The Humanities in a Technological Society

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Physicists talk of two of the fundamental forces of nature as the strong and the weak forces. I am going to borrow these terms in an entirely metaphorical way to name the two fundamental forces in which I live my life as a professor of literature. The strong force is technology, not to be understood as this or that machine, or this or that branch of machinery, but as the entire organized and interdependent ensemble dictating the technicization of everyday life, from politics, economics, and bureaucratic administration, to the media, advertising, fast food, transportation, and tourism. The technical-experimental state of mind dominates contemporary education, from the earliest grades through the university. Technology includes the three thousand advertisements that the average American sees each day, and the thirty-five buttons I press or dials I turn from the moment I wake up to the moment I walk into my first class at eight o'clock in the morning. Over the past century the technological system has gradually become so intrinsic and all-pervasive that, like the air we breathe or the purloined letter, it often seems invisible. Either we mystify its presence as in so many Hollywood spectaculars, or we tend to think of it as neutral, a mere means towards freely chosen ends, and not an end in itself which uses persons as *its* means. Technology, the strong force, is the central feature of modern life.

The weak force is essentially what I like to teach, literature. These two forces intersect in my daily life at the English department.

Let me compare a visit to our departmental office fifteen years ago and one today. Then, there were three secretaries and seven machines

(typewriters, telephones, a mimeograph). Now, there are three and a half secretaries and forty-two machines (word processors, copiers, printers, scanners, fax machines, portable phones, a microwave)—so many machines that the office next door was taken over to house them. Then, there were faculty gossip and the occasional discussion of literature. Now, there is anxiety over the university's sudden adoption of Microsoft Word or the backward incompatibility of a new program. Then, with its casual clutter of books and some old dusty plants, the office looked like an academic department. Now, when it no longer looks like itself, it ironically looks like so much else: with its light gray tones and jam-packed machines it could be a dentist's office, or a pharmacy, or the suburban branch of a corporation. One morning it reminded me of the Mir Space Station, which by chance I had just seen on the news; technological society does not know the horror of mixing. At a time when the words "difference," "diversity," and "multiculturalism" are on everyone's lips, and when postmodernism proclaims the end of totalizing systems, technology has been grinding the world relentlessly together. These events, I believe, are not unrelated.

As we are hustled through the technological system like a badly handled package, we tend to blame the ill-functioning of the system rather than inquire into its nature.[1] In countless ways human rhythms have succumbed to technological rhythms, which we attempt to humanize by such words as user-friendly, though they have a habit of ambushing us, like computer viruses. Technology is above all for use; if you have it, you use it. A recent faculty memorandum came to me via a fax machine from the Senate Office. It had been beamed up to a satellite a couple of hundred miles above the earth and back again; yet the Senate Office and the English department are next door to each other in the same building. I asked myself, what earlier forms of communication did such technological overkill replace: the photocopier, the typewritten letter, the hand-written letter . . . the *handshake*? Face-to-face contact has been replaced by face-to-machine contact.

People who raise the faintest objections to technology are branded

[1] The simile is adopted from Ruskin, on tourism and the new cult of speed: "all travelling becomes dull in exact proportion to its rapidity. Going by railroad I do not consider as travelling at all; it is merely 'being sent' to a place, and very little different from becoming a parcel." To *see* it is necessary to slow down: "a turn of a country road, with a cottage beside it, which we have not seen before, is as much as we need for refreshment; if we hurry past it, and take two cottages at a time, it is already too much" (*Modern Painters III*, *The Works of John Ruskin*, eds. E. T. Cook and Alexander Wedderburn [London: Unwin, 1903-12]: 5.370).

Can technology be balanced against other needs?

as Luddites. This term of opprobrium only goes to prove how incredibly naive technology's defenders can be about the subject. "Luddite" implies that one can smash a specific machine or burn down a factory and "go back" to a pre-technological world. Technology, however, can no longer be understood in terms of single machines; it is the system in which we live and move and have our being. There is no question of "going back." The issue is whether we have any control over how we go forward. I do not want to evoke pastoral nostalgia or to dream of a lost wholeness: those withered departmental plants! Such indulgence may be compared to reading old travelogues about a lovely country whose face has been scored by modernity. Yet it may be instructive to trace the recent histories of these strong and weak forces, technology and literature, and their convergence in the present moment, though "convergence" may suggest an equality of opportunity that they do not enjoy. At a time when the humanities have suffered greatly at the hands of technological society, they are more important to our social and ethical life than ever before in human history.

Today the humanities are under attack from many quarters. Far more students take courses in behavioral psychology to learn about interpersonal relations than take courses in Shakespeare or the nineteenth-century novel. A report in the *New York Times* (9 October 1996) chronicles the drop in foreign language majors from 1990 to 1995: Latin declined by eight percent, Italian by twelve, French by twenty-five, German by twenty-eight. Philosophy, English, and religious studies have declined steadily since the 1970s. It is sometimes said that the humanities will survive only as a plaything of technocrats or a mere adornment to life. At best they will be the private delight of the aesthete, the antiquarian, or the bibliophile.

Any assessment of the humanities in technological society should refer, if only briefly, to their foundations, to their concepts of freedom and the individual, *civitas* and *humanitas*, and to the civilizing mission they have performed during their long history: in Eugenio Garin's words, "the formation of a truly human consciousness, open in every direction, through the historical and critical understanding of the cultural tradition."[2] From Isocrates, Cicero, and Quintilian, to Guarino da

[2.] Eugenio Garin, *Educazione umanistica in Italia*, 9th ed. (Bari: Laterza, 1975), 11. "It is not a *logos* and an historic commonality that should constitute the horizon of reference," writes Gianni Vattimo in what may supplement Garin, "but the idea of an indefinite enlargement of *logos* before a community-always-in-the-making" (cited in Maurizio Ferraris, "Etica e ermeneutica," *aut aut* [Milan], N. S. 228 [1988]:87-95). The allusion is to Heraclitus, "It is the *logos* of soul to increase itself."

Verona, Montaigne, and Matthew Arnold, the humanities have always helped frame certain choices: what kind of student are we producing, what type of mind, what configuration of ideals, what practical skills, what standard of conduct? In short, by whom in the future does society wish to be represented? The goal was to educate a person who knows not only many things, but how to rank them; who has the spark of wisdom to know where to look again for wisdom.

Humanities provide standards.

In the later nineteenth century, when science and technology were making their demands on the curriculum, Arnold correctly perceived that humanistic values had been undermined neither by the widening of the humanities to include modern languages, nor even by nineteenth-century science. The physical sciences did not claim to address the subjects that concerned the humanities; and the differences between them could be resolved by applying, under the eye of the humanities, scientific discoveries to the improvement of life. Arnold conceded that the humanities would have to yield their "leading place" in education, though he also believed that they would find it again, that forces in human nature itself were working for them. He urged humanists to carry on "the disinterested pursuit of perfection"; to construct a global culture founded upon the best that has been thought and said throughout history; to evaluate the results of science on the basis of their benefit to human needs and freedom; and to nourish the sense of beauty.

