

Timeline

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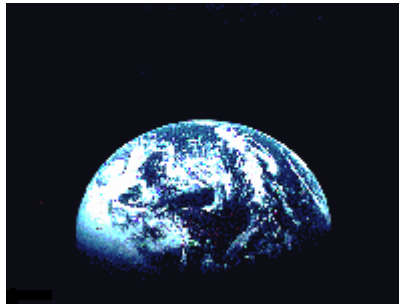
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Confrontation or Cooperation?

An address by Rear Admiral Eugene J. Carroll, Jr., USN (Ret.)

Earlier this year, Admiral Carroll, Deputy Director of the Center for Defense Information (CDI) in Washington, D.C., delivered a major address at the University of Missouri. The editors of *Timeline* believe Admiral Carroll's perspective is worthy of widespread distribution and have included it as a special section in this issue.

"If we have the wisdom, dedication, and persistence to make the democratic process work, we have the gift of time in which to choose the right answer and an opportunity for our children and grandchildren to live in the next American century. We owe them the same privilege we have enjoyed."

Rear Admiral Eugene J. Carroll, Jr. USN (Ret.)

Rear Admiral Eugene J. Carroll, Jr., is Deputy Director of the Center for Defense Information (CDI). He holds an M.A. degree in international relations from George Washington University, and is a graduate of both the U.S. Navy and U.S. Army War Colleges. His combat service includes flying Skyraiders from an aircraft carrier in the Korean war, commanding two Skyraider jet attack squadrons, and serving six years with units engaged in the Vietnam war, including command of the aircraft carrier Midway. He was the first naval officer to serve as director of U.S. military operations for all U.S. forces in Europe and in the Middle East. His most recent position

was in the Pentagon as Assistant Deputy Chief of Naval Operations for Plans, Policy, and Operations, involved in naval planning for conventional and nuclear war.

CDI is a private, nonprofit, nongovernmental organization whose staff includes retired, high-level military officers who are concerned with the need for rational military programs which will meet the long-term national security interests of the United States. CDI's Military Advisory Council has more than 100 retired senior military officers around the country who provide information and counsel to the Center, speak to local civic, school, and business groups, give media interviews, and appear on local TV and radio and news talk programs.

Today Americans are the most fortunate people on earth. We are citizens of the most prosperous nation, the most powerful nation, a republic which has endured for more than 200 years under a Constitution which accords to each one of us the full protection of the law. Not only that, we are living here in the American Century. Never in the history of the world has one nation exercised the preeminent influence on world affairs which America wielded in the 20th Century.

Given our immense good fortune, the question becomes, what lies ahead in the 21st Century for our children and theirs? Will it be another American Century? Or could this great power slip away, be thrown away, and the 21st Century become the anti-American Century?

The answer is that it depends on whether we attempt to perpetuate an American global hegemony as the world's only

military superpower—or if we seek to exercise constructive leadership as a cooperative member in a peaceful world community governed under the rule of law. Confrontation or cooperation?

The lessons of history and common sense make the choice very clear. Not one of the imperial regimes of history has ever secured a permanent place in the world order through military supremacy. Even in high school we learned of the rise and fall of empires—Assyrian, Persian, Roman, Ottoman, Austro-Hungarian. In this century we all watched the sun set on the British Empire as they exhausted their strength in the far reaches of Africa and Asia. One truth stands out in history—every nation or empire which would subjugate others will ultimately fail if they attempt to base their dominion on military force.

There are two reasons for this. First, the people of the hegemon will finally refuse to make the sacrifices in blood and treasure necessary to maintain military control over others. Second, the subjugated will ultimately rise in opposition to reject the sovereign. The birth of the United States of America is a classic example of both of these principles in action.

Nevertheless, in the face of both history and common sense, the U.S. Congress and the Executive seem determined that they can deny both by making military power the primary instrument of U.S. foreign policy. We are the only nation in history which has formally divided the globe into military zones and appointed a General or an Admiral to be Commander-in-Chief within each zone. We keep nearly a quarter of a million

uniformed troops permanently assigned to these Commanders, heavily armed and fully combat ready to intervene militarily in not one, but two conflicts anywhere on earth and to win both wars nearly simultaneously. President Clinton has proclaimed that we will act multi-laterally where possible but are prepared to act unilaterally when necessary.

This aggressive posture is called in current jargon “forward presence.” In truth, it is no more than gun-boat diplomacy which, through the implied threat of military action, is intended to influence and control events to our advantage. This confrontational approach to foreign relations is extremely negative because it is based upon coercion rather than efforts to develop constructive approaches of mutual benefit. All too often it also puts the United States in a position where the use of force will not resolve a problem but we will look foolish and impotent if we fail to act after threatening to do so. Kosovo is only the latest example of this process.

Yet another dangerous, perhaps fatal, form of confrontation is intensifying through U.S. nuclear policies. In 1995 we led efforts to extend the Non-Proliferation Treaty (NPT) indefinitely. To inspire the non-nuclear states to agree, we joined the other four nuclear powers to make a formal pledge in a statement titled, “Principles and Objectives For Nuclear Non-Proliferation and Disarmament.” This contained a joint commitment to “the determined pursuit by the nuclear weapons states of systematic and progressive efforts to reduce nuclear weapons globally, with the ultimate goal of eliminating those weapons....” To a layman, that is an

unequivocal commitment to get rid of all nuclear weapons.

Despite this, two years later President Clinton flatly renounced any intention to honor that commitment. In Presidential Directive #60, parts of which were revealed to the media, he approved a policy which declared that nuclear weapons would remain the cornerstone of U.S. security indefinitely and affirmed our right to make first use of nuclear weapons, even against non-nuclear states. The President also determined that we will keep substantial nuclear forces on hair-trigger alert status and continue targeting numerous sites in Russia and China. He has subsequently ordered the production of new tritium supplies for our arsenal of 12,000 nuclear weapons. For the first time, U.S. civilian power-generating reactors will be used for this task, thus breaking the barrier between peaceful civilian nuclear programs and production of fuel for our nuclear weapons.

