

Timeline

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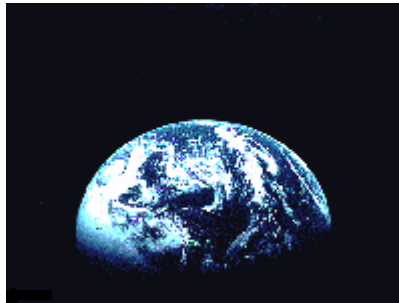
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<http://www.globalcommunity.org>

timeline@globalcommunity.org

Phone: (650) 328 7756 Fax: (650) 328 7785



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Hope, Human and Wild:

*True Stories of Living Lightly
on the Earth*
by Bill McKibben

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Rua Quinze, the main shopping street in Curitiba, Brazil, was scheduled to be widened for more vehicular traffic and crowned with an overpass. Instead, a visionary mayor had the street closed to traffic, paved with cobblestones, and decorated with thousands of flowers. Curitiba is one of three stories of hope described in the book Hope, Human and Wild by Bill McKibben.

Crusty, old David Brower, that legendary environmentalist, gave Bill McKibben some advice. McKibben had written *The End of Nature*, a book that describes the devastating impact humans are having on the flora and fauna around the world, “ending,” the author predicted, “the very idea of wildness.”

Brower’s advice: write a follow-up book on “renewal, recovery, restoration.” He was right, McKibben realized after some serious thought. The “appropriately depressing” reality presented in *The End of Nature*, while still true and increasingly recognized, is only half the equation. As McKibben puts it in *Hope, Human and Wild*: “If we can’t prevent the environmental damage that is already underway, we can—if we act boldly—limit it. But I no longer think fear is sufficient motivation to make such changes, especially since they involve the most fundamental aspects of our economies, our societies, and our individual lives. To spur us on, we need hope as well.”

To instill that hope, McKibben explores in detail three experiments which provide “a vision of recovery, of renewal, of resurgence.” One is in Brazil and another in India, but the story the author begins his book with is, for him, “dessert...for, as it happens, I live surrounded each day by one form of that splendid new vision. I live on the East Coast of the United States.”

The East Coast of the U.S.

While in most parts of the globe, forests are being devastated at an accelerating rate since 1950, the exact opposite has happened on the East Coast. There the forests were decimated in the early nineteenth century. McKibben quotes one observer at the time who wrote of New Hampshire: “The forests are not only cut down, but there appears little reason that they will ever grow again.” Today, the author notes, “despite great increases in population, 90 percent of New Hampshire is covered by forest. Vermont has gone from 35 percent woods in 1850 to 80 percent today, and even Massachusetts has seen its woodlands rebound to the point where they cover nearly two-thirds of the commonwealth.” One Agriculture Department official observes that the landscape now looks much like it would have prior to the American Revolution. Animals are returning, as well—wild turkeys, deer, moose, bears, beaver; elk and bison have been reintroduced; coyotes have begun to fill the niche once occupied by wolves; there have been reported sightings of cougar.

Of the East Coast, McKibben observes: “So far we can claim neither humility

nor wisdom; our good fortune is mostly accidental, and...new dangers of human carelessness and selfishness threaten even the tentative recovery of this place. Still, the hope represented by the East is real. It is transferable, too, to any other place that still has some open space and some rainfall: surely people on every continent can look at it as a hint of the grace of nature if people back off, give it some room and some time. The world, conceivably, will meet us halfway; the alternative to Eden is not damnation.”

Curitiba, Brazil

The author’s second beacon of hope is Curitiba, a city in the mountainous regions in the south of Brazil. Here, despite a tripling in its population in 25 years, Curitiba has “solved urban problems we find intractable even in the rich West.”

On McKibben’s first visit to Curitiba, he went for an evening stroll on streets closed to cars, strung with lights, lined with small shops, punctuated with broad, leafy plazas. Buses rolled by, full, every few seconds. It was a place he later lived in with his family for a month “to see if its charms extend beyond the lovely downtown,” and to talk with police, merchants, urban foresters, engineers, and citizens—99 percent of whom were happy with their town.

As the author describes it, the turning point for Curitiba may well have come when city planners, faced with the typical problems that arise from explosive growth, decided to widen the main streets of the city to add more lanes for cars, knock down old buildings, and build an overpass over the main shopping

street. “Resistance to the plan was unexpectedly fierce,” McKibben writes, “and the loudest voice belonged to Jaime Lerner, a chubby man who looks like Norm, the guy at the end of the bar in Cheers.” Lerner, the mayor of Curitiba, had a different vision: he saw the central street as a pedestrian mall. He knew that the store owners would love a mall once it was built, but that he would have a hard time persuading them to go for the idea. “To prevent opposition,” Lerner recalls, “I told my staff, ‘This is like a war.’ My secretary of public works said the job would take two months. I got him down to one month. Maybe one week, he said, but that’s final. I said, ‘Let’s start Friday night, and we have to finish by Monday morning.’”

It was an instant success with the store owners, but an offense to the local automobile club which threatened to reclaim the street by driving their cars down it. What the car drivers found, however, was a street filled with dozens of children busily painting pictures on long strips of paper, an event that has been re-enacted every Saturday since. The transformation of Curitiba had begun.

