When I was nineteen years old I got the dream job of designing and building Muppets for Sesame Street. At the time, the company was still small and informal, but it was growing rapidly. Soon after I arrived so did the organizational development consultants. Then came the new executive team: Bill, Bob, and Jay. They all looked the same: mid-40s, gray sideburns, plastic smiles. I called them the game show hosts. Then memos started replacing visits, and evaluation forms replaced conversations over lunch. The "creatives" in the workshop were not amused. When asked to list the milestones of our accomplishments in our new annual evaluation forms, we made a giant jar of Gramma's Pickled Benchmarks and sent them "upstairs," with a card: "We hope you find our benchmarks tasty. They go well with milestones and metrics."

Eventually, we were moved from an open, airy atrium space to a sweatshop warehouse across town to make room for the growing licensing department. Most of us became depressed, and many of the most brilliant designers left. I started moonlighting for the licensing department. You could make a lot more money sculpting a prototype for a Kermit night-light than you could designing a new character.

This is not only a classic story about institutionalization choking out creativity; it's also a story about automation taking over the imagination. During the same period that organizational structures began automating our interactions, electronics started automating our puppets. When I started in the workshop we were basically making glorified socks that, if you wiggled them the right way, came alive. The seams showed, hand rods caught the light, buttons fell off. These puppets forced you to do the lion's share of the work, suspending disbelief to get to the land of enchantment. Then, with the help of robotics and cranes, Kermit learned to ride a bicycle (look Miss Piggy, no hands), and teeny miniature Doozers started moving their mouths when they talked. The rest is history. We may be as wildly amused and entertained by sophisticated special effects as by sock puppets, but much more passively so. We're no longer charmed or enlivened by our own participation in the enchantment. Our imaginations, along with a piece of our humanity, have been withdrawn from the workshop and are moonlighting in the licensing department.

I finally left even the licensing department to work at the MIT Media Lab, where the unlimited possibilities of new interactive multimedia seduced every imagination. I hoped that the new levels of interactivity might call back the muse, but what I found was far more disturbing than what I had left. All that brilliant minds around me seemed to be doing was creating more and more sophisticated ways to leave this juicy, chaotic world and replace it with a dry, controllable electronic one. When I put on the first goggles and gloves to test what would later be called virtual reality, I knew we were veering dangerously off course. The more our machines defied gravity, the graver our situation seemed to become.

Let me cut to the chase. In the pit of our collective stomach, we know something is terribly wrong. The symptoms are everywhere: war, terrorism, extinctions. We know that we have lost, and are continuing to lose, something that is vitally to our being fully human and necessary for the health of the planet. We know in our hearts that technologies that speed up our lives, distance us from the world, and bombard us with more than we can digest, leaving us disconnected, distracted, and restless, are not helping.

Even after acknowledging this, our convictions start to waver. Maybe, after all, the benefits of our technologies outweigh the costs. Maybe, if we keep enhancing our computers, increasing our interconnectivity, making our machines more user friendly, they could
finally become the key to a participatory democracy, a cozy global village, or maybe even an awakened global consciousness. Mostly we're not sure that it even matters what we think because the behemoth seems to have a life of its own.

While the momentum of technology can be destructive and disempowering, technology itself is neither good nor bad—but neither is it neutral. It cannot save us; we can't get rid of it—nor should we just try to accept and live with it. The medium is not the menace. It is a symptom of the ailments that have intensified in the Western mind over the last 2,500 years. Neither enhancing nor abolishing computers is the solution. All of the problems associated with the computer—its power to induce passivity, to scatter our minds, to destroy our imaginations, and to blunt our humanity—have long been tendencies in our own thinking and behavior (Talbott 1995).

As long as our relationship to technology goes unexamined, it will continue to be the expression and instrument of suppressed, unconscious, and dangerously distorted energies.

Our unconscious and dangerously distorted energies have put the future of the whole Earth community at stake. Such an awesome responsibility should bring us to our knees. If we are to survive, we have to awaken from our technological trance into the immediacy of a sensual, animating world in crisis. We have to take one step back from the question of technology to ask ourselves: What must the human become for the whole Earth community to flourish?

This question demands a lot of us. It requires that we imagine ourselves and the world as richer and deeper than the mechanical imagination can capture. It calls on us to recognize how truly precious and vulnerable our humanity is and that it is our responsibility, on behalf of life, to restore, protect, and steward it. It requires that we know fully what we have become. If we can resist the impulse for quick (mechanical) answers (and hours of surfing the Web for them), the question can take us on a healing pilgrimage into moist, dark depths lost by a dry, overtly, technocratic culture. On this journey, the clear light of reason (logos) and the deep waters of the poetic imagination (mythos), our innovative genius and sensual body wisdom, might rise together to steward the future. The muse might return to the workshop. Then our technologies will naturally fall into the service of life.

Who Are We Now?

Dear, dear! How queer everything is today! And yesterday things went on just as usual. I wonder if I've been changed in the night? Let me think: was I the same when I got up this morning? I almost think I can remember feeling a little different. But if I'm not the same, the next question is, Who in the world am I?

