The citizen is responsible for protecting themselves in the current political system of regulation.



A water purification plant around Houston, Texas



A patient undergoing hydrotherapy

Drinking water today carries a signature of our industrial activities as well as our physical and psychological state. Sewage treatment plants do not currently remove cosmetics, perfumes, and pharmaceuticals from water that becomes tainted with a witches' brew of antibiotics, antidepressants, blood thinners, heart medications (ACE inhibitors, calcium-channel blockers, digoxin), hormones (estrogen, progesterone, testosterone), and painkillers. Some purification processes break down or diminish some of these chemical and the traces in drinking water are far below levels said to affect humans. Little is known of their cumulative or cross-pollination effects. The effects on wildlife is more evident in fish. Intersex fish — creatures with both male and female sex characteristics — have been found in heavily polluted sections of the Potomac River. Concentrated forms of estrogen are credited in popular press with the unexplained drop in male fertility over the last 30 years. Psychiatric practices have evolved over the past 50 years from favoring a narrative of talk therapy to an emphasis on pharmaceutical therapy. 1 in 6 Americans now takes some kind of psychiatric medication. Old or unused medications find their way into the water supply down toilets or through seepage in landfill. Earlier forms of therapy involved “taking the waters,” at spas or mineral baths, which by the mid 1800s had become formalized as hydrotherapy. Early theories suggest that water found its way into every surface and crack and would clean the toxins from the body. This involved hot and cold water applied inside and/or outside the body in various methods such as half baths, sitsbath, head bath and dusche. Hydrotherapy has evolved to have numerous currently accepted medical and pseudoscientific uses. It was still in use in the 1930s as a possible psychological cure for alcoholism as experienced by Bill Wilson, co-founder of Alcoholics Anonymous.

An altruistic perspective on water continues with the New Age movements perspective: when you stand on the shore the molecules touching you extend out endlessly, connecting a vast matrix of arteries stretching across the planet, a connection between all living things. The water consciousness movement points to its free state, which naturally moves in S-like graceful arks until harnessed brutally in the industrial matrix of the city: chemically treated, pressurized and forced into endless right angles of pipes toxic with lead and metals. The new agers believe that the life-force of the water is sapped out of it in this process, destroying healthful bacteria and minerals which are now missing from our bodies. Many are repulsed by recycled toilet water, sewage and the addition of chloramine and seek out more natural forms of water, called raw or

live water. Products named Live Water and alkaline waters which have never been filtered offer alternative drinking sources and dangers. “There’s acute and then chronic risks,” Dr. Hensrud said, including E. coli bacteria, viruses, parasites and carcinogenic compounds that can be present in untreated water. *“There’s evidence all over the world of this, and the reason we don’t have those conditions is because of our very efficient water treatment.”*<sup>10</sup>



A Soji crystal water bottle

Soji Energy Company sells crystal infused water bottles which combine the new age fascination with the properties of crystals offering amethyst which the company claims: *create balance, patience, and inner peace by stabilizing one’s emotions. Amethyst opens the gateway to divine consciousness and higher intuition by providing clarity when there’s confusion in the mind. Amethyst can even help with cell regeneration, insomnia, mood swings, and immunity. It is also known as the “Traveler’s Stone,” providing extra protection while you’re out on the road exploring new places.*

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<sup>10</sup> Bowles, Nellie. “Unfiltered Fervor: The Rush to Get Off the Water Grid.” The New York Times [New York] December 2017



## Magic Dirt Water

Yet another water product seems to reference the elementary school fascination with the question of whether all water on earth was once dinosaur urine. RESTORE Magic Dirt Water for kids is a colorful and fun version of the magic supplement their parents take before every meal. The fossil record indicates through carbon dating that the Aqueous Humic Substances of RESTORE's Terrahydrate come from the rich soils of earth when dinosaurs roamed.



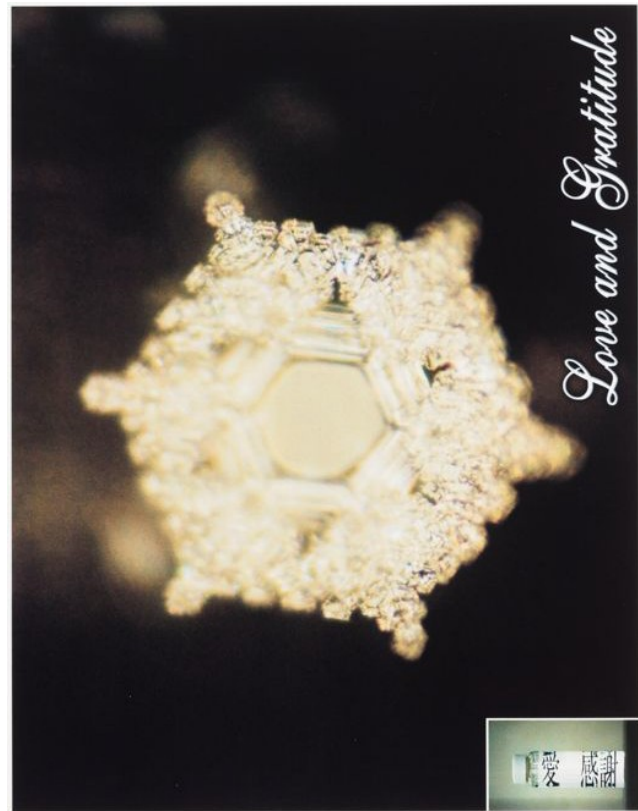
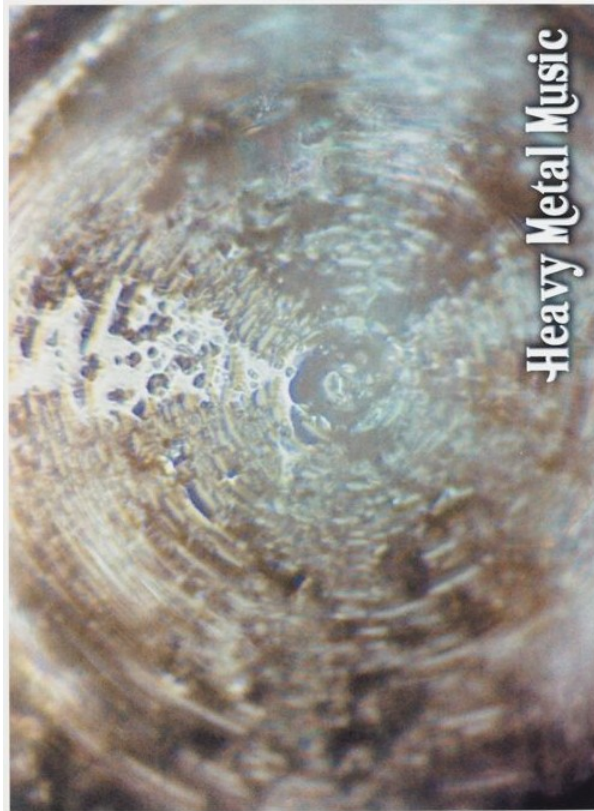
The Chilean Blob