McKibben goes on to describe the wonders of Curitiba: Their bus system which “carries four times as many passengers each day as Rio’s subway system and costs one-half of one percent as much per kilometer.” Their day-care centers, which are free to children three months or older, are open 11 hours a day, and serve three meals and a snack. Their Childhood and Adolescence Integration Program, which keeps kids off the streets by involving them in tending vegetable and flower gardens.

Their program which gives a sack of food to any slum dweller who collects a sack of garbage. Their method of trimming grass in the city's parks, which involves a shepherd and his flock of 30 sheep. Their flood control system which features, not the usual massive channelizing in concrete viaducts, but small dams throughout the city, which allow the city's five rivers to turn into manageable lakes during heavy rains.

Curitiba, the author writes, "is the classic example of decent lives helping produce a decent environment." But is its success replicable? Lerner believes it is necessary first to break "the syndrome of tragedy, of feeling like we're terminal patients. Many cities have a lot of people who are specialists in proving change is not possible. What I try to explain to them when I go to visit is that it takes the same energy to say why something can't be done as to figure out how to do it."

Kerala, India

At first glance, McKibben writes, the city of Kerala, located on the tropical tip of India, "looks little different from the rest of the subcontinent." In fact, even for India, Kerala is crowded and poor; the average income per person is \$330 per year. Many families do not own beds; nearly half own only cooking utensils, a wooden bench, and a few stools.

But other facts tell a different story. A man in Kerala can expect to live nearly as long as one in North America, and 22 years longer than the typical male in the rest of India. There are more females in Kerala than males, as is the case in the industrialized world. Kerala's birthrate is falling faster than the birthrate in the U.S.

Kerala's literacy rate exceeds 90 percent. Clinics provide free health care for children, and affordable health care for everyone else. One of America's leading authorities on hunger notes: "You don't see malnourished children. You see children with shoes, neatly pressed and washed clothes. It's not like India at all." Another expert, using "a physical quality of life index," rates Kerala far higher than all of Africa, and essentially equal to the far-richer countries of South Korea and Taiwan.

"Kerala has changed the rules of the game entirely," McKibben explains. They've shown that people really do not need to be rich to have a good life, that economic growth is not the only way to well-being. As one observer notes: "Kerala is the one large human population on Earth which currently meets the sustainability criteria of simultaneous small families and low consumption."

There is no one reason for the miracle that is Kerala. It is part history, part economics, part politics, part religion. The only figure that emerges as central is that of Sri Narayana Guru, who is credited with shaking up the caste system, bulwark of the Hindu rulers from the eighth to the nineteenth century. "Unclean castes had to stay outside the temples: Ezhavas had to stand 12 feet from the walls, and Pulayas 64 feet." A man from the top caste would have a man from a lower caste walking in front of him to give warning so that others could get out of sight. A Brahmin could not touch his children when they got home from school until they had taken a shower.

Sri Narayana, an Ezhava and contemplative, performed religious rites not previously permitted and, under the banner of “One caste, one religion, one God for man,” began the fight for increased rights for the Ezhavas which resulted eventually in land reform and increased educational and job opportunities. Today, McKibben writes, “Kerala is less caste-ridden than any spot in the Hindu world.”

There is also less gender bias toward females. Women in Kerala have a longer life expectancy than men, infant mortality is lower for girls than boys, and there are more female than male college students.

McKibben ends his book with musings about America—the direction it is going; what lessons can be learned from places like Curitiba and Kerala and applied; how we can learn to live lightly on the Earth without losing what we treasure; the difficulties and possibilities for change. One passage sums up his thoughts: “I suspect that the tyranny of desire cannot be overcome—that asceticism is, and probably should remain, a minor streak in the character of our species. I don’t even think we need to ‘change’ ourselves. All of us have more than one kind of desire already within us; it’s just that we’ve built our economy and society around one particular set of instincts, and ignored the others. But we could find those others again; they are not so deeply buried.”

“Now we have the chance to back up—to say that we will take our satisfaction not from the pelt of the beaver and what it will buy, but from the slap of the beaver tail on the water and from the swamp maples turning red in mid-August

around the edge of the beaver pond.”
Bill McKibben

Hope, Human and Wild:
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on the Earth*
by Bill McKibben
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The Universe and the Unfolding Human Journey

Sister Miriam Therese MacGillis

Sister Miriam Therese MacGillis is a Dominican Sister. She founded and lives on Genesis Farm in New Jersey, which offers earth literacy programs and is a pioneer in community-supported agriculture. Sister Miriam has a Masters in Art degree from the University of Notre Dame, is an educator, and has lectured in countries around the world. The following are excerpts from a public talk she gave recently at the Foundation’s Center in Palo Alto.

It’s a great privilege to be able to pause in our busy lives and have the luxury to grapple with some of the deep human questions that we are all living with at different depths of our own souls, to search together for insights into the great questions that are affecting us as a human species and as a culture.

