

A Revolutionary for Our Times

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introduction by Dr. David Skrbina

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We are steeped in a technological milieu.

Technology surrounds us on all sides, envelops us, and, perhaps, suffocates us. It determines or shapes every course of action that we take in our daily lives—how we live, eat, sleep, get to work, where and how we work, how we entertain ourselves, how we run our government, how we conduct our wars. Technological considerations dictate what we can and cannot do, how we do it, and frequently even why we do it. Technology and its direct effects are in our air, our water, across our landscape, and in our bodies. In the developed nations of the 21st century, for all practical purposes, there is no escape from its pervasive effects.

Needless to say, this was not always the case. For the vast majority of our existence, humanity has lived without advanced technology. Ever since the genus *Homo* emerged from the African savannahs some 2 million years ago, humans have survived and thrived with only the crudest of tools. We lived as wanderers, typically in groups of 50 people or less, and only occasionally stopping to establish temporary encampments. Of the 2 million years of our existence we had controlled use of fire for perhaps only half that time. Durable, stone-tipped spears appeared only 100,000 years ago, and arrowheads, needles, and harpoons some 25,000 years ago—scarcely 1% of humanity's lifetime. We faced all the challenges and threats of nature with only the spear and the hand axe, wearing only crude furs and simple woven clothing, and, for some, with a campfire to keep warm and cook food. I will not idealize the primitive life; it was hard, brutal, sometimes violent, sometimes cruel. But it was the life humanity came to live.

Like it or not, our bodies and our minds are adapted by 2 million years of evolution to a primitive, low-tech existence. Yet today we are surrounded by ubiquitous, advanced, inscrutable technology. And therein lies our predicament.

How can we, creatures of nature, who have spent 99% of our existence using only the simplest of tools, thrive and live well in a high-tech world? Rationally, it seems impossible—and it *is* impossible. There is no good reason to expect that human beings, whose physiology is virtually unchanged since the Stone Age, could adapt well to such a radically altered lifestyle.

By way of illumination, compare the two-million-year lifetime of humanity with a 50-year-old man. Humans have been non-hunter-gatherers—that is, farm-, village- or city-dwellers—for only the past 10,000 years; this so-called civilized portion of history represents a mere 0.5% of our species' lifetime. On a scale of 50 years, then, this “modern” existence corresponds to just *three months*.

Let's say, hypothetically, we find a man born and raised as a nomadic hunter-gatherer in the wilds of sub-Saharan Africa, utterly unaffected by civilization and high technology. We wish to ‘help’ him by introducing him, progressively over three months, to all the benefits of modern life. So we take him, first, to a small farm, and show him how we grow domesticated crops and raise domesticated animals—organisms he has never seen in the wild. We introduce him to sowing, weeding, harvesting, animal husbandry. We allow him one month to adapt.

Then we take him to a small rural village. We show him writing, and teach him the basics of metals and ceramics. He interacts with a relatively large number of people every day, in relatively close quarters. He is subject to the rules of the village. We allow him a second month to adapt to this.

For the third month we take him on a tour of human cities: smaller first, then mid-sized, finally to a large modern metropolis. Over the course of his final 30 days he sees, in turn: complex wood and metal tools, guns, mechanical clocks, large buildings, ocean-going ships, railroads, cameras, refrigerators, bicycles, gasoline engines, telephones, light bulbs, cars, radios. On the *final day*, we show him, for the first time ever: jet airplanes, television, computers, nuclear reactors and nuclear weapons, integrated circuits, the space shuttle.

Then we turn him loose. We give him a few dollars, a small home in the suburbs, dress him up in a suit and a tie, and say, “Have a good life.” “Be a good citizen,” we say; “and don't do anything wrong. But don't worry, you'll adapt—we did!”

What shall we expect for our African friend? What are his prospects for the future? We humans, as a whole, are no better off than this 50-year-old hunter-gatherer. As individuals we are, of course, born and raised in a

technological world, and so we think we can adapt. But our physical and mental selves are really locked in the past. We try to hide this past with fancy clothes and sophisticated language, and we arm ourselves with all varieties of clever technological aids. But our ancient hunter-gatherer selves are still there, deep inside, struggling to make sense of the world.

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Empirically, the evidence points to one likely outcome: namely, that we humans are in fact *unable* to handle advanced technologies without causing massive disruption to our bodies, our psyche, and our environment.

