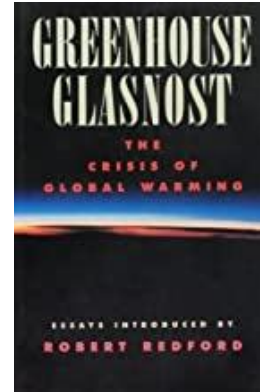


ISHK History → Greenhouse Glasnost

Why We Don't Listen

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To understand how and why we human beings have difficulty in changing our actions is a little beyond my short essay, yet an awareness of how the mind is structured may help a bit. It is not only the greenhouse problem that eludes our solution, but many other modern predicaments.

Why does the growing greenhouse effect and its related problems attract little attention, while a stock market “crash” makes headlines? we might ask. But we might also ask: Why does the number of nuclear weapons expand astronomically, though largely unheralded, while one hostage’s plight commands the front pages? Why do we collectively spend billions on medical care while neglecting the simple preventative actions which, if we took them, would save many times that amount and benefit society much more?

All these things are happening now, and are happening all at once, in part because *the human mental system is failing to comprehend the modern world.*

We are all collectively in the same boat. We hear of the problems of getting ideas into something called “public opinion.” We forget that public opinion, the media, the government are all composed of individual human beings with a nervous system and set of judgment priorities that make them *ignore* constant problems. We are blind and deaf to the real world.

Our brains are designed to respond to sharp change in the world, not slow and gradual change. And it is the slow changes that lie behind our current problems: stockpiles of nuclear weapons grow larger, budget deficits mount, our education becomes more and more obsolete, and the environment deteriorates. But most people’s attention is fixed on eye-catching “images”—the little girl Jessica, who fell down a well, for example, or horrible murders, airplane crashes, dramatic changes in stock prices, surprising football scores. Cancer terrifies us, and we keep on smoking.

In the old world, for which our perceptual systems were designed, the overall environment remained relatively stable, limited. Threats were signaled by short-term changes, usually requiring immediate action. Humanity’s ancestors faced these threats over millions of years of evolutionary history. Apes, australopithecines (our first upright ancestors), early human hunters and gatherers, and the inhabitants of early civilizations, like other animals, had evolved quick reflexes to deal adequately with such threats.

The world that made us is now gone, and the world we have made is a new one that we have developed little capacity to comprehend.

There now exists a mismatch between the human mind and the world humans inhabit. We have made radical transformations in the world in an instant, in evolutionary time. The mismatch interferes with the relationships of human beings to each other and with their environments. Human beings, and all other organisms, have to adapt to the environments in which they live. For most of the history of life our prehuman ancestors evolved biologically, as do all living things. Then, for the relatively brief period of human history—a few million years—adaptation took place primarily by means of cultural change: the development of language and tools; the invention of agriculture, cities, industry, and high technology.

Cultural evolution can be much more rapid than biological evolution, for it involves alterations of information stored in minds or in books, tools, art, and other artifacts of societies. Cultural evolution can effect significant changes in a matter of decades or less. But the rapid changes human beings are making in the world now have rendered even the pace of most cultural evolution far too slow.

We are losing control of our future. The serious and dangerous mismatch is this: Our civilization is threatened today by changes taking place over periods of years and decades, but changes over a few years or decades are too slow for us to perceive readily. That is a time scale too leisurely for a nervous system attuned to bears, branches, burglars, and downpours. At the same time, these changes are much too *rapid* to allow processes of biological or cultural evolution to adapt people to them. *We are out of joint with the times.* Our times.

And the rate of change in the world around us is increasing. Now humanity is refashioning the world so quickly that each *decade's* environment differs dramatically from that of the last. Each triumph of technology contains new threats. With the advent of television and other modern communications, we can even feel threatened by events (such as earthquakes in Soviet Armenia or San Francisco) occurring thousands of miles away.

The physiological tendency is to respond immediately to these events as if they were local emergencies, while at the same time we ignore things that happen to us or our neighbors that really *are* serious threats. Thus our old mental system struggles and often fails to distinguish the relevant from the trivial, the local from the distant, just as the ability to make such distinctions becomes increasingly crucial.

Consider the way we deal with common problems. Crack is the subject of much attention in the media, with its drug czar, William Bennett. But suppose I told you about a drug six times as addictive as crack that will kill approximately 4 million Americans in the 1990s, far more than crack will. One might feel it is imperative for us to act. But the drug is tobacco, and it has been difficult to whip up truly affirmative programs of action, even in view of the threat. New dramatic

threats, then, receive attention; old ones form a part of the woodwork. Slow and familiar threats, the threats that are killing us, are ignored.

The human mental hardware—our senses and brains—is effectively fixed, stationary. Although we are evolving, our mental machinery will not change biologically in sufficient time to help us solve our problems, because the same mental routines that originally developed to signal abrupt physical changes in the old world are now pressed into service to perceive and decide about unprecedented dangers in the new.

Crack fits into the mind's routines, cigarettes do not. A tragic earthquake commands front-page news all over the world, even though twice as many people were killed on the highways that same weekend as in the earthquake, and each weekend since. We caricature the world.

