From The Age of Missing Information

Bill McKibben

Daybreak

A little mist hangs above the pond, which is still save for a single mallard paddling slowly back and forth. From time to time it dives—sticks its rump in the air. From time to time it climbs out on a rock and airs its wings in the breeze, which is visible now and again on the surface of the pond. I watched for about an hour, and mostly the duck just swam back and forth, back and forth, back and forth.

Ducks are not necessarily placid. At certain times of the year male mallards flick water at females, or engage in what the bird books call a "grunt-whistle," while females perform "nod-swimming." At other seasons they may pull feathers from their bodies to insulate their eggs. And ducks are peculiarly susceptible to "imprinting." If, between thirteen and sixteen hours after they hatch, they are exposed to a moving object—a man or a dog or an Infiniti Q45—they will thereafter follow it.

But on this particular morning this particular duck was doing nothing much, just swimming slowly back and forth.

We believe that we live in the "age of information," that there has been an information "explosion," an information "revolution." While in a certain narrow sense this is the case, in many important ways just the opposite is true. We also live at a moment of deep ignorance, when vital knowledge that humans have always possessed about who we are and where we live seems beyond our reach. An Unenlightenment. An age of missing information.

This account of that age takes the form of an experiment—a contrast between two days. One day, May 3, 1990, lasted well more than a thousand hours—I collected on videotape nearly every minute of television that came across the enormous Fairfax cable system from one morning to the next, and then I watched it all. The other day, later that summer, lasted the conventional twenty-four hours. A mile from my house, camped on a mountaintop by a small pond, I awoke, took a day hike up a neighboring peak, returned to the pond for a swim, made supper, and
watched the stars till I fell asleep. This book is about the results of that experiment—about the information that each day imparted.

These are, of course, straw days. No one spends twenty-four hours a day watching television (though an impressive percentage of the population gives it their best shot). And almost no one spends much time alone outdoors—the hermit tradition, never strong in America, has all but died away. (Thoreau came up twice on television during May 3. Once, he was an answer on *Tic Tac Dough* in the category "Bearded Men," and later that evening, in the back of a limousine, a man toasted his fiancée with champagne and said, "You know how we've always talked about finding our Walden Pond, our own little Utopia? Well, here it is. This is Falconcrest.") I'm not interested in deciding which of these ways of spending time is "better." Both are caricatures, and neither strikes me as a model for a full and happy life. But caricatures have their uses—they draw attention to what is important about the familiar. Our society moving steadily from natural sources of information toward electronic ones, from the mountain and the field toward television; this great transition is nearly complete. And so we need to understand the two extremes. One is the target of our drift. The other an anchor that might tug us gently back, a source of information that once spoke clearly to us and now hardly even whispers.

About the mountain first. Crow Mountain is no Himalaya, no Alp. Even in the company of its fellow Adiron-
a story the previous night. He failed, reporting only that a spokesperson "could not release what was said on Sunday night's newscast without the permission of William Applegate, the news director, and Mr. Applegate did not respond to repeated requests left with his secretary for a transcript." In other words, the most powerful newspaper in / the world could not get its hands on a newscast watched by millions only hours before. So I was pleased with my archive of tape, even if there were hours blanked out here and there, and MTV was nothing but snow so I had to retape it and a few others a couple of days later, and several hours of CBS were in black and white.

I chose Fairfax solely because of the astounding size of the system, which in 1990 was roughly 40 percent larger than its nearest competitor. There were five Christian channels, four shopping channels, two country music video channels, even a channel that broadcasts all the arrival and departure information off the Dulles and National airport screens. Its Cable Guide lists nearly a thousand movies each month; in May 1990 they ranged from About Last Night ("1986, Romantic Comedy, A young man and woman find themselves confused, frustrated, enthralled") to Zombie ("1964, Horror, Friends vacationing on a remote island find it inhabited by disfigured ghouls"), with everything in between from Slumber Party Massacre II to The Son of Hercules Versus Medusa to It Happened One Night to Bonzo Goes to College to Sagebrush Law to Shaft (and Shaft in Africa) to Watchers ("1988, Science Fiction, A dog, the subject of experiments in fostering superintelligence, escapes from a CIA compound"). For those who want more,