But Arnold was wrong in his prediction.[3] Not only have the humanities failed to regain their high status in education, they have slipped farther behind. What Arnold could not have known was that a whole new body of academic disciplines, the social sciences, would soon emerge to fight for their own place in the curriculum and assert their right to relate the conclusions of the physical sciences, as well as their own theories and discoveries, to human needs in the modern world. The social sciences had encroached upon the traditional sphere of the humanities, interrogating the very same subjects and issues, claiming that they too could teach students how to lead an ethical, beneficial, and self-fulfilled life. Sociology examined the individual's relation to the community, once primarily a humanistic question. Psychology and psychoanalysis laid claim to the study of the inner life, another humanistic province. In a similar fashion, the new disciplines of political science, economics, and anthropology proposed to solve

[3] At least the triumph of the humanities is much further off than he envisaged.

problems that had been the sovereign domain of the humanities. Furthermore, Arnold could not have predicted the transformative power of technology. Even Max Weber in the next generation, analyzing the "iron cage" of rationalized modernity, did not gauge the extent to which rationalization would involve the technicization of life.[4]

Throughout the twentieth century the debate over the role of the humanities has waxed and waned. High points include the reforms at Columbia and the University of Chicago in the 1920s and 1930s, and those at Harvard after the Second World War and in the 1970s. With every new plan, the humanities yielded more ground. In the past decade or so the debate has been renewed with bitterness and desperation. Allan Bloom's *The Closing of the American Mind*, E. D. Hirsch's *Cultural Illiteracy*, Robert Proctor's *Education's Great Amnesia*, Richard Gambino's *Racing towards Catastrophe*, John R. Searle's *Is There a Crisis in American Higher Education?*—the titles invoke impending doom. "A fairly sizable number of professors in literature departments have lost interest in the study of literature as it has been traditionally construed," observes Searle; "my impression of neurobiology conferences is that the participants are deeply committed to neurobiological research . . . my guess is that many of the participants at the MLA have lost interest in doing what they are officially supposed to be doing."[5] Some literature professors would prefer that core humanities requirements, a shadow of their former selves anyway, be phased out, though without them their departments would shrink drastically, suffering the fate of classical studies three or four generations ago.

Rather than analyzing the decline of the humanities narrowly in terms of turf battles among disciplines, one ought to situate it within the larger social and historical panorama. Astonishingly, the debate proceeds with scant reference to the massive presence and continuing expansion of the technological system. Despite the postmodern belief in the continuousness of academe and the "real world," vestiges of the ivory tower mentality may have induced us to think we are protected from the system, at least from its worst excesses. Nonetheless, the nature and impact of technology have been examined closely by such writers as Lewis Mumford and Jacques Ellul, Roderick Seidenberg, Gilbert Simondon, and Siegfried Gideon, not to mention Heidegger

[4] Andrew Feenberg, *Critical Theory of Technology* (New York: Oxford University Press, 1991), 7.

[5] John R. Searle, *Is There a Crisis in American Higher Education?* Founder's Day Pamphlet Series no. 1 (Cheney, Wash.: East Washington University Press, 1995), 17-18.

and Marcuse. They and others have tried to comprehend the unparalleled shift in adaptive behavior that has happened within the space of a hundred odd years, from industrial to technological society.

Students of technology may be placed within two broad groupings: instrumentalists and substantivists. Instrumentalists believe that technologies are single tools that lie ready to hand as in a toolbox, and that tools are neutral or value-free means to chosen ends. Typically, instrumentalists speak of technologies rather than technology, thinking they can pick and choose among options while keeping their hands on the reins of power. For them, technology is indifferent to politics.[6] A car is a car and a computer is a computer in any social or political context, and top-down management, bureaucratic expertise, and quality-control are the same everywhere. On the instrumentalist view, technology differs from law and religion, "which cannot be readily transferred to new social contexts because they are so intertwined with other aspects of the societies in which they originate."[7]

"MacDo" vs. *French cuisine.*

By contrast, the substantivists, a minority that includes such figures as Ellul and the later Mumford, argue that technology is a monolithic phenomenon vastly greater than the sum of its parts. For Heidegger, human beings are mere "standing reserves," raw materials to serve the system. Far from being neutral, technology has become the *substance* informing more and more of life, like an implacable bureaucracy at the core of things that directs decisions at every turn. Thus, choosing technology entails "unwitting cultural choices": instrumentalists might defend fast food as the most efficient way of getting calories, saving time, and avoiding social complexities; substantivists would recall the ritualistic aspects of the dinner hour, lament the breakdown of the family, and denounce the coarsening of taste.[8] They would decry the fact that French children prefer what they affectionately call the "MacDo" to French cuisine.

The technological paradigm of Jacques Ellul is admittedly extreme, but its very extremism focuses the issues in their clearest light.[9] Ac-

[6] "Whether the end accomplished is wise or unwise, beautiful or hideous, beneficial or harmful, must be determined independently of the instrument employed" (Langdon Winner, *Autonomous Technology: Technics-out-of-Control as a Theme in Political Thought* [Cambridge: MIT Press, 1977], 27).

[7] Feenberg, *Critical Theory of Technology*, 6.

[8] *Ibid.*, 8.

[9] As for "extreme": Stephen Rose writes that Ellul is "just a frustrated man who [has] never been accepted and who [spends] most of his time railing against this fact." More sympathetic, Mumford still disapproves of Ellul's "ingrained fatalism." For

cording to Ellul, modern technology began with the machine, abstracted principles from it, then outstripped it, became independent, and finally turned itself into a political, economic, and social reality. For the essential concept and its all-embracing referent, Ellul uses the term "technique" (*la technique*), defined as "the *totality of methods rationally arrived at and having absolute efficiency* (for a given stage of development) in *every* field of human activity."[10] Technique has five major features. The "prime characteristic"—indeed, the "supreme imperative"—is the principle of least effort or efficient ordering.[11] This includes rationalization, measurement, standardization (e.g., of the production process), linearity, segmentation, simplification, minimum waste, and speed. Human values are filtered out except where they facilitate the technical means which are omnipotent and often "unfriendly," thereby requiring the user-friendly convention. No real choice exists among technical methods: after all the necessary calculations are factored, the decision is obvious because technique dictates the *one best means* or least effort.[12] Rival technology signifies that the principle has yet to make its latest judgment on a case, which will not be final because improvements and breakthroughs are always in the offing.[13] If mistakes occur, technique intervenes to remove the defect and a new pathway is opened.

A second feature of technology is *self-augmentation*: machines keep making more and more machines. "Everything occurs *as if* the techno-

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Rupert Hall, "Ellul lives on black bread and spring water. . . . The prophet whose cry is only 'Woe, ye are damned' walks unheeded. Ellul is such a prophet. . . . If he is right, his book is useless" (cited in Clifford G. Christians, "Ellul on Solution: An Alternative but No Prophecy," in *Jacques Ellul: Interpretive Essays*, eds. Clifford G. Christians and Jay M. Van Hook [Urbana: University of Illinois Press, 1981], 147).

[10] Jacques Ellul, *The Technological Society*, trans. John Wilkinson (New York: Knopf, 1973), xxv.

[11] Jacques Ellul, *The Humiliation of the Word*, trans. Joyce Main Hanks (Grand Rapids: William B. Eerdmans, 1985), 151.

[12] Robert Kanigel, *The One Best Way: Frederick Winslow Taylor and the Enigma of Efficiency* (New York: Viking, 1997), 441. The first efficiency expert and founder of scientific management, Taylor wrote that "the same principles can be applied with equal force to all social activities; to the management of our homes; the management of our farms; the management of the business of our tradesmen, large and small; of our churches, our philanthropic institutions, our universities, and our governmental departments" (*The Principles of Scientific Management* [1911], cited 438).

[13] The "fundamental law" of the instrumental theory of technology is "You cannot optimize two variables": one inevitably proves more efficient. Meanwhile, political, social, religious trade-offs may introduce nontechnical values (Feenberg, *Critical Theory of Technology*, 6).

logical system were growing by an internal, intrinsic force, without *decisive* human intervention."[14] Progress is irreversible and unceasing, and the progression is geometric as opposed to arithmetic. A breakthrough in one field brings solutions on all sides, like the internal combustion engine, the laser, or the computer; "these solutions in turn create even more problems which in turn demand ever more technical solutions."[15] Paratechnologies quickly develop in response.[16]

A third characteristic of technology is *monism*. The parts of the system are united to one another and recombine easily because they do not vary in their essentials. Technique is acultural, ahistorical, a-geographical; there is no Eastern or Western technology. We live inside a "transnational and *multi*-polar, interdependent, and highly interactive" order.[17] Monism imposes the good with the bad uses of technique. At the point when atomic energy had been harnessed, it was bound to be used for a bomb. Information-gathering services can be applied to scholarship or surveillance. "Technique never observes the distinction between moral and immoral use. It tends, on the contrary, to create a completely independent technical morality."[18] Robert Merton labels it the morality of "know-how": "Technique transforms ends into means. What had been prized in its own right now becomes

[14] Jacques Ellul, *The Technological System*, trans. Joachim Neugroschel (New York: Continuum, 1980), 209.

