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Why Are We Not Astonished?

by Ed Ayres

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ENGRAVING BY GUSTAVE DORÉ FROM AN 1884 EDITION OF MILTON'S *PARADISE LOST*.

ESSAY

Why Are We Not Astonished?

by Ed Ayres

Watching the world is like closely examining a photograph of a human face, as printed in a newspaper or magazine. The photo is made up of dots, or “pixels,” and a small piece of the photo seen close-up is unrecognizable. In today’s high-speed world, each of us receives vastly larger numbers of “bits” of information about our world than earlier generations ever did, but those bits are still like the dots in an extremely tiny fragment of an increasingly enormous picture. From where we normally see it, it is incomprehensible. But stand back far enough, and the larger picture comes into focus. The world’s multiple declines become visible as a single decline. It becomes clear that we are in a mega-crisis of our own making, and that we have a chance now to escape it before it destroys us—but that the chance won’t last long. The window of opportunity is closing fast.

How to see through that window before it’s too late? A clue can be found in the ways human societies have long dealt with the things most critical to their present survival and future hopes: they tell eye-opening stories, whether in the form of myths, legends, or songs. Many societies, for example, have passed down stories of great floods. The Chewong people of Malaysia, the Koyukon of Alaska, the Maya of Mesoamerica, and the Christians and Jews who spread out from the Middle East all have told of great inundations. Whether those accounts contain dim memories of some prehistoric event that actually occurred or some intuitive grasp of what we can bring upon ourselves if we disrespect the powers of the world into which we were born, is hard to know. But that these stories offer something more than mere entertainment, I think few would deny.

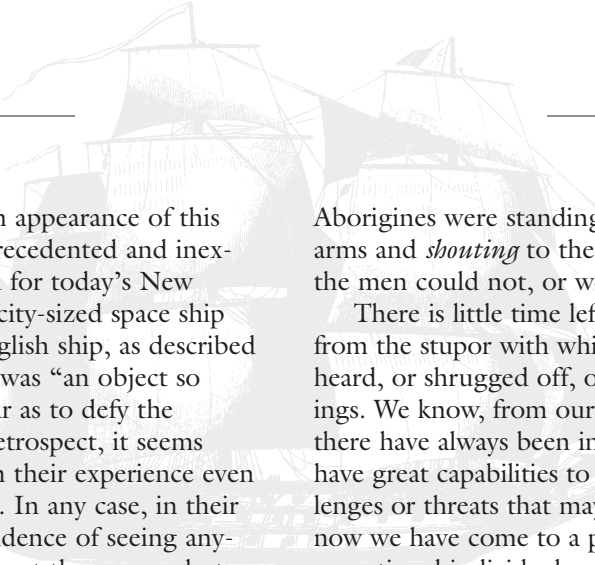
Such stories may open eyes or minds by telling of events that were not anticipated—astonishing

ordeals that might now serve as insights or warnings. For a story to be truly eye-opening, however, requires that much of the setting in which it takes place—the geography, climate, or culture—be familiar. There is a continuum of rising intensity between a light rain and a catastrophic flood, for example; if you have experienced the rain, you can mentally extrapolate to the flood. But if you have lived all your life in a place where no water has ever fallen from the sky and no sudden rivulet has ever run across the ground before you, you might find the idea of a terrible flood impossible to grasp. There is a paradox of perception here: that where there are no familiar conditions, there may be no galvanizing shocks. In a time of increasing disturbance and discontinuity, that paradox poses a growing threat to our ability to plan.

The records of history, as well as of recent psychological research, suggest that on those extraordinary occasions when people are suddenly confronted with something that is utterly alien to their experience, they may in effect go blank while the neurons race around in search of a familiar pattern of synapses—some memory, or myth, or clear expectation. Consciousness is a connecting of sensory stimuli and meaning, and if no connection is made, there may be a failure of consciousness. You may not see anything at all.

