In 1978, Aleksandr I. Solzhenitsyn delivered the 327th commencement address at Harvard University. Titled “A World Split Apart,” his speech focused on the growing moral vacuum in Western civilization. In spite of our “abundance of information, or maybe partly because of it,” he said, “the West has great difficulty in finding its bearings amid contemporary events.” The rising racket of information repeatedly breaks our concentration. We claim to be truth seekers, he argued, but instead we follow simplistic “formulas.” We wrongly assume that the overall condition of the world is improving because of our wealth of technology and information. We forget that “truth seldom is sweet; it is almost invariably bitter.”

Although we celebrate the arrival of the information society, we have not fully faced its implications. Along with information come misinformation and disinformation. Rumor and hearsay abound. Opinions fly through digital networks. Deceitful persons and institutions spread half-truths. While we understandably revel in the apparent power of information technologies to collect and disseminate information, we also ought to question the quality of such information. Does it help us to grasp the condition of our personal lives and social institutions? Is it trivial or significant, helpful or harmful, relevant or meaningless? How can we discern the real value of the growing caches of database information culled by specialists, collated and analyzed via computers, and distributed through high-speed networks?

The plethora of available information makes us ever more dependent on experts who supposedly can interpret it for us. We need help, so we
turn to popular guides for “dummies” and “idiots.” Bookstores are selling millions of books designed to give laypersons a modicum of insight into professions, technical skills, avocations, history, and even religion and sexuality. Two publishers have released over one thousand titles for dummies and idiots. Such volumes are popular, suggests the author of Philosophy for Dummies, because people “have less access to the experts, who are locked up on college campuses.” Maybe so, but perhaps we are so overwhelmed by information and so underwhelmed by our own knowledge that we all feel like insecure dummies. “We all have bits of the ‘idiot’ in us,” says the author of The Complete Idiot’s Guide to Self Esteem. To overcome our insecurities, we reach for information produced by apparent non-dummies. Adrift in a sea of information, yet hoping to arrive safely on the shore of success, we paddle around using the techniques outlined in self-help books.

Living in the age of cyberspace, we have faith in the processes of collecting and distributing information. Words such as “data,” “knowledge,” and “information” connote social progress and personal enlightenment. We revere technologies such as computers and the World Wide Web that will supposedly transform data into information and information into knowledge. Mary E. Boone argues that the computer “may enable the next big leap in the evolution of human intellect” and “dramatically extend the memory of our species and our ability to work with ideas.” She calls computers “supplements of the mind.” Everywhere we look, in news reports and public television documentaries, experts are extolling the benefits of information technologies for social progress. We are succumbing to informationism: a non-discerning, vacuous faith in the collection and dissemination of information as a route to social progress and personal happiness. We are particularly hopeful that more efficient and powerful messaging systems will improve the quality of our lives. As presently constituted, however, information technologies limit our abilities to perceive our moral condition and dampen our capacity to be virtuous people. In a society steeped in informationism, disciplined human activities that require time, patience, and perseverance are anathema. Self-help solutions, themselves usually technological practices, replace moral disciplines. Instrumental habits—practices that might be efficient and effective but are not necessarily good—eclipse virtuous practices. Acting like machines rather than humans, we do what is immediately convenient and efficacious, not necessarily what is right and good. The exigencies of technique tend to override our ability to employ other means and to seek truly good ends. As a quasi-religion, informationism preaches the is over the ought, observation over intimacy, and measurement over meaning.
The first section of this chapter explores informationism’s emphasis on the is over the ought. Informationism places the highest value on contemporary culture, current events, and immediate action. In cyber-culture, we are increasingly obsessed with documenting the present rather than understanding the human condition, particularly our moral situation. Uninterested in the hard work of nurturing virtuous character, we hope for technological solutions to our moral problems. We more or less accept our informational world the way it is and then proceed to make it even more that way.

The second section examines how our informational practices position us as impersonal observers of the world rather than intimate participants in the world. The glut of information at our disposal creates the illusion that we understand our predicament. We become promiscuous knowers, flitting from one bit of information to another, with no fidelity to an overarching worldview. In search of informational knowing, humans have long objectified knowledge and collected it in libraries, and now in databases. Ironically, as we gain more access to such objectified information, we lose our own capacity to know. We depend more and more on supposed experts to give us knowledge, while distrusting our own intimate connections to the world around us. Although we selfishly gain more knowledge about the world, we lose the more intimate knowledge of the world.6 We become informational voyeurs of life rather than responsible participants in the knowing of our own cultures and communities. “Surfing” is an apt word for our condition because it connotes living on the surface of reality.

The third section discusses our high-tech penchant for measurement over meaning. Information technologies foster statistical ways of perceiving and systematic modes of imagining. Under their influence, we see the world in terms of cybernetic systems composed of measurable causes and effects. The resulting cyber-worldview is a closed system that elevates the value of control over moral responsibility. Manipulating information to cause particular “outcomes” becomes more important than being virtuous persons or contributing to a good society.

This chapter concludes with a brief critique of this quasi-religious informationism. Information technologies themselves will never enable us to become more responsible persons or communities. People are more than atoms in cyber-systems. Culture is more than a formal organization. And human action is intrinsically a matter of making moral as well as informational decisions. The more we imagine our lives and our societies as informational systems, the more likely it is that we will manipulate and control human beings as mere cogs in digital networks. Informationism lacks both the means to acquire moral wisdom and the
good ends that should frame our desires. It is a morally bankrupt faith in our own ability to engineer the Promised Land.