Once my friends in Fairfax had mailed me the cardboard boxes full of tape, I began spending eight or ten hours a day in front of the VCR—I watched it all, more or less. A few programs repeat endlessly, with half-hour "infomercials" for DiDi 7 spot remover and Liquid Lustre car wax leading the list at more than a dozen appearances...
apiece. Having decided that once or twice was enough to mine their meanings, I would fast-forward through them, though I always slowed down to enjoy the part where the car-wax guy sets fire to the hood of his car. Otherwise, however, I dutifully spent many months of forty-hour weeks staring at, say, **Outdoors Wisconsin**, the kind of show that appears on minor cable channels across the nation because there's nowhere near enough programming produced to fill all the available time. On **Outdoors Wisconsin** ("summer to fall, winter to spring, Green Bay to where the St. Croix sings") they were "sucker-grabbing" in a creek near Fond du Lac. Sucker-grabbing involves wading up behind suckers, which are a variety of fish, and grabbing them. "They're really good if you grind 'em and mix 'em with a little egg and soda cracker," the host contended.

Which leads pretty directly into the question "Why bother?" **Outdoors Wisconsin** clearly has little direct effect on anyone but the suckers. But TV is cumulative, and over a lifetime ten minutes here and there of watching fishing or car racing or **Divorce Court** has added up to a lot of hours and had a certain effect on all of us. When people write about television, especially the critics who have to do it regularly, they usually have no choice but to concentrate on the new and the interesting as if they were reviewing plays or films. But TV is different—the new is relatively unimportant. The most popular program in 1990, **Cheers**, was in its ninth season; several weeks it was topped in the ratings by twenty-two-year-old **60 Minutes**, or challenged by **Murder, She Wrote**, which turned a hardy seven. Programs that first aired twenty or thirty years ago are still on the air, shown more often than ever in ceaseless rerun. You could argue that **The Brady Bunch**, not **Twin Peaks**, is the really important show to understand—simply by dint of repetition and familiarity it has won its way into the culture. (In March of 1991, the Associated Press reported that a Florida police officer had pleaded guilty to battery charges. He had lined up fourteen juveniles he had caught skateboarding, and then gone down the line whacking them with a nightstick as he sang the theme from **The Brady Bunch**. "He was singing that **Brady Bunch** tune, and each time he'd say like two words, he would hit one person in the butt," one of the boys told investigators.) People don't watch TV the way critics have to watch it. They don't watch it the way I watched it either—I have no way of re-creating the discussions the next day at work, say, or the easy familiarity with a show that you've seen every Thursday for a decade. But I did watch everything. The commercials, the filler, the reruns, the videos—all of it counts. **My Three Sons** still alters people's orbits, at least a little, just as Cosby will still be a force in 2010.

I grew up in the sixties and seventies, watching a great deal of television. Not the "quality TV" of television's Golden Era in the 1950s—not **Playhouse 90** or **The Honey-
mooners. I was watching TV TV Friday night meant ABC—The Brady Bunch, The Partridge Family, and Room 222 in that order. TV was like a third parent—a source of ideas and information and impressions. And not such a in that order. TV was like a third parent—always with time to spare, always eager to please, often funny. TV filled dull hours and it made me a cosmopolite at an early age. I have great affection for it—I can remember waiting anxiously for Room 222 to come on, remember that the high school it showed (Bernie with the red Afro! Karen Valentine!) seemed impossibly, enticingly sophisticated. People who didn't grow up with television tend not to understand its real power—they already had a real world to compare with the pictures on the screen. People my age didn't—we were steeped in television, flavored for life. A few years ago my wife and I moved to a mountain-rimmed valley—there's no cable, and even with a big antenna you get mostly snow. Since necessity is the mother of acquiescence, TV proved a fairly easy habit to kick. But of course I hadn't escaped it entirely—it lingered in my temperament, attitudes, outlook. And only with some distance, some time away, was I starting to get a sense of just how much. As I embarked on this project, then, I was not some Martian suddenly confronted with television; I was a traveler returning to a cozy home, able to see that home with new eyes. Going back to television was like spending the holidays with your parents once you've grown up—in three days you comprehend more on a conscious level about your mother than you did in twenty years of living with her.