This directive is supported by many ongoing measures to sustain and enhance U.S. nuclear war fighting capabilities at an annual cost of more than \$30 Billion. Our deeds, which speak far more clearly than our empty promises, send clear signals to the world community that the world's foremost nuclear power regards its weapons as key elements of national security and military strength. This is an affront to all of the nations which consented to the indefinite extension of the Non-Proliferation Treaty at our urging, and it openly confronts other nations with the need to create their own nuclear weapons. Sharp criticism is being directed at the U.S. by many of the 182 non-nuclear states which accuse America

of violating its pledge to work for the abolition of nuclear weapons. A number of nations are considering withdrawing from the NPT regime, clearly threatening the spread of nuclear weapons into new hands. This can in no way increase the safety of America.

Another form of confrontation is America's unwillingness to enter into or support constructive cooperative measures within the community of nations. As the world's superpower we stand aloof from the community. Such growing isolation is pernicious and endangers our long-term interests economically, politically, and militarily.

The starkest example of growing isolation is epitomized in the UN Convention on the Law of the Sea (LOS). Negotiations on this major effort to develop international law began in 1958 with strong U.S. participation and leadership. This process took 24 years to come to fruition in the 1982 LOS Convention, and it accommodated virtually every U.S. demand except for the Article XI provisions concerning seabed mining. For this reason, the industrialized states, led by the U.S., refused to ratify the Convention.

Negotiations resumed in 1990 to resolve seabed mining disputes and these led to agreement by most industrialized nations, including the U.S., to new provisions in July 1994. President Clinton promptly submitted it to the U.S. Senate for advice and consent to ratification. Regrettably, the LOS Convention came into force on November 16, 1994, without American accession, which is still being blocked in the U.S. Senate.

As a result, we have lost all rights to participate in the administration of the Treaty, isolating America from the development of a body of international law which covers 70 percent of the Earth's surface and protects freedom of navigation, fisheries, the oceanic environment, and the wealth of the global seabed. Worse, we are doing this even though the provisions of the Convention have been shaped through strong U.S. leadership. It is difficult to conceive of a more foolish, shortsighted failure to advance the rule of law in the world order, nor one more certain to generate unnecessary confrontations with other nations in the future.

A similar failure occurred in 1997 in Rome in negotiations on an International Criminal Court (ICC). Early on, the U.S. was a leading proponent of a permanent international tribunal which would have jurisdiction over war crimes, crimes against humanity, and genocide. It would be a permanent successor to the Nuremberg Tribunal and obviate the need for *ad hoc* arrangements for special bodies, such as the one now sitting in the Hague to consider crimes committed during the dismemberment of Yugoslavia.

Unfortunately, our efforts were directed toward creating a Tribunal which would remain firmly under the control of the UN Security Council where we could exercise a U.S. veto if the ICC moved to act in a way we considered inimical to U.S. interests. During increasingly acrimonious deliberations in Rome, U.S. insistence on retaining a means to deny jurisdiction to the ICC created a storm of criticism of the U.S. position by even our closest friends and allies. The final vote

in Rome on a charter for the ICC was 120-7 against the U.S. position. Even worse than the crushing defeat is that we found America voting with nations such as Iraq, Libya, and Yemen, radical states little noted for their devotion to human rights and the rule of law.

Now it appears certain that the overwhelming majority of the world's democracies will become participating members in an effort initiated by the U.S. to expand the rule of law within the world community. It is sadly ironic that the world's leading democracy has chosen to exclude itself from this initiative. It is even more disheartening that this is only one more among many efforts to establish just and peaceful international norms to which the U.S. refuses to accede.

Other international agreements which the United States refuses to ratify are the Comprehensive [Nuclear] Test Ban Treaty, the Convention on the Rights of the Child, and the Ottawa Anti-Personnel Land Mine Treaty. The first of these three is absolutely critical to efforts to control future proliferation of nuclear weapons. Despite strong public support for the Test Ban Treaty, in October 1999 the U.S. Senate rejected it by a vote of 51-48. Voting was almost wholly along party lines and was intended to inflict a humiliating foreign policy defeat on President Clinton. The primary effect, however, was to create further doubts in the world about America's willingness to live up to its legal and moral obligations to work for nuclear disarmament as we are pledged to do in the Non-Proliferation Treaty.

The Convention on the Rights of the Child of 1989 now in force has been signed by 191 nations. Only Somalia and the United States have not. This basic humane declaration that the children of the world have certain inalienable rights sets forth standards which are American to the core. Nevertheless, there seems to be an instinctive U.S. rejection on the grounds that other nations have no right to prescribe the rights of American children.

The Ottawa convention outlawing anti-personnel land mines came into force on March 1 this year but is also strongly opposed by the Pentagon. President Clinton has conceded that at some date in the future we will consider adhering to the Treaty, but first we must find military alternatives to these indiscriminate killers of soldiers and innocent civilians alike. Meanwhile, we ignore the fact that more than 133 nations are already committed to the ban while we stand in opposition with such nations as China, Iraq, Iran, Syria, Congo, and Cuba.

Even more contentious is the current U.S. position on the Chemical Weapons Convention which outlaws the manufacture, possession, or use of chemical weapons. It was entirely logical and helpful for the United States to ratify this international convention two years ago because by public law we are required to eliminate our own arsenal of chemical weapons by the year 2004. If we are going to be without such weapons in five years, it is devoutly to be desired that other nations also eliminate theirs. And this 168 nations have agreed to do.