Wallowing in the I While Forgetting the Ought

During the height of the so-called New Economy craze in 1999, as media pundits declared greater efficiency and prosperity fueled by high-tech innovation, the Wall Street Journal Interactive Edition examined the charitable giving practices of Internet companies. Given all the money being made in the stock market, one would have expected flurries of new philanthropy. Reporters discovered instead that high-tech firms were among the least likely to participate in philanthropic causes, and Internet companies were the worst of all. Amazon.com, with a market capitalization of $28 billion, contributed little to charitable causes. Yahoo! boasted a market capitalization of roughly $47 billion but indicated on its Web site that the company “does not provide cash grants or financial sponsorships.” Although those kinds of organizations were not interested in giving away money, their workers enjoyed spending it; nightlife thrived in high-tech areas. One observer suggested that the young owners of Internet companies did not yet understand the value of investing in charities. “You have a lot of young people making a lot of money who care more about themselves than helping others,” explained one Internet CEO. Maybe so, but such an explanation misses the broader ethos of cyberculture. High-tech endeavors are usually organized around short-term goals and immediate practical needs, such as achieving incremental product upgrades or securing the next round of investment capital. Cyberculture is so focused on the here and now that it implicitly rejects the human need for a long-term vision, let alone a moral compass. In this milieu, charitable causes simply are irrelevant.

Lacking any clear “oughts,” today’s informationism is a religion of quick decisions and instant deletes. Acting like processors of information, we become info-religionists who carelessly transmit, receive, and discard torrents of messages with little reflection. As the list of new email messages comes up on our screens, we begin deleting the junk mail and typing telegraphic responses to worthy recipients. We live in the digital world of the now, instant everything. We seek immediate solutions to even moral crises, as if Web sites and email petitions can change the world. We fill our lives with temporary satisfactions, such as surfing the Web, watching DVDs, or chatting on a cell phone while driving a vehicle. Modern technologies provide us with a myriad of ways to “delete” the moral life by focusing only on immediate, instrumental activities.
Preoccupied with the present, informationism focuses on “what is” instead of “what ought to be.” Cyberculture, for instance, obsessively documents current events, from business transactions and consumer profiles to personal schedules and news reports. Probably no culture has ever been more enchanted with its ability to collect and publish contemporaneous information, from the foods that Hollywood celebrities prefer to the sexual practices of politicians. Cyberculture also chases after the latest technological products, models, and upgrades—the endless whirlwind of test products and “beta” technologies that promise us immediate progress.

Ethics, the realm of moral obligations and standards of right conduct, enters cyberculture primarily through moralistic campaigns that faddishly capture the public imagination via news reports. We focus briefly on such things as ensuring credit card security for online purchases, protecting the privacy of children while they surf the Web, shielding private medical records from corporate databases, or improving the civility in online chat rooms. Terms such as “infogap,” “technological poverty,” and “digital divide” come and go in the news, championed by one or another consumer group or self-appointed watchdog association. High school shootings momentarily prompt the nation to examine the impact of violent video games on young people, but before long we are back to business as usual, producing promotional Web sites for violent movies based on the same video games.

Like ethical chameleons, we adapt our moral practices to the latest technologies rather than summoning our technologies to follow a long-term moral vision. Our desire to become skillful technologists increasingly dictates our moral decisions. We rarely think about what it means to be good and wise people; instead, we focus on whether we are technically connected. We assume that by adopting novel technologies we can solve the moral problems created by earlier ones. Supposedly, encryption will ensure privacy. Web site “blocking” software at public libraries will protect children from access to adult materials online. Our romance with information technology leads us to assume that moral issues are best solved technologically.

This emphasis on the technological now is a recipe for cultural chaos as well as a license for self-interest. One-time Internet company CEO Michael Wolff describes the boom time of the World Wide Web as a frenzied era of moral confusion and nearly unbridled selfishness. Caught in the escalating game of buying and selling unproven companies, many inventors, investors, and executives hoped eventually to make it big on public stock offerings. The frenzy of the moment overtook any reasonable standards of conduct. Billions of dollars changed hands, thanks to the machinery of Wall Street, the bravado of venture capital-
ists, the spreadsheets of creative accountants, and the elliptical tales of self-promotional CEOs. As Wolff recalls, dot-com wannabees were playing with abstract data and overblown financial predictions. Hindsight now shows that dot-com mania swamped any long-term sense of moral responsibility.

Journalistic reporting is the primary mode of “knowing” in informationism. Information technologies are particularly efficient at collecting and disseminating current fads. Cyberspace makes it enormously easy and inexpensive to make and distribute endless copies of up-to-date documents. It also leads to dynamic online content that changes by the day, hour, and even minute. Cyberspace turns us all into reporters who daily compose telegraphic messages online for friends, relatives, and anonymous others. Instant messaging becomes a means of reporting to friends the minutiae of our lives. Theodore Roszak argues that information itself has “taken on the quality of that impalpable, invisible, but plaudit-winning silk from which the emperor’s ethereal gown was supposedly spun.” One result is a “Breaking News Syndrome” in which people become nervous and exhausted while chasing after the latest reports about current events.

