

# Cold Evil: Technology and Modern Ethics

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Twentieth Annual E. F. Schumacher Lectures

October 2000, Salisbury, Connecticut

Edited by Hildegard Hannum

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## I. THE PILOT'S DILEMMA

In the early 1970s, at the height of the anti-war movement, I went with a friend to an off-off-Broadway play. The drama, called *The Rescue*, had been recommended by a fellow student radical. The small loft theater on Manhattan's Lower East Side was filled with the usual motley assemblage of young activists like me. I have long since forgotten the name of the work's author. In any case, the play, which featured the painfully earnest acting *de rigueur* at that time, was woefully written, yet as the evening progressed, I found myself thoroughly engrossed.

The play portrayed the plight of a young American bomber pilot shot down and injured while flying a mission over North Vietnam. As the drama begins, the pilot, dragging a fractured leg, is fleeing from a band of enemy soldiers who spotted him as he parachuted from his burning plane. He finally collapses and is found by a kindly old farmer, who takes him into his house. The next scenes involve the sagacious farmer and his beautiful young daughter ministering to the pilot's injuries while hiding him from a variety of pursuers, including the army patrol and vengeful neighbors furious about the destruction of their families and farms. Slowly the young man recovers his strength and begins to help around the farm. He learns to respect the life of these peasant people and, yes, falls deeply in love with the farmer's daughter.

The play's denouement is triggered when a band of Green Berets, having illegally entered North Vietnam to rescue the pilot, arrives at the farm. There is a joyful reunion of the Americans, only to be followed by the chilling news that they must kill the farmer and his daughter as security risks. In vain the young pilot pleads for their lives, arguing that they protected him and would never betray him or the rescue mission. Finally, when it becomes clear that the order to kill is irrevocable, the pilot insists on doing it himself. He takes the old man and his new love into a side room, pulls out his revolver, and after some hesitation shoots himself.

I remember the post-performance coffee house conversation being marked by outrage over the news that the United States had invaded Cambodia. But I was distracted, still mulling over the pilot's dilemma. Here is a young man who has no compunction against—in fact, is thought of as a hero for—using his airborne ordnance to hit various “coordinates,” thereby blowing to bits any number of Vietnamese men, women, and children. Yet when face to face with the order to kill just two people—people he had come to know and care about—he suddenly commits suicide

rather than escape to safety. It occurred to me then, and I still believe, that this pilot's seemingly unique dilemma actually embodies the central ethical predicament of modern society.

## II. THE ENIGMA OF MODERN EVIL

For many of us during the Vietnam War era there was little confusion about ethics or evil. "Evil" was no enigma or dilemma; it seemed easy to recognize. We saw as evil the greed of Wall Street and its neo-colonialist drive to maintain control of Third World resources. Evil was clearly represented in what we regarded as the rapacious U.S. military from General Westmoreland (whose name we always pronounced "west-more-land") to the Commander-in-Chief himself, the reviled President Johnson. Vietnam era "villains" such as these fit a familiar ethical scenario for us. Driven by greed, power, or ambition they were led to corruption, crime, and violence. We protested, were arrested, and eventually contributed to ending the war.

I have always been proud of my years in the anti-war movement. Not many generations can say that they helped stop a war by means of acts of conscience. However, we certainly did not halt "evil." And evil still seems easy to recognize. Wars have proliferated over the decades, as have terrorism and fanaticism of all sorts. Everywhere we still see the drive for power and the lure of greed. Moreover, our media are inundated with reports of individuals in the heat of hatred, prejudice, lust, neurosis, or misplaced religious fervor committing heinous crimes and causing enormous suffering. Each day, it seems, there is a media melange of murders, rapes, kidnappings, hate and sex crimes, domestic violence. As we become exposed to these daily horrors I, like many others, often wonder with a shiver, "What could have possessed the people who committed those acts?" At other times, feeling the potential "heat" of such evil-doing in myself, I think, "There but for the grace of God . . . ."

Yet the poignancy of the pilot's dilemma has continued to prod me into a more difficult and subtle exploration of "evil," the kind that is not so easily recognizable. When reviewing so many events of the last century (dubbed "the ruthless century" by poet Czeslaw Milosz) I was confronted again and again with a different and more enigmatic ethical problem than the obvious "hot" evil scenarios of violence, greed, crime, prejudice, and hatred that have become so familiar. It is certainly true that untold billions of human beings died terrible deaths in the wars of the past century, but a huge percentage of these victims were not killed face to face, accompanied by shouts of passion or hate, but rather from great distances in anonymous slaughter. Almost one-and-a-half million young men (shockingly, their average age was 17 years) were cut down in the battle of the Sommes in World War I. The vast majority were killed by machine-gun and mortar fire. They did not see their killers face to face.

Less than thirty years later hundreds of thousands of non-combatants —mostly women, children, and old men—were incinerated in the span of just a few minutes in the atomic "flashes" over Hiroshima and Nagasaki, death delivered coldly and anonymously from 20,000 feet above. For much of the last half of the twentieth century a nuclear arms race pushed the world to the brink of Armageddon—the unimaginable final destruction of all society and nature by missiles and planes poised on a computer trip line. More recently, the public has been jolted by revelations of a

whole new genre of global environmental threats to the biosphere itself, almost unthinkable perils to life on earth that we had not even suspected existed: ozone depletion, global warming, species extinction, acid rain, desertification, deforestation. Which evil people are responsible for these eco-catastrophes? And even as we produce ever more food, hunger increases at an astounding rate so that close to one billion people are starving every day. Who is starving these people?

Here we arrive at a central problem for modern ethics. Evil has never been so omnipresent as it has been over the past century, so perilous to the earth and the very future of humanity. Yet there seem to be very few evil people. It would be difficult for many of us to name any evil people we know personally. The very idea of our society being characterized by masses of evil people seems somewhat comical. All in all, there is a striking paucity of modern Mephistopheleses. And virtually no one identifies oneself as evil. Obviously, few of us relish the thought that our automobile is causing pollution and global warming or laugh fiendishly because refrigerants in our air conditioners are depleting the ozone layer. I have been in many corporate law firms and boardrooms and have yet to see any "high fives" or hear shouts of satisfaction at the deaths, injuries, or crimes against nature these organizations often perpetrate. And as noted, bomber pilots tend to be viewed as heroes, not as mass murderers. We are confronted with an ethical enigma; far from the simple idea of evil we harbored in the past, we now have an evil that apparently does not require evil people to purvey it.