First, I want to acknowledge that my own work and thinking is deeply rooted

in the work of Thomas Berry, who would, of course, give credit to a whole list of thinkers, mostly scientists, whose lives have been engaged in a pursuit of truth. Without perhaps understanding the depth of their inquiries, these scientists have been exploring some of the deepest spiritual dimensions of the universe by trying to understand small pieces of the miracle of existence: the geologist, fascinated by the story of stone, by the activity of the Earth's crust; the lonely scientist out in the wilds exploring the mating dances of animals—or whatever piece of the whole marvel of the universe engaged them. Today, we are able to reflect on those findings in a way that our ancestors never could because what has been explored and discovered is so new.

We also have the privilege of standing back and realizing that almost the totality of the foundation of Western culture—our concepts of ethics, spirituality, law, government—are beliefs we have held for thousands of years. Most of the cultural foundation was discovered and codified and institutionalized in a period of time when all that we could know about the world around us was with our unaided human senses. In those times before lenses and amplifiers and the other inventions and technologies we have today, we told ourselves what everything meant around us: Where did we come from? How did we get here? Why are we here? We came to some pretty definite agreements, and those agreements have been foundational to the development of most of our major accomplishments as a civilization.

Now, today, when our human senses have been expanded by technology, what we see is very different from what they

saw. What we hear is very different from what they heard. We are graced by incredible discoveries that are starting to come together to shape for us a comprehensive story that is available for the first time to the whole human species. This new universe story, this new cosmology, is still a model that we imagine and create, but it is based on the most painstaking evidence. And this cosmology, this universe story, is inviting our generation of humanity, at a time of unparalleled crisis, to rethink some of the basic assumptions that underlie the civilizational vessel in which we live out our lives.

An insight that is critical to this rethinking is making a distinction between what we come to understand through direct sense experience and what we know on the inner plane. We have this immense human-soul capacity by which we know things instinctively, intuitively, and which is a never-ending fountain of knowing, of wisdom, of connections. Out of this we touch mystery that is not verifiable in the world of sense-knowledge. One way of knowing is not better than the other; they are simply two different modes. It's also important to recognize that the inner landscape, the world of imagination, the world of inner sensitivities, is itself activated by our experience of the outer world. Our imagination cannot create what our senses have not in some way apprehended.

So we can see how the outer world of our ancestors is what literally shaped the development of their psyche. When we live in different places, we are going to be activated by what's there—climate and altitude and topography and animal

forms and plant forms—according to our geographic position. Our language and art will be different, our buildings will be different, the symbols and stories we tell will be different. In every case, we will have made pretty strong commitments to the certitude with which we hold our belief systems, given the context out of which they have grown.

Now we are living at a time when we can put on lenses like the Hubbell telescope out there on a spacecraft which has allowed the human eyeball to actually go around to the other side of Mars. It allowed us to see into space at a depth that was just absolutely mind-blowing. When the images came back looking like a fixed, star-studded night, we were told that what we were seeing weren't stars, but galaxies. Such information from the outer landscape demands of our inner psyche the capacity to adapt to that reality, and opens up the soul for a profound experience of the awe and the vastness of the universe. We are finally being forced to go back to the very foundations of our cultural belief systems, pick them up, and without fear look at them. It's clear that the belief systems must adjust. Not because they're bad, but because the perception of reality is such that they just can't suffice any longer. That's the kind of deep cultural work we are being challenged to do.

For 5,000 years, one of the certitudes about our Western world view has been that there is a fundamental difference between matter and spirit. Matter is matter and spirit is spirit. God has spirit, angels have spirit, the departed have spirit, and humans have spirit, but everything that is not human on the Earth is matter. This view holds that there is an

inherent, inner, transcendent dimension unique to the human that the nonhuman world does not have. What we have to understand is that the major institutions of our society—at least our Western society—are still committed to this belief that there is a radical discontinuity between the human and nonhuman world. Which is why Thomas Berry would say it's very, very important that as we look at the crises we are experiencing today, we also look at the ability of our institutions to deal adequately with them. He cites four major institutions.

First is the economic institution of the planet. Even though globalization of the economy is a fact, it has its roots in the Western world, in the industrial process. This economy has as its purpose to enable humans as efficiently as possible to take the nonhuman world in its natural state and change it through human work and industrial processes into consumer goods—goods that can be used by humans for a period of time, then put to the waste heap quickly so humans will go back and get the next batch. That's its purpose. The nonhuman is there for the human.

The second institution is government. Humans have sovereign rights and the nonhuman world has no rights. The whole jurisprudence of the Western world is formulated around that belief system, so in the regulatory agencies there is no voice for the voiceless, there is only a voice for the humans.

The third institution is the university—and education as a whole, because we know that it's all of a piece. The university has the capacity to take the

next generation of humans and help develop all of those skills and tools and competencies by which they enter and continue the economic and governmental process.

Fourth are the religious institutions of the West. They, too, have a commitment to this fundamental separation. As a result, they are preoccupied with the human historic period and the written scriptures of the traditional religions as the basis for how the divine reveals the divine. They are very short on seeing the universe itself, or the nonhuman world, as carrying the revelatory dimension of the divine. In many fundamentalist institutions, there is more commitment to redeeming or liberating the human out of the world than to engaging the human in a creative response with the nonhuman world. It doesn't mean that these institutions are bad, it means that their perceptual frame of reference is such that that's about the only way they can function. And if you have this basic frame of reference, then people doing what they are doing are acting ethically in terms of their relationship to the nonhuman world.