—Lewis Carroll, Alice's Adventures in Wonderland

To know what we as a species need to be tomorrow, it helps to know who in the world we are today. We're not the same as we were when we got up in the morning 2,500 years ago. But how are we different? Alice followed a very late rabbit into a hole in the earth, and a wild wonderland opened up around her. Our species, on the other hand, seems to have tumbled through a very different hole. Ever since Plato pointed the way and Aristotle gave us the method, then passed the baton to Descartes, Newton, and Bacon, we have been ascending out of the moist, dark cave of our origins ever upward toward the bright, dry highlands of pure reason.

The Internet represents the fulfillment of the journey, a mind completely severed from the messy flesh and moist ground of earthly life. We thought this was the direction of freedom—up and away from gravity, the body, and our mortality. But instead we have found ourselves in a tight gray box cut off from meaningful engagement with an ensouled world. Our machines, instead of setting us free, have become ever more efficient mechanisms for sealing us in. We are imprisoned not by the passions, pain, and constraints of earthly life, but by our compulsive desire to be free of them.

But let's not fool ourselves; that cave was no wonderland either, and there were some pretty good reasons to venture out of its claustrophobic, poorly lit interior. It was dark. We couldn't see ourselves, nor anything else for that matter. So we went out to find some light. As we did, our own interior began to be illuminated, and so did the world. Subject and object woke up in each other's arms, squinted, rubbed their eyes, and history began. The Chartres cathedral, Beethoven's Sonata Pathétique, the words of Dante, Wordsworth, and Emily Dickinson—every cultural achievement that readers and deepens our inner worlds is made possible in part by the outward movement of logos toward the light of reason.

But the movement outward is not enough to generate such magnificent artistic achievements. Such immense creativity throughout history has required a consistent countervailing force pulling inward toward the deep, dark imaginative pools where inspiration bubbles forth. Not only our artistic achievements but also every major technological invention that extends our senses and agency into the outer world—the printing press, the telescope, the space shuttle—were all made possible by both the outer push of logos and the inward pull of mythos.

At a dinner party with author Susan Griffin, psychologist Rollo May described his first sexual encounter with an "older woman, sophisticated and 'European,' . . . who invited him to her room. He was stiff and uncertain of himself, she the pursuer. At the door she moved to embrace him, holding him close to her and then moving away, close and apart, close and apart until an irresistible force field existed between them. This was, he says, among the most erotic movements he had known" (Griffin 1995, 149).

History is full of such erotic, pulsing movements—close and apart, close and apart, mythos and logos, dark and light, feminine and masculine, remembrance and forgetting. This dance makes our world. Every good erotic encounter is hot—electrically charged—and juicy—dripping with emotional and physical fluids. Water and electricity are the physical, elemental yin and yang forces that power this dance. Water dissolves us into communion, while electricity jolts us into differentiation—close and apart.

Becoming familiar with these forces both literally and symbolically as they dance in our minds, our bodies, and the
Since ancient Greece, water and earth have been associated with the feminine, and fire and air (electricity) with the masculine. This association continues to this day. The pre-Hellenic Greeks personified the forces and gifts of water as the Titaness Mnomosyne, or “remembrance.” She was the goddess of the first moment, who was born just before her brother Kronos, “time,” because time without memory would lead to chaos. The character of electricity, on the other hand, was best known as the messenger god Hermes. He was one of the last gods to enter the Pantheon and did so on his own initiative. Getting to know these two gods can tell us a lot about ourselves and the dance.

Mnomosyne and Hermes

At the time when heaven still embraced Earth, when Uranus still lay with full-hipped Gaia, the Titans were born and with them memory, or Mnomosyne. She was called the Mother of the Muses, and a mortal who has been blessed by the gods can approach Mnomosyne’s waters where wellsprings of inspiration bubble forth through dreams and visions, like the Muses’ song. By drinking her waters, the visitor can recollect the residues that have sunken into her wells. The waters of Mnomosyne are our direct access to the unconscious and become the deep source of art and culture (Hilich and Sanders 1989). They are what connect the living with the dead and unborn, the present with the past and future.

Whereas Mnomosyne is the archetype of the mind directly connected to the wellsprings of the unconscious, Hermes is the ingenious mind able to see everything anew. As a precocious day-old infant, Hermes captures a tortoise, kills it, and with the immediate and instinctive curiosity of a child, guts it. He then proceeds to steal brother Apollo’s herd of fifty sacred oxen, kills two cows, and uses the intestines of one to make strings for the tortoise’s shell, so creating the first lyre. He goes on to devise a number of new technologies: the alphabet, astronomy, musical scales, boxing, a system of weights and measures, and the cultivation of olives.

Throughout Hermes’ story runs the current of energetic ingenuity and vision for the future (Hirshfield 1998). He is the opposite of Mnomosyne, whose power, though it rises in a springlike freshness, is primarily in the service of continuity with time and the fabric of life. The power of Hermes is that of electricity, the power to ignite change. He is a trickster, spilling with the energy of creation. Like most tricksters, he loves sex. As we know, the trickster can go too far, and when he does, he generates chaos and alienation. We no longer feel joined to the fabric that gives meaning to our lives and is made meaningful by the part we play.