### **III. THE TECHNOSPHERE**

The solution I found, over many years, to this enigma of modern evil lay in gaining a better understanding of the milieu in which I and most other modern humans live. It is commonly accepted that humanity lived the vast majority of its history (though it is called the "prehistoric" era) in direct relation to the natural world. Approximately seven thousand years ago humans were able to partially separate from our natural milieu. Primarily with the advent of agriculture and other basic technologies we were better able to control and manipulate nature as we organized larger and more complex societies. Much of our written history, laws, and ethics comes from this "social" era in our collective history. Most historians still place us in an "advanced" stage of this social milieu.

French sociologist Jacques Ellul was among the first to realize that over the past century a large segment of humanity has unknowingly entered a third sphere of existence, which he called the technological milieu. It is not nature or even society that now dominates our lives; rather, it is technology. When we define the technological milieu (which I term the "technosphere"), we refer not only to the massive and interconnected systems of machines and techniques we use but also to the technocratic organizations, including corporations and government bureaucracies, that are required in order to utilize and operate this massive and increasingly global technological infrastructure.

Without much awareness or comment on our part, the technological-technocratic system has usurped the natural and social milieus to become the primary environment in which we live. Our

homes, workplaces, transportation, food, energy, entertainment, leisure, education, and government have all been almost completely absorbed into the technological grid. If we tally the time spent in cars, in office cubicles, in front of TVs and computers, using telephones, Palm Pilots and all our other gadgets, it becomes clear that we spend the vast majority of our waking hours with technology and working for the corporations and bureaucracies required to run the vast technological system in which we live. Each of us lives more and more in a kind of technological cocoon, where much of our action and communication are determined by, and mediated through, the technological grid.

Further, living fully in the technosphere is now seen as the ultimate goal of human endeavor. So much so, that we patronizingly refer to societies still living in natural or social milieus as “undeveloped,” no matter how sustainable their relation to the natural world or how sophisticated their social organization, arts, or philosophic and religious beliefs. A central and disturbing question is: What happens to the natural and social spheres when they are subsumed into (i.e., developed into) the technosphere? In *The Technological System* Ellul gives us the chilling answer:

1. The technological environment could not exist if it did not find its support and resources in the natural world (nature and society). But it eliminates the natural as a milieu, supplanting it while wasting and exhausting it. . . . Technology acts upon the past environments by dividing and fracturing the natural and cultural realities. That implies destructuring the past milieu as an environment and exploiting it to such an extreme that nothing is left of it. For example, the well known “depletion” of natural resources results not only from abuse by the technologies, but from the very establishment of technology as man’s new milieu.

Even as it exploits, wastes, and exhausts our natural and social resources, the technosphere provides us with our means of production and survival. We utterly depend on our technological system for sustenance, and it provides us with the basis of our collective and individual dreams and desires—from visions of an endless array of products to our hopes for new techniques that will cure all disease, feed the world, and conquer the solar system. Clearly, living in the technosphere raises very different ethical questions and responsibilities than did the past milieus of human existence. We find ourselves not only in a novel physical environment, the technological system, but also in a new ethical landscape. For technology is never neutral. Whether it’s a hammer or a nuclear bomb or a piano or genetic engineering, technology always represents power, an extension of human power. And the question always arises, Is that power appropriate. Simply put, when power is inappropriate, evil results.

Understanding the full ethical revolution brought to us by the technosphere is beyond both my ken and the boundaries of this lecture; however, I believe we can now see a dramatic dichotomy between evil as it occurred in the social era of human history and evil as incarnated in the current technological sphere. When humanity was still in the social sphere, ethics tended to be a matter for the individual. Right and wrong were choices each of us could make. Evil thrived on the emotionally unstable, vulnerable, or violent individual or on those who were confused or misguided, and it had a tendency toward the irrational. By contrast, the technosphere has created a technological, institutional plane on which “the system” effectuates evil in circumstances where individuals and their emotions, ethics, or morals play no significant role.

The passionate, pathological, or satanic villainy of yesteryear has been largely replaced by a technified evil which appears cold and impersonal and as faceless as daily life in the technological milieu. Passionate, feverish "hot evil," though clearly still with us, has been largely usurped by this automatic, systemic "cold evil" in which we all partake, in which we all are complicit. As noted by M. Scott Peck, modern evil is that which "one percent of the people cause, but in which 100 percent of us ordinary sinners participate through our everyday sins."

In *The Enigma of Evil* theologian Alfred Schutze sums up this evolution of ethics in our technological times:

Whereas only a few centuries ago evil, so-called, had to be considered pertinent to moral behavior, more specifically the backsliding or weakness of the individual, today it also appears in a manner detached from the individual. It shows up impersonally in arrangements and conditions of social, industrial, technical and general life which, admittedly, are created and tolerated by man. It appears anonymously as injustice, or hardship in an interpersonal realm where nobody seems directly liable or responsible. . . . It has become the grey eminence infiltrating all areas of human existence . . . .

Unfortunately, despite the unprecedented perils it spawns, this "grey eminence," this cold evil, so intrinsic to the technosphere with its systemic exploitation of nature, culture, and societies goes virtually unrecognized. Our society continues to be deeply concerned about the remaining "evils" brought to us by the natural sphere (e.g., floods and tornadoes) and nearly obsessed with the acts of personal hot evil endemic to the social sphere. We have utterly failed, however, to register the appropriate recognition and abhorrence of this new form of institutional evil produced by and through the technological system. Our churches, moral leaders, and teachers rarely recognize or speak out against the cold evil that has impersonally devastated so many lives and destroyed and disfigured so much of creation. The tragic result of this failure is that cold evil flourishes, causing ever greater ecocide and genocide even as it remains unnamed and unaddressed.

#### IV. THE ANATOMY OF COLD EVIL

"Technology is a way of organizing the world so that we do not experience it."

—Max Frisch

A synonym for the word "cold" is "distant," and a vital component in the success of modern cold evil is the physical and psychic distance that technology creates between the doer and the deed. This technological distancing is, of course, the key to "the pilot's dilemma" that so captivated me many years ago. Using the technologies of air flight, electronic targeting, and bombs, the pilot could kill without compunction at 20,000 feet, his victims now abstracted as "coordinates," their humanity virtually invisible. Yet once he had been shot down, the technology's physical and emotional distance was removed.