Consider first our physical health. We suffer from a range of modern ills that have traditionally been very rare: obesity, cancers, accidental death and injury, deliberate death through high-tech weapons (including handguns) and warfare, global plagues like AIDS. Automobile accidents kill over 40,000 Americans every year, and about 1.3 million people globally—that's roughly 3,300 people killed *every day*. Nearly 44% of the American population is medicated.^[1] A recent study suggests that 28% of all teenagers suffer chronic headaches, with 40% of these occurring daily.^[2] Even the mundane daily computer use that many of us experience imposes its own risks: carpal-tunnel syndrome, eyestrain, back and joint pain, headache, toxic chemicals on keyboards and monitors, and the general ill health that results from sedentary behavior.

Modern foods are killing us: pesticides, chemical fertilizers, growth hormones, radically new genetically-modified crops, too much sugar, too much fat, too much *meat*. Primitive humans rarely ate meat, but when they did it was typically freshly-killed, always wild game, and usually after putting in several exhausting hours of chase, on foot, with sticks or handmade spears.^[3] We moderns eat something like 3.5 pounds per week—a half-pound per day, every day—of domesticated, fat-laden, hormone-injected, antibiotic-laced, high-tech factory-farmed animal flesh. Little surprise that cancer and other ailments result.^[4]

There is also the potential for direct, violent physical harm. Terrorists achieve their ends through the use of high technology—especially those residing in the halls of government. Virtually all major terrorist threats, including biochemical agents, bio-toxins, nuclear weapons, and other WMDs, are the direct result of advanced industrial technology. The claim

that the 9/11 attacks were “low-tech” is a lie; the hijackers made good use of one of the most advanced products of modern technology, the jet airliner.

Psychologically, we suffer widely from illnesses that, to the best of our knowledge, were rarely seen in ancient times: clinical depression, insomnia, suicide, bipolar disorders, dementia, anxiety, and numerous byproducts of extreme mental stress. Nearly 15% of the US population has a personality disorder.^[5] Some 26% can be classified as mentally ill.^[6] The use of anti-psychotic drugs among children is soaring, both in the US and the UK; British rates increased from 3.9 to 7.7 per 10,000 children over 13 years, whereas American rates ran significantly higher yet: from 23 to 45 per 10,000, over just five years.^[7]

Attention deficit disorder and autism have been linked to television and video games, and studies have argued that they are quite literally addictive.^[8] So too the Internet. A 2006 Stanford University study found that “more than one out of eight Americans exhibited at least one possible sign of problematic Internet use,” including finding it “hard to stay away,” concealing nonessential use, using it as an escape mechanism, and harming relationships—all classic signs of addiction.^[9] More broadly, researchers now find that a whole range of psychological ailments correlates closely with daily computer usage.^[10] And social psychologists have long suspected that many of our modern era’s senseless and brutal crimes stem from an assortment of social stresses, exacerbated by industrial technology.^[11]

Even the putative *benefits* of technology often turn out to be nonexistent, or to have some nasty strings attached. The Internet, which brings a flood of information into every household and allows for instantaneous, mass communication, comes with severe side effects. Evidence is building that it is literally rewiring our brains’ cognitive circuits, resulting in a diminished ability to focus and concentrate on longer and more demanding tasks, such as reading substantive articles or books. Journalist Nicholas Carr recently observed^[12] that “over the past few years I’ve had an uncomfortable sense that someone, or something, has been tinkering with my brain...I’m not thinking the way I used to think. ...Now my concentration often starts to drift after two or three pages. I get fidgety, lose the thread...” He lays the blame on Internet “power browsing,” which places highest priority on *efficiency* and *immediacy*, causing everything else to take a back seat—in particular, deep reflection and sustained concentration.

Cell phones, which offer continuous and immediate contact with nearly everyone, continue to raise red flags. They are suspected of damaging our cellular DNA,^[13] correlate with an increase in anxiety among teens,^[14] pose risks to pregnant women and unborn fetuses,^[15] and increase the risk of brain cancer and malignant tumors.^[16] Other studies attempt to dispute these findings, but it is clear that cell phone radiation is producing at least some detrimental effects on our bodies.