Informational reporting includes endless high-tech prognostications that entertain us in the present more than they illuminate the future. Late-breaking news stories about technological innovations sound like popular science fiction. A flight magazine predicts that “shrinking technology promises mobile professionals the world at their fingertips.” It quotes experts who say that by 2010, 40 percent of teens will own always-on, wearable communications and computing technology. Dick Tracy meets Star Wars. Such pie-in-the-sky predictions are entertaining reports, not realistic assessments of our future. Furthermore, they offer no real solutions to our moral dilemmas of today or tomorrow. Will a fingertip-controlled world or a wearable computer bring us more peace and justice? Will they foster virtue at home and work?

Being up-to-date technologically symbolizes to us the likelihood of our future success. We assume that we must be plugged in, networked, subscribed, paged, and emailed. So we open the technological floodgates to the latest forms of instant communication. Even if we fail to master information technology, the sheer ownership of it becomes a self-help mechanism for improving our social status. Many people buy the latest equipment before its value is proven; they love being on the cutting edge before their friends are. But what is the real value of greater processing speed, a larger monitor, or expensive software with so many bells and whistles that we will rarely use, let alone master? Informationism thrives when our rhapsodies about the latest technologies give
us the illusion of being informationally up-to-date, socially elevated, and professionally successful.

Yet in the wear and tear of consuming daily information, we find that it is increasingly difficult to know exactly whom to believe and which messages to value. As we follow the buzz of the latest popular culture, we have little time to think about the kinds of individuals that we are becoming, let alone the types of persons that we should be. James M. Houston writes, “We are living in a time of verbal explosion. We are deluged by words, in bulletins, in data collecting, in advertisements, in books, in the promises and slogans of politics, in the mishmash of news.” But most of what we find in such chaotic messaging is “talk but not deeds, information but not insight, promises but not fulfillment, words not events.” Lacking an overarching sense of the meaning and purpose of life, informationism cannot meet our need for discernment. In David Gross’s words, modern “life becomes increasingly vacuous, as entire populations become unable to discern what is valuable from what is valueless.” Locked into the informational “is,” itself a simplistic version of current reality, we find it progressively more difficult to imagine any means to the “oughts” of virtuous character. Only the impressive jargon of technique—of greater informational efficiency and control—seems to offer hope. A moral endeavor such as philanthropic giving disappears from our informational radar.

Feigning Intimacy by Observing

Lorie Anderson and her husband had an idea for a Web site finely tuned to the needs of individuals in the information society: a host of multiple-choice “selectors” that would help people make quick decisions about even the most significant aspects of their lives. The resulting Web venture, SelectSmart.com, makes decisions for people by analyzing their self-reported preferences. Selector Centers provide multiple-choice instruments for people to choose everything from a pet to a belief system. Need a faith? Fill in the multiple-choice answers to twenty religion-related questions and find out which religion suits you the best. According to this technique for identifying the real-world analogue to one’s personal faith, an individual does not need intimate knowledge of any belief system to have religious beliefs. Religion is merely a personal preference, like breakfast cereal or clothing.

As such superficial religiosity suggests, informationism emphasizes observation over intimacy. In spite of our optimism about information technologies, they do not always deepen our relationships with others. The more time and energy we spend using information technologies,
the less likely we are to know intimately the world around us. Information technologies foster secondhand knowledge about rather than more intimate knowledge of. Informationism produces what Lewis Mumford calls “cold intelligence,” a kind of knowing disengaged from the deeper drama of life. We ride through life like tourists, enthralled with the means of transportation but largely indifferent to the individuals and cultures that we visit along the way.

Intimacy is firsthand knowledge of the inmost character of someone or something. All human knowing requires some degree of intimacy. In education, for example, teachers should know the students they serve, not just know information about them. In an information society, we tend to relate impersonally to the world through technology rather than personally through direct experience. We become non-intimate observers of life—what Jerzy Kosinski once called “videots.” We might prefer watching televised sports to seeing them in person, or even watching others play sports instead of participating in them. “We live on the surface of ‘things,’” writes Houston, where “our lives are easily described but rarely understood, busy going nowhere in particular. We live at the edges of other people’s lives, too busy to listen.” We are like astronauts, he says, “each in our own spacesuit, orbiting the earth.” Our comprehension of reality is “descriptive and speculative, and no longer participatory knowledge in which the observer was personally involved.” Surfing the Web becomes one of the most relevant metaphors for conducting our everyday lives.

As the pool of information grows, our actual knowing declines. Knowledge exists “out there” in cyberspace, not in our minds and hearts. The Web, for example, is an enormous flea market of informational odds and ends. Billions of pages exist in cyberspace, but no one can know even a small percentage of them intimately. Nor is there an overarching Web librarian who knows the Web’s “catalogue” well. We rely on nonhuman search engines to find relevant—rather than good or truthful—information on the Web. Moreover, once we locate relevant information we will probably be unfamiliar with its source, the original knower of the information. Surfing the Web is more like sampling bits of information than gaining wisdom or even acquiring knowledge.

Informationism stresses the instrumental value of accessing information over the intrinsic good in knowing well. Under the spell of this quasi-religion’s technical power, we celebrate the sheer ability to search databases for information that we need to satisfy our curiosities or to solve an immediate problem, such as repairing a malfunctioning printer or eliminating a patch of crabgrass from our lawn. We assume an instrumental rather than a moral purpose for accessing relevant information. After all, we want to repair the printer, not worry about the ethics of
printing copyrighted information. We are immediately concerned about killing the crabgrass, not protecting the environment. We scarcely imagine that our knowing should also make us intimate with truth and goodness. Information technology becomes a means of manipulating the world to get what we want.