In his provocative book *Faces of the Enemy*, psychologist Sam Keen quotes a pilot who served in Vietnam and who directly experienced "the pilot's dilemma." "I was OK so long as I was

conducting high altitude missions, but when I had to come in and strafe and I could see the faces of the people I was killing, I got very disturbed.” Technological distance creates the faceless quality so emblematic of cold evil. Computer scientist and author Joseph Weizenbaum noted this distancing and the ethical task it creates when he critiqued a massive bombing strategy outlined by a Department of Defense science panel during the Vietnam war:

These men were able to give the counsel they gave because they were operating at an enormous psychological distance from the people who would be maimed and killed by the weapons systems that would result from the ideas they communicated to their sponsors. The lesson, therefore, is that the scientist and technologist must, by acts of will and imagination, actively strive to reduce such psychological distances, to counter the forces that tend to remove him from the consequences of his actions. (“Closing the Distance” in *Visions of Technology: A Century of Vital Debate About Machines, Systems and the Human World*, ed. Richard Rhodes)

Needless to say, our military scientists and technologists have yet to demonstrate the “acts of will and imagination” called for by Weizenbaum to breach psychological distancing. Far from it. During the Persian Gulf War enemy troops and houses were viewed by pilots as so many blips on computer screens, blips which disappeared after a “hit”—a kind of desert Nintendo. Television stations such as CNN seemed particularly enamored with the images of the computer-generated “hits.” It was not until long after the war that we learned about significant human “collateral damage” caused by the weapons’ surprisingly large margin of error.

Nuclear war perhaps best exemplifies the facelessness and technological distancing that confounds traditional ethics and creates the cold-evil scenario. The nuclear annihilation of much of the human race is designed to take place thousands of miles away, through aptly named inter-continental ballistic missiles. These weapons, capable of destroying life as we know it, are to be launched half a world away from the intended targets. To compound the physical and psychic distancing and further deflect responsibility, the missiles will not even be launched by humans but rather by technology—computers programmed to assess the threat and make the “cold” launch decision.

When contemplating cold evil’s military incarnations we see not only the ethical consequences of distancing but also the critical role of scale. Kirkpatrick Sale has written eloquently in *Human Scale* about the crucial role scale plays in all aspects of contemporary life. It is also an essential problem of modern ethics. When technology allows us to deliver weapons (or energy, food, education, etc.) on a tremendous scale, personal contact and responsibility are lost. Imagine if one had to kill millions of people one at a time with a sword. Contrast this with allowing a computer to annihilate the same number of people with a few nuclear bombs. The sword, however destructive, is a human-scale weapon that has a very circumscribed ability to kill. By contrast, the nuclear bomb’s scale is almost unlimited and its consequences beyond individual or even social control.

Ethical distancing and ethical problems of scale are not limited to high-impact military technology. The behavior and nature of modern technocracies, business, and government organizations are equally illustrative of this cold evil. Witness how corporations, now working on the global scale, routinely make calculated decisions about the risks of the products they

manufacture. Typically, they weigh the cost of adding important safety features to their products against the potential liability to victims and the environment and then make the best "bottom line" decision for the company. More often than not, safety or environmental measures lose out in this calculation. As for people or nature, they have been "distanced" into numerical units relegated to profit-or-loss columns. The corporations then decide how many units they can afford to have harmed or killed by their products.

We witness daily the way the modern corporation has become distanced in time and space from its actions. A pesticide company has moved to another country or even gone out of business by the time—years after it has abandoned its chemical plant—the local aquifer and river have become hopelessly polluted, fish and wildlife decimated, and there is a fatal cancer cluster among the families relying on the local water supply. The executives of a tire company are thousands of miles or even a continent away and do not hear the screech of wheels and the screams as their defective tires burst and result in fatal crashes.

The workings of the global trade and finance corporations and organizations epitomize the physical and psychological distancing of cold evil. In the isolation of their First-World offices, members of the World Trade Organization and their partner financiers and economists of the World Bank and the International Monetary Fund (IMF) make decisions affecting millions. This is most evident in the imposition of "structural adjustment" measures on developing countries. For decades the IMF and World Bank loaned money at considerable interest to "developing" nations, essentially to capitalize modernization and technification. The funding was often for huge, ecologically devastating industrial projects. Not surprisingly, much of the money ended up in the hands of corrupt governments or as kickbacks to First-World corporations. As payments became overdue and interest rates skyrocketed, many countries found themselves unable to repay these loans. To solve this repayment problem the IMF and World Bank implemented a series of "structural adjustment programs" (SAPs). These programs involve renegotiating a country's loan on more favorable terms if it agrees to "adjust" its spending policies, which means reducing wages, lowering labor and environmental standards, slashing social programs (particularly in health, education, and welfare), and allowing increased foreign domination of the country's industries.

The effects of the SAPs have been disastrous. Millions have lost their jobs and find themselves with no access to housing, health care, or food. Spending on education in many countries has declined by more than 25% in less than a decade. It is now estimated that as many as 19,000 children die every day from disease or malnutrition as a direct consequence of the SAPs mandated by the IMF and World Bank. Yet despite its horrific toll, the cold-evil practice of structural adjustment has gone without ethical censure until quite recently. Contrast this indifference with the public and media outrage that would erupt if a group of terrorists, driven by hot-evil hatred, were killing thousands of children a day. It is now accepted, even by the global financial technocracies, that SAPs have been fiscally ineffective as well as socially and environmentally devastating. But the trade technocrats and corporations simply view this outcome as a policy "miscalculation" that requires "modification."

Cold evil's distancing is also profoundly present in those who work for corporations and other

technocracies. Our minute and specialized jobs have separated us from ethical consideration of our collective work. Whether processing financial statements at a bank, riveting at a Boeing plant, litigating for a large law firm, or delivering on-line data to corporations, most people's work represents a tiny cog in the great machine of production. As a result, we become psychologically numbed and removed from the ultimate consequences of the collective work being done. We fall into what E. F. Schumacher termed "the sullen irresponsibility" of modern work. Moreover, even if a worker were somehow able to overcome this irresponsibility, to breach the distance and cry out against the immorality of modern production ("I reject this alienating labor. Stop the machines; they are destroying nature, society, and the dignity of work!"), that person's employment would quickly be terminated.