Technology in schools provides yet another classic example. Computers and other high-tech learning aids were, for many years, hyped as the Holy Grail of improved academic performance. They have even been promoted for use by young children and infants. Now we find, instead, that computers and iPods are increasingly used for cheating and plagiarism.^[17] High-speed, ultra-short messaging, as with Twitter, threatens emotional and moral development.^[18] Text messaging in general now appears to damage language skills.^[19] Educational technology for infants, such as 'Baby Einstein' and related video tools, is now found to not only *not* help children, but is actually detrimental.^[20] The death blow to the pro-tech lobby came in 2007, with the publication of a major study by the US government. A review of 16 leading ed-tech products, covering more than 9,400 students in 132 schools, showed *no increase in achievement scores*.^[21] As a consequence, schools are now bailing out. A *New York Times* article^[22] quotes a local school board president: "After seven years, there was literally no evidence it had any impact on student achievement—none." Given the costs and health risks, it's no wonder schools are now seriously reconsidering their technology plans.

Finally, when we look outside the human sphere, to nature, we find disastrous problems: unprecedented species extinction, destruction of forests, resource depletion, global climate change. The toxic byproducts of industrial society are found in the bodies of arctic seals. Costa Rican tree frogs suffer from acid rain produced in New York. Global warming alters age-old weather patterns and threatens to disrupt every ecosystem on the planet. Nuclear reactor wastes will remain deadly for millennia. And the exploding global population is a direct result of highly advanced agricultural and health-care technologies.

Of these concerns, climate change is perhaps the most troubling. A 2009 report by a UN-affiliated think tank projects that, without drastic mitigation actions, climate change will cause "much of civilization to collapse," for large portions of the world.^[23] Here we have the ultimate irony: a technological

civilization created and powered by fossil fuels, which ends up being so disruptive to the global climate that it destroys itself. Along the way we will have eliminated thousands of other species, and put our own existence at risk. Perhaps a kind of cosmic justice is at work after all.

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From an objective standpoint, then, the situation seems clear: In advanced technology we are dealing with something—a set of tools, a structure, a mindset, a force, a power—which is damaging all aspects of our lives, and seriously undermining the health of the planet. And, for all practical purposes, it is beyond our rational control.

Modern technology, then, even though it is the product of natural beings and developed from the materials of nature, is a profoundly *unnatural* phenomenon. Nothing in humanity's evolutionary past, or in the Earth's evolutionary past, has equipped us to deal with the consequences of this phenomenon. And yet we, and all the world, are confronted with its effects every minute of the day.

There is no doubt that modern technology poses a profound dilemma for humanity. A recent textbook stated the following: "That technology represents a problem of major importance, requiring analysis and interpretation, needs no argument. ... It is the controlling power of our age, affecting and shaping virtually all aspects of human existence in this century." And I think many people—most people—have an intuitive sense that this is true: that the 'problem of technology' is very real, and very serious.

A recent poll of 69,000 people in North America revealed that a *majority*, 51%, can be classified as "technological pessimists," meaning that they are at best indifferent to modern technology, and at worst outright hostile toward it.^[24] This is a huge number—something in excess of 100 million adults in North America alone. We know from experience that Europeans tend to be even more skeptical about such things, and thus they are likely to have an even higher number of pessimists. So there seems to be a widespread and deep-seated feeling that something is wrong with our technological age.

So what shall we do? We are faced with a whole range of threats to our wellbeing, and all of them—literally, all major problems confronting humanity—are created or enabled by advanced technology. Shall we just sit

here and take it, stoically? Shall we wring our hands, bemoaning the fact that the system is too large, too impenetrable, too unmovable to change? Shall we ask our leaders for help? Shall we pray to God? Shall we wait for the scientists and technologists to save us? What irony—to look to technology to save us *from itself!*

These are a few of the issues that we will raise in this book. They are complex, far-reaching, and vitally important for our collective future. As difficult as it may be, it is a discussion that we cannot avoid.

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The occasion for the discussion at hand is, of course, the work of Theodore Kaczynski. Convicted of the Unabomber crimes in 1996, Kaczynski is now spending the remainder of his life in a high-security supermax prison in Colorado. The Unabomber case received worldwide attention, due in part to the inability of the FBI to track him down after 17 years of trying, and in part to the unique motivation of the person or group known as “FC.” FC’s primary demand, to which the FBI eventually agreed, was to allow publication in a major newspaper or journal of a lengthy anti-technology manifesto entitled “Industrial Society and its Future” (ISAIF). The *Washington Post* published a nearly complete version of ISAIF on September 19, 1995; roughly 1.2 million copies were sold that day. Soon thereafter, Theodore’s brother, David Kaczynski, recognized the style and content of the manifesto and contacted the FBI. Theodore, then age 53, was arrested at his small wooden home in rural Montana on April 3, 1996. On April 15 he was on the cover of *Time* magazine, and the whole world saw the man that had eluded capture for so long.