Today, such informational knowing influences all our domestic, vocational, and religious practices. In education, for instance, students often lack any personal commitment to what they are learning. They feel as though they are merely memorizing someone else's information and learning about others' data or skills, not developing their own knowledge. They want either to tell the teacher what the experts say or to present their "personal opinion." They do not want to articulate and defend knowledgeable conclusions based on reasonable evidence. They see school-oriented knowing as an instrumental means of getting grades and earning degrees, not as a means of becoming a wise person and contributing to a good society. Similar patterns of objectified knowing and informational dis-intimacy occur in churches, where sermons are abstracted lectures about religious information. Religious bookstores today sell an amazing array of spiritualized self-help literature designed to solve believers' immediate problems rather than to show them how to nurture faith over a lifetime. Concepts such as "religious tradition" and "spiritual discipline" evaporate in informationism. Whether in a classroom or a congregation, to "know" is to leverage information to accomplish instrumental goals. We forget that improved knowing is also a matter of being a wiser person in a better society.

If we do not attain intimacy with the world beyond our own psyches, we will feel little obligation to anything other than ourselves. Intimacy naturally leads us to empathize with others and thereby to consider their needs as well as our own. Good philanthropy, for instance, requires the giver to take an interest in recipients' lives, not just to send them a check. Similarly, a good computer programmer is one who can empathize with the people who will use a program, not just with her or his own expert use of software. Gaining intimacy with others gives a knower a means to break out of the limitations of self-interest and disinterest. Intimacy helps to nurture what Alexis de Tocqueville calls "self-interest well understood"—a self-interest softened by shared social mores. Selfishness, wrote Tocqueville, is a "vice of the heart" premised on "a passionate and exaggerated love of self." It "dries up" public virtues. The remedy for selfishness, according to Tocqueville, is "drawing" out of ourselves and entering into the "destiny" of others. The habits of the heart depend on such empathetic intimacy.

Intimacy can lead us to what Tocqueville calls a "constant habit of benevolence." As Mark Slouka suggests, cyberculture often exists in
an “ethical vacuum” and displays an “utter lack of compassion for the world and its problems.” The digerati, too, are not inclined to advocate responsibility as much as personal freedom. Lacking the habit of benevolence, they are more concerned with instrumental logic and pragmatic design—with making systems work—than with moral obligations and the common good. Such libertinism results from technologically distancings themselves from others—like constructing interstate highways that segment neighborhoods and isolate social classes in major cities. We assume in our public imaginations that new communication technologies will forge voluntary associations among mutually benevolent persons. Instead, we discover that our overdependence on informational knowing makes our relationships superficial, transitory, and ultimately selfish.

Reading online about the needs of the world, for instance, is never the same as personally knowing people in need. Real knowledge is direct and more or less intimate: I know my wife and children, for instance, since I think about them often, pray for them regularly, and interact with them repeatedly in person as well as through mediated technologies. If our understanding of people and life is overly mediated by informational technologies, we will lack such deep intimacy. Knowing about nature from reading online information, studying books, and viewing documents, for example, is not as intimate as communing with nature. Similarly, consuming political news and voting is not the equivalent of participating politically in our communities. Knowledge about is merely the accumulation of mediated information, whereas knowledge of includes intimate understanding, seasoned judgment, and active participation.

Our mediated involvement in cyberspace can render us mere observers of our own neighborhoods, schools, and communities of worship. Imagine a religious person who believes in the inerrancy of the Bible but who does not relate personally to God. Imagine, too, that he or she studies the church’s sacred texts but is not actively involved in a congregation. Finally, consider this believer as an ardent student of biblical information who does not practice the spiritual disciplines described in the textual information. Like such a non-intimate religionist, informationists believe impersonally in people, information, and institutions that they may never know firsthand. Hooked on informational knowing, they discount the value of intimacy.

Informationism seeks instant knowledge with instrumental payoffs. For example, some Americans “try” a religion for a few months to see if it “works” for their immediate needs—as if they are taking a showroom car for a spin or using a free thirty-day trial membership at a fitness club. Richard Cimino and Don Lattin argue that this “shopping for
faith” is part of the “consumerization” of religion—a trend that they say often leads to “looser-fitting” and “impersonal” religious institutions. In religion and every other area of life, mediated technologies feign personal knowledge of us to create an air of intimacy. A few doctors actually offer online diagnoses without examining patients in person. Database-driven Web sites create pseudo-intimacy by remembering our names, storing our preferences, and predicting what we want. They track “members” through usernames and passwords that enable site managers to create “personal profiles.” Such techniques might sell more products, but they will not make anyone more intimate with anyone else.

Informationism encourages informational promiscuity: impersonal relationships based on feigned intimacies and lacking moral integrity. Day traders, who buy and sell equities by the minute, maintain no intimate knowledge of or loyalty to the companies whose stocks they trade. By the end of the year 2000, the most active day traders alone represented 81 percent of online trading volume. Hard-core day traders continued to increase their trading volume compared with other traders, representing a growing percentage of the overall market activity. Moreover, online traders in general trade more often than offline traders. In other words, promiscuity increases with the use of information technologies. Zigzagging in and out of the markets, they might not even care about the ethics of the companies involved; a corporation known for producing faulty products can be just as “good” a stock play as a business with a social conscience. The objective data—the share prices, the percentage gained and lost, the ticking of the market clocks, and the commission rates—give day traders a false sense of intimacy with the world. Mayer Offman, dubbed the “rabbi of day trading,” says that it is “not a major thought-out process,” just an “instantaneous reaction.” Day traders live an endless stream of one-day stands with different equities.