Virtually all corporations and government bureaucracies are dictatorships in which autocratic managers quickly punish any underling who begins to demand an ethical basis for work and production. Each of us is caught, therefore, in a kind of job blackmail. By allowing ourselves to become numbed by inhuman, meaningless work and to become fully distanced from what we actually produce, we forsake responsibility for the consequences of our production system. We sell our moral birthright in order to "pay the bills." In this way we each experience our own "pilot's dilemma." The distancing endemic to our huge technological system and the massive private and public technocracies that run this system have turned workers, the vast majority of us, into ethical eunuchs and even unintentional criminals.

Whatever their ultimate moral and physical cost, our paychecks do allow many of us to become profligate "consumers." This cold-evil lifestyle is termed "the good life." We proudly bring home the new, convenient, "family friendly" SUV, fully distanced from the global warming to which this gas guzzler contributes and the respiratory illnesses it cause in our and our neighbors' children. Similarly, we buy our kids hamburger meals with "happy face" logos. But both parents and children would recoil with horror if suddenly forced to participate in the almost unspeakably cruel slaughter of the particular cow involved or to take a power saw to the rain forest or personally commit the other environmental crimes behind so many of our fast-food burgers. We turn the computer on without stopping to think that the power is supplied by a nearby nuclear power plant with all of its social and environmental risks. We even feel virtuous eating our vegetables, without a thought to the topsoil loss, pesticide pollution, and loss of diversity caused by their industrial-style production. If we paid attention to the sources of what we buy, we would find that we are complicit in myriad wrongdoings stemming from the technosphere's systemic evil, which is not easily recognized because of the distancing involved.

## **V. THE TECHNO-COCOON**

In recent years the technological system has engendered the ultimate in psychic distancing. Whether we are in the automobile, office, or airplane or using the television, computer, or telephone, we are ever surrounded and circumscribed by technologies and technocratic thinking. Our daily work usually involves being cocooned indoors in artificially lit, temperature-controlled, machine-laden office cubicles and locked into the technocratic hierarchies emblematic of corporate and bureaucratic life. As for our non-work hours, the average American spends more

than four hours a day in front of the TV and an increasing number of hours using a computer. In the transition between home and work the majority of Americans commute to work alone, inside temperature-controlled cars and utilizing their radios or stereo systems. This absorption of each individual into what I call the "techno-cocoon" profoundly limits our experience and consciousness of anything not part of the technosphere.

As a result of techno-cocooning, huge segments of the population have become autistic in relation to the natural world. Non-human creation is almost completely ignored; when we do notice nature, it is usually viewed on television or glimpsed from a whizzing car, train, or plane. For the short periods when we *are* in nature, it is usually experienced as technological recreation (re-creation) mediated through the roar of RVs, motor boats, jet skis, snowmobiles, and other power toys.

Our circumscription by technology has also made us autistic in relation to one another, markedly eroding our social lives in recent years. Come twilight time, I often note the startling difference between the streets of suburban northern Virginia, where I currently live, and those of Queens, New York City, where I was raised more than three decades ago. When I was growing up, people talked on the stoops in the evening, kids played games together, babies were walked in strollers—there was a real sense of neighborhood. Now, as I walk my dog each evening along successive suburban cul de sacs, what I see are the glowing blue lights emanating from the various TVs and computers in each home as family members individually cocoon themselves into their favorite night-time techno-entertainment or work. This technologically engendered isolation and collapse of community are not merely anecdotal. Author and scholar Robert D. Putnam, in his aptly titled study and later book *Bowling Alone*, carefully documents the precipitous decline in all forms of civic participation during recent decades.

Many argue that rather than eroding our social lives, techno-cocooning actually expands the scope of our interaction with others. After all, people are making contacts at an astonishing rate. We are constantly communicating with others by telephone, e-mail, and "chat rooms" as well as catching up with the rest of the world via TV, radio, and the Internet. The obvious problem is that all these contacts are mediated through technology and its ever-present distancing. All of the human connections in the techno-cocoon are "long-distance" ones. There is little or no human-to-human (face-to-face) communication taking place. This creates a tragi-comic paradox for those living in the techno-cocoon: in a world of ever expanding, near universal communications, we grow ever more alone, locked into the noisy solitude of the cocoon. As activist Beth Burroughs quips, "Sex on the Internet is mostly typing."

Ultimately, techno-cocooning makes impossible the "acts of will and imagination" that Weizenbaum so aptly calls for to restore ethics to our society and to end cold-evil distancing. Recovering a sense of ethics is permanently precluded by our circumscription into the perpetual distancing of the cocoon. Passively and with little awareness, we abandon our minds and wills to the convenience, power, and amusement offered by the technological cocoon. In fact, the technological environment becomes to us as water is to fish; we do not consciously recognize that we are enclosed in a cocoon. We do not experience the ongoing devastation of nature, society, or even our own spirit.

As we slip into near total technological autism, we cannot hear the great machines as they level the world's forests and dig up and destroy the earth. We cannot hear the cries of animals being abused, slaughtered, or harassed to extinction. We cannot see the suffering of our fellow humans, whether they are the homeless we step over to reach our cars and offices or even despondent members of our own family locked into nearby, but utterly separate, cocoons. We do not recognize the banalization and ultimate death of our own will and imagination as we "amuse ourselves to death." All in all, the techno-cocoon provides a kind of final anatomy of cold evil, creating a continuous buffer between each person and the many horrific wrongs of our technological system, sins in which we are all complicit and yet blissfully unaware of our complicity. We sit in our cocoons, fully alienated from nature and one another while fully entranced by and engaged with machines. This mass autism is surely unprecedented in both the scope and extent of its alienating impacts. We literally are no longer present to participate in the Creation, the social world, or the spiritual world. The diremption caused by cold evil is complete. We are deprived of the very relationships required for our healing.