So we want to look at the differences between the old story, the old cosmological world view, and what we're observing now as we look at this world of matter and spirit through the lenses we have created. Since we have moved into the nucleus of the atom, since we have gone into inner space, into the quantum realm, what physicists observe there does not fit our definitions of matter. We are not looking into objects. We are looking into a realm of reality in which whatever is in there is self-acting. It is a mystery we can't even

begin to find language for. The vastness of it and the depth of it are beyond us.

If this is true of any atom in the universe, then the universe as a whole, from its beginning until now, has had this deep interior dimension which has been evolving along with the physical complexity of the universe. There can't be one without the other. The universe is one. If spirit, psyche, consciousness, intelligence, soul, shows up anywhere, it is then a potential that has always been there and is integral to the universe as a whole. It is not something that comes in from outside the universe into humans.

That demands a tremendous adjustment in how we think of ourselves in the universe and how we think about our single planet of life which is the very context out of which our spirit, soul, psyche is derived. The Earth is one—one single, living organism. Any culture which would base its institutions, or base its activities and its professions on a discontinuity from the human to the nonhuman, will wind up becoming pathological. It will wind up so dysfunctional that it cannot be salvaged.

So we are here at this last stage of the twentieth century where the redesigning and the re-engineering of the natural world by good people acting ethically has resulted in devastation to the very basis of our existence. Without examining those assumptions, we haven't a chance of leaving the future in any kind of state for our children and our children's children. It has to happen in us, in you, in me, in all of us, in the six billion of us humans who are the Earth thinking about itself. We created the culture and we can recreate and transform its inadequacies

and build on its strengths. That's why we say that this moment when so much is being revealed to us is a moment filled with grace. It is a moment that gives us insight, awe, and reserves of energy by which we can begin to refashion and reinvent our human systems, so that we can live in mutuality with the natural world.



SYNCHRONICITY:

The Inner Path of Leadership
by Joseph Jaworski

Book Review by Joe Kresse

In this fascinating personal story, Joseph Jaworski, the son of Watergate prosecutor Leon Jaworski, tells of his odyssey from high-powered, "good old boy," Texas litigator to seeker of fulfillment and truth. His journey takes us from Watergate to wilderness experiences, from Shell Oil's worldwide scenario planning team to a dialogue with the physicist David Bohm, from personal crisis to deep discovery. The story is organized in the form of Joseph Campbell's "Hero's Journey," with its parts labeled *Preparing to Journey*, *Crossing the Threshold*, *The Hero's Journey*, and *The Gift*.

While there is a bit too much name-dropping for me, it is nonetheless clear that Jaworski's experience is genuine and applies to many of us who are caught up in trying to achieve "success" as the world defines it. Having gone a long way

toward realizing the American Dream, a personal crisis caused him to see how unfulfilled he was, and he set out in a new direction.

He ultimately left his law practice and founded the American Leadership Forum, which develops leadership capabilities among the rising generation of leaders from all sectors of society. "The over-arching principle of the organization would be one of servant leadership, serving with compassion and heart, and recognizing that the only true authority for this new era is that which enriches participants, and empowers rather than diminishes them. It would encourage 'transformational leadership': leadership of strong commitment and broad visionary ideas."

After launching the Leadership Forum and successfully running it for several years, in 1991 Jaworski received an opportunity to join Shell Oil's scenario planning group in London. For the four years he was there, the team he led developed two possible scenarios for the future of the world over the next thirty years. The book details these two scenarios, one called "Barricades," and the other, "New Frontiers." The Shell team felt that either of these two scenarios is possible, and which one comes to pass depends on decisions we make in the next few years.

As indicated by their names, these scenarios pose quite different futures. The scenarios are based on the team's conclusion "that two interrelated patterns characterize fundamental change around the world: increasing liberalization and increasing globalization. One of the reasons liberalization has spread so

quickly and widely is globalization. Liberalization, in turn, speeds globalization by opening and freeing flows of goods and knowledge.

“But we also saw that continuing liberalization was not necessarily inevitable. There are two faces to the liberalization revolution—two opposing forces that would drive the two scenarios we saw unfolding for the world. On the one hand, liberalization offers enormous opportunities to individuals, groups, companies, and societies to improve their lives. If these opportunities are seized and if they are realized, hope and expectation will generate pressure for further economic and political change. A positive feed-back loop is formed—a “virtuous circle” occurs.

“On the other hand, liberalization can threaten many people, who fear they could lose what they presently value—their national, religious, and cultural identity; their political power; their economic position. This could lead to a growing atmosphere of fear and resistance and a resulting negative feedback loop.

“We saw the world at an important turning point—what might be termed a ‘hinge of history.’ The liberalization might continue to spread into a world of rapid and unsettling change, with vast new competitive markets opening up in the developing countries....On the other hand, liberalization might be resisted and restricted, resulting in a world of divisions and barriers—a world deeply divided with huge disparities in wealth, with wide-spread poverty, urban crime, and the disregard for the environment

that inevitably accompanies desperation and hopelessness.”