Unfortunately, the U.S. Congress refuses to appropriate the money needed to implement the inspections required by the Convention for verification purposes. Now many other signatories are balking at implementing the agreement because the United States is not in compliance with its requirements. This is the classic case of refusing to cooperate in an international program to do exactly what the United States wants done because some members of Congress do not want “foreigners” to have the right to inspect U.S. facilities.

This attitude seems to be at the very root of America’s rejection of cooperative efforts to make the world a safer place under the rule of law. Chauvinistic jingoes claim to see a threat to U.S. sovereignty in every agreement which subjects Americans to international norms. Our leaders seem to believe that as the world’s most powerful nation we alone are empowered to proclaim and enforce American standards and judgments any- where in the world. We refuse to accept any international rules adopted by global consensus which could in any way infringe upon or limit U.S. freedom to act independently in our own interests as we define them. The spirit of the world’s remaining superpower seems to be, as President George Bush put it so elegantly, “We call the shots.” To some degree, that is true today. But how about tomorrow?

No nation is wealthy enough to sustain the burden indefinitely of being the superpower on guard everywhere around the globe. This year we will spend more than \$290 Billion to perform that role, and the present five-year plan calls for increases each year through 2005 when

military spending will reach \$331 Billion. This would be more, on average, than we spent confronting the Soviet Union during 40 years of the Cold War—but today we have no significant military enemy nor is there one in the foreseeable future.

At exactly the same time that military spending is climbing steeply, spending for the conduct of international affairs by the Department of State is on the rocks. The White House requested only \$17.4 Billion in 2000 and the Senate Budget Resolution has reduced that figure to \$12.5 Billion while increasing military spending by another \$8 Billion. For some time the U.S. military has been the primary instrument of U.S. foreign policy, but if these trends continue, our military forces may well become the *only* tool of U.S. foreign policy.

There are two other reasons mentioned earlier why military domination is not possible in the long term. In the absence of a military threat, American citizens will soon become unwilling to pay the costs, in blood and treasure, of serving as the world's policeman. Troop barracks in foreign lands afford vulnerable targets for terrorists who resent our military presence. It costs an extra \$1.8 Billion per year just to pay for 7,000 troops in Bosnia. Our present occupation operations in Kosovo will cost far more than that. Think also of what we are paying to keep more than 200,000 troops overseas at all times.

The other reason is that foreign nations will ultimately reject our efforts to maintain a permanent military-based hegemony. If the Philippine people can throw us out after 90 years, it can and

will happen elsewhere. Okinawa may well be next.

All of this simply reflects history. Empires rise and fall. Alliances wax and wane. Wars erupt and subside—with few long-term changes or benefits. In attempting to perpetuate a concept of foreign relations based on military power the United States is wasting a priceless opportunity to move from a confrontational posture to a cooperative one. Jonathan Schell's latest book, *The Gift of Time*, focuses on the need to get rid of nuclear weapons while there is no active threat to American security except nuclear weapons. By extension, we can use the same gift of time to build a new, long-term approach to security in the 21st Century.

It is impossible today to foresee or prescribe all of the conditions which must exist before nuclear weapons are abolished. I believe it can be done one step at a time. Ratify the Comprehensive Test Ban Treaty. Declare a no first-use policy. De-alert strategic weapons. Separate warheads from delivery vehicles. Reduce nuclear arsenals until 32,000 weapons become 5,000 and then 1,000 and then 500. Then we hope that those who follow after today's leaders will be wise enough to work out the means of eliminating the last nuclear weapons on earth.

Can we be certain of success? No, but we can be certain that as we proceed the world will become progressively safer each step of the way. As the danger of nuclear catastrophe fades, each successive step will become more obvious and more beneficial until the

rewards of abolition are irresistible and inevitable.

In an absolutely parallel process, progress from confrontation to cooperation can be advanced one step at a time through practical measures of international cooperation such as U.S. accession to the United Nations Convention on the Law of the Sea. In this one step we would accept the jurisdiction of international tribunals and panels capable of peacefully resolving international disputes in regions covering 70 percent of the Earth's surface.

Another step is to achieve U.S. acceptance of the jurisdiction of the International Criminal Court and increased submission of disputes for adjudication by the International Court of Justice at the Hague. Implementation of the already ratified Chemical Weapons Convention is a straight-forward legislative matter, while accession to the Ottawa Anti-Personnel Land Mine Treaty and the UN Convention on the Rights of the Child will require an affirmative response by both the Department of Defense and the Senate. All of these individual measures already have strong acceptance in the world community and active constituencies here in the United States.

Step-by-step progress in international cooperation will make it possible to increase confidence in, and support for, the concept of global governance. Only then can we finally turn to the United Nations and help it to grow into the role of world peacekeeper for which it was created with U.S. leadership 55 years ago. Otherwise, as long as America's leaders are committed to the belief that

as the world's most powerful nation we alone are empowered to proclaim and enforce American standards and judgments anywhere in the world, we are doomed to confrontation and growing isolation in a world increasingly ready to adopt global norms and pursue the peaceful conduct of international relations.

The future security and well-being of all Americans rests on far more than tanks, aircraft carriers, and strategic bombers. As the present tragic situation in Yugoslavia vividly demonstrates, we cannot wave America's magic superpower wand to make long-standing problems disappear. In truth, there is no military solution to the ethnic, religious, political, and historic disputes which underlie the violence there. Our security, and the solution to such problems in the future, will be promoted far more effectively through wise U.S. foreign policies that lead away from confrontation and make America the leader in a more peaceful, cooperative world order in the 21st Century.

Confrontation or cooperation? If we have the wisdom, dedication, and persistence to make the democratic process work, we have the gift of time in which to choose the right answer and an opportunity for our children and grandchildren to live in the next American century. We owe them the same privilege we have enjoyed.