Only in part is this a book about television; often I will be describing phenomena that appear on television but also on the radio and in magazines and everywhere else, because they are parts of modern life. The amount of territory that television covers in twenty-four hours is extraordinary—I could find fifty references to any topic that interested me. TV is a pipeline to the modern world, and a convenient shorthand for some of its features. Still, that does not mean that TV merely reflects our society. By virtue of its omnipresence, it also constantly reinforces certain ideas. It is less an art form than the outlet for a utility—like the faucet on a sink that connects you to the river, the TV links you to a ceaselessly flowing stream of information, and that very ceaselessness makes it different from a play or a movie. Television is the chief way that most of us partake of the larger world, of the information age, and so, though none of us owe our personalities and habits entirely to the tube and the world it shows, none of us completely escape its influence either. Why do we do the things we do? Because of the events of our childhood, and because of class and race and gender, and because of our political and economic system and because of "human nature"—but also because of what we've been told about the world, because of the information we've received. That's why for me the biggest question is not if the world before TV was a better place or if TV leads to violence. Nor for the purposes of this book do I much care if television is manipulated by giant corporations, the military-industrial complex, the "pressure of ratings," the hidden power of freemasonry, or the signs of the zodiac. These are important questions, but they're not my question. My question is
“What’s on?”

Television researchers tend to ignore the content, taking their cue from Marshall McLuhan, who argued that the "content of a medium is like the juicy meat piece of meat carried by the burglar to distract the watchdog of the mind." One study after another, not to mention the experience of most of us, indicates that McLuhan was largely right — that we do in fact often watch television because of our mood or out of habit, instead of tuning in to something in particular. Even so, we're not staring at test patterns. We also often eat because we're bored or depressed, but the effects are different if we scarf carrot sticks or Doritos.

Two thirds of Americans tell researchers they get "most of their information" about the world from television, and the other statistics are so familiar we hardly notice them — more American homes have TVs than plumbing and they're on an average of seven hours a day; children spend more time watching TV than doing anything else save sleeping; on weekday evenings in the winter half the American population is sitting in front of television; as many as 12 percent of adults (that is, one in eight) feel they are physically addicted to the set, watching an average of fifty-six hours a week; and so on. The industry works hard to make this absorption seem glamorous: the Fairfax system runs an around-the-clock Cable Welcome Channel for instance, which tells viewers how to operate their systems ("If you can't get a picture on your TV, make sure it is plugged in"), but mainly congratulates them endlessly on "being part of a complete communications system that puts the whole world at your fingertips, from the far reaches of outer space to the heart of Fairfax." Outer space! Satellites! Fiber optics! Data! The final installment of an A&E series called The Romantic Spirit gushes, "Computers and satellites and silicon chips signal that we are in sight of a post-Romantic Age, of a fresh start." Communications are now "almost instantaneous," a documentary on the computer age explains. "Communications are the currency we trade in, the currency of the information age."

But what is this vaunted information currency? If you're a commodity broker or a bond trader, it's a blizzard of constantly changing green numbers on a flashing screen. If you're a vice president for marketing, it's a cataract of data about how much people earn in a certain zip code and what kind of car they drive. For most of us, though, this romantic, mind-boggling Niagara of communications washes up in our living rooms in the form of, say, Gory Everson's hunky husband, Jeff. Gory has an exercise program on ESPN called Body Shaping, and she lets Jeff handle the show's Nutrition Corner. If you're in the supermarket, Jeff advises, and you open up a carton and see that one of the eggs is broken, "don't buy that carton."

To be fair, there's a lot of other information you didn't already know, some of which is vaguely fascinating. On the Discovery Channel, for instance, Dr. Frank Field explains that in Switzerland white bread is taxed and the money is given to whole-wheat bakers so their loaves can be competitively priced. According to Casey Kasem on Oprah, Neil Sedaka went to the same high school as Neil Diamond and Barbra Streisand, and while he was there he wrote a song
about a girl called Carole Klein who went on to become Carole King and of course have several number-one records, not only for herself but for the Shirelles. Sea otters wrap themselves in kelp before going to sleep, and three thousand matings are required to produce one lion cub that will live past its second year, and hyenas usually bear twins. And according to Showtime, the Voyager space probe carries a recording offering our planet's greetings to the entire universe in the voice of—Kurt Waldheim.