Prehistoric creatures, say the Crypto-zoologists, have been dwelling in the depths of the oceans and lakes and are rarely seen by humans. Nessie the Loch Ness lake monster has been tracked by radar, filmed photographed and spoofed, yet the monster has refused to yield any DNA. Wikipedia lists more than 40 lake monsters globally. Fear of the unknown has been associated with uncharted territories of the oceans and the practice of decorating early maps with fanciful and horrible creatures was common. These abominations slowly retreated, displaced by more accurate maps and understanding of the depths. A sea monster is more than articulated aquaphobia, it is a manifestation of uncontrollable natural power, all that is not human. Grotesque echoes of the mythical creatures emerge through news outlets across the internet in the form of Blob-monsters or globsters. These gelatinous, amorphous carcasses are found washed up on the shores of the world's oceans. British biologist Ivan Terence Sanderson is widely believed to have coined the term in 1962 to describe a strange Australian blob-creature. When found, these creatures are without specific structure, obvious eyes, bones, or a visibly distinct head. The speculation surrounding these remains takes the form of a kind of ritual media autopsy, a chimeric mix of mythology and science. The potential for the existence of unknown monsters represents something uniquely human in myth and exploration which has been lost to the assertion of technology and the shrinking of the natural world.

*We have employed electron microscopic, biochemical, and molecular techniques to clarify the species of origin of the "Chilean Blob," the remains of a large sea creature that beached on the Chilean coast in July 2003. The DNA sequence of the PCR product was 100% identical to nad2 of sperm whale (Physeter catadon). These results unequivocally demonstrate that the Chilean Blob is the almost completely decomposed remains of the blubber layer of a sperm whale. This identification is the same as those we have obtained before from other relics such as the so-called giant octopus of St. Augustine (Florida), the Tasmanian West Coast Monster, two Bermuda Blobs, and the Nantucket Blob. It is clear now that all of these blobs of popular and cryptozoological interest are, in fact, the decomposed remains of large cetaceans.<sup>11</sup>*

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<sup>11</sup> Pierce, Sidney K., Massey, Steven E., Curtis, Nicholas E., Smith Jr., Gerald N., Olavarría, Carlos & Timothy K. Maugel. (2004). Microscopic, Biochemical, and Molecular Characteristics of the Chilean Blob and a Comparison with the Remains of Other Sea Monsters: Nothing but Whales. *The Biological Bulletin*, Vol. 206 (Issue 3)



Two photographs by Emoto showing the effects of Heavy Metal Music and Love and Gratitude on water crystals

The Japanese researcher and spiritual leader, Masaru Emoto published a book titled *Messages from Water* which reached the *New York Times* bestseller list in 1999. Emoto took glasses of water and exposed them to words such as love, or sounds of heavy metal music, or thoughts such as gratitude to judge the emotional energy's and vibration's effect on the physical structure of water. He would then freeze the water and microscopically photograph the crystals to visually access the aesthetic properties of the formations. The *love* water was judged to be beautiful while the *heavy metal* was awfully dark and eerie. His results vexed scientists and fascinated the public as he went on to imply that polluted water could be cleaned through focusing meditative thought on the subject. The transposition of thought as physical action is equally informed by the Western "I think therefore I am" as well as the Eastern tradition of meditation. Strands of Emoto's project can also be traced back to the paranormal notion of telekinesis, and the experiments of thought photography of Louis Darget in France and Tomokichi Fukurai in Tokyo.

How likely is it that I have drunk a molecule that was once ingested by Shakespeare or Paul the Apostle? Statistically it can be shown that in a glass of water at least one molecule has been shared with every other person on the planet. Long before these mathematical calculations, Shakespeare had some thoughts on the subject:

*Alexander died, Alexander was buried,  
Alexander returneth into dust; the dust is earth; of  
earth we make loam; and why of that loam, whereto  
he was converted, might they not stop a beer-barrel?  
Imperious Caesar, dead and turn'd to clay,  
Might stop a hole to keep the wind away:  
O, that that earth, which kept the world in awe,  
Should patch a wall to expel the winter flaw!  
Hamlet, Act V, Scene 1. Right after the bit with the jester's skull.*

THE END