CDI Information Sources

- *The Defense Monitor*, CDI's primary publication.
- *America's Defense Monitor*, a weekly TV program on PBS and Cable.

- www.cdi.org, CDI's Internet site providing electronic versions of the above, plus issue papers, opinions, and editorials; texts of CDI's radio commentary *Question of the Week*; and the electronic *Weekly Defense Monitor* and *Russia Weekly*.
- Contact CDI at: 1779 Massachusetts Ave., NW, Washington, DC 20036; (202) 332-0600/(800) 234-3334; info@cdi.org



If We're So Rich, Why Aren't We Happy?

by Mihaly Csikszentmihalyi

Psychology has rediscovered happiness," says Mihaly Csikszentmihalyi of the Claremont Graduate University. In an article in the *American Psychologist*, "If We Are So Rich, Why Aren't We Happy?" he reviews a variety of ideas, new and old, about what happiness is and how to achieve it.

Is happiness how much stuff we have? Is it fame or power? Is it a life of prudence, self-discipline, virtue? Is it a life of comfort, one devoid of pain? Is it a life of religious practice?

The author begins his article by noting that happiness is the fundamental goal of life, the one goal that people seek for its own sake. We seek such things as health, fame, and possessions, he says, because we think they will make us happy.

By and large we are not happy people in a happy society, he claims. "Inhabitants of the wealthiest industrialized Western nations are living in a period of unprecedented riches, in conditions that previous generations would have considered luxuriously comfortable, in relative peace and security, and they are living on the average close to twice as long as their great grandparents did. Yet it does not seem that people are so much more satisfied with their lives than they were before."

The evidence is indirect, he admits, but cites figures for the U.S. that show "the doubling and tripling of violent crimes, family breakdown, and psychosomatic complaints since at least the halfway mark of the century. If material well-being leads to happiness, why is it that neither capitalist nor socialist solutions seem to work? Why is it that the crew on the flagship of capitalist affluence is becoming increasingly addicted to drugs for falling asleep, for waking up, for staying slim, for escaping boredom and depression? Why are suicides and loneliness such a problem in Sweden, which has applied the best of socialist principles to provide material security to its people?

"Germany and Japan, nations with more than twice the gross national product of Ireland, report much lower levels of happiness. A study of some of the wealthiest individuals in the United States, found their levels of happiness to be barely above that of individuals with average incomes." The author refers to a study that followed a group of lottery winners, finding that, even with their sudden increase in wealth, "their

happiness was no different from that of people struck by traumas, such as blindness or paraplegia.” He notes that, though personal income in the U.S. doubled between 1960 and 1990, the percentage of people describing themselves as “very happy” has remained unchanged at 30 percent.

The author observes: “Yet despite the evidence that the relationship between material wealth and happiness is tenuous at best, most people still cling to the notion that their problems would be resolved if they only had more money. In a survey conducted at the University of Michigan, when people were asked what would improve the quality of their lives, the first and foremost answer was ‘more money.’”

“If the main justification of psychology is to help reduce psychic distress and support psychic well-being, then psychologists should try to prevent the disillusionment that comes when people find out that they have wasted their lives struggling to reach goals that cannot satisfy them. Psychologists should be able to provide alternatives that in the long run will lead to a more rewarding life.”

Why Material Rewards Do Not Necessarily Make People Happy

One reason material rewards don’t necessarily make people happy is what the author calls the “escalation of expectations. If people strive for a certain level of affluence thinking that it will make them happy, they find that on reaching it, they become very quickly habituated, and at that point they start hankering for the next level of income,

property, or good health. In a 1987 poll conducted by the *Chicago Tribune*, people who earned less than \$30,000 a year said that \$50,000 would fulfill their dreams, whereas those with yearly incomes of over \$100,000 said they would need \$250,000 to be satisfied. Several studies have confirmed that goals keep getting pushed upward as soon as a lower level is reached.”

The second reason, the author cites, is “relative deprivation”: no matter how much we have, there is someone who has more. Millionaires are unhappy when they look at billionaires. It’s not that wealth, health, comfort, and fame necessarily detract from happiness; it’s that they don’t guarantee it. That leads to the third reason: too much focus on making money can shortchange other elements in life that are known to make us happy: a satisfying family life, having intimate friends, having time to reflect and pursue diverse interests.

The author explores other, nonmaterial, approaches to happiness, including those involving religion/spirituality (which he categorizes as “psychological”) and those involving pharmacology. Of the latter, he says, “Every culture has developed drugs ranging from peyote to heroin to alcohol in an effort to improve the quality of experience by direct chemical means.” But, he says, “chemically induced well-being lacks a vital ingredient of happiness: *the knowledge that one is responsible for having achieved it.* Happiness is not something that happens to people but something that they make happen.

“In psychological approaches to happiness, I focus exclusively on

processes in which human consciousness uses its self-organizing ability to achieve a positive internal state through its own efforts, with minimal reliance on external manipulation of the nervous system. There have been many very different ways to program the mind to increase happiness or at least to avoid being unhappy. Some religions have done it by promising an eternal life of happiness follows our earthly existence. Others, on realizing that most unhappiness is the result of frustrated goals and thwarted desires, teach people to give up desires altogether and thus avoid disappointment. Still others, such as Yoga and Zen, have developed complex techniques for controlling the stream of thoughts and feelings, thereby providing the means for shutting out negative content from consciousness. Some of the most radical and sophisticated disciplines for self-control of the mind were those developed in India, culminating in the Buddhist teachings 25 centuries ago. Regardless of its truth content, faith in a supernatural order seems to enhance subjective well-being: Surveys generally show a low but consistent correlation between religiosity and happiness.”

The Experience of Flow

Csikszentmihalyi’s contribution to the study of happiness is the concept of flow, or what he calls “autotelic experience.” This is an experience that is “engrossing and enjoyable...a state of total involvement in an activity that requires complete concentration.” Studies involving more than 10,000 interviews collected from around the world have led him to conclude that “happiness depends on whether a person is able to derive flow from what-ever he or she does.”