A caricature simplifies reality so that much of the environment is not registered on an organism's sensory system. Like a political cartoonist's caricature of a president's face, only a few aspects of reality are emphasized. Why should that matter? It matters because for billions of years of evolution, our ancestors acted in situations in which extreme caricatures sufficed for survival. In order to understand our present limitations, we have to understand their origins. Evolution is frugal; it would never favor organisms that invested energy in sensory frills if that same energy could be used to enhance reproduction.

A limited ability to sense the environment has been built into all animals through eons of natural selection. *All* sensory systems filter information from the outside world, their environment. The human sensory system is no exception; we too live in a world of caricatures. We, for example, are unable to see patterns of ultraviolet light quite visible to butterflies searching for nectar. People spend little time sipping nectar from flowers, and so evolution has not provided us with the capacity to see the ultraviolet designs on petals that guide insects to a sugary delight. We cannot hear the sound of a dog whistle or, like a bloodhound, smell the scent of an escaped prisoner. And we can't perceive certain novel hazards that exist today. The radiation from Chernobyl is real enough to kill, but we cannot immediately sense or feel its insidious effects.

This unconscious cultural evolution developed in a small-group animal with a short time horizon, the human being, in possession of its culture. Humanity is inadequate to deal with a world overpopulated with individuals who are only partially in contact with their own cultures and who must make critical decisions about the medium- and long-term future.

Unconscious cultural evolution has not led humanity to pay explicit attention to biological or cultural evolutionary heritage. Cultural evolution has not compensated for the baggage of an outdated human perceptual system. It has not, for example, invented a "time-lapse" system for perceiving the gradual changes to Earth's atmospheric composition that human biological systems are incapable of sensing. It has not led school curricula to convey the limits of the human perceptual system. It has not led to the establishment of governmental institutions that force politicians to address and account for the long-term consequences of their actions. It has not generated television programs designed to produce a widespread awareness of the diverse

limitations and built-in biases imposed on people by their biological and cultural evolutionary history. It has not provide us with an inventory of tools specifically designed to overcome biases. Cultural evolution has not even allowed most human beings to perceive that their familiar world results from an ongoing evolutionary *process*, even as it accelerated that process to unprecedented rates of change. It has not, therefore, given us the means of survival.

A single accident, the tragic and preventable loss of seven lives in the Challenger space shuttle, captured the world's attention; ignored are the thousands who die equally tragic and preventable, but duller deaths daily. Consider the following annual statistics:

- 43,500 killed in automobile accidents in the United States (1985)
- 1,384 murdered in New York City (1985)
- 36 murdered in Honolulu (1985)
- 150 killed in accidents in their own bathtubs (1984)
- 1,063 killed in boating accidents (1984)
- 3,100 dead from choking on food (1984)

-*Newsweek*, June 2, 1986

A single murder, that of hostage Leon Klinghoffer in 1985, commanded the front pages of almost every newspaper in the West for some days. Extreme political demands have been met because of the importance individuals, the media, and governments give to such tragedies. The threat of terrorism made millions change their travel plans in the summer of 1986. During the time it takes you to read this book, more people will die in automobile accidents in the United States than have *ever* (until the time of this writing) been killed by terrorists.

The way in which the mind caricatures reality to focus on the new and unusual is what makes terrorism good shock value. People will believe terrorism is a recurring strategy of the otherwise powerless, until they also realize its effect depends on the emphasis automatically given to it by the default positions of the "old minds" and, by extension, in the media. Terrorism taps into the nervous-system program that originated to register short-term changes in a steady state. A constant flow of murders is "tuned out," just as the sound of an air conditioner is tuned out shortly after it starts. But terrorism, or the discovery of a serial killer, acts like an occasional squeak in the air conditioner's motor; each time it sounds, it rivets our attention on the machine.

Nevertheless, biological evolution did its job well. It adapted our ancestors to their environments and, in that process, shaped us into rather special creatures.

Then how do we present the danger of greenhouse warming to the human being who must get the message about what we are doing to the Earth? It will involve, first of all, changes in how we write and how our media communicate. Surely, we always will need sensational stories to captivate us. But responsible newsmen can select equally exciting coverage of the major changes occurring in our world. Last summer, *Time* ran a story on 500 or so murders committed one week, who the victims and perpetrator were, what happened to them. Surely, when people are suffering from the effects of environmental pollution we can also run stories on what happens to these individuals. This is the key, since the mind responds only to representative

examples. Shattered Romanian villages are prototypes of what might become of other places on the Earth, and we should see what happened in Romania. The democratization of Eastern Europe is of vast importance to us all. Yet a victim of acid rain or skin cancer is no less an object of sympathy than a victim shot dead in the street in a drug-related drive-by shooting. We need to dramatize and attend more to the continuing tragedies of our time than to the isolated "whale down an ice floe" story. But we need to know that the mind will always want to hear about the single hostage killed, the whales trapped in Alaska, Baby Jessica. We shouldn't fight that but should learn to put the message in the way our audience—the human animal—responds. An alliance of psychological and environmental scientists with the media may pay off far more than further brute-force communications. We must learn to acknowledge a changing world, before the only message possible is that we have become its willing victim.