Hermes entered Western history with the advent of writing. This new technology transformed our relationship to words, to time, and, ultimately, to thought. The flowing, present-moment stream of Mnomosyne’s unselfconscious recital through oral history made way for the ingenuity of the trickster. When not only phenomena but also the world of the mind can be read, reflection and analysis emerge. The individual can then step back from the given culture and become a critic, a scholar, an inventor, and a creator of cultural knowledge (Hirshfield 1998).

Unless our imaginations are consistently replenished by Mnomosyne’s waters, however, there is nothing to author. Like legal documents, and pure theory, we have form without any deeply felt content, and the world fills with information as heaps of fragment and decontextualized data. It is in the marriage between Mnomosyne and Hermes that we find the source of ingenious and meaningful innovation. Without Hermes, societies remain static, but without Mnomosyne, they become dry and alienated.

Many of the individuals who laid the wiring for the electronic age were those most open to Mnomosyne’s inspirational flows. René Descartes, Nicola Tesla, and James Clerk Maxwell each were given the inspiration for their discoveries and inventions through dreams and visions. The work of each, however, charged the culture’s electrical imagination ever further apart from Mnomosyne’s replenishing wells. Though they made monumental contributions to the growing body of knowledge and technological innovations, they also contributed to the alienation caused by industrial growth.
On the night of 10 November 1619, René Descartes, a budding philosopher in his early twenties, had a series of three dreams. In his sleep the Angel of Truth appeared to him and, in a blinding revelation like a flash of lightning, revealed a secret which would lay the foundations of a new method of understanding and a "new and marvelous science." In the light of what the angel had told him, Descartes set to work on an ambitious treatise called "Rules for the Direction of the Mind." The objective was to describe how the mind works and to codify the laws of thought using mathematics as their model (Rozsak 1994, 234–35).

One afternoon in February, 250 years later, Nikola Tesla and a friend were in Budapest taking a walk. The light of the winter sun as it began to set bathed the two men in an amber glow. Moved by the beauty, Tesla was inspired to recite a few lines from Goethe's Faust:

The glow retreats, done is the day of toil; It yonder�s nasions, new fields of life exploring:
Ah, that no wing can lift me from the soil,
Upon its track to follow, follow soaring . . .

Just then he fell silent. An intense flash of light and poetic inspiration united in a single point of concentration and a vision flashed before his eye—a design for a motor capable of generating alternating currents and a rotating magnetic field. With the backing of Westinghouse, the generator that appeared fully formed in his vision, once built, converted the powerful waters of Niagara Falls into the bright lights of New York City. Tesla's invention became the driving mechanism for the modern electrical grid (La Chapelle 2001, 139–40).

The Angel of Truth brought Descartes his revelations and insights, which set the metaphysical and epistemological stage for the modern mind. Descartes later abandoned the Angel of Truth and the role of dreams, revelations, and insights as the wellsprings of thought and gave all his attention to formal, logical procedures. The material world became first separated from and then subservient to the mind. With Tesla's "flash of lightning," water became first separate from, then subservient to light. When water lost her sovereignty and her beauty and depths became secondary to her utility, Mnemosyne began to withdraw. Water without its soul is left to churn as mere H₂O through water wheels and turbines. "This is not water," declares Ivan Illich, "but a stuff which industrial society creates. . . . The twentieth century has transmogrified water into a fluid with which archetypal waters cannot be mixed" (1985, 7). The spirit of water is broken when its curvaceous flows are dammed and diverted and when it is forced to run through straight pipes and grids.

That Goethe's lines from Faust inspired Tesla's vision portends the shadow that looms when the soul of water withdraws from the imagination. After Westinghouse bought Tesla's system, a "war of the currents" ensued between Tesla and Thomas Edison, who wanted his own direct current system to light up the land. They each publicly electrocuted animals using their rival's system. These grotesque performances eventually and inevitably gave rise to the first electrocution of a condemned prisoner. Later on, Tesla's dehydrated imagination became even more deranged, inventing electromagnetically guided torpedoes and painting scenarios of horrifying "death rays" and robot warriors that would supplant human soldiers. The waters of his own soul became enslaved by his electrical imagination until he proudly declared that he could, if he wanted, split the Earth like an apple by keying into its resonant frequency. Without Mnemosyne we enter either a parched world of autocratic rationality or a demonic world of electrocutions, death rays, autonomous weapons, and planetary destruction (Davis 1998, 68–73).

Goethe describes Tesla's embattled predecessor, Faust, sitting alone in his high-vaulted Gothic study, lost in despair. "He had lived a long life of study, mastering every possible discipline, but felt himself a fool no wiser than before. In anger and desolation he implored the invisible forces: 'Spirits that hover near to me, give me an answer if you hear my voice!' His eye fell on the signs of the Earth Spirit. He then demanded that she appear. 'Obey! Obey!' he cried, 'although my life should be the price!' When the Earth Spirit did make herself seen, Faust reeled before its awesome shape of flame, but even so declared himself a kindred spirit of this mighty force. Faust's arrogance was bluntly rejected by the Earth Spirit, 'Your peer is the spirit you can comprehend; mine you are not!' The spirit Faust could comprehend then entered his chambers; the plodding pedant Wagner, dressed in nightcap and holding a flickering candle" (Zajonc 1993, 140–41).