Woven throughout the book are “synchronous” events that happened to the author, moments in which “things come together in an almost unbelievable way, when events that could never be predicted, let alone controlled, remarkably seem to guide us along our path.” Carl Jung defined synchronicity as “a meaningful coincidence of two or more events, where something other than the possibility of chance is involved.” Jaworski feels that being open and paying attention to such events is one of the crucial qualities of leadership needed now.

In addition, he posits three fundamental shifts of mind necessary to the creative leadership he believes is so crucial for our future. The first is a fundamental shift in the way we think about the world: “Our mental model of the way the world works must shift from images of a clockwork, machinelike universe that is fixed and determined, to the model of a universe that is open, dynamic, interconnected, and full of living qualities.”

The second is a fundamental shift in our understanding of relationship: “I saw the world as fundamentally connected. Everything that I have studied since that time has confirmed to me that relationship is the organizing principle of the universe. The physicist Henry Stapp describes elementary particles as ‘in essence, a set of relationships that reach outward to other things.’ Once we see relationship as the organizing principle of the universe, we begin to accept one another as legitimate human beings. This

is when, as Martin Buber said, we begin to see ourselves and others in an I and Thou relationship.”

And the third is a shift in the nature of our commitment: “Commitment begins not with will, but with willingness. We begin to listen to the inner voice that helps guide us as our journey unfolds. The underlying component of this kind of commitment is our trust in the playing out of our destiny. We have the integrity to stand in a ‘state of surrender,’ as Francisco Varela put it, knowing that whatever we need at the moment to meet our destiny will be available to us. It is at this point that we alter our relationship with the future.

“When we operate in this state of commitment, we see ourselves as an essential part of the unfolding of the universe. In this state of being, our life is naturally infused with meaning.”

Jaworski now works with Peter Senge at the MIT Center for Organization Learning, and another treat this book offers is an introduction by Senge. In it, he also describes the qualities of leadership needed today: “The new leadership must be grounded in fundamentally new understandings of how the world works. The sixteenth-century Newtonian mechanical view of the universe, which still guides our thinking, has become increasingly dysfunctional in these times of interdependence and change. The critical shifts required to guarantee a healthy world for our children and our children’s children will not be achieved by doing more of the same. ‘The world we have created is a product of our way of thinking,’ said Einstein. Nothing will

change in the future without fundamentally new ways of thinking. This is the real work of leadership. And this book is a good place to begin this work.”

This book is a good place to begin this work! I recommend it highly.

In the West we tend to think of leadership as a quality that exists in certain people. This usual way of thinking has many traps. We search for special individuals with leadership potential, rather than developing the leadership potential in everyone. We are easily distracted by what this or that leader is doing, by the melodrama of people in power trying to maintain their power and others trying to wrest it from them. When things are going poorly, we blame the situation on incompetent leaders, thereby avoiding any personal responsibility. When things become desperate, we can easily find ourselves waiting for a great leader to rescue us. Through all of this, we totally miss the bigger question: What are we, collectively, able to create? Peter Senge

SYNCHRONICITY:

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by Joseph Jaworski
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Science and Emotion Should Guide Us

Donella Meadows

OK, that's it.

I've heard that "science vs. emotion" taunt just once too often.

Nuclear power proponents toss it out like a grenade to silence people who are "irrationally" worried about radio-activity. This is an industry whose wastes will be deadly for thousands of years after the last "scientific" spokesman accuses the last worried citizen of unjustified "emotion."

Food industry leaders have long accused us of hysteria when we object to additives and pesticides in our suppers. But then, not wanting to eat poisonous chemicals is an emotional thing. One can get quite worked up about it.

The chemical industry is now aiming its "emotion" charge at Theo Colborn, who crusades against chemicals that masquerade as hormones. She exaggerates, they say. She lets her emotions distort the science, they say, as they sweep off the table the hundreds of scientific papers she has collected.

The straw that has broken my patience is the testimony of foresters from the Champion International logging company, fighting a proposed Vermont law to ban aerial spraying with herbicides. "We are not a bunch of crackpots out making uninformed decisions," said Donald Tase, Champion's district manager. Said

forester Stephen Richardson, "I am pleading with you to listen to science...and not get caught up in emotion."

Shortly after Champion claimed that science was on its side, I listened to a panel of three biologists and a toxicologist discuss herbicide spraying. Their conclusion was that science does not know what the effects will be. No one knows exactly what herbicides will do to breeding places, food supplies, or population balances of the creatures that live in the forest. We don't know how chemicals that drift or run off into streams will affect aquatic life. Communities of soil microbes may be disrupted, but we're not sure how. Probably, the panel said, these ecosystem impacts will be of greater concern than toxicity to humans—but that's a guess.

They did list some certainties. The clear cuts that precede the herbicides definitely cause huge losses of soil nutrients. Those nutrients wash into and affect life in waterways, already disrupted because clear cuts change runoff patterns. There is no doubt that wiping out all plants, even temporarily, will disrupt populations of forest animals. And we know that some of the chemicals mixed with herbicides to make them more soluble, more sticky, or more stable are actually more toxic to animals, including humans, than the herbicides themselves.