## VI. THE IDEOLOGY OF COLD EVIL

Pig number 6707 was meant to be "super"—super fast-growing, super big, super meat quality. He was supposed to be a technological breakthrough in animal husbandry. Researcher Dr. Vern Pursel and his colleagues at the U.S. Department of Agriculture had used our taxpayer money to design this pig to be like no other, and to a certain extent they succeeded. No. 6707 was unique, both in his general physiology and in the very core of each and every cell. For this pig was born with a human growth gene engineered into his permanent genetic makeup, one of hundreds of thousands of animals that have now been genetically engineered with foreign genetic material. I met the pig and his creator over a decade ago while doing research for my book *The Human Body Shop*. Pursel's idea was to engineer human growth genes into livestock in order to create animals many times larger than those currently being bred.

Pursel's pig did not turn into a super pig. The human genetic material injected into the animal at the early embryo stage had altered its metabolism in unpredictable and horrifying ways. By analogy, imagine injecting elephant growth genes into an early human embryo and the physiological changes that would accrue. The human growth genes caused huge muscle mass in the pig, which made it crippled and bow-legged and riddled with arthritis. The genes also made it impotent and nearly blind. This deformed pig could not stand up and could be photographed in a standing position only with the support of a plywood board. When I asked Pursel about his purpose in creating this pathetic creature, he responded that he was attempting to make livestock more efficient and more profitable. As for his failure, he said that "even the Wright brothers did not succeed at first." My attempts to point out the difference between the pig and a machine (i.e., airplane) were met with an uncomprehending shrug.

Instead of changing technology so that it fits life, the breathtaking attempt is being made to change life so that it fits technology—to genetically engineer plants and animals so that they will fit with global warming and survive the rising temperatures; to genetically engineer our farm

animals so that they can survive in the factory-farm system; and yes, even to genetically engineer us, so that we can survive in the technological world to come. Here I am only touching upon something that calls for another lecture!

We have seen how technology masks its consequences through physical and temporal distancing, thus creating a psychological disconnect between the doer and the consequences of the deed. There is another mode that modernity has brought us that creates and compounds psychological distancing and cold evil *without* physical or temporal distance. Here Pursel was not physically distanced from the suffering he was creating, for he was with pig no. 6707 day after day, carefully assessing each deformity and reaction. But he was ensconced in habits of thinking that were as effective in psychologically distancing him from his actions as any physical distance.

No. 6707 is vivid and tragic evidence that cold evil is not only a function of technological distancing but also of certain “trickle-down” ideologies that have over many generations now become habits of thought. These imbedded secular dogmas separate us from the ethics of our actions just as surely as spatial or temporal distancing. Pursel was motivated to genetically engineer pig no. 6707 by his belief in objective science, efficiency, profit, and a mechanistic view of life. These ideologies have also become the central dogmas underlying the technosphere. They are modern credos born centuries ago of the minds of some of the Enlightenment’s great thinkers. I am not suggesting that animal researchers or other purveyors of cold evil have read up on their Descartes, Bacon, or Adam Smith. Quite the contrary: I believe that certain basic tenets of these philosophers have trickled down from the scientific and academic elite to become habits of thinking and perception for the general public. These ideologies now go virtually unexamined, yet they provide the basic rationale for much cold evil.

### **The Cult of Objectivity**

One of the epochal moments in the history of Western science occurred on June 22, 1633, when Galileo, under extreme pressure from Church inquisitors, “abjured” his heresy that the earth revolves around the sun. Since that time Galileo has remained an ultimate symbol of modern enlightenment martyred by the forces of superstition and prejudice. Yet if we consider the nature of the cold evil so prevalent today, we can bring charges against Galileo anew. For his real crime was not his understanding of the nature of the heavens but rather his seminal role in creating what could be called “the cult of objectivity”—resulting in a science and science community that have largely been purged of subjectivity and qualitative human thought.

Galileo, a mathematician, was convinced that the natural world could not be understood through participation, relation, or metaphysical or spiritual work; rather, he maintained that the truth could be found only by means of *objective* quantitative measurement and rigorous mathematical analysis. All the “warm” aspects of the human—memories, senses, kinship, relationship—he dismissed as subjective and immeasurable and therefore without value in the scientific search for truth. Galileo wrote that color, taste, and all subjective experiences were “merest opinion” while “atoms and the void are the truth.” He then carried this argument one incredible step further, positing that what cannot be measured and reduced to number is not real. This philosophical

“crime” of amputating human qualities from the search for truth is summarized by historian Lewis Mumford in *The Myth of the Machine*:

Galileo committed a crime far greater than any dignitary of the Church accused him of; for his real crime was that of trading the totality of human experience for that minute portion which can be observed and interpreted in terms of mass and motion. . . . In dismissing human subjectivity Galileo had excommunicated history’s central subject, multi-dimensional man . . . Under the new scientific dispensation . . . all living forms must be brought into harmony with the mechanical world picture by being melted down, so to say, molded anew to conform to a more mechanical model.

The magnitude of the revolution in science inaugurated by Galileo and his fellow Enlightenment thinkers is difficult to comprehend. Perhaps philosopher Scott Buchanan best encapsulated this transformation when he described Galileo and his generation of thinkers as “world-splitters.” For that is what they were. Focusing fully on treating all of life and creation in cold, strictly mathematical and mechanical terms, they created a lasting dualism by separating the quantitative and qualitative, the objective and subjective. Regarding all the warm, subjective, and feeling functions of the human as incapable of quantification and therefore of little or no importance, they elevated one value, the objective, as the only road to truth. Their dualism resulted in the attempt to completely eliminate human subjectivity from the scientific search for knowledge and truth. This cult of objectivity is thus based on the pathetic fallacy that somehow the observed can be separated from the observer, a fallacy which has disfigured and deformed science for centuries.

The cult of objectivity also provides the central ideological underpinning for cold evil, offering a sure ideological defense against any attempt to reduce distancing through the infusion of qualitative human experience, whether it be feeling, relationship, participation, or culture. Its influence results in a “just the facts,” “bottom line” conception of truth. Whoever seeks to break the bondage of cold evil, to strike out against that “grey eminence,” is inevitably accused of being unscientific or, even worse, emotional. When we protest against the dangers of nuclear technology, the dire effects of global warming, the massive destruction of wildlife, forests, and biodiversity, or the monstrous creations of genetic engineering, we are inevitably warned not to react emotionally but rather to rely on purportedly objective “experts” using “sound science.” We are intellectually bludgeoned into abandoning our protest and acquiescing to the objective “laws” and methods of science, the cold facts. As a result, the arts and philosophy are ghettoized as entertainment or academic pursuits while love of, and participation in, nature are dismissed as “romantic.”