This book was never intended to be a biography, but it is worth recalling a few basic facts of Kaczynski’s life story. He was born in Chicago on May 22, 1942. From his early childhood it was clear that he was an academic standout, and he excelled at school. Skipping two grades, he left high school for Harvard at age 16. By 1962, at age 20, Kaczynski had completed his Bachelor’s degree in mathematics. He headed to graduate school at the University of Michigan at Ann Arbor, where, over the next five years, he earned Master’s and PhD degrees in math. In 1967 he acquired a teaching job at the prestigious University of California at Berkeley; it was a position he held for just two years. By 1971 he had decided to buy some land near

Lincoln, Montana and make a homestead there. He worked odd jobs and was periodically seen in nearby towns, but by and large kept to himself.

Under different circumstances, we might never have heard from Kaczynski again. But this was not to be. In one of his letters to me, he recounts how both recreationists and the Forest Service continually pressed in on him—to the point where a peaceful life was no longer possible. This invasion constituted a kind of war, and Kaczynski began to defend himself.

It was not until a few years later, in mid-1978, that the first so-called Unabomber attack occurred. Between 1978 and 1985 there were eight mail- or package-bombings, including one on an airplane, which resulted in a total of 20 injuries. All were connected with universities or airlines, hence the name given by the FBI: ‘un-a-bomber.’

The first fatality occurred in December 1985, when computer storeowner Hugh Scrutton was killed by a package bomb left in his parking lot. Between 1987 and 1995 there were five more attacks, killing two (advertising executive Thomas Mosser and California Forestry Association president Gilbert Murray) and injuring three. The ISAIF manifesto was published five months after the final attack, and Kaczynski was arrested seven months after that.

In the 14 years since his imprisonment, the public has heard and read many things about Kaczynski, but nothing from Kaczynski himself until now. This book is the first comprehensive and unedited collection of his writings.

This book will *not* address the many sensational issues surrounding Kaczynski: the details of the Unabomber case, Kaczynski’s personal history, his so-called “troubled past,” the “psychology of a murderer,” or the ineptitudes of the American criminal justice system.^[25] This book does not advocate violence, bomb-making, murder, or any other heinous acts that one might fear finding here. It does not even discuss violence except very indirectly, as one potential but undefined aspect of the “revolution against technology.”

The entire focus of this book is the *problem of technology*: where we stand today, what kind of imminent future we are facing, and what we ought to do about it.

The challenge to the reader is to make a firm separation between the Unabomber crimes and a rational, in-depth, no-holds-barred discussion of the threat posed by modern technology. Kaczynski has much to offer to

this discussion even if we accept that he was guilty of certain reprehensible crimes. We do ourselves no favors by ignoring him. His ideas have no less force, his arguments are none the weaker, simply because they issue from a maximum-security cell.

Kaczynski's writings revolve around a core argument against modern technology. To briefly recap that argument:

- Human beings evolved under primitive, low-tech conditions. This is our natural state of existence.
- Present technological society is radically different than our natural state, and imposes unprecedented stresses upon us, and on nature.
- Technologically-induced stress is bad now and will get much worse, leading to a condition where humans will be completely manipulated and molded to serve the needs of the system. Such a state of affairs is undignified, abhorrent, disastrous for nature, and profoundly dehumanizing.
- The technological system cannot be fixed or reformed so as to avoid this dehumanized future.
- Therefore, the system must be brought to an end.

The logic is sound. However, we are free to challenge any of the premises. Perhaps we did not evolve under low-tech conditions—maybe God created humans 6,000 years ago. Perhaps modern technology is, in some sense, not an aberrant condition but is really our “natural state.” Perhaps the stresses of modern life will not get worse. Perhaps reform is possible. Perhaps revolution, though justified, is futile. These are just some of the responses we might make to Kaczynski's argument, and in defense of the status quo. All these points will be touched on in this book; I hope that some progress will be made.

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As will become apparent, Kaczynski is a careful, insightful thinker who makes forceful arguments against technology—arguments that are not easily refuted. In spite of this, even at the peak of the Unabomber trial, one rarely heard anything of these arguments. Instead we were treated to an interesting spectacle: a near-universal assault on his character and actions, without a shred of meaningful discussion of his ideas. This shameful,

deliberate act of mindlessness was typically “justified” in three ways—none of which are rational. These tactics need to be firmly buried, so that a real inquiry can proceed.