Science helps spell out certainties and uncertainties, but it isn't the job of science to decide what to do. That takes a little "emotion," maybe we could say "values," or even "common sense." Is it rational, given ignorance of the consequences, to spray chemicals over

hundreds or thousands of acres? Is the purpose for doing so—to turn a multi-species forest into a plantation for the two kinds of trees that industry values to make our toilet paper cheaper—worth any risk? How much risk? To whom or what? Who should decide?

It would be helpful if, as we debate the answers to such questions, we could admit that there is a little science and lots of emotion on all sides.

The public is indeed too ignorant of science and too leery of chemicals, though given past unfortunate experiences with chemicals that corporate and government scientists told us were harmless, we have a rational basis for our leeryness. And there are plenty of scientists arguing on the side of caution when public health and the environment are at stake.

Corporations hire numerous scientists, but we know that their organizational purpose is not the search for truth, the stewardship of creation, or even the welfare of the human race. Their goal is to make money, which is perfectly rational, until it gets pushed to the point of destroying life-support systems. That's rationality gone over the edge into greed, domination, aggression—emotions. They are emotions that stand in sharp contrast to the fear, compassion, care, and other wimpy emotions associated with tree-huggers. They also are more, well, let's face it, testosterone-based emotions.

I would hate to bring up that sexist point, but the chemical companies have done it for me in the marketing of their products. A farming magazine I have seen advertises a herbicide called Pursuit. It

shows the cockpit of an attack plane as you would see it if you were the pilot, your leather-gloved hand at the throttle. "TAKE COMMAND," says the headline. In smaller print: "Using PURSUIT puts you in command of the most advanced herbicide technology available." Another ad shows a jug of herbicide draped with a cartridge belt. "Marksman drops Velvet Leaf like a shot."

There are commercial pesticides named Arsenal, Bravo, Clout, Force, Impact, Karate, Lance, Lasso, Machete, Oust, Pounce, Prowl, Punch, Ramrod, Rapier, Rodeo, Roundup, Scout, Sting, Stomp, Whip. What is being sold here? Science? Rationality?

So, fellow citizens, let us vow never to permit that "science vs. emotion" put-down to be used against us again. Let us note that it most likely comes from someone who is arguing not science, but self-interest, profits, power, and short-term benefits for a few with long-term costs for many. Let us use both our rational minds and our nonrational ability to sense right and wrong and argue for the health of living communities with all the science and emotion we can muster.

Donella H. Meadows, a systems analyst, author, and adjunct professor of environmental studies at Dartmouth College, writes a syndicated article each week to "present a global view, a connected view, a long-term view, an environmental and compassionate view." Timeline readers who feel that these articles deserve the widest possible distribution are encouraged to contact their local newspaper editor and suggest the paper carry them. Meadows can be

reached at The Global Citizen, Box 58, Plainfield, NH 03781.



Mememes: The DNA of Human Culture

Richard Brodie

Richard Brodie was the primary author of Microsoft Word, one of the world's best-selling computer programs. A chance conversation at Microsoft, Inc., introduced him to the term "meme" and inspired two years of intensive study which convinced him that the concept of memetics represents a major paradigm shift in the science of the mind. Memes influence the way we live our lives. Cultural memes shape our society. An understanding of memes is a powerful aid for communicating a vision for the future. Brodie's book on memetics, Virus of the Mind, was reviewed in Timeline, March/April 1997. The following is from a public talk he gave at the Foundation's Center in Palo Alto.

A few years ago, I was walking down Telegraph Avenue over in Berkeley on a windy autumn day and I came across a hat store. I got to talking with the owner, and I asked him why most men don't wear hats anymore. Well, he knew the reason. He told me exactly what had happened: "In 1961, there was an event that forever changed people's attitudes. John F. Kennedy was inaugurated and he

didn't wear a hat. That one act changed men's attitudes about wearing hats."

A single event like that can send a meme through all society. Here is another example: When Clark Gable appeared wearing no undershirt in *It Happened One Night* with Claudette Colbert, Fruit of the Loom stock went through the floor. Men all of a sudden said Ha! We don't have to wear an undershirt! Cool!

For a variety of reasons, incidents like these can send shockwaves through an entire culture. Wouldn't you like to be able to predict when that's going to happen? Wouldn't you like to be able to cause that to happen?

Tonight, I'm going to tell you a little about the science of memetics. Memetics is about how things get into our head. For me, the most shocking part of learning about memetics is the notion that our ideas are not necessarily our own. You can catch ideas like you catch a cold—you can be infected by an idea. Thinking about it like that, don't you want to exercise control over what gets in your head? I sure do.

Mememes are the DNA of human culture. Just as DNA is the recipe inside every organism that determines how that organism is going to take shape, mememes are the little bits and pieces of culture that determine how a culture is going to take shape. There are many different cultures across the world and with today's communications, they are mixing and matching. What is going to happen? What mememes are going to prevail? How are we going to shape the evolution of culture in a way that we think is a good way? You can use the science of mememes

for good, or you can use it for evil. I always like to ask, just like Maxwell Smart used to: “Are you going to use this information for the forces of niceness?”