[15] C. George Benello, "Technology and Power: Technique as a Mode of Understanding Modernity," in *Jacques Ellul*, eds. Christians and Van Hook, 92: "Once the technical orientation has been adopted, an automatic cycle begins which brings into existence all possible results of technique."

[16] On the forces propelling an information economy Anthony Smith writes: "information crises became endemic within the capitalist system from the middle of the last century. For example, keeping track of freight wagons in the massive US railroad system brought in its wake problems of managerial control—what we would call problems of information processing—that would have prevented further growth had not separate systems for handling the information itself evolved. Managing the handling of containers within a shipping operation, booking tickets for planes, ships and trains, running the timetabling of transportation systems, manufacturing the spare parts for mass consumer goods ranging from pianos to motor cars: all gradually became, or would have become, impossible without paratechnologies for collating the information" (*Software for the Self: Technology and Culture* [New York: Oxford University Press, 1996], 78).

[17] Maurice Roche on the new capitalist world order echoes Ellulian self-augmentation ("Mega-Events and Micro-Modernization: On the Sociology of the New Urban Tourism," in *The Sociology of Tourism: Theoretical and Empirical Investigations*, eds. Yiorgos Apostolopoulos, Stella Leivadi, and Andrew Yiannakis [London: Routledge, 1996], 318).

[18] Ellul, *Technological Society*, 97.

worthwhile only if it helps achieve something else. And, conversely, technique turns means into ends. 'Know-how' takes on an ultimate value."[19] Further, monism entails linkage: techniques of communication combine with techniques of administration and militarism—to produce progaganda, which becomes a new technique that can be applied elsewhere, as in advertising.

Technology begets uniformity.

Fourth, technique implies *universalism*. It grows on all sides, across the planet, and into space, and everyone wants it, and more and more of it, from the richest to the poorest nations, from the capitalist nations to the socialist nations, from democratic regimes to totalitarian regimes.[20] Once a part, now it is the envelope of the whole. Moreover, one can never do with just a little technology. A commitment to some of it inevitably brings in the rest: like a "universal language," it "shapes the total way of life."[21] In September 1997 China tried to justify its plan to privatize major industries by calling it "socialism with Chinese characteristics."[22] No one was taken in by such propaganda.

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[19] Robert Merton, intro. to Ellul, *Technological Society*, vi.

[20] For Harry Braverman, Ellul is a bourgeois ideologist, "fetishizing" technology, treating it independently of social relations, and not seeing it as a weapon in the hands of capitalists (*Labor and Monopoly Capital: The Degradation of Work in the Twentieth Century* [New York: Monthly Review Press, 1974], 229). But Ellul points out that technology had won over not only the capitalists, but the workers; that "a common will developed to exploit the possibilities of technique to the maximum, and groups of the most conflicting interests (state and individual, *bourgeois* and working class) united to hymn its praises" (*Technological Society*, 54-55). Moreover, he concedes that technique had improved the lot of labor in many ways, e.g., by reducing the working day and revolutionizing medicine. However, Ellul's whole argument is that, if the workers were suddenly to come to power, their state would not want any less technology than the one they overthrew, so that the problem of technology would not disappear. The state is the major supporter of the technological system, and hence a frequent target of Ellul's; it does not so much matter what kind of state *from a strictly technological standpoint*, as long as its ideology does not interfere, or interferes as little as possible, with the technological imperatives. Among reasons given for the collapse of the Soviet Union was its inability to keep up with the technological revolution.

John McMurtry defends Marx's belief in technology as an extension of human nature against Ellul's position that technology is in contradiction with it: Marx would construe such "neo-Luddite . . . distress at technology as, demystified, distress at the capitalist law of utilization of technology." But he never gets to the core of Ellul's critique any more than Braverman (*The Structure of Marx's World-View* [Princeton: Princeton University Press, 1978], 224).

[21] Ellul, *Technological Society*, 132; *Technological System*, 171.

[22] Cf. Jacques Ellul, *The Betrayal of the West*, trans. Matthew J. O'Connell (New York: Seabury Press, 1978), 31: "No one today can claim to follow an autonomous path. And yet we see our intellectuals hugging the illusion that China has found 'another way.' Is it not perfectly clear, however, that this 'other way' is really not other at

Ideology is mere window-dressing and tends to interfere with the smooth functioning of a world-wide system. Morning business news in the West begins with reports on the closing of the Hong Kong market. Technique subdues nature, a good example being the tentacular suburb which invades the environment and subjugates it. One is hard pressed to think of a single aspect of human activity that has not been subjected to "a reflection of technological orientation": sports, entertainment, "speeded tests," sex, personal relations, religion, *How to* books of myriad number.[23] The technological phenomenon crosses class lines, universalizes taste, and creates a global civilization. Mega-events such as the Olympic Games, the Soccer Championship, Princess Diana's Funeral, impossible without technology, are watched by people numbering over a billion—and this is only the beginning.

Autonomy, the fifth characteristic of the paradigm, is the most controversial element because it is shadowed by fears that "somehow technology has gotten out of control and follows its own course, independent of human direction."[24] Technology has now reached the point at which it is a law unto itself, "depends only on itself," and "maps its own route." Fifty years ago one might have spoken of the interdependence of technology and nature; now technology has the upper hand. In fact, it takes more technology to save nature from technology, and so its power spreads.[25] In a similar fashion, we speak of saving ourselves from governmental centralization by devolution towards the peripheries. Yet to enact this process and keep it functioning requires more technique, so that the system grows apace. "Inside the technical circle, the choice among methods, mechanisms, organizations, and formulas is carried out automatically."[26] Individuals still play a role, they invent the various tools, they make new bureaucratic protocols, etc., but what counts is the "anonymous accretion of conditions for the leap

all and that everything about it—the Marxism, the rational methods, and above all, the very movement itself—is western in its inspiration?"

[23] Ellul, *Technological System*, 170. "Technique cannot be otherwise than totalitarian. It can be truly efficient and scientific only if it absorbs an enormous number of phenomena and brings into play the maximum of data" (*Technological Society*, 125).

[24] Winner, *Autonomous Technology*, 13.

[25] Ellul, *Technological System*, 125. The past sixty years have witnessed the decline in the number of wading birds in the Florida Everglades by 90 percent. Who would not support efforts to clean up and protect the Everglades? Yet technology is an indispensable means to accomplish this goal.

[26] Ellul, *Technological Society*, 82: "this can be said only of the *ensemble* of techniques, of the technical phenomenon, and not of any particular technique" (90).

ahead." Generally speaking, only "minimal human intervention" is needed to create or improve something; "literally anyone can do the job, provided he is trained to it" (a point that would be supported by Heisenberg). The entire system should be understood as an "'organism' tending towards closure and self-determination." Soon supercomputers will alone be able to create programs for other supercomputers. The main issue is that, in its evolution towards an advanced state, technology tends more and more to dominate humanity itself. "Man," sums up Ellul, "is reduced to the level of a catalyst."[27] The sense of helplessness can be overwhelming.

