

8

THE BEGINNINGS OF REAL CHANGE

WE HAVE MADE two observations over and over again in this book. The first is that the world is an increasingly dangerous place, and many of its new dangers are not instantaneously obvious. The second is that our reactions to the modern world are often inappropriate because of the nature of our minds and the training we give them. This mismatch threatens the destruction of civilization.

Cultural evolution has always modified human default positions to fit changing environments, and cultural evolution has been keeping up rather well in many areas. But now the *overall* rate of environmental change has outpaced the ability of even cultural evolution to respond appropriately across the board. It has, for example, undermined the validity of the classic statement by Santayana that “those who do not study the mistakes of the past are condemned to repeat them.” While we can obviously still learn a great deal from history, it can be dangerous to focus too much of our attention on the past. Increasingly we are getting into the position of the generals who are always preparing to fight the last war. As a consequence our society may well suffer the fate of those who depended upon the Maginot Line.

For example, it is now clear that science and technology make up *at least* half of our culture, and from the point of view of making

informed decisions about the future, considerably more than that. Yet in the interesting book *Cultural Literacy* by E. D. Hirsch, the summary of the shared culture of “literate” Americans shows only about one quarter or less of that culture to be concerned with science and technology—and much of that in areas irrelevant to our future.

The average person no longer feels comfortably fitted into a rather stable environment. Rather he or she feels inundated by change, tends to adjust in areas where the need is seen as greatest, and simply fails to perceive change in others. Joe may adapt to his wife’s being an executive and being more highly paid than he is, but he “can’t handle” thinking deeply about the nuclear arms race. Susan works for a local environmental group on problems caused by a toxic waste dump, but keeps going to singles’ bars because she doesn’t perceive AIDS to be a personal threat. Father O’Shea warns his flock repeatedly about the immorality of the nuclear arms race . . . and the immorality of artificial birth control. Congressman Smith realizes that the budget deficit can cause enormous difficulties, but thinks the problem can be cured by perpetual economic expansion.

But although the problems that humanity now faces are immense, at least they are of our own making. The mismatch of our brains with our environments has been produced by millennia of effort, by the skill, ingenuity, and drive of our species—by the very minds that are now out of step with the world they live in.

There are already signs that successful steps can be taken to remedy the situation, simply by taking advantage of the flexibility and trainability of human minds. Widespread conversion to new-mindedness *might* eventually come along in the normal course of cultural evolution, but we cannot now afford to wait. Too many signs

indicate that our ability to change the world is rapidly outstripping our ability to understand it. Too many trends in the arms race, in the environment, and in other areas, are harbingers of the destruction of civilization.

Before large-scale action can be taken, however, there must be public awareness, public debate, and a decision to take action as a society. We are not naive enough to think that this can take place overnight, but we do know that major transformations have already come about rapidly. Consider some examples:

- Social scientists in the 1960s believed that it would take decades of consistent government pressure to persuade Americans to change their reproductive habits and have small families. These “habits”—having as many children as one could afford—were considered a fundamental part of human nature, and the prognosis for rapid change was bleak. The shift to small families actually took about three years in the early 1970s, without any government pressure whatsoever.

- Some scientists believe we can't convert to a sustainable economic system quickly enough to prevent an ecological collapse, and yet our entire economy was transformed to a wartime basis in a matter of a year or so at the beginning of World War II and changed back to a peacetime basis in a similar period at the end of the war.

- Most nations have recognized the seriousness of the population problem and many are trying hard to encourage their citizens to do something about it.

- Many governments and corporations have recognized that humanity faces serious problems, ranging from the depletion of oil

reserves to the destruction of tropical forests and the modification of global weather, and some have taken steps to conserve resources (especially energy) and protect the environment.

- Many millions of people realize that nuclear weapons threaten everyone, including their owners, and are trying to find ways of eliminating them.

- The winds of change are blowing through such bastions of old-think as the People's Republic of China, the Soviet Union, and the Roman Catholic church.

- Innovative education programs are teaching children in many parts of the world to increase their intelligence, to cooperate, and to think in new ways.

- More people are becoming sympathetic to the other organisms that also inhabit the earth and are trying to save endangered species from extinction and to protect domestic and laboratory animals from abuse.

- Many people have begun to recast our spiritual heritage and adapt its "perennial truths" to the modern world.

- Science is providing increasing knowledge of the universe, the human environment, and the human mind—but people (including many scientists) increasingly realize that scientific information alone will not solve human problems. It is beginning to dawn on some that a major factor in our problems is how we think about the world—as the deep ecology movement and attempts both to humanize medicine and to take diplomacy into the hands of ordinary citizens all indicate. It is possible, we believe, for the rational and the spiritual to support each other rather than to conflict.

- For the first time, large numbers of people are concerned about the state of all humanity, our planet, and its other life-forms. But it will take more than just new thoughts or new ideas to make the difference. It will take a revolution in the way we bring up children and in the way we teach and what we teach.

- Biological evolution probably has given us brains that, when exposed to certain cultural environments, have default positions on the roles of the sexes and on appropriate reactions to people perceived as belonging to different groups. The interaction between biological and cultural evolution has modified those attitudes in various ways in different groups—and when the environment is appropriate, the modification may be very rapid.

In a few decades people in the United States have changed fundamental attitudes toward women, blacks, and other minorities. We no longer hear news reports of the “first woman pilot ... executive ... telephone lineperson,” and so on. Blacks as stars of movies and TV shows, as personalities featured in advertisements, as sports heroes, astronauts, entrepreneurs, and so on, rarely inspire comment.