An incident that occurred more than two centuries ago, but was carefully documented at the time, illustrates what can happen. For millennia, the Aborigines of eastern Australia used small bark canoes to fish off the coast of their isolated continent. They had no contact with whites. But on April 29, 1792, the British sailing ship *Endeavour*, under captain James Cook, sailed into a bay and encountered a group of natives—the first known contact between Australians and Europeans. One of the passengers on the ship was an avid botanist, Joseph Banks, who was keeping a detailed journal of everything he saw on the journey.

This essay is adapted from a new book, God’s Last Offer: Negotiating for a Sustainable Future (New York: Four Walls Eight Windows, 1999).



To the natives, the sudden appearance of this ship would have been as unprecedented and inexplicable as it might have been for today's New Yorkers to look up and see a city-sized space ship blocking out the sky. The English ship, as described by historian Robert Hughes, was "an object so huge, complex, and unfamiliar as to defy the natives' understanding." In retrospect, it seems unlikely there was anything in their experience even to make them see it as a boat. In any case, in their reactions, they showed no evidence of seeing anything at all. The ship floated past the canoes, but as Hughes writes—based on Banks's account—"the Australians took no notice. They displayed neither fear nor interest and went on fishing."

We can speculate about what went on in the Aborigines' minds: that perhaps they were like the crowd in the tale of the Emperor's New Clothes, in which each person who saw a naked emperor simply thought that this could not be, and was therefore unwilling to mention what he saw lest he be judged insane. But even in that tale, at least the idea of being naked is a concept everyone understands. But the idea of an enormous...thing?

In any case, the Europeans on the ship, having seen that no hostile responses had been provoked, lowered their landing boats and began rowing in to shore. As Hughes explains, what happened then was that the natives suddenly recognized something that did have meaning in their experience: "The sight of men in a small boat was comprehensible to them; it meant invasion. Most of the Aborigines fled into the trees, but two naked warriors stood their ground and shouted...."

The 6 billion natives of Earth are in a position much like that of the Aborigines of the *Endeavor* encounter. We are being confronted by something so completely outside our collective experience that we don't really see it, even when the evidence is overwhelming. For us, that "something" is a blitz of enormous biological and physical alterations in the world that has been sustaining us. As happened with the Aborigines, it is an advent that will change life for us in ways we cannot conceive of. But there's at least one all-important difference between the situations. In the world at the outset of the new millennium, while there may be billions of people who don't see the thing that confronts us, there are at least a small number who have some inkling of it. They include our leading scientists and global-trends analysts, and they've been trying to arouse the attention of the rest of us—and they have failed. It is as though the wise elders of the

Aborigines were standing on the shore waving their arms and *shouting* to the men in the canoes—but the men could not, or would not, hear.

There is little time left for us to wrench ourselves from the stupor with which we humans have half-heard, or shrugged off, or blanked out, those warnings. We know, from our history as a species, that there have always been individuals among us who have great capabilities to respond heroically to challenges or threats that may seem overwhelming. But now we have come to a point where the courage of exceptional individuals won't suffice; we now need humanity as a whole to become heroic. We need, urgently, to pursue a question even more fateful to us now than whatever it was the European explorers were pursuing at that historic moment when Captain Cook was discovered by Australia: Why are we so unresponsive to the challenge that now looms before us? Why is it that even many of the most educated, news-watching, world-savvy people among us have only the vaguest awareness of the fact that the most world-changing event in the history of our species—more world-changing than World War II, or the advent of the nuclear age, or the computer revolution—is happening right now? What is going on to so profoundly block our perceptions of the fact that, so to speak, our ship has come in?

Environmental scientists have made it emphatically clear—coming about as close as scientists ever come to shouting—that we are in trouble. What they point to can be described in terms of four global "megaphenomena"—of rising carbon dioxide concentration in the atmosphere, rising rates of extinction, rising consumption of resources, and rising population. And all four, after hundreds of centuries of relative stability, have suddenly spiked. Plotted on graphs, they look like heart-attacks. Population, for example, now grows by as much every three days as it did every century, on average, for most of the one-thousand centuries before the Industrial Revolution. Yet, for all the extraordinary arm-waving of the scientists, few people seem to see any big problem. We treat this spasm of biological destruction we've ignited more like heart-burn than heart-attack; we don't see it as a consuming issue, at least not with anything approaching the fascination with which we follow college basketball or hip-hop music, or sensational crimes of violence, or political campaign spending scandals or plane crashes. The fate of the planet isn't even given much attention by the editors of the *New York Times* (which instead published an article last year titled "The Population Explosion is Over"),