As an example of an autotelic person, the author quotes a composer he interviewed who told how he felt when his work was going well: “You are in an ecstatic state to such a point that you feel as though you almost don’t exist. I have experienced this time and time again. My hand seems devoid of myself, and I have nothing to do with what is happening. I just sit there watching in a state of awe and wonderment. And the music just flows out by itself.” The author comments: “This response is quite typical of most descriptions of how people feel when they are thoroughly involved in something that is enjoyable and meaningful to them.

“This kind of intense experience is not limited to creative endeavors. It is reported by teenagers who love studying, by workers who like their jobs, by drivers who enjoy driving.” The autotelic person is skilled at what he/she does, knows when things are going right, and knows when the challenge is too great or is not sufficient to keep from getting bored. This requirement of skill, concentration, and perseverance, the author notes, distinguishes his concept of flow from the popular notion of “going with the flow.”

The author believes that autotelic flow “helps explain the contradictory and confusing causes of what we usually call happiness. It explains why it is possible to achieve states of subjective well-being by so many different routes: either by achieving wealth and power or by relinquishing them; by cherishing either solitude or close relationships; through ambition or through its opposite, contentment; through the pursuit of

objective science or through religious practice. People are happy not because of what they do, but because of how they do it. If they can experience flow working on the assembly line, chances are they will be happy, whereas if they don't have flow while lounging at a luxury resort, they are not going to be happy. The same is true of the various psychological techniques for achieving positive mental health: If the process of becoming resilient or self-efficacious is felt to be boring or an external imposition, the technique is unlikely to lead to happiness, even if it is mastered to the letter. You have to enjoy mental health to benefit from it."

The author's advice: Get fully involved in life. Don't let lack of wealth or health be an obstacle. "Introduce more flow in schools, in family life, in the planning of communities, in jobs, in the way we commute to work and eat our meals—in short, in almost every aspect of life. Find flow in activities that are complex that provide a potential for growth over an entire life span, allow for the emergence of new opportunities for action, and stimulate the development of new skills."

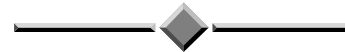
Mac Lawrence

Note:

Mihaly Csikszentmihalyi (pronounced "ME-high CHICK-sent-me-high-ee") is a former chairman of the Department of Psychology at the University of Chicago and has been a visiting professor at the University of Maine and at universities in Finland, Brazil, Canada, and Italy.

Dr. Csikszentmihalyi's books include *Beyond Boredom and Anxiety*; *Flow: The Psychology of Optimal Experience*; *Being Adolescent*; *The Evolving Self*;

and *Creativity, Flow and the Psychology of Discovery and Invention*. He has also written short stories for the *New Yorker*, essays for the *Atlantic Monthly*, book reviews for the *New York Times*, and has translated fiction and poetry into English from Italian, French, and Hungarian.



Bringing Back the Rangelands

Excerpts of a talk by Dan Dagget

Last October, the Collective Heritage Institute held its Tenth Bioneers Conference, a gathering of biological pioneers from diverse fields and cultures "who are providing pathways to a future environment of hope...an alternative scenario to the destruction depicted daily in the news...a revolution from the heart of nature."

With permission from the Bioneers, we present here excerpts of a talk by Dan Dagget, author of Beyond the Rangeland Conflict: Toward a West that Works.

I'm going to talk about ecological restoration. Actually, I'm going to be talking about community restoration, and family restoration, and families on the land, and how to restore that connection. When scientists look at the smallest, most basic forms of matter, there are no

things there; there are only relationships. We don't live in a world of things; we live in a world of relationships.

If we live in a world of relationships rather than a world of things, then sustainability isn't a matter of things. Then ecological health—a functional relationship between us and the land—is not a matter of things; it's a matter of relationships.

Humans have a relationship with nature that has evolved over hundreds of thousands of years. Only recently have we started living on the earth like aliens. We're stripping it. We're not honoring the old agreements in which humans acted as predator and prey, as hunters as well as gatherers, as starters of fire, as slowers of water, like the beaver. Ancient humans built irrigation systems, little dams. We've got them all around where I live in the southwest, in Flagstaff, Arizona. We've been spreaders of seed, cultivators, all those things. But we're not honoring those anymore. The solutions that we come up with today are solutions that aliens would come up with. More and more we're removing ourselves from eco-systems. We extract ourselves even further from all these old agreements.

But should we instead dress in skins and start chasing elk around here? I don't think that would work. So what we're talking about is a new science of environmental activism as a matter of restoring relationships. We have to start asking Mother Nature, "Who are we? What did we used to do? What do you rely on us to do?" Let's ask other species and ecosystems, and pay attention to the answers we get.

For me that's meant becoming involved in rangeland issues around the West. In *Beyond the Rangeland Conflict*, I wrote about discovering places where folks were going back and restoring some of these old relationships.

Grazing animals, grasses, and predators evolved together. The predator has put the lightning in the step and the reflexes of the deer, and the defensive mode into bison. We first learned that from indigenous people. The wolf is the friend of the deer. What we're finding is that not only is that relationship important, but that the wolves and the deer, the wolves and the bison, by their interaction, are creating the grasses, perhaps even the climate, the watershed conditions, the whole ecos in which they live.

It is all interconnected and if you pull out any one part, it all starts to go out of whack. So if you're going to try to restore rangeland eco-systems, how do you restore the relationships? What if, instead of using bison, we tried using what we already had on the ground? and that was, of all things, cows.

We decided to try it in a place that was really rough. Then we might know if it really worked. We would bring the cows on to the lands in places where ranches already existed, and in the same way that free-roaming animals would come on to the land.