First: “He’s a murderer, and we must not dignify a murderer by discussing his ideas.” Based on his plea bargain, we indeed must accept that Kaczynski did deliver the fatal mail bombs. For that he is rightly punished with a life sentence in a federal penitentiary. His tactics were deplorable, and I for one do not endorse such actions.

And yet, in any civilized society even the most nefarious of prisoners has some rights. Freedom of speech is one of these. Every prisoner in any modern nation should have the right to communicate to outsiders, to express his or her ideas, and even to publish books or artwork, provided they hold to the same broad restrictions of any citizen. American prisoners cannot profit from their work—this is the famous “Son of Sam” law—but that is not at issue here. Kaczynski gets not one dime of profit from this book. But he cannot be denied the legal or moral right to express his views.

Furthermore, every document that Kaczynski receives or sends out is reviewed in detail by personnel from the US Federal Bureau of Prisons. We need have no apprehensions about him communicating secret plans to destroy the world, or to kill again.

But do we dignify Kaczynski unduly? I recall a similar concern in late 2005, when a documentary ran on American public television about Mark David Chapman, the killer of John Lennon. Similar complaints were raised: “We dignify this criminal too much by even mentioning his name”; “We should never hear his voice”; “We should never read a word of what he says,” and so on. Many opposed the documentary, and yet it was produced, and aired. And nothing was to be gained except sheer voyeurism. There was no deep message, no residual value in hearing Chapman speak. It was pure pop culture. And yet it aired, because he has a right to speak, and we have a right to know. How much more important to hear from Kaczynski—not just the mail-bomber who eluded the FBI for 17 years, but a man with ideas that challenge the core of our modern worldview, and even offer a kind of salvation.

That said, we could clearly opt to close our eyes and ears to the man. But this solves nothing. We are still left facing the same issues, and having to answer the same difficult questions. In dealing with his writings perhaps we do dignify him. But more importantly, we dignify our children,

the natural world, and ourselves—because it is these that will bear the consequences of our actions.

Second: “Sure, technology causes problems, but we’ve got no choice. What are we supposed to do, go live in a cave?” The point here, presumably, is that technological society is an irrevocable reality, and any discussion to the contrary is a complete waste of time. To this I can only say: (a) If you really think that you have no choice, then the debate is over. Kaczynski has won. If you have no choice, you have no freedom. You are little better than a slave to the system. You may be a *comfortable* slave—an Uncle Tom, if you will—but this is an utterly undignified existence. And (b), if by *cave* we mean a life *without* technology, then this is ludicrous, and impossible. For the 2 million years of our existence we have used tools—technology—to survive. It cannot be otherwise. The whole question is, what *level* of technology shall we use? We can choose simple, natural, manageable, biodegradable tools, or we can choose complex, enslaving, toxic tools.

If the cave imagery is intended as a shorthand notion for a simple, low-tech lifestyle, then I respond, yes, this is precisely what we need. We modern people think life unlivable without electricity, the Internet, air conditioning, and indoor plumbing. Obviously it was not always like this. The greatest accomplishments of humanity occurred without computers, without electricity, without plumbing. Think of it—life without computers! What barbarians those Renaissance men must have been! Those ancient Greeks—brute animals! And yet the Greeks, for example, though living with only the most basic of tools, were able to create one of the greatest societies in history. The whole point of technology, of society, is, after all, to *have a good life*; and a good life requires almost nothing at all.

The third common tactic was to raise a series of red herrings—to discuss everything about the man *except* his “crazy” ideas. His arguments no doubt pose a threat to the system, and thus many people, especially those in positions of power, are very anxious to repudiate Kaczynski and his ideas—preferably, in such a way as to avoid actually addressing them. The arguments are not easily defeated, especially by simple-minded politicians, jealous or jaded intellectuals, or apologists for big business, so they tend to mount superficial or trivial attacks. They will talk about his mental state, his upbringing, the legal circus—anything to distract the public from substantive inquiry. In this way, Kaczynski’s dangerous ideas are safely hidden out of sight. Virtually every mass media discussion of either Kaczynski or ISAIF

is guilty of this ploy; even at the height of the media frenzy, the most one could hope for would be to hear or read a few snippets from the manifesto.^[26] The cover story in *Time* the week after Kaczynski's arrest is a perfect case in point: not a word on the substance of his thinking.^[27]

One instance that was especially egregious, if only because one would have expected better, was the largely inane critique of the manifesto by Kirkpatrick Sale in *Nation*.^[28] Given a rare opportunity to provide an in-depth assessment of the piece in a high-visibility venue, Sale fumbled badly. He spends an inordinate amount of time on trivial, incidental, or pointless issues, belaboring the Unabomber's "wooden," "plodding," and "leaden" writing style, and his lack of pure originality ("thinks he's the first person who ever worked out such ideas")—as if such things have any bearing at all on the arguments at hand.