No one doubts that technology saves lives and cuts down on drudgery, though not on work. The real moral problem of the system is that everything is situated in relation to it, so that ultimately all

[27] Ellul, *Technological System*, 125; *Technological Society*, 86, 92-93, 135. "At the present time, technique has arrived at such a point in its evolution that it is being transformed and is progressing almost without decisive intervention by man" (*Technological Society*, 85). Technoevolutionism has a history with arguments on all sides of the question. Shortly after Darwin's epochal discoveries, Samuel Butler fantasized that the machine was a step forward in the evolutionary process. Capable of doing what human beings could not, machines ultimately would dominate their inventors. "Day by day, the machines are gaining ground upon us . . . more men are daily bound down as slaves to tend them, more men are daily devoting the energies of their whole lives to the development of mechanical life. . . . that the time will come when the machines will hold the real supremacy over the world and its inhabitants is what no person of a truly philosophic mind can for a moment question" (*Notebooks* cited in Lewis Mumford, *The Myth of the Machine, Part II: The Pentagon of Power* [New York: Harcourt Brace Jovanovich, 1970], 194-95). Mumford credits Butler with launching the concept of automation; Norbert Weiner, with the possibility of a machine producing another machine. Since machines will do everything better, "the transposition of life into mechanical organizations will, Butler pointed out, eliminate man's most serious difficulty: that of developing his own capacities to become human" (96, 194).

At the same time, technoevolutionism has its proponents. "In the past the man was first; in the future the system must be first," wrote Frederick W. Taylor (cited in Kanigel, *One Best Way*, 438). "Can the synthesis of men and machine ever be stable," asks Arthur Clarke, "or will the purely organic component become such a hindrance that it has to be discarded? If this eventually happens—and I have good reasons for thinking that it must—we have nothing to regret and certainly nothing to fear." Paraphrasing this argument, Winner writes that "man should be pleased to have played even a small walk-on part in this much larger drama. To complain that humans have been left out of the final scenes is merely an example of outdated species chauvinism." On some views, notes Winner, machines are becoming more and more human, and human beings are becoming more and more like "cybernated organisms" surrounded by machines; but many theories of technoevolution suffer from the flaw that they presume the eclipse of free conscious agents (58-59).

choices become technological ones. "Technological advance will move faster and faster and can never be stopped," writes Heidegger: "in all areas of his existence, man will be encircled ever more tightly by the forces of technology. These forces, which everywhere and every minute claim, enchain, drag along, press and impose upon man under the form of some technical contrivance or other—these forces . . . have moved long since beyond his will and have outgrown his capacity for decision."[28] Mumford and René Dubos have arrived at similar conclusions.

Left to itself, technology so thoroughly subordinates human ends to technical means that those ends are lost. Tools were formerly moulded by the rhythms of the body, which conferred the primacy of the human over the artificial. When the tool was replaced by the clock, comments Franco Piperno, the human body had "the bewildering experience of being synchronized with the rhythm of the machine; the time of the machine builds a nest in the body of the worker—think for instance of Charlie Chaplin's film *Modern Times*. The advent of the computer, finally, introduces a time that escapes the very possibility of experience." In computer time a second is a "gigantic dilation" of the present; concepts of time and memory are transformed on mathematical lines. We no longer become caricatures of ourselves, as in Chaplin; we cease resembling ourselves. "The central aim of information knowledge is not the completeness and coherence of facts and judgments on the world, but rather the optimization of procedures, be they for decisions, diagnosis, management, or planning. Information knowledge incessantly transforms procedures so that the action may be more effective and, above all, faster."[29] Other graphic symptoms of this apparently unstoppable growth of technology are the global ecological crisis, intellectual devastation by the media and advertisement, bureaucratism, the strangulating and labyrinthine transportation system, architectural gigantism, and what Mumford calls "the suppression of personal, communal, and regional individuality by a kind of tasteless, homogenized universalism."[30]

One of the most effective ways that technique communicates is by images. Marshall McLuhan, Guy Debord, and Neil Postman have long

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[28] *Discourse on Thinking*, cited in Winner, *Autonomous Technology*, 14.

[29] Franco Piperno, "Technological Innovation and Sentimental Education," in *Radical Thought in Italy: A Potential Politics*, eds. Paolo Virno and Michael Hardt (Minneapolis: University of Minnesota Press, 1996), 123, 126.

[30] Lewis Mumford, *Myth of the Machine, Part II: Pentagon of Power*, caption to illustration no. 21. between 340 and 341.

since informed on our spectacle-oriented, audio-visual culture.[31] An avalanche of images from morning to night, via television, film, computer, and the rest of the mass media, has smothered the humanities, not to mention literary culture. Voracious consumers of images, we use them even where they are not strictly necessary. We blame the growth of visual culture for the surfeit of classroom miseries as students struggle to arrive at the meaning of not especially cryptic poems. But we fail to connect this failure with the underlying technological imperatives that we embrace elsewhere. What goes unexamined is how, at a deeper level, technology and visual culture share a common basis, have evolved alongside each other, and have drastically shrunk the domain of literary language. "Contemporary culture in its now global communications context," writes Don Ihde, "is increasingly embodied through its instrumentarium . . . image technologies." [32]

Image technologies have smothered humanities.

To begin with, the continuous parade of images would be impossible without technology; this alone accounts for the nonstop invasion and multiplication of images within every corner of daily life. Like technology, images—still or moving, speaking images—operate on the principle of least effort. Useful, fast, and efficient, they enable us to grasp the total gist of something at a glance: "sight saves us the trouble of thinking and having to remember." Because of their association with vision, images pack a high degree of realism, currentness, and objectivity, even when on other grounds we are convinced of their falsehood (for example, in advertising). Images are "accepted as reality and identified with it," says Ellul; "we think we are reflecting on facts, but they are only representations." [33] Critical responses to Gulf War news broadcasts revealed "the simultaneous *immediate awareness of the viewers that the news was being 'cooked' and yet its planned effect was accepted and even celebrated*." Image-mediated sight frames and detaches an object, diminishes depth, alters contrast; it is non-isomorphic with objects ("virtual reality" is more virtual than real); and it is constructive (time reversals, flashbacks, special effects, discontinuities).[34] We are hurried

"Virtual reality" more virtual than real.

[31] See, for example, W. Terrence Gordon, *Marshall McLuhan: Escape into Understanding* (New York: Basic Books, 1997), 193-218.

[32] Don Ihde, "Image Technologies and Traditional Culture," *Inquiry* (Oslo), 35 (1992):378. "Images are the chosen form of expression in our civilization—images, not words" (Ellul, *Humiliation of the Word*, 126). Ours is "the century of the screen" (Paul Levinson, *The Soft Edge: A Natural History and Future of the Information Revolution* [London: Routledge: 1997], 162).

[33] Ellul, *Humiliation of the Word*, 115-16, 127-28.

[34] Ihde, "Image Technologies and Traditional Culture":382, 383.

along by the multiplicity of images and ride on their gleaming surfaces; like technology, they have no insides, no interiority. Images move us from stimulus to response in a flash, programmatically, without the discourse of reason, involving "a kind of direct communication of knowledge, as if it did not pass through the brain," like pressing a button or buying a product ("impulse buying").[35]

Instead of reading a book, children and teenagers prefer to play video games because it is easier, more immediate, "more fun"; the whole mind does not have to work as hard to think up and imagine forth: the principle of least effort. Video games, so full of rules and operative procedures, and so relatively contentless, adapt the young not only to the physical apparatus, but to the formalisms and methods of technological society (one game rule book runs to forty pages). It is said that current college students are the Nintendo generation, having grown up with the computer as entertainment. The computer's real triumph arrives with the next generation, now ages twelve through fifteen, for whom the computer is primarily a "learning *tool*" and "extension of the faculties," though what has happened is an introjection of the principles of technique into young minds, and narrowed sensibilities.

Image cultures require coarseness in art.