Approaching the profound powers of the Earth Spirit with only the relatively dim light of reason leads us not to her, but to a demonic, half-light distortion of her. In 1852, James Clerk Maxwell, a promising young mathematician, beheld the wretched face of this shadowy counter-image with which he fought a Faustian battle.

Maxwell was in his third year at Trinity College in Cambridge. The midnight bells had tolled, and the young scientist was up on his "confounded hydraulics" to prepare for bed. He asked himself "with voice unsteady, if all the stuff I read. I / Ever made the slightest use." He looked at the life ahead of him, one of outer accomplishment and lofty station, and knew it would be but the "fruit of reason put under the control of worldly pride." Across the scattered papers, strewn with mathematical equations, shadowy shapes began to flicker, becoming little marching creatures, the "glorious ranks" of professors past and present, "who scrutinized the trembling lines." As if to taunt him further, an awful form arose before the despondent undergraduate, a creature intent on defending the project of the rational mind:

Angular in form and feature, Unlike any earthly creature, She had properties to meet your Eye whatever you might view. Hair of pen and skin of paper; Breath, not breath but chemical vapour; Dress,—such dress as College Draper Fashions with precision due; Eyes of glass, with optic axes Twisting rays of light as flux is Twisted, while the Parallax is Made to show the real size. Primary and Secondary Focal lines in planes contrary Sum up all that's known to vary In those daily, unmeaning eyes. (Zajonc 1993, 142)

This wretched mathematical "hag" proceeded to drain all feeling for beauty and
poetry from Maxwell's heart. Then, "Suddenly, my head inclining / I beheld a light form shining; / And the withered beldam, whining, / Saw the same and slunk away." In place of the hideous shape and voice of the "artificial spectre," Maxwell caught glimpses of "the being whom she aped." Her calm, self-possessed radiance far outshone the clumsy guise of pedantry (Zajonc 1993, 142).

The young Maxwell grappled with the vision. He longed to follow this radiant image of divine truth by entering "holy contemplation" and "leaving the learned crowd behind." However, as with Faust, who also wished to leave his dusty volumes to pursue truth, it proved more difficult than Maxwell had imagined. As the gap between faith and science grew greater, Maxwell succumbed to a safe and conventional position sanctioned by Luther, that the "two ought not to be regarded as having any significance except to the man himself" (Zajonc 1993, 142).

Unencumbered with the burden of integrating the moist devotional into the dusty halls of academe, Maxwell could continue his work. He went on to synthesize all the disparate knowledge of electricity and magnetism into a single set of four equations, now called Maxwell's equations. Most electrical, magnetic, or optical experiments find their formal theoretical explanation in terms of these four equations. From his work a prediction for the velocity of light could be made. He may not have ever again beheld the flaming light of the Earth Spirit, but he could calculate how quickly she disappeared from view.

The Earth Spirit's light shines through Hermes and Mnemosyne when they are in their most intimate embrace. When either of them withdraws, the other turns ugly and eventually deadly. Without imaginative feeling, reason becomes the wretched mathematical hag. Without clear vision, imagination becomes deranged delusion. The inner and outer worlds are not separate. The earth, our bodies, our minds are all dancing with Mnemosyne and Hermes, water and electricity. They all consist of at least 75 percent water and a constant electrical current.

As 75 percent water, we are marine habitats inside and out. The health of our waters is the health of the whole of life. When the electronic imagination denied the soul of water, it began polluting, damming, and diverting her waters. Out of balance, betrayed, and estranged, the tormented waters and overexcited electricity have begun to poison our bodies, twist our minds, and kill the earth. They have been defiled by an atomistic world view of substances and fixed solids. A water-based world view might begin to provide a solution.

An unknowing, if controversial, pioneer of an ensouled, rehydrated conception of the body and its waters is the Iranian Fereydoon Batmanghelidj, M.D. Batmanghelidj has spent most of his scientific life researching the link between pain and disease and chronic dehydration. By successfully treating three thousand patients suffering from stress-induced peptic ulcer disease with water, he understood for the first time in medical history that the body indicates its water shortage by producing myriad painful symptoms. His discovery challenges the medical community to make a fundamental shift in the paradigm of physiology.

Batmanghelidj explains that the human body is composed of 25 percent solids (the solute) and 75 percent water (the solvent). It is currently assumed that the solids regulate all functions of the body. At the very outset of research into the human body, the water content was assumed to act only as a solvent, a space filler, and a means of transport. No other functional properties were attributed to it. The waters of the human body are considered less significant than the solids. Under this assumption, all research has been geared toward identifying the "substances" responsible for causing a disease (Batmanghelidj 1992, 8).