In fact Kaczynski's writing style is perfectly suited to the task. He is clear, precise, and articulate. He writes in a commonsense manner, largely free of technical terms. When he does introduce precise terms, he is generally careful to define them. He is respectful of the reader. He writes to a broad audience. He is methodical and meticulous. Clarity and precision are of utmost importance, befitting the severity of the situation.

Kaczynski's originality is not really in dispute. It is true that many of the themes he addresses have been discussed by others, but this fact takes nothing away from the force of his arguments. Quite the contrary—it only *strengthens* his position. He follows in a long line of important thinkers who had grave concerns about technology, and its potential to disrupt society. The earliest of these was Lao Tzu, the venerable Chinese philosopher of 2,500 years ago, who observed: "The more sharpened tools the people have / the more benighted the state." Sharp tools cut through the social fabric, separating people from themselves and from the world. Such tools cast us all into a dark time, from which we are unable to see our way ahead. We build them at our own risk.

Shortly afterward, Plato was making the first connection between *techné* and *logos*, and warning us about even so benign a technology as *writing*:

This invention will produce forgetfulness in the minds of those who learn to use it, because they will not practice their memory. ... [Writing is] an elixir not of memory, but of reminding... [It offers us] the appearance of wisdom, not true wisdom... (Phaedrus, 275a)

Such early reflections led, in time, to Rousseau's full-blown critique of technology in his *Discourse on the Arts and Sciences* (1750), and to Henry David Thoreau's anti-technological musings in *Walden* (1850). Not long thereafter, British essayist Samuel Butler felt compelled to issue the first unequivocal attack against the technological system:

Day by day, the machines are gaining ground upon us; day by day we are becoming more subservient to them... The time will come when the machines will hold the real supremacy over the world and its inhabitants... Our opinion is that war to the death should be instantly proclaimed against them. Every machine of every sort should be destroyed by the well-wisher of his species. (Darwin Among the Machines, 1863)^[29]

Noted philosophers like Scheler, Whitehead, and Heidegger published stinging critiques. Orwell's *Road to Wigan Pier* (1937) concludes with a penetrating and insightful attack on mechanization and the "machine society." Of special significance to Kaczynski, and the whole technology debate, is Jacques Ellul's 1954 masterpiece *The Technological Society*; his portrayal of technology as a monistic, self-driving force in the world that is able to invade all aspects of human existence, deeply undermining our freedom in the process, was as ground-breaking as it was troubling. In the 1960s and 70s, radical thinkers like Marcuse and Illich called for virtual revolution against the system.^[30] Through the present day, some elements of the so-called green anarchist movement attempt to do the same—see R. Scarce (2006).

Thus, even though Kaczynski addresses many issues which others before him have raised, he carries the analysis to a new level of intensity. His uniqueness is expressed in a number of ways. First is his relentless focus on technology itself as the root cause of our predicament; he is adamant that, directly or indirectly, modern technology is the sole basis for our most pressing contemporary problems. Second, he assigns highest value to the dignity and autonomy, or freedom, of the human being; it is these things that are chiefly threatened by technology. Third, he explicitly calls for revolution against the system, in a way that no prior critic has done. And revolution is not merely some whimsical afterthought—it is a core element of his overall critique. Fourth, he is very authoritative in his research, citing in a careful

and scholarly manner the relevant ideas that support his claims. He does not make idle statements, or offer appeals to emotion, or engage in hyperbole. Finally, Kaczynski is very pragmatic. This is not just theory for him. The situation demands action, and he offers specific plans to assist the transition to a post-technological world.