Some of the information on TV could win you fabulous prizes. "In American literature, what Mark Twain character had a girlfriend named Becky Thatcher?" As English teachers across the nation held their collective breath, a team on Super Sloppy Double Dare who had earlier recalled the name of the Flintstones' pet dinosaur failed to remember Tom Sawyer, and so had to turn themselves into "human tacos" by pouring vats of guacamole on their heads.

On other occasions, the information is more speculative: John Osborne, in a special edition of Prophecy Countdown called "Angels—God's Special Space Shuttles," calculated that angels travel eleven million miles a minute versus 283 for a NASA rocket.

And once in a while the information is just a shade less than honest, as when the Travel Channel claimed that "three things make Nuremberg famous—its Christmas market, the Nuremberg gingerbread, and the Nuremberg sausage."

Most of the time, though, the information that TV has to offer is not spelled out in such tidy little factlets. It is at at least a little hidden in the fabric of movies and newscasts and commercials and reruns. Not so hidden that you need to hire a team of deconstruction contractors to analyze it all—just hidden enough that the messages are passed over, absorbed through the eyes without triggering the entire brain. People used to claim you could see "sex" written on Ritz crackers in their advertisements. Despite careful examination I never could, and that's not what I'm talking about. What I'm talking about is what happens when you see an ad, over and over, for small Ritz crackers pre-smeared pre-stuck together with butter and sold under the slogan "No assembly required." What habits of mind and body does this, in concert with a hundred other similar messages, help produce? And how do those habits differ from the habits, the attitudes people got from the natural world?

Occasionally, in between old World War II documentaries on A&E, a promotion for the network showed a man named Jack Perkins who said proudly that his channel showed "the entire scope of television, which is of course the entire scope of life." This is more or less the claim of all those who herald the new age now upon us—that our flow of data replaces nearly all that came before, including nature. Mark Fowler, the Reagan-era director of the Federal Communications Commission, appeared on C-SPAN to make this point explicitly. He talked about the range of environmental problems we face, including the depletion of the ozone, the destruction of the rain forests, and the spread of acid rain. "Pretty dreary stuff," he said, "except that as the ecological system has deteriorated, I think the man-made information ecology—the ebb and flow of words, voice, data—has vastly improved, so that we now live in a world more tightly bound, more in touch one part
with another, than at any moment in its history."

Set aside the question of whether it's a worthwhile trade-off to be able to fax your aunt in Australia so that you can tell her it's bloody hot out and all the fish are dying—simply realize that an awful lot of people have come to see this "information ecology" as a sort of substitute for the other, older, natural ecology. "Ours is an economy increasingly dependent not on our natural resources or geographic location," President Bush told the members of the class of 1991 as they left the California Institute of Technology. "Ours is an age of microchips and MTV." And most of us vaguely agree with the president, I think—the world seems to be evolving into an "information economy" where the occupants of every country will busy themselves selling each other computer chips and watching the whole process on Esperanto CNN.

Against such a tide of opinion it sounds a little romantic to say: If you sat by a pond beside a hemlock tree under the sun and stars for a day, you might acquire some information that would serve you well. I don't fret about TV because it's decadent or shortens your attention span or to murder. It worries me because it alters perception. TV, and the culture it anchors, masks and drowns out the subtle and vital information contact with the real world once provided. There are lessons—small lessons, enormous lessons, lessons that may be crucial to the planet's persistence as a green and diverse place and also to the happiness of its inhabitants—that nature teaches and TV can't. Subversive ideas about how much you need, or what comfort is, or beauty, or time, that you can learn from the one great logoless channel and not the hundred noisy ones or even the pay-per-view.