We chose a mine site in central Nevada near the town of Mina. It was just a big pile of clay—an old gold mine site, part of the dam that held the soup of chemicals that they used to treat the ore.

It had been reclaimed by the best that technology could do. Topsoil had been spread over it and it had been seeded with exotic grasses. The grasses came back for a while and then they disappeared and the land started to erode badly. That was the best corporate America could bring to this particular site. It was a disaster.

But what would happen if we brought topsoil, seeds, grass plants, etc., and we left it alone and the rains came? What happened was we ended up with bare dirt and a little bit of tumble weed. Next, the owners decided to spread hay on the place to give grazing animals a reason to go there. They put seeds on it, essentially the same sort of seed mix that had been applied before, and they put more hay on it that the animals could eat. Then they put about 600 head of animals on this barren wasteland. Because it was Nevada, the neighbors were out there sitting in their pick-ups all betting that it wouldn't work.

When the owners pulled the animals off at the end of the next year, in the next spring, it was lush and green. In one year on six inches of moisture over the winter, they ended up producing more grass on that barren mine site than their neighbors did on some of their cultivated and irrigated hayfields. And all they did was act as though they lived in a world of relationships, not of things. All they did was restore relationships.

Next we tried something even harder: an environmental disaster. A superfund site that you can see from satellites: a pile of copper mine tailings, 1100 acres, 300 feet thick of rock that's been wrenched from the earth, ground up into dust to

the consistency of talcum powder and then treated with a witches brew of chemicals that include cyanide to leach out the metals.

There are similar sites all over the world and quite a few in Arizona. You can imagine how this stuff erodes. Go pour some water on some talcum powder and see what happens. It erodes like crazy and so it pollutes like crazy, and dust blows off of it in mare's tails that blow down into the town where the people joke about "tailings tacos." The dust permeates everything—what you eat, what you are; it gets into people's bodies.

Terry Wheeler, who ran this project, put cattle on it and put a fence around them. He put a bunch of junk hay out and put out seeds. He turned the animals loose on it, and then threw on alfalfa, that cows really like. And they would go charging around on it and stomp all the old junk hay into the soil, or into the tailings, and then they fertilized it with the stuff from their gut. In one season he got lush high grass 300 feet up all the way to the top of the tailings piles, and it was all put there by relationships.

One of the groups that I work with near Flagstaff is called the Diablo Trust. It's a group of environmentalists and ranchers and just plain folks and agency people that are trying to apply these ideas on two ranches totaling 420,000 acres just south of Flagstaff. Also Terry Wheeler, who did the project on the mine tailings, is working with a group called the Quivera Coalition near Santa Fe and doing restorations with land that had been productive in the past but is now

nothing much more than eroding rangeland.

What started all this is that environmentalists and ranchers came together, more or less by accident at first. We were there with a really visionary woman named Tommy Martin. We didn't have an idea what to do, and she asked us what we wanted. We started talking about what we wanted on the land, and we found that we all wanted pretty much the same things. We wanted the land to be healthy. And we started working toward that. To me, what we did prove is that synergy can be more powerful than victory.

The 2000 Bioneers Conference will be held October 20-22 at the Marin Center, San Rafael, CA. Contact: Collective Heritage Institute toll free at 1-877-BIONEER; website: www.bioneers.org



For Seafood Lovers

Today, 11 of the world's 15 most important fishing areas, and 70 percent of the world's fishes, are either fully fished or overfished. It's an environmental problem whose solution is in your hands every time you buy seafood. Make wise choices, and you help assure healthy oceans for the future.

Here's a quick summary of the fish and other seafood which are in deep trouble and those that are better off.

Best choices

Albacore Tuna
 Calamari/Squid (*Pacific*)
 Catfish (*farmed*)
 Clams (New Zealand rock clams or "Steamers," *farmed*)
 Dungeness Crab
 Halibut (*Alaska*)
 Mahi-Mahi/Dorado
 Mussels (*farmed*)
 New Zealand Cod
 Oysters (*farmed*)
 Rainbow Trout (*farmed*)
 Salmon (Alaska, California, *wild-caught*)
 Striped Bass (*farmed*)
 Sturgeon (*farmed*)
 Tilapia (*farmed*)

Proceed With Caution

Bay Scallops
 Bayshrimp (Pacific Pink Shrimp)
 English/Petrale Sole
 Halibut (CA/OR/WA)
 Imitation Crab/Surimi/Pollock
 Salmon (OR/WA, *wild-caught*)
 Snow Crab
 Spot Prawns (*trap-caught only*)
 Turtle-Safe® Shrimp/Prawns
 Yellowfin Tuna/Ahi (Hawaii, *line-caught*)

Avoid

American Lobster
 Bluefin Tuna
 Chilean Seabass/Patagonian Toothfish
 Cod (*Atlantic*)
 Lingcod
 Monkfish
 Orange Roughy

Rockfish/Pacific Red Snapper/Rock Cod
 Sablefish/Butterfish/Black Cod
 Salmon (*farmed*)
 Sea Scallops (*Atlantic*)
 Shark (all)
 Shrimp/Prawns (*wild-caught or farmed*)
 Spot Prawns (*trawl-caught*)
 Swordfish

*Source: Monterey Bay Aquarium's
 "Seafood Watch."*

*For updated information, see
 www.mbayaq.org or www.audubon.org*



Amory Lovins Sees the Future, and Hydrogen Plays a Big Part

By Donella Meadows

For 25 years, energy guru Amory Lovins has been seeing further and further into the energy future. He has been labeled a dreamer, but by now he's accumulated enough of a record to qualify as an oracle. At a meeting of the National Hydrogen Association, he and colleague Brett Williams of the Rocky Mountain Institute put together some new pieces of the energy puzzle to picture an exciting economy, not far out of reach, based on hydrogen.