The cult of objectivity results in a kind of social schizophrenia that separates our public lives from our private lives. If we tried to bring the cult of objectivity into our family setting, we would correctly be viewed as insane. If a mother described her child solely in mathematical terms, stating that all the rest is “unreal,” she would be an appropriate candidate for institutionalization. Yet this objectivist view is exactly what determines public policy in science, law, and much of our governmental and educational systems. Woe to the scientist who would speak of scientific truth received through poetry, long meditation on a salmon, or the experience of a Mozart piano concerto; woe to the lawyer who would ask the judge to use intuition in resolving the case; or even to the biology teacher who would teach that all of life has an “inside,”

a soul.

The ideological hold of the cult of objectivity is so strong that as a society we have virtually eliminated human culture and subjectivity as part of our scientific pursuit of knowledge and truth. Our policies continue to be guided by the cold objective values of quantification and measurability; they ignore intuition, emotional understanding, spiritual wisdom, and all the warm, subjective human values so needed for our healing and wholeness. The continued reign of the cult of objectivity among our scientific and policy elites is a fundamental precondition of the technosphere and ensures the continuing spread of cold evil.

### **The Cult of Efficiency**

Just four years after Galileo's historic confrontation with the Church another mathematician, René Descartes, published his now famous *Discourse on Method*. Among its many provocative arguments was his revolutionary view that animals are really "beast machines," nothing more than "soulless automata." In a memorable passage Descartes writes, "I wish . . . that you would consider all the functions [of animals] neither more nor less than the movements of a clock or other automaton . . . so that it is not necessary, on their account, to conceive within any animal any sensitive soul . . . ." This mechanistic concept of life quickly became a *cause celebre* as theologians and others attacked the *bête-machine* theory. But the Cartesians were adamant and became active adherents and practitioners of vivisection. Jean de La Fontaine gives us an account of where Descartes's theory led his followers:

There was hardly a Cartesian who didn't talk of automata . . . They administered beatings to dogs with perfect indifference, and made fun of those who pitied the creatures as if they had felt pain. They said the animals were clocks; that the cries they emitted when struck were only the noise of a little spring which had been touched, but that the whole body was without feeling. They nailed poor animals up on boards by their four paws to vivisect them to see the circulation of blood, which was a great subject of conversation. (Quoted in Leonora Cohen Rosenfeld, From *Beast Machine to Man Machine*)

As with Pursel's work and much of modern day animal research, it is hard to imagine a more telling picture of cold evil, here spawned by the ideology of mechanism. This ideology is summed up by historian Floyd Matson, who notes, "With Descartes all of life has become a machine and nothing but a machine: all purposes and spiritual significance alike have been banished."

In the centuries since Descartes we have fully entered the technological milieu, and as we create our great machines, they in turn re-create our images of ourselves. The extent to which the incorporation of mechanism has trickled down into the general public consciousness is evident in the manner in which we describe ourselves. We speak of our soldiers as "fighting machines"; our leaders ask us to be "mighty engines of change," and our bedroom partners call on us to be "sex machines." When we are tired, we say we are "worn out" and "run down," perhaps near a "breakdown." Cold evil thrives when all of life is viewed in terms of machinery. What dignity or responsibility inheres in a machine? How can machines love or care or feel? The habit of perceiving life as machine ultimately distances us fully from our own humanity and from the

entire living community.

Perhaps the greatest impact of Cartesian mechanism is its creation of the cult of efficiency. Efficiency—maximum output with minimum input in minimum time—is an appropriate goal for the productivity of machines. Under the sway of mechanism, however, efficiency has metastasized over the past century into the principle virtue, not just for machines but for all life forms as well. We have undergone a kind of mechano-morphism, turning all life into machines and then judging and changing life utilizing the mechanistic value of efficiency. The effort to make humans more efficient began in earnest over a century ago when the eugenics movement became accepted public policy in the United States and led to the sterilization of thousands of the “unfit.” The cult of efficiency was further forced on humans in the years prior to World War I by the pioneering work of U.S. mechanical engineer Frederick Winslow Taylor, who began a managerial revolution to make workers more efficient in the newly developed assembly-line method of production.

Over the generations the trickle-down effects of the cult of efficiency have turned into a veritable flood. Efficiency has become our number one unquestioned virtue. A large part of our public and personal lives is constructed around this cult. As a society we repeatedly urge efficient government, an efficient and productive work force, efficient use of natural resources, and efficient use of *human* resources (that’s us!). Everyone is trying to become more efficient. We have all become “multi-taskers,” using the best-selling minute-manager manuals for reference (surely *The Nanosecond Manager* will be a bestseller of the future).

As demonstrated by the creation of pig no. 6707 the cult of efficiency is leading to enormous potential crimes against life. The great philosopher Owen Barfield in his seminal work *Saving the Appearances* warned that “those who mistake efficiency for meaning inevitably end by loving compulsion.” Now the genetic engineers such as Pursel are literally remaking the genetic code of the world’s life forms in order to make them more efficient. Humans are not to be spared, as indicated by a recent report with recommendations by the U.S. Department of Commerce and the National Science Foundation; altering the permanent genetic make-up of humanity to increase the “efficiency of performance” is now a top scientific priority. Even as the doctrine of efficiency is becoming the dictate for biotechnology, nanotechnologists tell us that they will soon be rebuilding all of matter, molecule by molecule, to make it more efficient.

As with the cult of objectivity, if the efficiency principle is applied to private life, it quickly turns into the ludicrous. This should not surprise us, for efficiency is a machine value, not a life value. Is a father to treat his children efficiently, giving them minimum food, affection, and “quality” time for maximum good behavior or academic performance? Are we to treat our friends according to an efficiency calculation? Do we treat our beloved pets on an efficiency basis? Most pets produce nothing at all (my dogs specialize in spoiled rugs and chewed baseball gloves), but we lavish on them our love and affection. In fact, all these relationships are based not on efficiency but on empathy and love. Yet the cult of efficiency has robbed much of our public life of the language of empathy. Thus, the cold-evil cruelties of the workplace, slaughterhouse, and research laboratory overwhelm the values that could reform and heal them.