But the doctor's research led him to conclude that it is the solvent—the water—that regulates all functions of the body, including the activity of all the solutes that are dissolved in it. This is a profound figure-ground reversal from the primacy of solids to one of liquids. With it, water metabolism becomes the most essential factor in maintaining the health of the body. Batmanghelidj's paradigm shift echoes those in the emerging systems and complexity sciences, that the flows and relationships between apparent substances have more ontological substance than do the substances themselves. The shift has yet to take place in our minds. If it doesn't, we and much of the earth community will die of thirst, and one of the symptoms will have been the information age.

Electricity and Water

Scientists must be made to realize that water is not something to be handled carelessly, like an inanimate object. Water is not merely H2O, but a living organism with its own laws commanding respect from mankind, if the consequences are not to be fatal.

—Victor Schauberger

Now Hermes with his stores of data and information leads the way as we explore the dance between electricity and water on the stage of the physical world. On Earth, water has been washing, gushing, dripping, flowing, spilling, boiling, and splashing for over 4,200 million years. As the molten surface of the young Earth began to cool, water in the atmosphere condensed and torrential rains began to fall. The water beat down for millions of years moistening Earth's new skin and forming her great sea wombs. After many more millions of years of raging thunderstorms, a virile flash of lightning penetrated and impregnated the watery womb. In a flash, methane, hydrogen, nitrogen, and carboxylic gases that had been swishing quietly for millennia transformed into protomolecules for organic compounds. Out of the quiet of these warm, dimly lit primal seas came a spark of life. Once jump-started, it had an irresistible urge to reproduce and continue being. Now it's busy wiring the world.

In the entire known universe, there is no other place with so much liquid water floating on its surface as Earth. Eighty percent of Earth's surface is covered with water. "Touched by the heat of the Sun, our oceans store warmth to protect Earth from overheating or freezing as it rotates. The moisture that evaporates from the oceans helps to shield life from harmful sunrays, cleanses the air with rain, and provides moisture for life on land" (Marks 2001, 44).

Life is as dependent on electricity as it is on water. It is estimated that each
year lightning converts more than 3 million metric tons of atmospheric nitrogen into nitrogen dioxide. Rainfall carries this nitrogen dioxide to Earth’s surface where it nourishes the bottom of the food chain.

Every minute on Earth, 6 billion gallons of rain falls. An ocean falls from the sky every single day. Lightning flashes in Earth’s atmosphere about six thousand times a minute. Lightning can be three to four miles long and an inch in diameter, can carry a charge exceeding hundreds of millions of volts, travel at one hundred thousand miles per second, and has been estimated to be five times hotter than the surface of the Sun. It hits an estimated one thousand people each year. This is the storm and drang of eros.

Lightning and electrical energy are generated by the movement of water in the atmosphere; through its flows beneath and across Earth’s surface, through its evaporation and condensation cycles, and through its energetic spinning whirlpools. Water and electricity have been dancing on Earth for 4,200 million years. Separately they can either destroy or nurture life, but only together can they awaken the seed of life from the sleeping womb (Marks 2001).

The waters of Earth consist of chemical compounds that are impregnated by an electrical charge. In the mind, the waters of the unconscious consist of images and impressions, which are impregnated by the awakened intellect inspiring new ideas. The erotic dance between water and electricity gives birth perpetually on all scales to new forms of thought and life. When a couple becomes estranged, the children can develop severe psychological problems.

What happens to the waters of Earth is the fate of the whole Earth community. In the past century, we have removed billions of tons of living creatures from the oceans and added as many toxic substances. Our planet’s oceans are imperiled. The soul of water’s withdrawal is turning land into desert at a rate of 683 hectares per hour (Müller 1999). A recent study by the Clean Water Network reports that one-third of our rivers, one-half of our estuaries, and more than one-half of our lakes are not fit for fishing and swimming—never mind drinking.

So much water is being released into the atmosphere by deforestation and loss of groundwater and topsoil that sea levels are rapidly rising. Earth’s waters have been chased from the ground. Deranged and unable to hold her water, Earth is setting new records every year for droughts and flooding (Marks 2001).

The Body

Just as moving water creates lightning in our atmosphere, so too does it create electricity within our bodies. From inception to death, water is flowing through sixty thousand miles of arteries and veins, constantly filtering and being recirculated. Our kidneys clean about two thousand quarts of fluid each day while producing about two quarts of urine. Blood is approximately 90 percent water, kidney tissue is 8 percent water, our muscles are 75 percent water, the liver is 66 percent water, and even “dry” bone is 33 percent water (Gardner 1982).

The dance between electricity and water takes place in our heads as well. The brain is about 85 percent water. The very act of thinking is made possible because our brains are floating in water. Brain waves created by electrical activity send electrical thought waves through our bodies through waterways. When the brain creates a thought it sends an electrical signal via the nerve endings to the waterways that flow throughout the entire body, connecting it to every cell.

The thought (in the form of an electrical impulse) travels throughout the body along these rivulets. The brain is mostly water in perpetual motion. This motion generates electricity to help generate thoughts through nerve impulses. There can be no thinking without water and electricity.