A meme is three things: It’s a thought; it’s your mental programming; and it’s a replicator. People often say, “A meme is just a thought or idea, right, so why do we need a new word for it?” A meme is a thought, but it’s not just a thought. Memes are ideas, but they’re not just ideas. Memes are the pieces of mental programming that make our mental computer run. When you’re born, you have certain hardware you’re born with, and as you grow the hardware develops and the software develops—through your education, your religious training, the things your family and friends tell you, television, books, and so on. Those little bits of mental programming are the memes. They’re the stuff lodged in there. And a meme is a replicator—just like a gene is a replicator. A meme is something that spreads because it’s good at spreading. What makes things good at spreading? That’s the central question of memetics.

The old way ideas spread, back before mass communication, was pretty much one on one, or one on a few, such as trades being passed down from master to apprentice, or stories passed down by oral tradition. The new way of spreading memes is mass communication. When radio and television were invented, instead of just reaching a few people at once you could reach millions of people. I think the recent Super Bowl had an audience of a billion. Just think, a billion people.

Here’s one example of mass meme communication. Remember when trash used to be worthless? Now it’s like gold. Now we feel outrage if we see someone discarding something that is recyclable. What caused that shift in attitude? Nothing in the world changed—we changed. Our view on trash did a flip. I credit television with a lot of that. I remember the campaign with the Native American. He’s wearing a head dress and rowing his canoe on this beautiful, unspoiled stream, and someone throws some litter from their car. It lands in the water right in front of him and he turns his weathered face and sheds a lonely tear. Remember that? They’re saying: “Don’t be a litter bug!” That kind of campaign, effective memes like that, reflect, refract, and create social change.

The future of mass communication is even more exciting/scary nowadays. We now have the potential for billions of people all having home pages—all having equal voice, all having virtually equal accessibility to the other billions on the planet. When you have a mix of cultural ingredients like that simmering, it has profound implications for what we can expect in social change. Most people are looking at it as an economic opportunity. I think it’s an opportunity for social change.

There is a new field of science known as evolutionary psychology which asks, “What is it about us as animals that makes us have the psychology we do?” And it turns out that all animals have four basic drives. You probably know what they are: feeding, fight or flight, and mating. The things that catch our attention pertain to these drives. Memes that associate with them do really well,

and memes that don't, don't do nearly as well.

This is a heck of a thing to think about. It means that good ideas don't necessarily catch on—ideas with good memes catch on. How about truth? People are always asking me about truth—don't memes that are true have an advantage just because they are true? No, they don't. The memes that catch on are ideas that catch your attention. Ideas that make you feel good. Ideas that seem to solve a problem. Ideas that speak to the four basic drives.

How do you use what I'm talking about to communicate effectively? Here's a story. You all know Colin Powell. He was put in charge of this operation to invade Panama so they could get rid of Manuel Noriega, remember? That was called *Operation Blue Spoon*, right? It was—until an hour after Colin Powell was put in charge. He immediately changed the name to *Operation Just Cause*. Why did he do that? In his autobiography he says, "There was no way I was going to ask people to risk their lives for a blue spoon!" And you know the really clever thing about calling it *Just Cause*? Even when you were criticizing it, how could you say, "I'm really against *Just Cause*!" In the abortion rights battle, same idea—you either have people calling themselves pro-life or pro-choice. Nobody wants to be anti-something because that makes you look like the bad guy. So think carefully when you are creating a label.

In this world there's one thing you ought to know: *it's meme, or be memed*. The biggest problem I have with enlightened, wonderful, intelligent, educated people

like yourselves is when they say, "Well, I just won't interfere. Live and let live. People have a right to live their life as they see fit." There's a whole meme complex around that. But what is it saying if you are not wanting to influence someone else? That's a real putdown of yourself. It's saying you don't really think your ideas are valuable. I think any committed person who cares and has good will is probably going to make a positive influence on others. So don't just sit there and live and let live if you're really passionate about something. Listen, those other guys are not sitting around! The forces of evil and chaos are out there spreading *their* memes. Organizations like yours provide a focal point for spreading "nice" memes.

The way to communicate your memes is to be what I am: I am an evangelist. Hallelujah! I am an evangelist for memetics. My job here today is to get you all thinking about memetics, to get you to shift your worldview to look at things that way. I want to do that because I think when people look at things that way, they make much better decisions and have a lot more influence over what happens in their lives. It's always better to have happy, powerful people who have influence over what happens in life than people who are confused and don't understand why life is happening to them.

So evangelize for what you care about. You want to get people's attention. Let me tell you, the most precious commodity a human being has is his or her attention. When I designed my book, *Virus of the Mind*, I said to myself, "What can I put on the cover that's going to catch people's attention? What

memes can I put there that are going to be catchy memes?" The cover of my book shows a picture of a syringe injecting memes into a brain. I picked this cover deliberately because it looks scary. I could have called the book *An Introduction to Memetics*, but do you think it would have been on the best seller list for six months if I had done that?