The use of information technologies to track mass markets engenders even greater promiscuity. In the information age, corporate shareholders are an increasingly endangered species, replaced by “shareflippers” who want to get in and out of the market quickly. “Responsibility to shareholders is rapidly becoming an irrelevant concept in our country,” writes Jim Collins. The CEO of eBay, Margaret C. Whitman, even suggests that many Silicon Valley companies were “founded by mercenaries, and they were not built to last. They were built to flip.” This lack of institutional intimacy transforms the market for Internet-related equities into “a popularity contest, based on consumer moods and filled with millions of networked investors bluffing the financial markets like a poker game.” Such a self-referential market operates as a “psycho-
Logical feedback loop” inflated by “irrational exuberance.” In other words, information technologies can sustain impersonal markets devoid of intimate relations among the parties involved. Ironically, these high-tech markets coalesce around vague moods and sentiments rather than information per se. Moreover, professional media propagandists, such as financial pundits and investment analysts, try to create the illusion of their own, intimate knowledge of the markets. Relying on their advice, we become intimate with their propaganda rather than with the actual participants in the markets.

Feigned intimacy extends throughout digital societies, all the way to the executives of corporations. Peter Drucker says that he finds “more and more executives less and less well informed . . . if only because they believe that the data on the computer printouts are ipso facto information.” He recommends that CEOs take the place of a company salesperson for several weeks every six months. Unless we intentionally cultivate intimacy in a cyber-world, we will find it evaporating from our lives as we pursue instrumental practices. Even the act of surfing the Web tends to be informationally promiscuous, since it requires no personal knowledge of the people or organizations whose sites are visited. The growing artifices of information technology create the potential for layers of digital promiscuity that encourage selfishness and stifle moral responsibility at all levels of society.

The explosive growth of pornography online illustrates cyberculture’s capacity for pseudo-intimacy. Like the VCR and satellite television before it, the Web became a commercially viable medium partly because of males’ desire to access erotic materials from the privacy of their homes. In spite of occasional news reports about the resulting broken marriages and sexual addictions, online sexual promiscuity became a profitable business predicated on people’s inability to be satisfactorily intimate with real persons. Publishers now offer self-help books on effective techniques for maximizing online sexual encounters, fostering cyber-relationships, and overcoming gender differences in cyberspace.

From business to sex, informationism emphasizes amoral observation over virtuous intimacy. As observers in this digital arena, we are apt to see the world merely as a video game meant to be played for our own short-term pleasure—and if we find cheat codes, we will not hesitate to use them. Speed and success are more important than intimacy and discernment. If instead we become intimate participants in culture, we will see the world as an ecology in which we must reside responsibly. John Lukacs suggests that true knowledge is “participant.” It “consists of the relationship of the knower and the known.” Intimacy requires us to live harmoniously with others whom we both know and respect. Forging such intimacy can take generations. Informationists
treat life itself as a mere pastime, like filling out a multiple-choice test on the Web to find out which religion best suits their fancy.

Measuring Life without Meaning

Political pundits and techno-gurus speculated in the 1990s about cyberspace’s potential impact on the fabric of democratic institutions. American political consultants and lobbyists forecasted “geometric changes in everything from fund raising to voting to grassroots campaigns.” One consultant even predicted that the November 2000 election would “blow away clueless politicians and apparatchiks.” Supposedly, the Internet would renew democracy by returning political participation to citizens. The medium would extirpate the evil influences of soft-money donations to political action committees, educate voters with grassroots information untarnished by mainstream media, and grant politicians an inexpensive forum to communicate their messages directly to electorates. Cyberspace would even offset the influence of political TV commercials, sound-bite reporting, and media-staged debates.

Critics of cyber-democracy are not nearly so sanguine. Paul Virilio, for example, argues that the “libertarian propaganda” about “automatic democracy” assumes that the “absence of deliberation would be compensated by a ‘social automatism’ similar to that found in opinion polls or the measurement of TV audience ratings.” He worries that this would lead to a “reflex democracy, without collective reflexion, in which conditioning would have greater importance than ‘electoral campaigning.’”

Probably the most widely touted test of cyber-democracy occurred in Arizona, where the state Democratic Party and election officials conducted the nation’s first binding online election. The real-life cyber-experiment gave Democrats an opportunity to vote online for a few days preceding the traditional paper-ballot election. In only one day of online balloting, the total number of Democratic primary voters surpassed the number who had cast their votes in the traditional manner four years earlier. By the time Internet polling concluded at midnight the day preceding the traditional election day, 35,765 voters had cast Democratic ballots online. Some critics worried that the cyber-election would favor more educated and affluent voters who generally have Internet access. But one grassroots African-American organization determined that roughly 85 percent of its urban constituency had access to the medium. Moreover, the group’s get-out-the-vote initiative boosted African-American voting by nearly 1,000 percent in some districts. All in all, Arizona’s
cyber-experiment appeared to be a rousing democratic achievement that discounted Virilio’s dire concern about reflex democracy. Statistical achievements, however, are not always incisive. Reporters assessed the experiment quantitatively, giving audiences the false impression that real democratic gains had been made. Although the voting data looked grand, what did they really mean? Were the voters better informed? Were campaign advertisements during the online balloting more civil and less deceptive? Did the technology enhance the quality of political life in Arizona by getting more citizens involved in the political affairs of their communities? What did we really gain through cyber-voting? All we can say for certain is that more people voted in what is typically a low-turnout primary, probably because of all the media attention. Nevertheless, journalists equated the numbers with political progress.