For instance, as the sun comes up I'm sitting by the edge of the pond on Crow, drinking tea and wondering idly if the weather will hold all day so I can hike to the cliffs on nearby Blackberry Mountain. Ransacking my brain for weather lore, I recall that red skies at night are a sailor's delight, a ring around the moon heralds snow, and woolly caterpillars are woolliest before a hard winter, none of which is much help. I find myself wishing that I could gauge the wind direction and its speed, add the feel of the air and the type of clouds overhead, and make a reasonable guess, as most Americans once could, of what the day would bring. Of course this is no longer an essential skill—on the Fairfax cable system alone you can watch not only the twenty-four-hour national Weather Channel but also a local radar weather channel that shows storms moving inexorably, pixel by pixel, in your direction. You'd be crazy to devote any time to learning to forecast from the clouds and the wind—you wouldn't be as accurate as the giggly guy in the loud sports coat, and who would teach you anyhow? Jeffersonian farmers would doubtless have wel-

comed accurate predictions. Still, let this stand as one small example of information people once had and no longer possess.

Or another small example: an oft-repeated ad on May 3
was for a product called Jimmy Dean Microwave Mini Burgers, prefabricated hamburgers in a microwavable container. Silly as it sounds, think of the information you would have needed a century ago if you lived in a place like the Adirondacks and wanted to make yourself a hamburger. You'd have needed to be able to raise cattle, which implies knowing how to clear land, how to rotate pastures, how to build a barn—probably you'd have needed to know how to get your neighbors to help you raise a barn. You'd have needed to know how to kill an animal, and what to do with it once it was hanging there dead. You might have bought your grain at the store or you might have used cornmeal, but certainly you needed to know how to bake bread. Baking and cooking would have required wood, which meant you had to know which trees to cut down, and when, and how to build an even fire. And so on.

I do not mean that this was a more virtuous way to produce a hamburger, or that there's something effete about learning the weather from Willard Scott. Clearly, TV is not to blame for these developments; it merely chronicles them. And these particular skills, in and of themselves, may not be so important. However, in the course of performing them, one could not help accumulating a large store of what you could call "fundamental" information, and it is precisely this kind of fundamental information I want to rediscover in this book. I went to the

mountains to get it—until recently, though, it was more routinely obtained, more a part of everyday life.

During most of human history, this fundamental information came most of all from agriculture. The vast majority of people lived on farms, of course—only a century ago most Americans still lived in rural areas. Now farmers are an anachronism. We tend to think of them in sentimental terms, as virtuous, but also vaguely embarrassing. When ESPN broadcast the world horseshoe-pitching championship (an up-and-coming event that surely soon will be the Miller Genuine Draft Pro World Pitching Championship), an official of the sport's governing body felt compelled to say: "A lot of people still have that image of horseshoe pitchers being farmers in bib overalls. But that's really a misnomer. Here at the world tournament, less than one percent of our entrants are what you might call farmers. Some are ranchers, but we have a good cross-section of professional people—doctors, lawyers, mathematicians, teachers, physicists even." Or listen to Marshall McLuhan. In the middle of one of his usual riffs about the glories of the "electronically configured world . . . a world not of wheels but of circuits, not of fragments but of integral patterns," he recounted a conversation he had with an executive at IBM. "My children," the man told McLuhan, "had lived several lifetimes compared to their grandparents when they began grade one."

Which, basically, is nonsense. While McLuhan's idealized youth may have reams of data unavailable to the wisest adult of a few generations earlier, they had much less access to precisely the kinds of fundamental information we most sorely lack. Even the dullest farmer quickly learns, for instance, a deep sense of limits. You can't harvest crops successfully until you understand how much can be grown without exhausting the soil, how much rest the land re-
quires, which fields can be safely plowed and which are so erosion-prone they're best left to some other purpose. This sense of the limits of one particular place grants you some sense that the world as a whole has limits, a piece of information we've largely forgotten, in part because being a successful businessperson involves constantly breaking through limits. Instead of learning about limits before they reach kindergarten, kids watch, say, The Gobots, a cartoon assemblage that turn from robots into late-model automobiles and back again. On this day they unveiled a new invention: a "proton cultivator that will solve the problems of feeding the people of the earth. It will make barren land fertile"—indeed a single dose turned cartoon desert to cartoon corn. Losing this sense of limits matters—one reason we're so blithe about doubling the present population of the world must be that we think some such device will double the amount of food we grow. (Between 1985 and 1990, in truth, the world's per capita production of calories declined.)