To understand it, you have to follow the trail Lovins has already blazed. He started by pointing out the tremendous opportunity in our current, inefficient energy technologies. Eliminating energy

waste, he insisted, is just as useful as striking a new oil well or building a new power plant, and it is cheaper, easier, and kinder to the environment.

Having established the value of negabarrels and negawatts, Lovins moved on to rethink the automobile, coming up with what he calls the Hypercar, "safe as a Volvo, peppy as a Porsche," running 100 or 200 miles per gallon. No single trick accounts for the stunning efficiency, rather Lovins cascades dozens of design ideas that enhance each other. He makes the ideas public, so car companies will compete to bring them first to market. So far Toyota and Honda are at the head of the pack.

Reducing the gas consumption of the car fleet by a factor of four to eight would do a lot to clean up the air, slow global warming, and reduce dependence on the Middle East. But oil is still messy and finite. It would be better, many people have realized, to run our cars on hydrogen.

You can make hydrogen from water by splitting off the O from the H₂O or from natural gas (methane) by splitting off the C from CH₄. The energy to do that could come from wind or solar generators. Hydrogen could store and transport these intermittent renewable energy sources. Make it in the desert from photovoltaic arrays. Make it at the natural gas well-head and shove the resulting CO₂ back down the well to force up more gas and to bury the greenhouse effect. Transport the hydrogen in pipelines like natural gas. Lovins points out that large quantities of hydrogen are already moved around for

industrial purposes and that it is safer than gasoline.

The best part of this scheme is that when you use the hydrogen to run your car, nothing comes out of your tailpipe but water vapor.

Lovins wants to use the hydrogen not in mini-explosions that drive internal combustion engines, but in a nice, quiet fuel cell that drives an electric motor. A fuel cell is essentially a battery; it generates electricity through a controlled chemical reaction. You recharge this battery by loading in hydrogen.

Many folks have dreamed of fuel cell cars. Fuel cells exist; they are the mainstay of space vehicles, but they are, as Lovins says, “hand-assembled by Ph.D.s,” and therefore expensive. It would take a massive scale-up to achieve economies of scale and develop products that ordinary mortals could afford. Furthermore, it’s hard to start up a network of hydrogen-refueling stations.

So here are Lovins’ new pieces of the puzzle. First, Hypercars. If we’re not talking about our present over-heavy, draggy bronto-mobiles, we need way less power, therefore a smaller, cheaper fuel cell. Second, cascade some mutually enhancing ideas. Car people tend to think only about cars; energy planners tend to think mainly about houses, industry, or the grid. Lovins thought about the whole system and realized it would be easiest to start with stationary energy needs—workplaces, houses—and then expand hydrogen into the transportation system.

Picture this. When you get up in the morning, the electricity you use comes from your basement fuel cell, about the size of an air conditioner. The heat it generates gives you hot water for your shower. The hydrogen it consumes could come from a pipeline, from a neighborhood or rooftop solar array, or from a natural-gas-fired “hydrogen appliance” also in your basement.

You hop into your Hypercar and go off to work. Only your tires make noise; only water remains in the air behind you. When you pull into your parking space at work, you snap two connectors onto your car. One reloads your fuel cell from the industrial-size hydrogen appliance at your workplace. The other is an electric line that takes power all day from your fuel cell and calculates how much you’re owed for the electricity.

As Lovins says: “While you sit at your desk, your power-plant-on-wheels is sending 20+ kilowatts of premium-quality electricity back to the grid.... Thus your second largest, but previously idle, household asset is now repaying a significant fraction of its own lease fee. If a modest fraction of drivers took advantage of this deal almost or all existing coal and nuclear power plants could be displaced. Ultimately the U.S. Hypercar fleet could have four or more times the generating capacity of the national grid.”

Says Lovins: “This approach offers several strategic advantages. It uses idle off-peak capacity in the natural gas and electricity distribution systems that have already been installed and paid for. It is build-as-you-need and pay-as-you-go, requiring investment only in step with

incremental demand. It is one or two orders of magnitude cheaper than building a dedicated, centralized hydrogen production and delivery system from scratch....And vibrant competition between gas- and electricity-driven hydrogen...will exert downward pressure on the prices of hardware and hydrogen.”

No, you can't buy a house-sized fuel cell, yet, or a hydrogen generator, or a Hypercar, though prototypes do exist. Yes, right now the technologies are expensive. But factor in the avoided costs of air pollution, global warming, defense of the Middle East, central power plants, and long-distance electric wires, and they don't look so bad. Right, this system still doesn't solve the problem of traffic jams and parking places. Lovins has some ideas about that, too.

Donella H. Meadows, a systems analyst, author, director of the Sustainability Institute, 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.” Meadows can be reached at Sustainability Institute, Box 174, Hartland Four Corners, VT 05049.



Genetically Engineered Foods— Who's in charge?

Analysis by Sandra Mardigian

The last issue of Timeline included an article on “The Precautionary Principle” which states: “When an activity raises threats of harm to human health or the environment, precautionary measures should be taken, even if some cause and effect relationships are not fully established scientifically.* Many critics of the lack of testing and oversight on genetically engineered (GE) foods say this is a case that calls for just such precaution.

Continuing unresolved public concern and controversy in the U.S. over genetically engineered foods are caused in part by the fact that the U.S. government does not have the proper regulatory framework to address the questions raised by bioengineering.

The three agencies that might be presumed to have the responsibility for genetically engineered food safety are the Food and Drug administration (FDA), the Environmental Protection Agency (EPA), and the Department of Agriculture (USDA). But the mandates followed by these agencies were simply not set up for regulating transgenic crops.