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With these pseudo-criticisms and diversionary tactics out of the way, a true inquiry can proceed. In order to move ahead and seriously tackle the problem of technology, there are three main issues that we should bear in mind:

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- (1) What is the present state of affairs? (in terms of human stress and indignity, environmental damage, etc). How bad are things at the moment?
- (2) What is our likely future in the near term; say, in the next few decades? Will things get better? Stay the same? Get worse? Get *much* worse?
- (3) What can, or should, we do about it?

Most people, being more or less adapted to modern society, would likely rate present conditions as a mixed bag: some good, some bad, some problems we need to work on but nothing imminently pressing. The near-term future they would see as more of the same—a few improvements, a few new problems, overall slightly better, perhaps. This automatically implies a conservative course of action: Carry on with the status quo, don't rock the boat, be a 'cooperator,' work hard, follow the rules, vote, hoist the flag of nationalism when called to. No major catastrophes coming, and in any case we have the government, the scientists, and corporate self-interest to take care of any problems that may arise. This view, according to Kaczynski, is naively optimistic—*dangerously* optimistic. It fails to respond to the exponentially growing power of technology, and its rapidly increasing ability to assert control over life on this planet.

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Faced with persistent technological crises, there is also the common attitude of 'no pain, no gain': "Yes, there are inevitable problems with technology, but they are a necessary part of the learning process. Without the pain of the mistakes we could not enjoy the gains that technology offers." This line of thinking would be fine, if (a) the pains were predictable, limited,

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and manageable; (b) they were fairly and justly distributed; and (c) the ‘gains’ were in fact true improvements on the human condition. Kaczynski argues, rightly I think, that all three of these assumptions are false. And not just ‘a little false,’ but radically false—false in a deeply deceiving fashion.

Kaczynski’s answers to the central questions are quite clear. In my exchange of letters with him, I pressed him on these points in order to better understand his reasoning, and to examine any weaknesses. These questions are, in fact, core issues that we all should ask ourselves. Furthermore, they do not end. This is an inquiry that must be ongoing, and responsive to the changing nature of technology itself. An answer one day may well be exposed as inadequate or fallacious the next.

One hundred years ago, Henry Ford could not begin to anticipate the highway deaths, urban sprawl, wars over oil, and global warming that his automobiles would bring. The inventors of television could not anticipate that it would lead to obesity, ill health, lower academic performance, and attention deficit disorder. The inventors of aerosol propellants (chlorofluorocarbons) could not know that they would destroy the planetary ozone layer. Early coal miners could not know that their product would disrupt the climate of the entire planet. These were not simple mistakes, mere oversights; they are an unavoidable aspect of advanced technology. We can *never* know what the consequences will be, and the more powerful and more ubiquitous the technology, the greater the risk. If global warming destroys the Earth’s ability to sustain life as we know it, then all the wonderful gains of the industrial age will be utterly worthless.

Paraphrasing Lao Tzu: *the sharper the tools, the darker the times*. We live in an age of *very sharp tools*. Consequently, it is also a very dark time. But tools cut both ways. Can they even, perhaps, be turned against themselves? Does the technological system contain the seeds of its own destruction? This may be our only hope.

We are clearly in dire need of a substantive inquiry into the problem of technology. In recent years we have seen just the beginning of what may lie ahead—a potentially catastrophic future. If most people are not yet convinced that drastic action is warranted, it is only because the worst outcomes have yet to be realized. On the other hand, if we wait until the crisis is obvious to all, it will be far too late. What can we do, *now*, to regain human dignity, defend the planet, and give ourselves the best chance for

long-term survival? This is the question that presses upon us with the greatest urgency. We ignore it at our peril. •

NOTES:

^[1] From the report “Health: US 2004,” by the US Health and Human Services Department. See AP news story, 2 December 2004.

^[2] In the bibliography, see Powers et al. (2003), and Split and Neuman (1999).

^[3] Though evidence suggests that humans also scavenged dead animals killed by other predators. But doing this, of course, still meant fighting off the competition, including perhaps the predator who made the kill. One can imagine that this still involved considerable risk, effort, and skill, especially when armed with only sticks and stones.

^[4] For the connection between modern meat consumption and cancer, see: Chao et al. (2005); Nothlings et al. (2005); Norat et al. (2005); Xu et al. (2007); Egeberg et al. (2008); Allen et al. (2008).

Also, the industrial production of domesticated meat has an astonishingly negative impact on the global environment. It produces 22% of human-induced global warming gases, more than the total transport sector combined (see *Lancet* study, 13 September 2007). According to the UN’s FAO agency, livestock directly or indirectly utilize an amazing 30% of the earth’s entire land surface area. And they represent fully 20% of the total land animal biomass (“Livestock a major threat to environment,” 29 November 2006). This cannot but have a catastrophic long-term impact on the planet.