If we're ever to recapture these fundamental kinds of information, it's necessary to start by remembering just how divorced from the physical world many of us have become. In a refreshingly honest piece of reporting, food writer Dena Kleiman recently told readers of The New York Times about a trip she'd taken to the lake district of southern Chile. "I had always fantasized about eating my own catch—staring down at a plate of fresh fish and knowing it would never have got there without me. The whole idea was appealing: braving the elements, testing my skill, indulging in one of the oldest battles of time—man versus nature." So she jumped at the chance to go fishing in Chile, although not before consulting with a passel of experts. George J. Armelagos, an anthropologist at the University of Florida, told her that "it was not until about ten thousand years ago that humans first turned from hunting and fishing to farming and herding in what was the start of the Neolithic Age." After that "nothing was ever the same," explained Mr. Armelagos, who is also the author of Consuming Passions: An Anthology of Eating. Ultimately, added California anthropology professor Eugene Anderson, "it is capitalism that has distanced us from all stages and phases of the food preparation process." Having heard this, Kleiman was ready. The management of the hotel sent her off in a boat with a guide, and the chef promised he would saute her catch with a touch of garlic. "Time passes slowly in a fishing boat," she reported. "The routine, in fact, is tedious. Cast out. Reel in." To fill the time, "I tried to envision what kind of weapon I would devise, what kind of skill might be required, what kind of mind-set I would need to develop if I were lost in the wilderness and confronted with starvation." While mulling over this problem, she caught a fish, the guide motored her in, and she handed it to the chef and dressed for dinner. But presented with her catch, she reports, "I was stunned to find myself suddenly feeling nauseated," unable to eat for the memory of the vibrant living creature of some hours before.

Despite the assurances of one Robert Cialdini, a social psychologist at the University of Arizona, that "it is natural for
us to generate food for ourselves," she went without her supper. Her squeamishness is not the point—that may be her only natural reaction, and in any event it's not deep enough to stop her eating the flesh of animals she didn't catch herself. It's how profoundly disconnected an obviously intelligent and educated person can be from the natural world. She is perhaps a slight caricature in this regard—only a true Manhattanite would actually consult a professor for the news that it is okay for us to "generate" our own food—but she offers a pretty accurate drawing of our society as a whole. Even most of us who do hike and fish do so sporadically, and out of such a single-minded desire for recreation that we don't absorb a lot of meaning from the experience. What you do every day, after all, is what forms your mind, and precious few of us can or would spend most days outdoors. "Despite all the lip service we give to craving nature and wanting to spend more time away from cities, I suppose that in the end we are grateful to live in a society where foraging requires only a walk to the local market," Kleiman writes. And that is fine—we don't need a nation of hunter-gatherers. But it does, as she demonstrates, come at a real cost in your comprehension of the world—it robs her of the ability, in this instance, to squarely address her own participation in the drama of life and death.

Even for the few modern farmers who do appear on television, the industrial scale of the business has changed it so dramatically that much of this information is diluted, drowned out in the roar of the tractor piloting its noisy course across a vast sea of crops. The Lifetime network ran a short feature on a farm family in northern California. They ran such a large dairy operation (950 head) that the mother said she spent most of her day on the computer doing records while Dad was out minding the help. The kids took care of the house pets, and helped in other small ways, but they weren't really a part of farm life any more than a banker's children make loans. The message she tried to teach them, Mom said, was that "hard work pays off in nice things—toys, cars." Which is probably better than our culture's usual message—Buy a lottery ticket so you won't have to work hard—but it doesn't yield much in the way of wisdom about death or limits or the cycles of the seasons. Even home gardeners, presumably planting for love of working the soil, are hectored around the clock to purchase products like Miracle-Gro— hectored by "world championship gardeners," which is to say not the people who grow the tastiest vegetables or produce them most thriftily, or with the most care for their soils. No, these are the people who through constant application of chemicals have managed to produce the largest vegetables, great pulpy squashes and melons.

The narrow valley at the foot of Crow Mountain was once a farm—we know how grand it looked because a poet, Jeanne Robert Foster, lived in the mountain's shadow as a girl. But the farmer who had built it watched as his children left for other, shinier pursuits. An old man, he looked on in despair as his fields began the slow return to forest:
I must find a man who still loves the soil
Walk by his side unseen, pour in his mind
What I loved when I lived until he builds
Sows, reaps, and covers these hill pastures here
With sheep and cattle, mows the meadowland
Grafts the old orchard again, makes it bear again
Knowing that we are lost if the land does not yield.