Let it be granted that images can convey certain forms of knowledge quickly and easily—chiefly scientific knowledge, which is today the model of knowledge. Ellul concedes that in some fields a picture *is* worth a thousand words; science and social science require sketches and diagrams since many of their propositions cannot be expressed in words. The issue is the dominance of image-based culture as a whole, not only the deluge of images, but their quality: basic, ideographic, exaggerated, coarse by the standards of high art. Think of the computer-created Disney feature films. The content of these simplified cartoon images was determined by the forms of technology—efficiency, speed, economy, segmentation, conformity, etc. Compare the industrial colors and standardized faces of these cartoon persons or animals with the real thing, or, say, with an engraving of a rabbit by Albrecht Dürer. A rabbit by Dürer is beautiful and has much in common with a real rabbit. Yet people prefer a Disney rabbit to a Dürer rabbit or the real thing. Disney World in Orlando is the single most "touristed" spot in the

[35] Ellul, *Humiliation of the Word*, 134, 211. "Impression and image take precedence over logic and concept," writes Sven Birkerts on the differences between print culture and electronic imaging (*The Gutenberg Elegies: The Fate of Reading in an Electronic Age* [London: Faber and Faber, 1994], 122).

world, with over thirty million visitors a year. All of Italy with its thirty splendid cities has only twenty-four million visitors a year.[36]

Currently, one of the most popular tourist spots in France is Cluny: not the real abbey of Cluny, which was destroyed in the early nineteenth century; rather, a vast computer-simulated reconstruction of it in a museum adjoining the original grounds. If people were genuinely interested in the history of Cluny or the monks of the Middle Ages, they could have read half a dozen books in half the time it took them to get there. They could have gone to see a *real* abbey. Instead they chose to "experience" a visual stunt. As one advocate remarks on this new direction in entertainment: "the 'virtuality' machine involves a full immersion in computerized programs that will provide contact in real time (i.e. the answers of the operator will interact with the human 'proprioceptor system'). . . . The machine, which for all intents and purposes is a journey in itself, offers a wide range of getaway places and tourist settings. This type of anticipatory experience with its plausible interactive relationship could reinforce the *déjà vu* feeling even further and perhaps condition the psychology of perception in a way which one cannot yet foresee."[37] One may recall the decadent Des Esseintes in Huysman's *À rebours*: to save himself the trouble of traveling to London, he simulates the feelings of being there, at a railway pub, listening to a few Englishmen, on a drizzly day, in Paris.

Ihde argues that image technologies overcome the conflict between high and popular culture, delivering a "pluriculture" or "multiple otherness." News broadcasts comprise bits and pieces of information, countries, products; MTV transmits a "multicultural mix of musics, fashions, ethnic traditions, human races." The non-linear, jumpy, novel content resembles the form, its technique; this has become the model for many kinds of programming. "Ordinary space-time is here techno-

[36] Opened in 1983, Tokyo Disneyland was meant to be an "exact replica" of the original; its producers wanted Japanese visitors "to feel they were taking a foreign vacation." It became the top attraction in Japan within five years (50 million by 1988), where a visit "now replaces traditional outings to shrines and temples for graduation and new year celebrations." The French Press initially disparaged Disneyland Paris by calling it a "cultural Chernobyl." Yet when Disney managers made some concessions to give the complex a more European look and feel, the Europeans reacted negatively: they "came for an American experience." As a result, Disney returned to its original plan, and Disneyland Paris was on its way to success (Susan C. Schneider and Jean-Louis Barsoux, *Managing across Cultures* [New York: Prentice Hall, 1997], 66).

[37] Giuli Leibman Parrinello, "Motivation and Anticipation in Post-Industrial Tourism," in *Sociology of Tourism*, eds. Apostolopoulos et al., 85.

logically deconstructed and reconstructed in a *bricolage* image of space-time." The model both mirrors current experience and promotes it everywhere. "One may pick and choose culture fragments, multiply choices, and in the process reflectively find one's own standards often provincial or arbitrary." (Given the superficiality of much programming, these choices are more often illusory than real.) The image technologies, concludes Ihde, diffuse a relativizing spirit that is "*non-neutrally acidic to all traditional cultures*."[38] Since we live less and less in ordinary space-time and more and more in technologically mediated space-time, we may discern the lineaments of a wholly new type, the young man or woman of our time.

Image technologies "non-neutrally acidic" to traditional cultures.

More than simply fabricating the hyper-real environment, technology constructs the technicized individuals that navigate through it. Here its image investment pays off enormously: a functional, simplified imagery, as on a computer screen, is the one best means to adapt people to the efficient, streamlined technological environment, which needs visually oriented people to expand and reticulate, if only for the sheer amount of information to be processed and disseminated. Technicization begins in earliest childhood (hence the power of Disney and the like) and then permeates all levels of the educational system. First, the goal was a television in every classroom, now it is a computer on every desk. Pictures in textbooks used to be ornamental and subservient to the content; "now the text has become the explanation of the images."[39] Who could say that students are learning more? In current guidebooks, pictures and cutaways have seized the lion's share of the page. One series (significantly entitled *Eye*witness) announces itself, "The Guides that Show You What Others Only Tell You" (one glossy cutaway glides down the Grand Canal in Venice). The audio-visual method, Deweyesque learning-as-doing, the denigration of memory as mere rote, all have set a premium on speaking a foreign language rather than reading it, though for most people speaking the language will be exceedingly rare, and meanwhile sacrificed is a reading of Leopardi, Baudelaire, and Rilke. What one receives from school is minimal by comparison to captivating home video and the computer screen. Without realizing it, those who have grown up in a technological society "have a need to live through images." Ellul underscores the evenness of the exchange: "technique requires visually

Technology constructs technicized individuals.

[38] Ihde, "Image Technologies and Traditional Culture":383, 385-86.

[39] Ellul, *Humiliation of the Word*, 117.

oriented people. And people living in a technical milieu require that everything be visualized."[40] In this way the system makes the very product it feeds upon.

The apotheosis of image technology is the Hollywood blockbuster. Everyone agrees that these films are aesthetically negligible and that they trivialize reality. Yet their producers and purveyors lavish immense sums on them. What takes place in this display of imagistic wizardry is a reinforcement of the audience to the principles of technique. These films are hymns to technique. Hollywood represents built-in progaganda for the technological system. In a stunning example of technological universalism, Hollywood has edged out all other national film industries. Japanese, Italian, and French cinema, which had once mounted an effective opposition, have succumbed. The independent filmmaker has all but lost the battle of independence.

What are some of the consequences of visual culture? In "Bowling Alone" and "The Strange Disappearance of Civic America" Robert D. Putnam examines the decline of civicness or social trust from the "long civic generation" born between 1910 and 1940 to the "post-civic" generations of Baby Boomers and after. Over the last thirty years, he notes, membership in voluntary organizations has fallen by a quarter to a half: from churches, community clubs, and labor unions (down 65 percent since 1954), to literary discussion groups, PTAs, the Red Cross, and bowling leagues. Newspaper home circulation has dropped by one half from its peak in 1947. Though Putnam concedes that the downward trend is not monocausal, nonetheless "the culprit is television." The long civic generation, which grew up without it, belongs to twice as many associations as the post-War generations, which grew up with it. Today, by conservative estimates, the average American watches television three hours a day, which amounts to about 40 percent of leisure time. Most homes by the late 1980s had more than one set, which means more private viewing. We have gone from being joiners to being viewers. Heavy readers tend to be joiners, while "heavy viewers are more likely to be loners."[41] Heavy television watching tends to make people overestimate crime rates, to sharpen

[40] Ellul, *Humiliation of the Word*, 150-51.

[41] Robert D. Putnam, "The Strange Disappearance of Civic America," in *Ticking Time Bombs: The New Conservative Assaults on Democracy*, ed. Robert Kuttner (New York: New Press, 1996), 281, 282. Disputing Putnam, Michael Schudson writes: "If people who formerly joined the YMCA to use the gym now go to the local fitness center, Putnam's measures will show a decrease in civic participation when real civic

skepticism regarding the benevolence of other people; it quite possibly increases aggressiveness in young people and lowers scholastic achievement. It certainly fascinates mainstream America with its sordid display of scandal and corruption—moral, social, political, religious.[42] Putnam cites Neil Postman's conclusion relating television and passivity.