The idea of a crisis is wonderful for meme spreading. What was the pivotal topic of the first Clinton election? The health care "crisis." But it's been six years, yet the so-called "crisis" hasn't been addressed. That's because they created it. That's what politicians do. Sadly, in the current media environment it is absolutely impossible for anyone telling the truth to get elected to a national office, because the truth is boring. The news is biased—it's a bias against being boring; it's a bias against the status quo. People are not interested in the same thing over and over again. They're not, and that's the bias.

Repetition is another great way of spreading your meme. You'll notice that I mention the title of my book a lot, *Virus of the Mind*. This was taught to me by a guy named Peter McWilliams who is a very successful author. He told me, "When you go on a talk show, never say 'the book.' Always say the title." Unfortunately, before he had discovered this principle, he titled his first book *You Can't Afford the Luxury of A Negative Thought*, and then there was a subtitle. But he learned quickly, and he titled his next book *Life 101*.

Self replication is the most powerful force in the universe, do you realize that?

Think of the atomic bomb. One atom sends off a particle, which splits another atom, sends off more particles, all these particles are flying around, replicating that splitting—pretty soon, Boom! A huge amount of energy. Or think of the population explosion: One family has several children; each of them has several children; each of them has several children. Exponential growth—Boom!

People say to me, evolution is just survival of the fittest; it's a tautology, it doesn't mean anything. That's defining "fit" as though who or what survives doesn't matter. Well, the future is created by replication. Replication of genes and replication of memes—viruses of the mind.

When I called my book *Virus of the Mind*, I knew that the word virus sounds kind of negative. A virus is a parasite. But a mind virus can be a very positive thing. I'm going to leave you with this thought: When you talk to someone, when you write anything, when you're on television or do any public speaking, what you're doing is infecting people with memes. Before you do it, to the extent you don't already, think about what memes you want to spread.

For the gift of your most precious commodity for the past hour—your attention—I thank you.



Blips in the Timeline

The term “blip” is most often used to describe a point of light on a radar screen. Gathered with the assistance of Research Director Jackie Mathes, here are some recent blips which indicate positive changes toward a global community.

Canada Apologizes

The Canadian government has apologized to its 1.3 million indigenous people for 150 years of paternalistic assistance programs and racist residential schools, and promised to establish social and economic development programs and a \$245 million “healing fund” for the thousands who were forced to attend schools where they were sometimes abused. Many indigenous leaders called it a significant step, while others said the apology and compensation did not go far enough—indigenous people are among the poorest and least healthy of Canadians; rates of infant mortality, youth suicide, and unemployment are significantly higher than for other Canadians; most live below the poverty line. Still, the formal “Statement of Reconciliation” represents a significant reversal and a difficult acknowledgment for a government that prides itself on its compassion.

Planning for Sustainability

A few small nations, particularly the Netherlands, New Zealand, and Singapore, have moved toward sustainability using comprehensive national plans. The Netherlands National Environmental Policy Plan has five main features: (1) Managing Comprehensively,

not piecemeal; (2) Tools, such as an information database accessible to every citizen; (3) a Long-term Action Plan to accomplish total environmental recovery in 25 years, with annual goals and objectives to monitor progress; (4) a Social Contract between government, industry, and nonprofits; and (5) Cooperation as the key to helping business to take the lead. Now 125,000 Dutch businesses are working toward the goal of total environmental recovery. Successes include experimental green loans which provide tax-exemptions for profits from green investments; the cleanup of Rotterdam Harbor, largest harbor in the world; fossil fuel taxes to help cut CO2 emissions; and cutting back on the use of agricultural chemicals by 25 percent.

Seeds for Peace

The Seeds of Peace Program has brought almost 800 Arab and Israeli teenagers together in the Maine woods over the past five summers to help break the generational cycles of violence and hatred that sustain the conflict in the Middle East. In daily conflict resolution sessions, they learn to disagree yet remain friends. “After a summer of sharing everything from shaving cream and showers to sports and sing-alongs, ‘reentry’ into hostile societies often is as sobering for them as it must be for astronauts....No longer are they in a ‘safe’ place,” said John Wallach, the founder of Seeds of Peace. But the youth are maintaining friendships through e-mail and an online “chat room.” Their messages are filled with pain and anger, as well as compassion, reassurance, and encouragement. A Jordanian teenager wrote about returning home: “We were

rejected everywhere; we were traitors.” An Israeli wrote that his peers blamed terrorist bombings on “your new friends.” A Jordanian youth wrote: “We have to do what our leaders are not doing—and will not do if we don’t push them....Please continue fighting for what you believe in.”

New Life for Dead Trees

Dead trees nourish the soil and provide habitat for wildlife, but the timber industry looks at dead trees and generally sees only dollar signs. The forest on Mt. Baker in Washington State recently went through an infestation of pests that munched through some 1,800 acres of trees. Some trees died, and more will die in the next few years, but the forest as a whole is just fine. Nevertheless, the Forest Service announced a timber sale, ostensibly to restore the forest’s health. A suit filed on behalf of the Northwest Ecosystem Alliance and the Pilchuck Audobon Society argued that the sale violated provisions of the Forest Service’s own policy for protecting streams and old-growth forests. No sooner was the complaint filed than the agency withdrew the sale.

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