As I stand on the ridge this morning, looking at the sumac and the birch covering the pasture, it is clear he never found his man. And clear that most of us will need some way other than a life of growing crops to get at this fundamental information.

There are other paths to this kind of deeper understanding of the world, but they too are overgrown and hard to find; a day of watching television makes it obvious that farming is not the only skill we've lost. Often, in fact, the television culture celebrates incompetence. One American Express ad depicts a couple who have chartered a sailboat in the tropics but are having a difficult time operating it. Suddenly they see a cruise schooner round the point, and to the triumphant Big Chill strains of "Rescue Me" they ditch their scow and jump aboard the luxury yacht, where there's a crew to attend to stuff like sails and wind and lines and rocks so they can concentrate on drinking. Money supplants skill; its possession allows us to become happily stupid. Presumably the crew members on the yacht make enough money pursuing their specialty that they don't need to know about anything else themselves either. Certainly most TV characters don't possess many skills; except for tending bar and solving murders, virtually no one in a drama or comedy actually works.

"Occasionally, though, television offers a few glimpses of people who have developed very deep mastery, become real craftsmen. There are baseball games (on this evening the Braves were losing to the Pirates) where you get to watch men employ an enormous accretion of specialized knowledge—"There's a good hitter's pitch coming here," "He's shading him to right." On public TV, a man demonstrated the art of Chinese calligraphy. And off in the back alleys of cable there are a great many cooking shows run by chefs who can chop, whisk, separate, fold, knead, and roll, all in a blur.

These kinds of skills come from long, repetitive, and disciplined apprenticeships. Societies have always, at least since the beginning of agriculture, needed and valued certain specialized abilities; while the great majority of people were learning from their parents to produce food and otherwise care for themselves, a few were spending years with a master of some craft or art. Where the one education was broad, the other was deep—deeper, say, than law school. So deep that it may have produced some of the same kinds of fundamental knowledge that farming produces, because the master taught not just cooking or painting but universal things. As the poet and longtime Buddhist novice Gary Snyder wrote recently, "The youngsters left home to go and sleep in the back of the potting shed and would be given the single task of mixing clay for three years. . . .  It was understood that the teacher would test one's patience and fortitude endlessly. One could not think of turning
, but just take it, go deep, and have no other interests." the TV era, we're more comfortable with, say, Robert Warren, who has a cable art show and today is teaching all of America how to paint "Majestic Mountain Meadow." No three seasons of watching Robert mix paints! Or perhaps the amazing piano course sold by former Detroit Lion Alex Karras and endorsed by Davy Jones—"Now the Mon-kees can play their own instruments." Or maybe you'd like the Paint by Numbers Last Supper Painting Kit from the QVC shopping channel. "Duplicate Leonardo da Vinci's beautiful painting—you get 42 shades, so many that you're going to get very close to da Vinci. . . . You'll be able to learn just what goes into making an intricate painting like this. Give yourself the pride of accomplishment."

Still, there are echoes. The notion of apprenticeship as an almost religious vocation survives best, oddly, in martial arts movies like Bloodsport on Showtime. Representative of its type, it featured a young Caucasian who had studied for many years under a Japanese master. His command of body and soul was complete—he had reached the point where he fought not for external reward (for the teacher gave none, not even a smile) or for his liking for blood (he hated it—his master left Japan after his family was killed at Hiroshima). Instead he fought for an essentially spiritual satisfaction—because it made him feel close to some universal force. We thrill to this in part because it's a ridiculous excuse to let people kick each other's teeth in. But there's also something deeply attractive about that depth of training, that self-abnegation. We secretly believe that people who have gone through it may understand more about who they are. Bloodsport was followed on Showtime by Championship Boxing (Michael "The Silk" Olajide losing a decision to Thomas "Hitman" Hearns). In an even more degraded way, boxing is about the same kind of issues. The great dramas in the sport only occasionally take place in the ring—usually they're outside it, where we watch to see if young men "stick to their training" or at the first flush of victory begin buying Italian cars and fancy women and letting their hangers-on coax them into staying up late at night. That is, will they trade their secrets and their discipline for the glitter of the world? Almost invariably flash wins out, in part because by old master-apprentice standards the training is not very rigorous (and because most other sorts of apprentices don't make $20 million a year). Still, we always find ourselves hoping.