## The Cult of Competition

In 1993, after the hard-fought passage of the North American Free Trade Agreement, a victorious President Clinton issued a paean to the glories of economic competition: "In an economy where competition is global and change is the only constant, our only chance is to take the world head on, to compete and win. . . tonight we have not flinched. Our people are winners . . . tonight we are ready to compete and win to shape the world of the 21st century." Critics quickly asked what it really meant to economically "win" against other countries. Was it right to enthusiastically herald competition and victory that would result in increasing poverty, unemployment, and social unrest in the "losing" countries? Despite this criticism, most in the media praised the White House for strongly reasserting that economic competition is the very basis of U.S. economic life and success. The competition ethic does not apply only to economics. In *No Contest: The Cult of Competition* educator Alfie Kohn observes that competition permeates virtually every aspect of our lives: "From the time the alarm clock rings until sleep overtakes us again, from the time we are toddlers until the day we die, we are busy struggling to outdo others. This is our posture at work and at school, on the playing field and back at home. It is the common denominator of American life."

How did competition become the common denominator of our lives? Once again, it is because an ideology has trickled down to become part of the public consciousness. Anthropology teaches us that competition was never, prior to modernity, the manner in which a society allocated scarce resources. As historian Marcel Mauss writes, "Nowhere in the uninfluenced primitive society do we find labor associated with the idea of competition." The idea of competition as the means of achieving economic survival and furthering one's self-interest is relatively recent. Eighteenth-century philosopher Francis Hutcheson was looking for rules of human behavior that would be analogous to the newly discovered laws of physics. He finally determined that the greatest motivator of life is self-interest, asserting that this ethic is to social life what gravity is to the physical universe.

In 1776 Adam Smith, Hutcheson's most notable pupil, published *The Wealth of Nations*. This book would become a gospel of the new competitive economics. Smith maintained that each individual freely pursuing his own selfish needs would, without intending to, contribute to the economic and moral good of all. He thus saw the market as an almost divine "invisible hand" that would magically turn selfish competition into unintentional altruism. Smith's teachings encouraged the growth of the Industrial Revolution and our entry into the technosphere, providing the "moral" basis for the development of the capitalist-industrial state. Today Smith's theories concerning self-interest, competition, and the market have evolved into a veritable faith in human secular salvation through a self-regulating market.

As with objectivity and efficiency, competition is a "cold" ethic. It is the ethic of isolation and annihilation, separating us one from the other in the blood sport of making a living and leading us to desire the annihilation of the competitive other. As we each relentlessly pursue our self-interest, we become ever more cold-hearted and isolated, ever more autistic—the very prescription for a cold-evil society. Psychologist Nathan Ackerman gives a telling description of

the pathology of competition: "The strife of competition reduces empathetic sympathy, distorts communication, and impairs the mutuality of support and sharing."

Morton Deutsch, perhaps the most well-known researcher in the psychology of competition, describes the mind-set required of those mired in the cult of competition: "In a competitive relationship, one is disposed to . . . have a suspicious, hostile, exploitative attitude towards the other, to be psychologically closed to the other, to be aggressive and defensive towards the other, to seek advantage and superiority for self and disadvantage and inferiority for the other" (quoted in Alfie Kohn's *No Contest*). The proliferation of this mind-set in the competitive market system acts as a powerful disincentive to practicing the empathy and cooperation so essential to fighting cold evil. The isolation and emotional stunting of competition exacerbate technological autism and match perfectly the individual technological cocooning now reaching epidemic proportions. Finally, as with objectivity and efficiency, competition acts as an ideological defense against those attacking cold evil, who are regarded as mere sore losers in the game of life.

### The "Cold Trinity"

Modernity has brought with it increasing tolerance for diverse religious beliefs and traditions. We are rightfully proud of our pluralistic religious environment. Yet over the years I have grown skeptical about this purported robust religious pluralism. The almost unquestioned acceptance of the cold-evil ideologies of objectivity, efficiency, and competition makes it obvious how little our religious beliefs affect our social practice. I have come to a far different conclusion about the diversity of our religious life: I now believe that we tolerate various religions with increasing ease because they have gradually become tangential and irrelevant to the actual workings of the technosphere and do virtually nothing to impede the work of that grey eminence "cold evil." I see somewhere in the dark oracular workings of the technosphere a single "default" religion made up of these ideologies, a religion whose doctrines the vast majority consciously or unconsciously believes.

This new secular religion is, of course, Progress. Almost a half century ago philosopher Richard Weaver, in *The Ethics of Rhetoric*, noted the central religious position that "progress" has taken in the modern technological state: ". . . 'progress' becomes the salvation man is placed on earth to work out; and just as there can be no achievement more important than salvation, so there can be no activity more justified in enlisting our sympathy and support than 'progress.'" Our faith in technological progress may be obvious, but I think it is more difficult, and not completely fanciful, to see that it has a governing trinity. The secular "cold trinity" of Progress apes the Christian trinity in a tragi-comic way: Science will let us know everything; Technology will let us do everything; the Market will let us buy everything. Science takes the place of God the Father in this new trinity. Mysterious and unknowable to all but the cognoscenti, science has its own objective, unemotional laws and rules, which define the universe. To find "the Truth" it has its own unwavering impersonal process (ritual), known as "the scientific method." Any statement that begins "Science tells us . . . has the imprimatur of unquestioned truth."

Technology plays the role of the incarnated God, The Son. Science incarnates in our daily lives

as technology. It is an admittedly inhuman, cold, mechanical incarnation, yet it manufactures miracles. Technology saves lives, allows us to fly and to speak to others who are thousands of miles away, and creates so many other everyday wonders. Our belief in the Father (Science) is bolstered by the acts of the Son (Technology), which appear to be devoted to making our lives a "heaven on earth." Technology also has its impersonal, unquestioned commandments based on its mechanical nature, the aforementioned "laws" of efficiency. Importantly, Technology takes on the mysterious nature of its progenitor Science. After all, few of us understand how even the most basic technologies (telephone, television) actually work. So Technology is in this world but, at least to our consciousness, not wholly of this world. It is a kind of incarnated magic.