not by U.S. Senators, and not by teachers or talk-radio hosts. The scientists, of course, have no means of reaching people on their own. When they go to the extraordinary effort of producing documents like the 1992 World Scientists' *Warning to Humanity*, or the IUCN *Red List of Endangered Plants*, or the 1995 world climate scientists' *IPCC Report* which warned that human-caused global warming is underway and must be stabilized, they make a few ripples. But then, again and again, those warnings are either blunted or pushed to the margins of public awareness. Just as the Kyoto climate convention was approaching its critical decision point in late 1997, for example, an article appeared in the *Wall Street Journal* titled "Science Has Spoken: Global Warming is a Myth." That article appeared during the warmest December ever recorded, which came on the heels of the warmest November and the warmest October. It was a year in which the American Museum of Natural History had just undertaken a landmark survey of experts in the biological sciences, the majority of whom said they believe our planet is now undergoing the greatest mass extinction since the dinosaurs were extinguished. Yet, when a Washington, D.C., radio interviewer asked Clarence Page, a reporter for the *Chicago Tribune*, to explain the seeming "emptiness of the news" that month, Page replied that, frankly, "nothing was happening." Page was not being ironic, and his perceptions were much like those of other mainstream journalists.

Why are we not astonished by what is happening to our world? The answer is complicated, but here are a few parts of it:

- In this "information age," we have access to vast amounts of information, but the quality of what we have access to is increasingly questionable. Real news reporting is buried under a landslide of pre-packaged news planted by corporate PR, ideological groups, and other entities interested in manipulating how we act and consume. The *Wall Street Journal's* "Global Warming is a Myth" article, for example, was planted by an Oregon-based front group for the industries that have an interest in seeing the climate treaty scuttled. Real news is buried from one side by a river of PR and from the other side by a growing pressure from the dominant media conglomerates to select news for its entertainment value. Meanwhile, some of the most important information about the world is completely hidden—by spreading privatization (much corporate data is kept secret), by incomplete accounting (much economic data doesn't count costs to other species or generations), and by

the expanding global shadow economy (a large share of the world's commerce is either underground or "informal"). Information explosion becomes information obliteration.

- Our sources of belief have become less trustworthy. Once they were mainly our parents, elders, teachers, neighbors, and other people we grew up with and spent time with personally. Those sources were sometimes right and sometimes sadly wrong, but at least they didn't systematically exploit or deceive us by the millions, for purposes unrelated to our own well-being. Only in the last half-century—the last 0.05 percent or less of our experience as a species—have we suddenly shifted to a heavy reliance on surrogate sources of belief: TV *depictions* of parents (often characterized as amiable fools or foils for the dominant youth culture), inspirational televangelists, morally outraged radio ideologues, and charismatic authors of best-selling books on "success." Needless to say, these passionate new surrogates do not know you from Adam, and the people who "created" them have more interest in manipulating what shows you watch and what clothes or cars or soft drinks you buy than in whether you will be well prepared for life.

- We're stressed out by unprecedented levels of environmental and social destabilization: 500-year floods, devastating hurricanes, increasingly severe water shortages, unexpected crop failures, resurgent diseases, and guerrilla wars. Once-healthy waters are covered with red tide; rainforests burn; and children are recruited into roving armies. Often the reaction to such stress is to flee—not just physically, but emotionally and cognitively. People who have money often flee from the pain of their lives by consuming. We know that overeating is often a symptom of personal stress. I suspect that overconsumption on a societal scale may be driven by the same insecurity—or sense of emptiness—writ large.

- Our world has been turned inside-out by entertainment. Once it was built around work; now it's made up of thrills. In industrial countries, entertainment has become the kind of dominant business that manufacturing once was. In Texas, which is part of what was once called the great American wheat belt, the estimated market value of just two entertainment businesses last year—the Dallas Cowboys and Houston Oilers football franchises—was greater (at \$735 million) than the total value of the wheat that state grew (\$600 million). The loci of our entertainments are artificial environments—stadiums and auditoriums and the interiors of cars, instead of canyons and vales and dells; earphones instead of the sounds of birds or wind; and the false

fictions of TV ads and sitcoms instead of reality. If we're not astonished by what's happening to our world, maybe it's in part because, being constantly cut off from it, we no longer have any strong expectations to begin with.