Handcrafting pottery and samurai fighting and growing corn may be outmoded skills, but perhaps all the discipline and wisdom they offer can be acquired through more modern devotions, in which case, my day on the mountain would be unnecessary. That is one of the arguments Robert Pirsig makes in Zen and the Art of Motorcycle Maintenance when he says "the Buddha, the Godhead, resides quite as comfortably in the circuits of a digital computer or the gears of a cycle transmission as he does at the top of a mountain or in the petals of a flower." ("I am master of my fate, captain of my soul," intones an ad for BMW motorcycles.) The Buddha, for all I know, is as comfortable in the gearbox, but he's increasingly inaccessible. Albert Borgmann, in a book called Technology and the Character of Contemporary Life, argues convincingly that Pirsig's approach becomes less and less helpful as technology progresses. When Pirsig wrote his book, a motorcycle was essentially a mechanical device; with each passing year it becomes more and more a microelectronic one, and you can't sit by the
road and find God by looking at a bunch of incomprehensibly microscopic silicon chips. (You also can't repair your motorcycle anymore.) TV itself began as a toy for hobbyists, a gee-whiz gadget to build in the basement. Now it is too complex even for individual corporations—great manufacturing combines are getting together to develop High Definition TV. The great push is always away from individual skill and engagement—a horse took all sorts of information and insight to handle, and a Model T a little, and a Honda Accord virtually none.

It's a comfortable notion that as we progress we simply add to our store of understanding about the world—that we know more about the world by kindergarten than our grandparents knew when they died, and that our grandchildren will in turn be infinitely wiser than we are. In truth, though, we usually learn a new way of doing things at the expense of the old way. In this case we've traded away most of our physical sense of the world, and with it a whole category of information, of understanding. We have a new understanding, reflected most ubiquitously by television, which in many ways is sophisticated and powerful. And democratic—TV's obvious virtues, that it is cheap and always accessible—should not be overlooked. But there's much that it leaves out, that it can't include. For only a few people anymore will this other information come from farming, and I don't anticipate a sudden, statistically significant boom in pot-throwing apprenticeships. So I'll concentrate on contrasting television's message with the ideas about the world and our place in it that come from a day in the natural world. In a way, I suppose, I'm hunting for a shortcut, which is the curse of the age. But it's a useful shortcut, since though few of us will farm, most people can still manage regular excursions into the natural world. It's not elitist—it's subversively easy.

To pull in this broadest of broadcasts you do not need pristine wilderness—there's very little, perhaps nothing, left that's entirely "natural." A city park or a suburban woodlot or a rural hedgerow or a backyard garden will do—anyplace that will let you take a conscious step away from the entirely man-made world. In all these places you can read what John Muir called "the inexhaustible pages of nature . . . written over and over uncountable times, written in characters of every size and color, sentences composed of sentences, every part of a character a sentence."

That this broadcast has gone on since the start of time—that some of its messages still live in our genes and instincts—does not mean, however, that it will go on forever. Parts of Muir's grammar are wiped off the slate each day—species lost, ecosystems altered. You have to listen harder to the natural world so you can separate out the primal song from the songs of our civilization and from our static. A team of Canadian scientists recently finished a study of several lakes in a remote part of northern Ontario, an area where the temperature had increased 3.5 degrees in the last two decades—the kind of warming that other scientists tell us the whole planet can expect in the next two generations. The Canadian researchers reported all sorts of highly complex alterations of the environment. Warmer air had meant more evaporation, for instance. Hence, stream flows dropped and the lakes became clearer and therefore warmer. As a result, many cold-water species, including trout, faced extinction. But beyond their practical impact,
the changes were simply one more sign that Muir's alphabet was turning into indecipherable hieroglyphics—one more sign that the great simplification had begun.

Much of this simplification may be irreversible. If so, we had best listen closely, since we will not get another chance. And what chance we do have of preserving this natural world also depends on listening—on absorbing the information of the mountain and garden and park as thoroughly as we soak up the information on the screen. And on letting it play as large a role in shaping the way we live. It depends, that is, on turning the present moment into a true age of information.