As the Arizona experiment with cyber-voting illustrates, informationism upholds measurement over meaning as a more valid way of comprehending reality. Unwilling to accept the validity of meaningful experience, it strives for the objectivity of data. Informationism thereby transforms us into “number crunchers” and “bean counters” who equate data with meaning. The era of cyberculture is also an age of statistical measurement, prediction, and control. Calculating market shares, voting percentages, and other measurements pleases informationists. To borrow language from Jean Bethke Elshtain, informationism’s “facts are reduced to brute data and our descriptions can no longer serve as a source of moral or ethical information.”

Numbers alone never tell any story. In fact, measuring progress without moral discernment can be a recipe for instrumental successes that are ethical disasters. During World War II, the Nazis used powerful, IBM-designed data-processing devices to keep track of prisoners in extermination camps. They mastered the tabulation of inhumane efficiency and control, creating a cutting-edge system for “controlling inventory” and calculating the “best” murder systems. Our capacity in a high-tech world to gather and process voluminous amounts of statistical information is a dangerously two-edged sword. Without responsible frames of reference, we turn information technologies into cold machines that destroy our capacity to think wisely, feel empathetically, and act virtuously. Our statistical imaginations tell us that we are progressing, while we fall into moral chaos.

Americans love to measure problems and calculate social progress. In the 1900s, Americans became “the most energetic measurers of social life that ever lived,” according to Theodore Caplow and his colleagues. In addition to calculating everything that had been counted before, Americans pioneered the measurement of crime, love, food, fun, reli-
Discerning Our Informationism

igion, and work. Daniel Boorstin suggests that Americans live in “statistical communities” that define culture in quantitative terms, from economic data to demographic trends and social norms. When we adopt informationism, we see the world increasingly through the lenses of measurable norms, means, causes, and effects. “The digital age is causing a paradigm shift like you’ll never see again,” proclaims futurist Barry Asmus. “Everything gets better as it gets smaller. Everything gets cooler as it gets faster. Everything gets cheaper as it becomes more valuable.” We rhapsodize about size, speed, and cost. Email increases workers’ productivity by nine thousand dollars annually, claims Ferris Research. The media announce such remarkable data as sure signs of human progress. And we believe them! Today, we are not as interested in moral assessment—questions of proper proportion, the right scale, or appropriate duration—as we are in sheer numbers. We trust data more than goodness and rightness.

Informational experts treat their subjects as abstract, independent, and self-sufficient. Things that cannot be measured easily, such as virtue, are relatively unimportant to impatient experts. This is why managers, for example, speak a language of technique rather than virtue. They refer to employees as “resources” and assess workers’ “bandwidth”—their available time and talent. Accounting experts define persons as “expenses,” not as “assets,” although some firms are trying to correct this situation by categorizing workers as “intellectual capital.” Accountants and chief information officers (CIOs) calculate the “bottom line.” Drucker argues that most CIOs are really only “data officers,” not information officers. Business Week’s special issue on the “twenty-first century economy” proclaimed that the “optimists have it right” because “the numbers” suggest that the revolutionary new economy is “for real.” Tell that to the many information workers who lost their jobs only a few months later.

In the 1980s, MBA programs across the country integrated computer modeling and spreadsheet analysis into their curricula. As a result, much business education was transformed from teaching students historical lessons and semi-intuitive strategies to providing them with techniques for making statistical projections of the probabilities of future financial scenarios. By the late 1990s, software companies were producing PC-based “MBA-ware” that supposedly enabled individuals to automate complex statistical forecasting methods on their home computers. Some people dubbed this software “a consultant in a box” or simply “MBA-in-a-box.” Meanwhile, the role of top leadership in large American business was “shifting away from that of the dominant decision-maker to that of manager of the information system.” Former CEO Max DePree says, “Managers who have no beliefs but only understand methodology
and quantification are modern-day eunuchs. They can never be truly intimate." Data-processing technologies are ennobling a new class of statistical kings while dethroning veterans of the older methods of experience, common sense, and even wisdom.

The penchant for measuring information is not all bad, since decision makers ought to be aware of important facts in a given case. Collecting and analyzing data are important ways of knowing. Yet something troubling is taking place when bean counters rise to priestly status in modern organizations. As we use information technologies to model reality, we implicitly embrace a systemic concept of human culture. We imagine cultures not as organic ways of life but as computer-like networks—closed systems that persons can objectively observe, measure, manipulate, and eventually control. Our attempts to quantify and analyze human endeavors implicitly assume that human beings act within naturalistic systems of causes and effects, like chemicals interacting in test tubes. In the 1940s, mathematician Norbert Wiener called the study of systemic models of reality cybernetics (from the Greek kubernetes, or "governor"). He equated persons and culture with machines, mathematical models, and cause-effect processes. Although we are distinctively human, cybernetic models depict us as mere networks. When we become informationists, we conform our image of ourselves and society to a systemic metaphor, all the while venerating the data we collect about such systems.