According to neurophysiologist Carla Hamford, “We start thinking better the second water passes over our tongues. Some of the water we drink is immediately absorbed sublingually and sends a message to the hypothalamus. The hypothalamus in turn sends a message to the brain and other organs that new water is on the way. This allows for more water to be available to the brain and enables the brain’s neurons to fire more actively and efficiently” (Gardner 1982, 189). When working on a problem, drinking water is one of the best things you can do to find a solution.

Batmanghelidj claims that we are not sick, we are thirsty. To get well we need to stop treating chronic dehydration with medication and instead drink more water. Although most of us recognize that we need water when our mouths become dry, Batmanghelidj tells us that this is the last signal the thirsty body gives and that it indicates extreme dehydration. We have lost the critical perception of needing water. Because of a gradually failing thirst sensation, our body becomes chronically and increasingly dehydrated from early adulthood. He suggests that the most important thing we can do for our health is to learn to become sensitive to thirst pain.

We each drink about 6,600 gallons of water in a lifetime and about five times our body weight each year. A loss of 1 percent of our body weight makes us thirsty. The intense thirst following a 5 percent loss of body water is nearly unbearable. By the time 7 percent has been removed, circulatory failure may ensue (Batmanghelidj 1992, 51–52). If life did begin in the sea, then we are alive only because we carry our own sea within us.

According to Batmanghelidj’s research, when the body becomes dehydrated, it operates a priority system for rationing the reserves of water it has. Water is moved toward high-priority areas and drawn away from other lower-priority areas according to a predetermined program for drought management. The brain is at the top of this hydration hierarchy. It needs more water than any other organ and will actually starve other organs and body areas for water to maintain its own water levels.

It may not be part of a predetermined rationing system, but special water privileges are also being demanded by the “brain” on the global and psychological scale. As the thinking faculty for the Earth, the human is hoarding her waters while the rest of the organs, her forest lungs, wetland rivers, and river veins, are drying up.

So too the mind’s waters are slaves to the rational intellect at the expense of all nonrational ways of knowing. We are starving our imagination, emotions, intuition, and bodies of water. Our cur-
rent malaise, our social, psychological, and ecological crises are all thirst signals. As Batmanghelidj says, the most important thing we can do is become sensitive to thirst signals.

Not only are we thirsty, we are also exhausted. We haven't slept in centuries. When we left the cave we searched for light, then for the secret of light, then for how to fill the world with light switches so that it was constantly flooded with light, a perpetual daytime-blasting nightmare. In the global city of telecommunications we have banished the night. The merciless glare of electric lights extends the harshness of the day deep into a night restless with the hum of machinery and the eerie glow of neon. We are creatures of daylight, locating ourselves in our world by sight more than by any other sense. We think of knowing as seeing. So we are compelled to keep knowing by keeping the lights on. Light and darkness being among our most primordial metaphors of good and evil, we think technology is a triumph over darkness, evil, and death. We can now see the world twenty-four hours a day, but what we see is only surfaces.

As darkness pours over the blue veil of daytime, earth and the sky merge under the immensity of the starry heavens. There are things you can only sense in the night. Nothing is left to do, to say. A human can only stand in silent awe and thankful devotion before the immense wonder of it all. Night is the time of poetry and dreams when the depths of space and time fall into the refreshing pools of our imaginations.

The intricate life underwater reveals secrets silently and only in the dark. In the bright daytime the surface of water can only reflect the light. Like Narcissus we become captivated by our own daytime reflection on the water's surface and remain gazing at the surface of our manufactured world, ourselves, until we starve. Like Narcissus we are lonely for the beauty of the world and for our own depths, perceptible only in the dark interior.

While I was a master's student, I became well acquainted with the pain and distortions of the dehydrated, over-fit mind. At the end of my last semester, I was working on a paper that would be a grand synthesis of syntheses, a massive metanarrative describing the evolution of space and time. The limit for the paper was twenty pages. By the thirtieth page I started skipping meals. By the fortieth I was down to five hours of sleep a night. As I kept writing feverishly—fifty, sixty, seventy pages—I stopped answering the phone or seeing friends. My affect became flat, as if the juices had been drained out of my heart and body and sent to my head. I felt like a writing machine. I had to get it all down, all the connections I was seeing, all the brilliant insights. The more I ignored my body and heart, and strapped them to the chair in front of the computer, the stronger my compulsion grew to create an airtight, all-inclusive theory about everything.

It was as if, by disconnecting from the physical, emotional world, I had become fundamentally disoriented, lost in conceptual space. From there all I could do was to try to think my way back to the world through theoretical maps. But the mind separated from the heart and body of the world is fundamentally disoriented, like a chicken with its body cut off, and its maps are bound to be distorted. It took me weeks to regain balance, and when I did, I didn't care so much about everything fitting together conceptually, yet I could feel the coherence of the cosmos in simple everyday acts.