It is difficult to remember that at the end of World War II blacks still went to segregated schools in the South, were regularly lynched, played only menial roles in movies, and were largely absent from big-league sports. The notion that everyone both needs and has a right to quality unsegregated schooling and higher education has become widespread, even though full access has not yet been provided. While the default prejudices still often show through, and a great deal still remains to be done, virtually all the roles once reserved to male WASPs are now open to all.

Perhaps more telling, all but the most marginal members of society understand that it is no longer *proper* to let those prejudices show. That has been made clear by revulsion against Ku Klux Klan activities in the southern United States, capped in 1987 by a multimillion-dollar judgment against the Klan by an all-white jury appalled at the Klan's role in the murder of a black youth. It has also been underscored by the sensible statements of many Georgians about the problems of desegregating one of the last bastions of pure white supremacy in that state.

- Cultural evolution has also produced transformations in areas other than the provision of social justice. Like people all over the world, Americans since World War II have changed attitudes to fit new phenomena such as TV, jet aircraft, computers, terrorism, AIDS, and thermonuclear war. Other adjustments have been even more rapid. In a mere quarter of a century, the entire issue of environmental deterioration has entered the public consciousness and been integrated into the structure of society. The proper size for the human population and the possibility of limiting it became, in the same period, a matter of public debate.

This is not an exhaustive list, but it is enough to show that rapid change in society is already a commonplace. In addition, the very process of growing up—developing from infant to child to adult produces enormous changes in the way we think, as well as in the physiology of our nervous system. The cerebral hemispheres, for instance, become “wired up” for language (in the left) and spatial abilities (in the right) between the ages of five and eight, producing a child who is a very different animal from the one of four years old.

Most people do not realize that schooling also changes the structure of children's minds significantly. Reading, writing, and arithmetic, so commonly taught, are *not* natural acts of the mind, but are radical transformations of the way the nervous system operates. The mind's default positions are for talking and listening, but new mental routines are developed in the child's brain by their schooling, creating a new mind capable of reading and writing.

Why not reprogram other defaults to create a new mind suited to the demands of the new world? Changes in attitude on topics as diverse as racial and sexual prejudices, nuclear power, and the importance of preserving the environment all indicate that *when the time is ripe*, social change can move with astonishing rapidity.

We believe the same thing can happen with education for new-mindedness, and we think the time is ripe right now. We are writing this book to try to hurry this "ripening" in the minds of others. Nowadays there is widespread dissatisfaction with the quality of schooling in the United States and with most of what is spewed at us through our television sets. Many people are also aware that things are seriously amiss in the world and are groping for ways to set them right. But contrary to many remedies suggested recently, knowing the dates of the Civil War or having some familiarity with titles of Aristotle's books won't really help us to comprehend an unprecedented new world; the past is no longer prologue. Getting "the basics" is important, but getting a new curriculum is even more so.

There are even signs that remedies are within our grasp—not simple ones, not just a few, but remedies nonetheless. Human beings have always been the most adaptable creatures on the planet, and they should be able to chart a new course for themselves. Some of

that charting is already being done. The old mind is today being challenged and changed by many scattered efforts. *Can we bring these efforts together to produce a large-scale program for a rapid “change of mind”?* We know what the problem is. The “solution” is not simple—to generate the social and political will to move a program of conscious evolution to the top of the human agenda.

Since the problems have taken centuries to develop, any effort to “solve” them is not going to succeed in a few years with a few programs or the production of a slogan or two. It will take a major worldwide cultural effort, much more intensive than the current effort to educate people about AIDS or that which has gone into changing attitudes about women and sexual equality. Many of the individual steps toward amelioration may seem quite trivial, but taken together, they will, if well directed, snowball. We would like to, but we can’t present here a simple “Paul and Bob’s Ten-point Program for the Saving of the World in the New Millennium.” No “Bob and Paul’s Project Supermind 2000,” although such programs will likely be suggested by fringe elements in the next few years.

So we think there is no *simple way out* of the human dilemma, but there may well be a simple, constructive way to *proceed*. We have to create a widespread understanding that in the foreseeable future, human beings will continually be adapting to increasing threats caused by their own inventions—threats that our “nature” will make difficult for us to perceive or act upon.

What we can do is to begin to call the attention of people to their own caricatures of reality and to the new world itself. People may then be able to assess correctly the consequences of their actions in the world. Our society must resolve to cultivate a different kind of

educated person, one trained generally to understand what kind of an animal we are and trained specifically to meet the challenges of an ever more rapidly changing environment.

“You can’t change human nature” is a standard excuse for not taking action on a wide range of social issues. In part, as our analysis shows, the statement is true: we need tribalistic relationships, we are more responsive to current information than to long-term trends, and we focus on the superficial appearances of everything from automobiles to presidents. Part of the insight people must incorporate into their consciousness is that some of the default positions are firmly lodged in the mind and must be worked around rather than transformed. A need for tribal leaders probably cannot be refashioned completely and certainly cannot be genuinely changed within our lifetime.

Changing the built-in defaults of the mind can only come about at the snail’s pace of biological evolution. Unhappily, in order to solve problems such as runaway population growth, the collapse of ecological systems, and the approach of a thermonuclear Armageddon we can’t wait for the necessary tens of thousands of years until natural selection does its thing.

But we change human nature daily in schools and in a few years in society. We need, now, to consciously manage that change.