Wiener's faith in the power of measurement and control is at the heart of the gospel of informationism. In The Human Use of Human Beings, he envisions persons as information-processing machines, akin to electronic signaling circuits and ultimately just as regular and predictable. "When I give an order to a machine," he writes, "the situation is not essentially different from that which arises when I give an order to a person." Wiener adds, "To live effectively, is to live with adequate information. Thus, communication and control belong to the essence of man's inner life, even as they belong to his life in society." Wiener writes that it is "best to avoid all question-begging epithets such as 'life,' 'soul,' 'vitalism,' and the like" because humans resemble machines. According to this kind of cybernetic vision, human communication is a machine-like system for sending and receiving messages. By carefully measuring the flow of information, human beings supposedly will gain the power to regulate each other's thoughts and behaviors.

During the same period in which Wiener created his cybernetic ideas, Claude Shannon developed an "information theory" that further advanced experts' hopes to measure and control human messaging. Shannon's theory took abstract quantification to the extreme by disconnecting messages from meaning and context. In Shannon's view, human
communication is nothing more than measurable signals—like the bits and bytes in a computer “packet” today.\textsuperscript{76} Even random electrical impulses such as lightning crashes are deemed information. According to this view, contexts and shared meanings are irrelevant. Purpose, desire, obligation, virtue, and imagination are meaningless noise. Even storytelling and conversation evaporate into bits of signaling. The cybernetic vision assumes that the meaning of messages matters less than their instantaneous delivery.\textsuperscript{77} Shannon's theory foreshadowed the informationism of today.

Cybernetic models of communication eventually became moral licenses for experts to manipulate others. Not surprisingly, during the birth of cybernetic theory in the 1940s, social scientists even conjured up forms of behaviorism that used simplistic stimulus-response theories to predict and control human behavior. Psychologist B. F. Skinner's Walden Two, published in 1948, describes a fictional utopia where experts are trying to engineer a perfect human community by scientifically controlling the social environment. Skinner's social engineers are the new “inculcators of wisdom” through the development of a “science of behavior as powerful as the science of the atom.”\textsuperscript{78} Skeptic Clifford Stoll writes, “Skinner's methods fit well with today's computers. Students peck at their keyboards for dollops of sound and animation; administrators get instant reports; parents hear how their kids now enjoy school. This is supposed to make learning fun, not to mention efficient.”\textsuperscript{79}

Informationism fosters the spread of cybernetic control into all areas of life. This philosophy's mechanistic schematic of effective communication becomes a de facto template for instrumental messaging. Information processing and communication are the two crucial activities in all human attempts to control everything from interpersonal to international relations.\textsuperscript{80} Now information technologies are also means of technical influence. Online advertisements attempt to gain people's attention and divert them to other pages. Advertisers use “spam” (unsolicited email advertising) to coax potential customers to reply to sales pitches. So-called push technologies try to gain greater control over Web users by streaming “content”—such as Web-based broadcast channels—to their computer desktops. Regardless of the various ends—such as greater market share or a stronger political base—the cybernetic means are remarkably similar. In this sense, informationism is a highly evangelistic faith that preaches a gospel of cybernetic control.

These kinds of efforts at reducing human culture to measurable quantities limit our capacity for moral knowing. When we seek measurement over meaning, we adopt the language of probability rather than virtue, essentially making mathematics the preeminent route to all knowledge, and probabilities the means of discerning the value of human actions.
Like Descartes and other rationalists, informationists wrongly believe that humans can “know” without the biases of intimacy. The fact is that no matter how well we measure anything, we bring beliefs to the task, even the prejudice of what is worth measuring and what is not. The gospel of cybernetic control seduces us to join the “inner ring” of people who know how to make things happen and get results; it entreats us, to borrow C. S. Lewis’s language, to taste the “delicious sense of secret intimacy” among its evangelists. But it lacks any moral center, any higher sense of obligation beyond what the experts proclaim.

Moral practices require far more than such informational knowledge. If we limit morality to what is measurable, we reduce it to risk management. Peter L. Bernstein argues in Against the Gods that the mastery of risk is the foundation of modern life, in which we all seek to play the probabilities. Information technologies become risk-reducing systems rather than virtue-nurturing practices. Edward Yourdon says in Rise and Resurrection of the American Programmer that “formal risk management” is probably the most important business practice in computer programming. For all the successes that we can score with quantitative analyses, we still face the danger of succumbing to one narrow, instrumental, quantitative way of thinking and means of discerning worth. Such “digital thinking” can “easily lead to all-or-nothing positions, extremism, stereotypes and oversimplification.”