In *Technologies without Boundaries* Ithiel de Sola Pool predicted that the communications revolution would continue to fragment and privatize American culture. "A society in which it becomes easy for every small group to indulge its tastes will have more difficulty mobilizing unity. A society where mass publishing has to compete with specialized information resources will have more trouble establishing coherence of intellectual debate." At the same time Pool, who defined himself as a "soft technological determinist," also thinks that technology "will promote individualism."[43] On the contrary, the evidence points to the dwindling of autonomous selfhood under the superficial signs of privatism and lifestyles—styles bought and discarded like ready-made fashions. In the tradition of William Morris and Patrick Geddes, Mumford argues that "technological civilization destroys the individual's capacity to take part in the craft of fabricating his world."[44]

Most significantly, the power of technology and the omnipresence of the image have resulted in the subservience and devaluation of language. This does not mean its absence—on the contrary, we are drowning in a sea of words. Instead, technology establishes simple, unambiguous, utilitarian language as its literary standard; this kind of language wins its way by excluding all or nearly all but the referential and directional functions of words. Even the emotive or expressive function (prominent in advertisements) now takes a back seat, though

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activity is unchanged" (287). It is not my intention to be anecdotal, but I visited a local fitness center and found it quieter than a church. In one room about twenty men and women were lined up doing treadmill exercises, each watching his or her own television hooked up with earphones. Might this support Putnam's argument that privatism is increasing, that "real civic activity" *has* changed?

I am indebted to Anthony Lewis's commentary on Putnam in *The New York Times*.

[42] Among the most litigious people in the world, Americans are fascinated by endless legal procedures ("technicism is compatible with an increasingly legalistic intrepretation of the American civic tradition," writes Manfred Stanley in *The Technological Conscience: Survival and Dignity in an Age of Expertise* [New York: Free Press, 1978], 206).

[43] Ithiel de Sola Pool, *Technologies without Boundaries: On Telecommunications in a Global Age*, ed. Eli M. Noam (Cambridge: Harvard University Press, 1990), 261-62.

[44] Stanley, *Technological Conscience*, 44.

Utilitarian language lacks depth and beauty.

its imagistic content is noisier and more importunate, like a back-seat driver. Language neutralized as information dominates the "knowledge culture." Thomas Sprat, the seventeenth-century historian of the Royal Society, pleaded on behalf of a "close, naked" style of speech and writing, "bringing all things as near the Mathematical plainness, as they can."[45] His hope is being realized by the computer: "for technique all language is algebraic" (Philippe Roqueplo) and "technique's ambition is to make the whole world algebraic" (Marcel Jousse).[46] Diction, tone, figures of speech, metaphor, subtler forms of syntax, connotation and etymology, sound and rhythm, all the arts of language developed over the centuries to express intricate thought and emotional depth get ironed out and suppressed. Technological society has no need of them, or finds such literary strategies to be adversarial. Complex literary language penetrates the imagistic surfaces, probes into the furthest recesses of mind and feeling, breaks the force of habit, and draws patterns of coherence in order to deepen and empower a self-determining, continuously developing selfhood. Rightly to understand this language, one often needs to seek out its origins on biographical, social, and historical grounds, for that is what gave birth to it. So understood, literary language connects us to the past—personal, communal, and historical. It may contain unbidden, unfathomable mysteries: what Wordsworth meant by the word "invisible" in describing the secret interchange of mind and nature, what Coleridge meant by the word "magical" in portraying the imagination.

The decline in language studies affects much more than the reading of literature. Has anyone noticed how difficult it is to convince people by a solid argument: an argument constructed on the logic and rhetoric of forensic discourse? Few people can interpret it, appreciate it, and hence listen to it. Such language is becoming pointless.

When Kant set forth his concept of aesthetic autonomy as freedom from immediate utility and external controls, he was proposing a model for the autonomous self. A knowledge of complex literary language has traditionally been one of the liberating influences for the self, and so has been at the heart of the humanities. Present students have grown up on the use of formulaic computer language that refers generally to the reality of the technological environment, which seems complete in itself. The average video game does not have much lan-

[45] Thomas Sprat, *The History of the Royal Society* (1667), 113.

[46] Roqueplo and Jousse cited in Jacques Ellul, *The Technological Bluff*, trans. Geoffrey W. Bromiley (Grand Rapids: William B. Eerdmans, 1990), 143.

guage, and what little there is hardly varies from box-top directions. "Lack of interest in literature and the condemnation of philosophy reflect the inability of these disciplines to convert themselves into diagrams."[47] One should not wonder at students' turning away from complex language, which requires much more effort to decode and which must often seem utterly opaque compared to the lustre of an image. Immediacy, currency, and entertainment define the image. By contrast, literary language calls for both an analytic rigor and a disciplined knowledge not only of aesthetic strategies and literary tradition, but of the other humanities, history, and often the social and natural sciences. All this requires memory, one of the great reservoirs of selfhood.[48] Although it cannot perhaps be proven, some hidden connection exists between the ahistoricism of the technological system and the utter lack of interest in memory as an educational value. Memory has become old-fashioned. But without the experience of literary language and the power of memory to retain it, interiority loses one of its best means of development. If we consider a child's or a student's potential, one could say that interiority shrinks before the computer, or, which is the same thing, becomes procedural, formalistic, and conformist, a mirror of technique. Technology has no interiority; its windows are surfaces.

Memory a reservoir of selfhood.

Within my own teaching career I have observed the English of Shakespeare becoming a foreign language to my students.

Given all the publicity about word processors in the teaching of introductory writing courses, who would dare say that students write better today than they did twenty years ago? With all the means and resources they now have "at their fingertips," can they connect infor-

[47] Ellul, *Humiliation of the Word*, 152: "just as it was the agent of humanity's formation in the midst of the animals, so the word in our day is the agent of the great refusal" (176).

[48] Heir to the concept of memory training in classical tradition, Vico advocated the teaching of languages in childhood, "when reason is much weaker while memory is so much stronger" (Oration VI, in *On Humanistic Education (Six Inaugural Orations, 1699-1707)*, trans. Giorgio A. Pinton and Arthur W. Shippee [Ithaca: Cornell University Press, 1993], 135); "let their imagination and memory be fortified so that they may be effective in those arts in which fantasy and the mnemonic faculty are predominant. At a later stage let them learn criticism, so that they can apply the fullness of their personal judgment to what they have been taught" (*On the Study Methods of Our Time*, trans. Elio Gianturco [Indianapolis: Bobbs-Merrill, 1965], 19; see also Robert J. Di Pietro, "Humanism in Linguistic Theory: A Lesson from Vico," in *Giambattista Vico's Science of Humanity*, eds. Giorgio Tagliacozzo and Donald Phillip Verene [Baltimore: Johns Hopkins University Press, 1976], 349).

Computer language becomes model for all language.

mation and build upon it so that they can converse better? On the devaluation of language through its subordination to computer needs, Ellul writes: "The conversation with a computer is not limited to that situation; it becomes the model for all conversation. . . . This covers an enormous proportion of language use, since it involves all sorts of technicians: administrators, jurists, economists, physicists, chemists, marketing experts, doctors, engineers, psychologists, publicity experts, film makers, programmers, etc. They represent nearly the totality of language use."[49]

One publisher recently announced the cancellation of 175 contracts for novels and paid off the writers. The publisher could not afford to bring out so many books on account of the competition, not from other publishers, but from the visual media, whose products were easier and more marketable. The principle of least effort had inserted itself. Elvis Presley's Graceland in Nashville has 700,000 visitors a year, charging nine dollars a head, while the White House has only a million, charging nothing. It takes infinitely less historical understanding to appreciate Graceland than it does the White House. Once again, the principle of least effort.