Asperger's Syndrome

My condition was temporary, but for a shocking and rapidly increasing number of others it is wired right into their nervous systems and carried in their genes. According to an article in the December 2001 issue of Wired magazine, there has been a significant surge in the number of children born with a form of autism called Asperger's Syndrome. Alarming, the sharp rise is occurring primarily among children of computer programmers and engineers concentrated in technology centers like Silicon Valley. The disease is carried in the genes of those brilliant minds that have powered the technology revolution. According to the article, people with the disorder "lack basic social and motor skills, seem unable to decode body language and sense the feelings of others, avoid eye contact, and frequently launch into monologues about narrowly defined—and often technical—interests" (Silberman 2001, 43).

As I read this description, I think of Tesla, Newton, and the many extremely disassociated geniuses that have delivered us into the electronic age. I think of many of the programmers I knew at the MIT Media Lab who were unable to make eye contact, had monotonous voices, and stayed up all night long writing code. According to the article, "It is now a familiar joke within the industry that most hardcore programmers... are residing somewhere in Asperger's domain. Kathryn Stewart, director of the Orion Academy, calls Asperger's Syndrome 'the engineers' disorder.' Bill Gates is regularly diagnosed in the press: His single-minded focus on technical minutiae, rocking motions, and flat tone of voice are all suggestive of an adult with some trace of the disorder" (Silberman 2001, 39).

Apparently, autistic minds, which are clumsy and easily overwhelmed in the physical world, soar in the virtual realms of mathematics, symbols, and code. The doctor who discovered and named the disease in 1944, the Viennese Han Asperger, compared the children in his clinic to calculating machines: "intelligent automata" (Silberman 2001, 44)—a metaphor employed by many autistic people themselves to describe their own rule-based, image-driven thought processes. The most difficult thing for someone with Asperger's is face-to-face communication. Replacing the constant interactions of a typical office with a screen and an e-mail address inserts a controllable interface between a programmer and the chaotic world.

It was in the mid-90s, during the Internet boom, that the caseload of the California State Department of Developmental Services started rising. In 1999, the number of clients with Asperger's was more than double what it had been six years earlier (Silberman 2001). The numbers continue to climb. I had no idea when I was at the Media Lab that this "disease" would not only escalate and spread technologically but biologically as well. The disease of the modern mind is spreading through both memes and genes. Mnesomyces and her rich relational waters are receding from our very DNA.
What I saw at MIT made me concerned. I saw how we were entrusting the future of technology, and so the future of our own consciousness, to people who seemed utterly shut off from the world. It seemed obvious to me even then that technologies that come from such unbalanced minds were bound to generate the same imbalances in the users—that, like DNA, the programmers' and engineers' disorders are built right into and are passed on through their creations.

In a water-based, and so relationship-based, world it is not adaptive for a species to become increasingly incapable of relationship. In the past, someone with Asperger's would have been a nun or a monk copying scripture in the back corner of a monastery. Now she or he is successful in a high-status job, making $150,000 a year and looking a lot sexier than she or he used to, especially to another programmer. Our species is now rewarding and selecting for the dehydrated, unlit mind.

But the disease becomes more severe as it is passed on to children. According to the article in Wired, children with severe cases “spend their waking hours in trance-like states, staring at lights, rocking, making high-pitched squeaks, and flapping their hands, repetitively stimulating...their miswired nervous systems.” They have withdrawn into “iron-walled universes of their own” (Silberman 2001, 1[5]). As more and more people are being sealed into a dry, conceptual desert, the dance of eros will come to a dead stop. We will finally, truly unplug.

With genetically modified foods, cloned sheep, and “smart matter”—molecule-sized machines that reproduce—the lines between machine and life have become extremely blurry. Nothing living survives without water. It is highly suspect then that the one element that is anathema to electronics is water. This is the profound divide between life and high tech, and nowhere does it become more vivid than in the attempts we have made at voice simulation.

Voice simulation has become increasingly sophisticated and more realistic since the mechanical monotone of the first robot voices drone. “Warning, warning Will Robinson!” Now we can look forward to the Mr. Rogers-esque humanity of the automated recording that tells us cheerfully, coolly, and intransigently that our credit request was not approved. But even the most sophisticated among them lacks true human affect, the moisture of the human body and heart. Electronics cannot tolerate water, neither literally nor symbolically.

It’s easier to try to humanize our machines by giving them voices than to make conscious choices about the part they play in our lives. Endowing them with human qualities, with cute-little-helper animations, natural landscape screenshots, and kinder, gentler error messages is a kind of rescue attempt for the fleshy life and imaginal depths they seem to be stealing from us. But no matter how warm, fuzzy, and “user friendly” we make them, they will always be dead plastic boxes. The more ubiquitous they become, the more our wild, moist souls withdraw from the world. Making the interface “friendlier” doesn’t make us more human; it makes us more “users.”

How do we invite back the soul of water into our Earth, our communities, our bodies, and our minds? This is the same as asking how we can move back toward the world, toward the mysterious, sexy woman in the doorway, toward the dance. We have learned so far away that most of us can barely feel the magnetic attraction that keeps the dance going.