Our adoration of Technology, despite its dominance over our lives, is not with us at all times, nor does it fully motivate our daily lives. Although we do not understand our technologies, we soon tend to take them for granted, so an animating, ever-visiting third member of the trinity is needed: the Spirit (the Market). We wake every day, go to work, and make money—with a deep desire to buy. Just as in traditional theology the Holy Spirit gives us access to the Son, so too the Market gives us access to (the ability to purchase) Technology and brings it into our lives. It is this spirit of acquisition that brings us fully to the trinity. The Market also takes on the numinous quality of Science and Technology. As noted, its "laws" of supply and demand and competition are unquestioned dogmas that control public policy in virtually every sphere of our national and global economic lives. They are laws to which almost all of our economists and politicians genuflect on a daily basis.

The cold trinity provides a powerful, though mostly unconscious, arsenal for the defense of cold evil. No matter what environmental horror or exploitation of animals or humans occurs, it can be rationalized through the trinity, whereas complaints against cold evil are routinely condemned as heresies. The trinity acts as a kind of implicit enclosure of the spirit, a spiritual cocoon, blocking society from any incursion against the cold and binding laws of Science, Technology, and the Market. Questioning any one part of the trinity leads to immediate suspicion, the potential ouster from serious discussion, or loss of influence. Those "heretics" who would expose the cold evil inherent in this default religion of Progress risk ridicule as well as academic and social excommunication.

## VII. Relationship and Healing

Mankind has gone very far into an artificial world of his own creation. He has sought to insulate himself with steel and concrete from the realities of earth and water. Perhaps he is intoxicated with his own power, as he goes farther and farther into the experiments for the destruction of himself and his world. For this unhappy trend there is no single remedy—no panacea. But I believe that the more clearly we can focus our attention on the wonders and realities of the universe about us, the less taste we shall have for destruction.

— Rachel Carson

Like Rachel Carson, I have no panacea for addressing the growing threats of cold evil, entwined as they are with so much of our daily lives in this technological society. There is, however, a first step we can take, and that is to gain awareness. As E. F. Schumacher writes in *A Guide for the Perplexed*, "Only if we *know* that we have actually descended into *infernal regions* where

nothing awaits us but 'the cold death of society and the extinguishing of all civilised relations' can we summon the courage and imagination needed for a 'turning around,' a *metanoia*." One major obstacle to attaining this awareness is our current monolithic view of evil as only the hot evil of terrorism, crime, or personal violence. Until we confront the cold evil in which we are complicit and recognize the potential catastrophic threat it represents to ourselves and Creation, we cannot hope for the *metanoia* of which Schumacher speaks.

As for dealing with cold evil directly, I know that there cannot be healing or atonement without relationship. Our task is to restore our relationships with one another and the natural world. As with the bomber pilot, our only hope for restoring this relationship is to shatter the distancing so critical for cold evil. We can start by educating our children to the sense of wonder Carson speaks of, taking them into nature as often as possible and teaching them the ways of soil and wildlife.

We can also break distancing by using our imagination to alter the language of cold evil that has almost become second nature to us. For example, we could stop saying "consumer" to define our role in the technological system. To consume means to destroy (as in a consuming fire) or to waste (tuberculosis was called consumption because it wastes away the body). We must no longer be mere consumers, destroying and wasting the natural world. We must no longer be complicit in the crimes of our industrial system. To face cold evil we must become creators, not consumers. We must break out of our techno-cocoons and recognize that the actions we take in deciding which products to buy or which services to use or render will create a better future for ourselves and the earth. We must take responsibility for the consequences of how we fulfill our basic human needs. Further, we must become true citizens, asserting our sovereignty over corporations and not allowing ourselves to be mere consumers of what they provide us.

We must also attempt to change our relationship to work. We can no longer be content with mere "jobs" and the wage blackmail through which cold evil works. Despite often overwhelming economic pressures, we must at least attempt to seek a vocation, a calling, that expresses our values and fits our needs. Our work should be a "profession," a profession of our beliefs—good work whose consequences we can embrace.

In addition, we must learn to regularly practice heresy against the religion of Progress. We must reinfuse science with the qualitative experiences required for any holistic search for truth. We must balance efficiency with empathy, and competition with cooperation, not only in our private lives but also in our policy and public discourses. We must never allow the word "progress" to be used except in the context of the question, "Progress toward what?" We then must redefine progress as movement toward a future vision in harmony with the Creation and our spiritual needs.

Ultimately, confronting cold evil requires us to begin dismantling the totalitarian technological structures and systems in which it thrives. Our technologies and technocracies currently legislate our complicity in cold evil. Most of us cannot control where our energy or food comes from, where our taxpayer dollars go, what is taught in our public schools, whether or not to use automobiles, or even what jobs we will have. Moving toward the restoration of human scale in

our social and production systems as an alternative to current global-scale organizations and technologies may be the only way to permanently defeat the distancing that has been such a moral disaster for modern humankind. We can start small by growing our own food or joining a Community Supported Agriculture group or starting a local drive for sustainable transportation and energy. As E.F. Schumacher teaches in *Good Work*, "I can't myself raise the winds that might blow us, or this ship, into a better world. But I can at least put up the sail so that when the wind comes, I can catch it."

There is, of course, a metaphysical part of this work. In the memorable words of Father Thomas Berry, our current economic and technological systems have turned all of nature "from a community of subjects into a collection of objects." To restore relationship and begin healing we must again treat the living kingdom as a community of subjects, each with its own meaning and destiny, its own *eidos* and *telos*. Living beings must never be treated as mere objects, commodities, or means of production. Moving toward this new moral community involves nothing less than replacing the infrastructure of cold evil with technologies and human systems that are responsive to our physical and spiritual needs and the needs of the rest of the biotic community. This requires evolving a means of production and social organization for which we can truly take responsibility. It is a daunting, even overwhelming task, but the alternative is to continue to live in a state of cold evil, complicit in the current system's crimes and distanced from relationship and healing. This we can no longer do.

If we are going to rid ourselves of the cold evil threatening the biosphere, destroying society, and emptying our children of all meaning, we simply must devolve our technological systems so that they are democratic, so that they can be responsive to us and we can take responsibility for them, and so that they comport with nature, with life forms on the earth.

There is absolutely no doubt that we cannot be a democratic nation, we cannot be a democratic people, and we cannot free ourselves from the cold evil of technological control that now has spread even to our genetic core until we stop allowing technology to control human choices and instead see to it that our human choices control technology.