In 1930 C. K. Ogden proposed his Basic English as an international second language. This was based on 850 key words and simple grammatical patterns designed to give foreigners quick access to everything touched by English. His colleague I. A. Richards noted the parallels between this simplified language and the levelling nature of the media, which could therefore be employed to introduce such language as a first step towards literacy or second-language training (but *not* as a replacement of Standard English). Though it was a laudable goal, Richards was swimming in dangerous waters. In 1942 he went to the Disney Studios to learn how to make stick-figure drawings of people and things. Thus began his multi-volume *Language Through Pictures* in an expanded version of Basic English; the series eventually went into record, tape, television and computer, easily adapting itself to the evolving media. He put seven other languages into the same diagrammatic patterns. The abstract generality of the original linguistic model permitted it, and all cultural specifics were ploughed under. While Ba-

[49] Ellul, *Humiliation of the Word*, 162. Cf. John Naisbitt, *Megatrends* (1982): "more than 60 percent of us work with information as programmers, teachers, clerks, secretaries, accountants, stockbrokers, managers, insurance people, bureaucrats, lawyers, bankers, and technicians" (14), cited in William Wresch, *Disconnected: Haves and Have-Nots in the Information Age* (New Brunswick: Rutgers University Press, 1996), 6.

sic offered an ideal of technological efficiency—it was supposedly quick and easy to learn—it tended to reduce language from a complex instrument of intellectual analysis into a collection of purely functional or operational phrases.[50]

Basic English was part of the global spread of English, an event that one must link to the technological principle of the one best means or least effort. English was the first language of telecommunications, aviation, modern science, and international business. When the computer needed a kind of algebraic language to communicate on the information superhighways, it turned to something that resembled Basic English. What other language could a machine understand?[51] Just as technology in the environment has led to the reduction of species diversity, so too the technological system is reducing the overall number of languages. By the year 2050, in some estimates, the world will be getting on with ten languages, only four main ones.[52]

To mention Richards is to bring up the acknowledged founder of New Criticism, the first of the grand techniques that seized the academic high ground in literary studies after 1945. Paraphrasing Le Corbusier's "a house is a machine to think with," Richards said "a book is a machine to think with." The New Critics of the 1940s and 1950s attempted to protect the verbal artifact from the pressures of historical necessity and mere utility; yet their method was a direct reflection of those pressures. New Criticism was a kind of synecdochic condensation of the technological system in its antihistoricism; its objective neutrality and treatment of the poem as a clinical specimen; its quasi-scientific emphasis on specialization and method together with a meager, mostly inconsequential theorizing; its myths of synthesis and autolechy; its metaphors for organization. The New Critics fostered a straightforward, roll-up-your-sleeves approach to criticism that valued technocratic expertise, teamwork, bureaucratized efficiency, and anonymity (though a few top stars always get the prizes). "Criticism, Inc." was John Crowe Ransom's dry reference to the enter-

[50] Richards labored for many years to counter any such tendencies and to connect the study of Basic English with a development of intellectual skills.

[51] Ellul, *Humiliation of the Word*, 161, 166.

[52] "The language of international business is the language of the customer," observes T. Bruce Fryer; "Chinese, Hindi, English, and Spanish will be the most widely used languages of international trade in the future" ("The Language of Business," in Christiane E. Keck and Allen G. Wood, *Global Business Languages: Pedagogy in Languages for Specific Purposes* [W. Lafayette: Purdue Research Foundation, 1996], 9).

prise of which he was a principal partner. However, the New Critics ended in contradiction. On the one hand, they posited Kantian aesthetic non-purposiveness and a residual concept of the integrated subject; on the other, they held to a technocratic ideal of instrumental purposiveness, objectivity, efficiency, and practice. Their very emphasis on ambiguity tended to break up the ideal of wholeness and mirrored as in shivering glass that "loss of the self," to borrow Wylie Sypher's phrase, in countless procedures and mechanical exercises. The expansion of intellectual and imaginative freedom won by irony and ambiguity lapses into a free fall of proliferating meanings. This "loss of the self" may have as much to do with the anonymity of the corporation man and the overadministered society as with the doctrine of austere impersonality in high modernism.

There is hardly a better example of technological monism than the conjunction of aims in post-World War II American politics, in the academy following its shake-up and the rapid expansion of colleges and universities, and in the New Criticism. In 1945 a Harvard committee on educational reform published *General Education in a Free Society*, which exerted a potent influence on American education. Their thinking had been shaped by issues such as "'why we fight,'" the "definition of democracy in a world of totalitarianism," the "need to provide a 'common learning' for all Americans as a foundation of national unity," and the "effort to fortify the heritage of Western civilization."[53] Richards, a member of the committee, was obviously the person who wrote the sections recommending the New Critical "close study of well-written paragraphs and poems" instead of "more knowledge about the past"; who dared suggest making "versions of great works cleared of unnecessary and unrewarding obstacles," decontextualizing to make them "more accessible to general readers"; and who urged the "fullest understanding of the work read rather than of men or periods represented, craftsmanship evinced, historic or literary developments shown, or anything else."[54] In this way literature could be taught "efficiently" to a "new, mass student body" which lacked a "common cultural background" ("and not just the student body but the new professors").[55]

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[53] Daniel Bell, *The Reforming of General Education: The Columbia College Experience in its National Setting* (New York: Columbia University Press, 1966), 39.

[54] *General Education in a Free Society: Report of the Harvard Committee* (Cambridge: Harvard University Press, 1946), 108, 112, 114, 205. Having become "technicians," we have lost the art of "general conversation" (69).

[55] Gerald Graff, *Professing Literature: An Institutional History* (Chicago: University of Chicago Press, 1987), 173.

The major theoretical movements that succeeded New Criticism—each with its own authorities, special problems, methods (especially methods!), literary terms, common texts, and objectives—shared the same fundamental interest in technique over content, while abandoning the last vestiges of the humanistic concept of the self. The offspring of the New Critics became the first generation of the so-called critics as theorists. How did they carry out the principles of technique and earn Ellul's rebuke for the *humiliation of the word*? First, the synchronic aspect of language was favored over the diachronic. Again, history was demoted, though it is hard to think how much lower history could sink; but this, too, registers the impact of the technological system, which over the course of the past century has fostered the grand forgetting of history. Like the New Critics, the poststructuralists exhibited, in Frank Lentricchia's words, a "tendency to dissolve literary history into a repetitious synchronic rhetoric of the *aporia*."[56] Second, language was divided between signifier and signified, with the signifier being vastly preferred on account of its greater observability and controllability—more technical values—compared with the historical, social, religious, cultural, and biographical signifieds. Moreover, the heavy stress on method predetermined the field of vision and even the results. As with technique, there was a loss of ends, a concentration on means. Such proceduralism had typified New Criticism, when all the moves were marked in advance, on behalf of irony and ambiguity; afterward, the terms were indeterminacy, difference, undecidability, *mise en abyme*, and so forth. Theorists also attacked language on account of its ability to exert quasi-magical power through, say, some outdated "great narrative," metaphysical idealism, ruling class, religion, or high culture.[57] In every instance, literary language bore the brunt of the assault.

Fostering the grand forgetting of history.

One might reply that to be an instrument of hegemony is but one of the many uses of language. It is closest to propaganda. With regard to technique and the principle of least effort, propagandists present one (and only one) big, simple thing at a time, in the simplest language, repeated again and again, until it seems like a fact of life. However, if literary language has served as an instrument of hegemony, ancient tyrants and twentieth-century dictators must have found it an extremely

[56] Frank Lentricchia, *After the New Criticism* (Chicago: University of Chicago Press, 1980), 342.

[57] Ellul, *Humiliation of the Word*, 170, 176.