- The disconnection is worsened by systemic misuses of technology. Consider, for example, the marketing of children's play—the soaring dissemination of automated toys and games that provide the propulsion, conflict, or imagery once provided by children's arms, legs, and imaginations. Not only does that vastly enlarge the amount of plastics and metals needed to bring up children, but it renders the children more passive and dependent on still greater stimulation. Mega-dollar marketing campaigns, aimed at driving ever greater material consumption, replace the woods and fields that once kept kids connected to their planet. In a Toys-R-Us world, we spend more and more to bring up kids who are less and less connected to what keeps them alive.

- The obsession with technology has led us into increasing specialization. And that makes it harder for us to see the whole picture; we become more and more knowledgeable about less and less of the world. If you are an expert and you discover something curious, there's a good chance that only your colleagues in the field can really grasp it. Most experts no longer try to keep in contact with the rest of us at all; they are like the motes in an explosion of understanding being carried outward from the center. Think of the center as the common ground of those of us who are still close enough to each other to be able to integrate our collective knowledge and make it work as a system; it is our cultural and ecological integrity. The way expertise is exploding, the center can't much longer hold.

What to do? Most analysts, including us World Watchers, try to approach this question in terms of policy. But while that's necessary, it may not be enough. Good policy arguably does for human behavior what end-of-pipe control does for pollution. Ultimately, to be stable, policy has to reflect prevailing consciousness—beliefs, attitudes, values. So, just as pollution is more effectively attacked at the source, attitudes need attacking at their sources—in the education of kids by parents and schools, in the learning environment we grow up in, in the curricula of universities, in the accountability of media. We need to revisit how people learn (or don't learn) from the first gasp of life to the last, because today's average upper-middle class college grad, when you strip away what he knows about entertainment and technology, has a

medieval understanding of the world. That understanding won't get us through the next century.



We can identify some of the key steps in this critical redesigning of education—or, if you will, this reforming of consciousness. Here are a few of them:

- We can *bring up kids in physical contact with the physical world*. Not just take them to parks and zoos, but let them interact with the woods and its wild denizens. Recall how the visionary biologist Edward O. Wilson grew up. Without having had the boyhood pleasures of watching bugs in the woods, he'd probably never have become the biologist who has given us our most convincing warnings about the declining diversity of life. Then, consider the growing paucity of natural areas in an increasingly populated, paved, and polluted world. How will kids connect to nature then? The idea of their visiting it on the Web, as an efficient substitute for the sweaty business of catching large snapping turtles or climbing trees, is as ridiculous as the notion that looking at a picture of food is a substitute for eating. Does instant access to a thousand digital wilderness experiences make a person more able or inclined to defend the earth than just one experience of growing up in touch with real wilderness? I'm reminded of what Garrett Hardin once said, in response to the argument sometimes made by population-problem deniers, that more people just means a bigger pool of human resourcefulness and more assurance of a fruitful world to come. "England now has 11 times as large a population as it had in Shakespeare's day," said Hardin. "But not even an economist would maintain that there are 11 Shakespeares in England now. I doubt there is even one." Similarly, among the tens of millions of kids growing up with only digital woods to play in or paved playgrounds to run around on, I'm afraid there may not be even one budding E.O. Wilson.
- *Instead of teaching "subjects"* (history, math, English, phys-ed), we can *teach principles of learning* that the kids can then use to bring meaning to those too often meaningless subjects. For example, consider the principle of scale. Any new high school graduate who doesn't understand that he or she is about to enter adulthood on the cusp of the most tumultuous changes in human history has been abused by the school. And, of course, awareness of the true scale of those changes is only the first step toward gaining a clear enough view of the quandary we're in to have any chance of getting out of it. "Without perspective, we are lost," says Tom

Athanasios, author of *Divided Planet: The Ecology of Rich and Poor*. “Good news, most of it from the United States and other rich regions, does not automatically scale to the planetary level.” A climate treaty that promises to reduce CO₂ emissions to 5 percent below 1990 levels by 2010 will be worthless if it is not quickly revised (or surpassed by voluntary behavior) to achieve 60 or 80 percent. Laws that save a few hundred endangered species will do little to save the planet’s life as a whole, if not supported by changes in human culture—in how we see ourselves in relation to the other life of the planet, present and future—that can turn those few hundred rescues to hundreds of thousands.