The FDA oversees food safety, but does not look at the safety of pesticides. It therefore does not consider itself responsible for the safety of foods which contain genetically engineered pesticides. Pesticides have traditionally been monitored by the EPA, but the EPA only looks at the tolerance of humans for the seeds and for chemicals externally applied to plants and fields. Food from the plants has not been within their

traditional scope. The USDA's responsibility is to protect the farmer by making sure that crops grow as advertised by the manufacturer. It does not take responsibility for the safety of the crops produced and passed on to the consumer.

Labeling of foods so that the consumer can make an informed choice has been widely advocated. According to the Center for Food Safety, polls show that 90% of consumers want labeling and tens of thousands of consumers have written to the FDA in recent months. But in a move away from taking a role responsive to popular concerns, the FDA announced a plan in May that does not include additional testing and will not require food companies to label food that contains genetically modified organisms. This decision was taken despite considerable pressure from the public based on worry that there is not enough known about possible allergic reactions to the food or potential harm to other plants, insects, and animals in the environment.

However, popular concern has begun to have an affect via the market-place. Several companies with huge consumer bases have decided to go GE-free, and this, in turn, is influencing farmers to return to GE-free crops.

GE-Free Gains Favor

Recently, McDonald's and Burger King told their potato suppliers that they do not want genetically engineered potatoes. (GE potatoes are designed to combat the potato beetle by splicing the bacterium *Bacillus Thuringiensis* (Bt) into every cell.) McDonald's hopes its popular

french fries will be entirely GE-free by this fall. Procter & Gamble is also trying to source GE-free potatoes for their food subsidiaries.

J.R. Simplot Co., which supplies nearly 80% of McDonald's french fries, is instructing its farmers to stop growing genetically engineered potatoes, and officials at two major processors, McCain Foods and Lamb-Weston, a subsidiary of ConAgra Inc., say they won't accept biotech potatoes at harvest time this fall. "Virtually all the [fast food] chains have told us they prefer to take nongenetically modified potatoes," said Fred Zerza, spokesman for J.R. Simplot. The Seattle Times' Hal Bernton reports that farmers who worked with Monsanto to grow biotech-seed stock are struggling to find farmers who are willing to plant it.

Other companies that don't use genetically modified ingredients are Barbara's Bakery, Ben & Jerry's, Bird's Eye, Eden Foods, Freshlike, Nature's Path Foods, Newman's Own, and Stonyfield Farm. Two grocery store chains have taken a pledge to eliminate GE ingredients from their store brands: Whole Foods Market, Inc. (including Fresh Fields, Bread & Circus, Bread of Life, and Wellspring Grocery); and Wild Oats Markets, Inc. (including Alfalfa's market, Oasis Fine Foods, Sunshine Grocery, Ideal Market, and Wild Oats Community Market).

The backlash has been helped along by precedents set in Europe. Food companies, supermarkets, and restaurants throughout Europe have gone GE-free and placed added pressure on U.S. companies and farmers who wish

to export. Japan stated in April that it will begin screening food coming into the country to determine whether it is genetically engineered.

In addition to genetically modified potatoes, according to recent USDA statistics, plantings of engineered Bt corn will decline by 25%, and plantings of genetically engineered Roundup Ready® soybeans will decline by 9% this year. Given the lack of government responsiveness, maintained pressure from consumers is proving to be an effective force that is slowing down bio-engineered food production, helping to buy time to find out about its long-term effects on humans and the environment, and reducing possible risk to the public.

**The precautionary concept was adopted at the 1992 United Nations Conference on Environment and Development in Rio in the declaration known as "Agenda 21" and further refined in the "Wingspread Statement," January 1998.*



Blips on the Timeline

The term "blip" is 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.

www.saveoureenvironment.org

With ease and speed, this web site allows visitors to send an automatic, pre-written fax regarding a list of environmental

issues—from global warming to saving the Everglades—directed to members of Congress, the president, and appropriate others. The site is sponsored by American Rivers, Center for Marine Conservation, Defenders of Wildlife, Earthjustice Legal Defense Fund, Environmental Defense, Izaak Walton League, League of Conservation Voters, National Audubon Society, National Wildlife Federation, Natural Resources Defense Council, National Parks Conservation Association, Sierra Club, The Wilderness Society, The State PIRGS, Union of Concerned Scientists, and World Wildlife Fund.

Energy Savings Surprise

According to a Rand Corporation study, energy conservation efforts have saved Californians \$34 billion since 1977, or roughly \$1000 for each resident, and have played a significant part in helping the state's economy expand. Savings this high were unexpected and surprised officials. "Simple changes such as insulation and appliance replacement can cut the energy burden by two percent or more," the report says. Such a reduction can shave \$400 off an annual utility bill. In part because of California's building code related to energy conservation, the state's use of energy is significantly below the demand in other states with large populations. "This study shows that energy efficiency isn't just an environmental issue," said John White, an environmental lobbyist.

Business Values

At the Walter A. Haas School of Business at the University of California

at Berkeley, student entrants in the Haas Social Venture Business Plan Competition must show how their companies would aggressively advance a social or environmental goal, not just a financial one. The contest designers “believe in harnessing the potential of business to help create a more just and equitable society.”

Postal Service Going Green

The U.S. Postal Service awarded a contract to go-green.com in San José, California, to provide 100 percent green power to more than 1,000 postal service facilities in California. The contract calls for delivery of at least 30 million kilowatt hours of electricity from renewable energy resources in each of the next three years. In addition, the postal agency announced the largest contract for electric vehicles so far in the U.S.—the \$12 million purchase from Ford Motor Company of 500 electric vehicles to deliver mail in California and Washington, D.C.

SUGGESTIONS INVITED

We are always on the lookout for interesting subjects for Blips on the Timeline. Readers are invited to send articles or clippings indicating positive change to Jackie Mathes at the Foundation. If we use your suggestion, we’ll automatically extend your subscription for a year

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Palo Alto, California
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