Healing Waters

I cried inside that sweat, it seemed as though my heart was being tugged at and finally torn loose inside my chest. Other people cried too. So much emotion is expressed in the sweat and in the medicine lodge. And the weird thing about it—you don’t really know what you’re crying about. The emotions seem to come out of some primeval cavity—some lonesome half-remembered place. It seems when I cried it was more than an individual pain. The weeping was all our pain—our collective wound—it is larger than each individual. In the sweat it seems as though we all remember a past—a collective presence—our past as Native people before being colonized and culturally liquidated.

—Amita Valerio, This Bridge Called My Back

Moving toward the world requires that we allow ourselves to “hear the Earth’s cries within our hearts” (Thich Nhat Hanh). The soul of water and the waters of the world are purified through our tears. We are most human when shedding tears for the ailing world and for the humanity we have lost. Our tears are a form of praise for the beauty and grandeur of what we are losing. We have abandoned and suppressed our waters because for 2,500 years we have been afraid of our pain, the pain of losing what we love, the pain of losing our most cherished creations, our own hard-carved, differentiated, separate selves. We have dammed and diverted our waters and overlie our skies in an attempt to halt the flux of time in which all things fluidly rise and pass away, so that we might live forever. To heal our waters is to accept that we too shall die and to hold hands with the rest of creation during the fleeting moment we share. Then the pain that can neither be avoided nor abolished need not be born alone but can be shared and absorbed by a whole living creation.

As Wallace Stevens declared, “death is the mother of beauty.” To accept the fluidity of life’s passing is to let ourselves come close and be touched by the beauty of the fal leaves, the thrush’s song at dawn, the opening of a zinnia in spring—and to let ourselves weep as they pass. From the intimacy of our deep presence with the world on its terms, what we co-create only adds to its love and beauty. To steward the future, we have to fall madly in love with life. It is, after all, from love and back to love that all waters flow.

As medical science shifts its paradigm from one of solutes to solvents, and our physics follows suit, so too do we need to move from an epistemology of solutes to an epistemology of solvants, Ecotemist philosopher Carol Bigwood sounds this metaphysics of relationship and “nearness” with such eloquence and passion that I will let her words help call us to Mennonysne’s wells:

We need to pour healing tributaries to the forgotten earth, to give way to silenced people. Let rivulets of sweat run down our brow, between our breasts, around our balls in remembrance of the thousand years where this cedar stood in the Car- wick Valley before the clear-cutting. Cry like a baby for the Beluga whales whose bodies are so contaminated that under Canadian and U.S. law they are to be treated as hazardous waste.

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... [W]e need a moment of earthly fluidity and vulnerability in our thinking. We cannot weave ourselves closer to the world by engaging solely in rational, calculative thinking. ... We need to feel our remoteness from the land and ... let the distance from nature soften our thoughts as when we are distant from those we love. (1993, 201–2)

We need not suppress the gifts of reason, setting ourselves up for another backlash, but instead let play and laughter (Hermes) and beauty and love (Mnemosyne) infiltrate reason.

The dire need of our present human evolution lies in this simple, flexible characteristic of our human capacity to care for others, to dance, laugh, and sing in otherness, rather than in our ability to reason as we have known it. We need risk our institutionalized reason, not for the sake of irrationality, but for the sake of letting what has been deemed nonrational, (for Mnemosyne), to show itself in its integrity. (Bigwood 1993, 202)

As we liberate these waters that make us most human, so too will Mnemosyne be liberated, to quench the thirst of the earth, our bodies, and our minds and to make good use of the electrifying gifts of the bright mind. When we do, the glory of the universe will shine through the human as it does in the triumphal arch of the rainbow where light and water are in their most exalted embrace.

Then we will want nothing more than to devote ourselves to restoring the waters of Earth and making water the most basic consideration in everything we do. We will start by restoring the tree cover to fix the soil, preventing too-quick run-off, and steadying springs, streams, and rivers. Then we will restore the natural motion of our rivers and, in so doing, restore their vitalizing functions. We will become immensely curious about our oceans and less compelled to explore (and conquer) outer space. We will become deeply present to the quiet innermost stirrings and intuitions of our hearts that hold the whole world inside them. Only from this depth of presence with our world can we trust the equally important impulse for flight and transcendence and the use of our technologies.

What will become of our technologies? There is no telling what Mnemosyne and Hermes will dream up when they come close once again in their timeless dance, when Mnemosyne stops having to moonlight in the licensing department and joins Hermes in the workshop. When they find equal footing, their dance is always one of exquisitely beautiful and ecstatic play. Within it is the power to generate new forms of participatory art and technology that carry with them timeless wisdom and life-sustaining powers.

NOTES

1. Find a full and thoughtful discussion of the hazards of technology on p. 60 of Talbott (1995).

2. On p. 12, Hillman quotes Miguel de Unamuno: "In order to love everything . . . human and non-human, you must feel everything within yourself, you must personalize everything. For everything that it loves . . . love personalizes . . . we only love that which is like ourselves . . . it is love itself . . . that reveals these resemblances to us."

3. For a full description of Mnemosyne and Hermes as they dance in the history of poetry see pp. 189–96 of Hirshfield (1998).

REFERENCES


Muller, R. 1999. Earth to world leaders. Lapis.