- We need to *know the sources of our information and our beliefs*, and do reality checks on how much we rely on mediated ideas. We shouldn’t be afraid to use technologies like computers or TV as multipliers of human powers, but should be more wary of whose powers are being multiplied, and to what purpose. We need to find ways of preventing the control of public beliefs from falling into private hands. Ultimately, this requires a clear separation of the funding for science and education from the largess of industry. From McDonald’s franchises in public schools to Genentech grants to university biology research programs to Mobil Oil support for public radio reporting on climate change, it’s a slippery slide from where we are now to just sitting back and letting our knowledge be packaged and paid for. In the long run, our survival depends on insisting that, with rare exceptions, the findings of science—and the accumulated knowledge that is the legacy of real civilization—both be paid for by public money and remain accessible to all humanity.

- We can *find our place*. To cope with the changes now sweeping the world will require reconnecting with geography. That means the geography of bioregions and climate zones, not the ecologically ignorant overlays of political maps or demographic databases or real-estate guides. For many of us, this will mean taking a hard look at the ground under our feet for the first time. And it will mean looking at this ground with new kinds of questions—about where to live, how to live, and what kind of work to do. It will also mean knowing—once we can see the big picture kept from us before—that what is good for us as individuals is not in conflict with what’s good for the local or global publics.

- We need to *look beyond technology*. In the late twentieth century, high technology came to be implicitly treated as the ultimate human achievement. (Yes, all along there have been those who warn us that it is not, but they have been easily marginalized

as “Luddites”—or “extremists who want us to go back to the stone age.”) Yet no technology has ever been anything but a tool, an extension of the biomechanical and communications capabilities we already have—of our hands, eyes, and ears. There are other kinds of tools that extend the reach of our minds and spirits. We have accelerated the early development of those tools with the computer revolution, but it would be a mistake to regard what has happened on that front so far as anything more than a beginning. Computers today still extend mainly the brain’s more mechanical functions: calculation, organization, storage, and transmission of bits of information in much the same way that trucks and rail cars carry the grains of sand that are used to make concrete. The higher faculties—the tools that succeed technology—still lie ahead. Again, there are important practical implications. It is a colossal foolishness, for example, to assume that what we need in order to fix our broken educational system is to put computers in all the schools. That’s an extension of the same doctrine that was espoused by World Bank developers who decided decades ago that what would liberate the Third World was a proliferation of big power plants, highways, and office buildings. Many of those projects left only greater poverty. What children need now is not more extension of their already vastly extended corporeal powers, but more capability to make sense of the powers they have.

These are not policy steps. They’re fundamental shifts, first in how we learn and then in how we perceive. They could strongly affect how we *approach* making policy, however. One implication is that we may make more progress toward stabilizing climate change and biodiversity loss by focusing our efforts on the institutions of parenting and primary schooling—and our own enlightenment—than on trying to reform hidebound legislatures and bureaucracies. Of course, given the speed of decline, we can’t afford not to keep up our direct pressure on policymakers too.

Once we make these shifts in education and perception, I think two things will change quickly. First, we will find ourselves breaking loose from the jaded and dazed condition we’re in now—in which, paradoxically, nothing surprises us and so we are dangerously *vulnerable* to surprise. Second, the job of making policy for a sustainable world—a job that has been bogged down or ambushed at almost every turn in the road—will begin to move forward more easily and speedily, as it must if it is to succeed.

Ed Ayres is editor of *WORLD WATCH*. Information on *God’s Last Offer*, from which this essay is adapted, can be seen at www.fourwallseightwindows.com.