^[5] Grant et al. (2004).

^[6] Kessler et al. (2004).

^[7] Reported by the AP (5 May 2008)—“Anti-psychotic drug use soars among US and UK kids.” See also Rani et al. (2008).

^[8] Christakis et al. (2004), and Kubey and Csikszentmihalyi (2002). Regarding the possible connection between television and autism, see Waldman et al. (2006). Autism in fact seems to be more prevalent than commonly thought; recent estimates suggest that about one of every 150 children (0.7%) has some form of this disorder, significantly higher than previous estimates (see Rice, 2007).

^[9] Aboujaoude et al. (2006).

^[10] Nakazawa et al. (2002).

^[11] See, for example, the AP story of 5 April, 2007 (“Technology may fuel recorded assaults”), citing evidence that rape and other sexual assaults are on the increase due to the ability to record and transmit images of such acts.

^[12] Carr (2008): “Is Google making us stupid?”

^[13] Reuters news story, 21 December 2004: “Mobile phone radiation harms DNA.”

^[14] *Los Angeles Times*, 25 May 2006: “Cell phone use may signal teen anxiety.”

^[15] Story by G. Lean, in the British newspaper *Independent* (18 May 2008). “Women who use mobile phones when pregnant are more likely to give birth to children with behavioral problems.” He adds,

“using the handsets just two or three times a day was enough to raise the risk” of hyperactivity and emotional problems. For the full report, see Divan et al. (2008).

^[16] As reported in the *Independent*, “using a mobile phone for more than 10 years increases the risk of getting brain cancer” (7 October 2007). Long-term users “are twice as likely to get a malignant tumor on the side of the brain where they hold the handset.” See Hardell et al. (2007). See also AP story, “Cancer expert warns employees on cell phones” (24 July 2008).

^[17] AP news story, 27 April 2007: “Schools say iPods becoming tool for cheaters.”

^[18] CNN news story, 14 April 2009: “Scientists warn of Twitter dangers.”

^[19] See Reuters news story (27 April 2007) on a report of the Irish government: “Text messaging harms written language.” Teens were found to be “unduly reliant on short sentences, simple tenses, and a limited vocabulary.”

^[20] Zimmerman et al. (2007). For each additional hour of video watched per day, infants understood six to eight *fewer* words, on average.

^[21] Dynarski et al. (2007). Among their main findings: “Test scores were not significantly higher in classrooms using selected reading and mathematics software products.”

^[22] *New York Times*, 4 May 2007 (page A1). Headline: “Seeing no progress, some schools drop laptops.”

^[23] *State of the Future Report* (2009), by The Millennium Project. As an added bonus, it now appears that the very same emissions that cause global warming also lower the IQ of unborn children. See the article in *Time* magazine (23 July 2009: “Study links exposure to pollution with lower IQ”), or Perera et al. (2009).

^[24] Forrester Research study, “The State of Consumers and Technology: Benchmark 2005” (3 August 2005).

^[25] That said, I would like to make one brief observation on his mental condition. At his trial Kaczynski was diagnosed by a government-appointed psychologist as ‘paranoid-schizophrenic.’ The inference for the public was that this man was half-insane, delusional, and incapable of rational thinking—“of course, he sent mail bombs, he must be mad.” I am not a psychologist, but in a couple hundred pages of correspondence with Kaczynski, spread out over more than six years, I have found him to be stable, rational, lucid, and extremely articulate. I have seen no indication of any mental illness. This picture, however, does not serve the interests of the government, who would like to portray anyone attempting to undermine industrial technology as insane—insanity by definition.

As further evidence, Kaczynski has passed on comments from two staff psychologists—Drs. Watterson and Morrison—at his prison. According to Kaczynski they repeatedly denied finding evidence of serious mental illness, and called the schizophrenia diagnosis “ridiculous,” “wildly improbable,” and merely a “political diagnosis.”

^[26] There were of course a few exceptions, including: Wright (1995), Fulano (1996), Akai (1997), Finnegan (1998), and Coatimundi (1998).

^[27] Gibbs (1996).

^[28] Sale (1995).

^[29] See also his essay “Mechanical creation” (1865).

^[30] Marcuse (1964) and Illich (1973, 1974).

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