Our belief in the power of cybernetic systems to improve our world ultimately rests on the faith that our use of information technologies will make us better human beings. Computer programs that enable machines to beat humans at games of chance and skill are indeed impressive. But moral questions about human life are beyond the interpretive scope of information technologies. The meaning of moral wisdom, in particular, cannot be captured through the binary capacity of machine logic. If we play God with such technologies, we also inhibit our own ability to make moral sense of our condition. As Lukacs says, the human mind consists not principally of facts but of words. “The words are not the packaging of the facts; the words are the facts themselves. We think in words.” Individual persons are inherently more complex and interpretive than computers could ever be—more than any machine could ever fathom. Human beings are capable of far more than processing data. They can be moral knowers and responsible agents in a world of seemingly infinite significance. Machines will never understand the intimate meaning of existence, the moral nature of human life, the joy of relationships, and the goodness of responsible action. We are not designed as mere informational beings but as moral creatures who can pursue virtue. If everyone votes, but no one votes wisely, we are no better off.
Conclusion

The goal in computer programming, writes Ellen Ullman, eventually “becomes the creation of a system itself. Any ethics or morals or second thoughts, any questions or muddles or exceptions, all dissolve into a junky Nike-mind: just do it.” After all, she concludes, a computer program is not just “talk.” A program “runs.” “Whatever you might say, whatever the consequences, all you have are words and what I have is this, this thing I’ve built, this operational system. Talk all you want, but this thing here: it works.” Information technologies indeed can work. When we use them, it seems as though we do not have to concern ourselves with oughts, intimacies, and meanings. The machines work just as well when we do not direct them to function morally. We simply have to accept the “tunnel vision” of information while ignoring the “fuzzy stuff that lies around the edges—context, background, history, common knowledge, social resources” and the like. “What happens,” asks philosopher Peter Kreeft, “when we realize that objective reality includes not just brute facts but also goods, not only is’s but also oughts, not only the fact that society does do such-and-such, but also the fact that society ought to do so-and-so?”

No matter how many information technologies we devise, we cannot fashion them humanely unless we direct them toward coherent moral purposes. What is the telos to which our technologies should be aimed? How do information technologies relate to the aspects of life that we cherish and hope to maintain for future generations? We could debate these kinds of issues endlessly, but today we do not discuss them enough. We celebrate our cyber-savvy and informational abundance, but we are increasingly confused about what we truly ought to be doing with our information and machines. “Abundant data,” writes Clifford G. Christians, “far from permitting people to make judgments and form responsible opinions, actually keep them busy with an instrumentalist paradigm that precludes moral obligation.” We are morally lost in an increasingly informational society, unsure where to turn except to yet more technological innovation. We congratulate ourselves for our informational accomplishments, but the real benefits or drawbacks of such innovations, in distinctly moral terms, elude us.

If human life is not intrinsically meaningful, we are all machines with no moral compass and no responsibilities. By the end of the twenty-first century, predicts Ray Kurzweil in The Age of Spiritual Machines, there will no longer be a “clear distinction between human and machine.” George Dyson argues in Darwin among the Machines that information networks are taking on a life of their own, independent of human cul-
ture. He predicts that eventually a new type of intelligence will automatically emerge out of the unpredictable interconnections of growing numbers of complex networks. Some technologists even imagine information systems becoming so human-like that they gain “some of the resilience and safeguards of living organisms.” If these kinds of observers are correct, we will also have lost any sense of moral responsibility. Rich aspects of our humanness—such as motives, meanings, sentiments, and obligations—cannot be understood purely through database designs and statistical renderings. Imagine how impoverished the judicial system would be if court proceedings were merely informational presentations with no human attention to the meaning of testimony or the means of gathering evidence—as if computers themselves could directly administer justice. Machines will never be able to be virtuous; such a capacity is reserved for human beings.

The truth is that informationism divides human knowledge into bits of information devoid of moral meaning. We justify cyber-technologies in terms of our greater ability to collect and analyze information for the purposes of prediction and control. Numbers speak. Data impress. Measurements connote certainty. We even accept isolated technological facts as yardsticks for social progress, such as the number of television channels, the percentage of the population wired to the Internet, and the bandwidth of our digital connections. All such technological expansion symbolizes a greater human ability to socially engineer progress. We love information, and we cannot get enough of it. “Personal computers” (note how we anthropomorphize even computers) seem to offer a way for us to escape our epistemological and moral limitations as human beings. Technical knowledge, we assume, will satisfy “a need for mastery and control denied outlets elsewhere.”

The networked computing machine probably defines our age, just as the printing press defined the Enlightenment. The metaphor of the informed person in our age is the lone individual sitting at a computer, surfing through cyberspace, buying and selling stocks online, zipping in and out of chat rooms, exchanging instant messages, downloading the latest sports trivia, and feeling the invigorating high of such digital travel. Does this capture who we should want to be? Were we created merely to be cyber-surfers? Virilio says that we face a “techno-fundamentalism” in which “information itself has become an absolute power with totalitarian features.” Informationism carries the cybernetic seeds of such secular-rational totalitarianism. The only alternative, Václav Havel suggests, is “living in the truth,” which requires one to take the “moral act” of regaining “control over one’s own sense of responsibility.” In other words, we must discern our condition as truthfully as
possible so that we might also act as responsibly as we can even amidst the uncertainties of the future.

Informationism preaches a secular-rational “faith” that silences moral discernment in the name of efficiency and control. But such faith is simply not enough to gain moral bearings. Although we now know more things and possess more technological methods, we are still plagued by what Jacques Ellul calls “inaccurate information and hazy facts.” Moreover, informationism betrays us by pretending to be the best, self-sufficient means to human progress. It evangelizes us to become observers of a world that we know less and less intimately and about which we are morally alienated. It cannot nurture good societies and raise virtuous persons. As a religion, informationism is insufficient, for it cannot even save us from our own foolishness. “The only ethic in cyberspace,” jokes one Silicon Valley executive, “is what you can get away with.” Surely we can do better.