Literary language poorly suited for propaganda.

inefficient one. Such language has too much complexity, historical range, and inner resistance to be effective as propaganda. Jacob Burckhardt chose his words carefully when, in 1889, he warned that the "*terrible simplifiers* . . . are going to descend upon poor old Europe" in the coming era.[58] For Solzhenitsyn, language is what finds the cracks within the system.[59]

In the midst of the precipitous decline of the humanities, perhaps the most distressing fact is that those entrusted with their defense have unwittingly participated in their dismemberment. If by the laws of nature a force gives rise to a counterforce, the force must first be recognized as such. Postmodern critics ignore technological universalism and celebrate the play of difference—sometimes differences so minimal that they they make no difference or are indifferent—without noticing that real difference, which is individuality, is being eroded. The technological system permits such minor liberties as the floating signifier or verbal play as things of small consequence compared to itself. Nor are postmodernist claims to have robbed myths and ideologies of their power anything but self-flattering dreams; Marxism and Freudianism, to name two, collapsed from lack of empirical evidence over a long term. Yet one should not be amazed that intellectuals have been captured and controlled by the very fashionable instruments that they believe they are wielding so freely. Although they protest against "history" or "traditional" culture on the grounds of a political or cultural agenda, the real reason behind their protest is that they have become completely technicized. "Americans have been commonly instructed since the 1930s that education and intellectual analysis detect propaganda and immunize the citizenry against it," writes Michael R. Real; "instead, Ellul sees education as a necessary precondition for propaganda and the intellectual as the most propagandized member of society because of his access to overwhelming amounts of information, his need to have an opinion on every subject, and the conviction 'of his

[58] *The Letters of Jacob Burckhardt*, trans. Alexander Dru (Westport: Greenwood Press, 1975), 220 (24 July 1889).

[59] Cf. Robert Casillo, "Techne and Logos in Solzhenitsyn," *Soundings*, 70 nos. 3-4 (1987):519-37. "There remains the hope that the art of the word, an incurably semantic art, will sooner or later make its repercussions felt even in those arts which claim to have freed themselves from every obligation toward the identification and representation of truth" (Eugenio Montale, *Poet in Our Time*, trans. Alastair Hamilton [New York: Urizen Books, 1972], 62).

own superiority.' "[60] In *Software for the Self* Anthony Smith refers to academics as the "pioneers" of the Internet.

Some critics are optimistic about the future of technology and culture. Middle-of-the-roaders as well as whole-hearted proponents want to adapt technology to the arts and education. Anthony Smith dreams of the combined results of Video on Demand (VOD) and Virtual Reality (VR): "If you attempt to link these two tendencies—the public spectacle and the capacity for individual choice—you arrive at a medium of dial-up reality: individuals or small groups using interactive techniques to gain access to an intangible but wholly enthralling experience, giving the solitary individual the feeling of being present at a spectacle in the illusory company of a large number of others." It is difficult to see how such amusements, akin to daydreaming or doodling, can produce an intellectually and emotionally enriching experience, let alone lasting art. Here is another stunt, which ought to be called by its right name, "enthralling" only in the imprisoning sense of the word. Still, such an outcome has everything going for it: mass curiosity, governments needing to fill up leisure time, monied interests. One cannot persuade people that they are losing anything, if they never have had the opportunity to grapple with literary language. Smith misconceives T. S. Eliot's definition of culture in saying that it implies "a sense of the permanence of the industrial system and its universalizing values."[61] The author of *The Waste Land* left no doubt regarding his judgment on the "universalizing values" of industrialism, which are those of technique. Smith's title *Software for the Self* has an element of excruciating, cosy talk-show chatter: the *soft*ware undermines the very self that it supposedly supports and entertains.

To ponder the question "Is a technical culture possible?" one may invoke the old distinction between culture and civilization. To be certain, technology can give us a material civilization. Smith rightly points out that in the future people will want two things above all, health care and entertainment, that is, endless play and the longevity

[60] Michael R. Real, "Mass Communications and Propaganda in Technological Societies," in *Jacques Ellul*, eds. Christians and Van Hook, 119-20. Cf. Clifford G. Christians, *Jacques Ellul and Democracy's 'Vital Information' Premise*, *Journalism Monographs* (Association for Education in Journalism), no. 45 (Aug. 1976), 23; and George Cotkin, "The Tragic Predicament: Post-War American Intellectuals, Acceptance and Mass Culture," in *Intellectuals in Politics: From the Dreyfus Affair to Salmon Rushdie*, eds. Jeremy Jennings and Anthony Kemp-Welch (London: Routledge, 1997), 248-70.

[61] Smith, *Software for the Self*, 107, 115. For Smith, the main problem is "regulation," which is yet another technique.

Language, hence culture, depreciated.

to enjoy it (though one thinks of Eliot's "Distracted from distraction by distraction"). But technology cannot give us a culture because of what it is doing to language—to literary language and symbolism, with their deep roots in the historical, cultural, and religious past. The technological system can gather and process information, can organize and control the planet, all more efficiently than anything hitherto; it cannot establish a humane standard of evaluation, nor provide a symbolism other than a desiccated, flattened imagery, for the most part parasitic on the culture it replaces. As the commitment to literary language fails, as computer language sweeps away other languages, we will lose an attachment to culture, "for culture has to rest on the specificity of a language."[62] When languages become obsolete, the cultures they enshrine will become obsolete with them.

One searches to avoid a counsel of despair. To whom can one turn? Lewis Mumford believes that a technical elite will produce a "uniform, all-enveloping, super-planetary structure, designed for automatic operation. Instead of functioning actively as an autonomous personality, man will become a passive, purposeless, machine-conditioned animal whose proper functions, as technicians now interpret man's role, will either be fed into the machine or strictly limited and controlled for the benefit of de-personalized, collective organizations." Still, Mumford sees a ray of hope: "the next move is ours: the gates of the technocratic prison will open automatically, despite their rusty ancient hinges, as soon as we choose to walk out."[63] Andrew Feenberg believes that technology does not of itself exclude democracy, but that it has been used to block it; that technology is not "*essentially* destructive," but is "a matter of design and social insertion." Langdon Winner advances a Scandinavian model which shows "the promise of creating citizen roles in places where private calculations of efficiency and effectiveness, costs, risks, benefits, and profits usually rule the day."[64] Feenberg and Winner would take from both the instrumental and substantivist theorists to forge a middle ground. In this category are Pool and Putnam: Pool's belief that "social values can condition the effects of technology . . . invites us not merely to consider how technol-

[62] Ellul, *Technological Bluff*, 144.

[63] Lewis Mumford, *The Myth of the Machine, Part I: Technics and Human Development* (New York: Harcourt Brace & World, 1967), 3; *Part II: Pentagon of Power*, 435.

[64] Feenberg, "Subversive Rationalization: Technology, Power, and Democracy," *Inquiry* (Oslo), 35 (1992):316, 320; Langdon Winner, "Citizen Virtues in a Technological Order":355.

ogy is privatizing our lives—if, as it seems to me, it is—but to ask whether we like the result, and if not, what we might do about it."[65] At the optimistic end of the spectrum, Immanuel Wallerstein sees an ongoing battle between the forces promoting technology and the forces promoting the liberation of the underclass and the oppressed everywhere: postmodernism is defined as "a mode of rejecting the modernity of technology on behalf of the modernity of liberation." While he boldly predicts that the modern world system is in "terminal crisis" and will collapse within fifty years, curiously enough he does not say what will happen to technology. We are summoned in a utopian spirit to "the task of imagining, and struggling to create, this new social order."[66] All well and good, but the technological system is not going to vanish into thin air.

What does Ellul recommend? A clear look at the facts without a mystification of technology; personal self-transformation in religious terms; the promotion of anything that tends to oppose technological values: play, diversity, pluralism, habits of anti-consumption.[67] In his late *Anarchy and Christianity* he aligns himself with the great high modernists in decrying the spiritual emptiness of modernity, and gives the example of early Christians who withdrew from the world in apolitical autonomous communities. Protest in sufficient numbers, a policy of lowered consumption, these just might effect some change.[68] We can all point to pockets of resistance.

Conscious resistance may help strike a balance.

While this may seem far-fetched, it is worthwhile to recall that monastic refuge happened once in Western culture and the humanities survived. The light of learning at Lindisfarne and Cîteaux, at St. Gall and Monte Cassino, could be rekindled by an apprenticeship to the word in the midst of our necessary participation in technological society. As Burckhardt said, the culture of the West may once again be saved by ascetics.[69]

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[65] Putnam, "Strange Disappearance," in *Ticking Time Bombs*, ed. Kuttner, 284-85.

[66] Immanuel Wallerstein, *After Liberalism* (New York: The New Press, 1995), 144.

[67] Christians, "Ellul on Solution," in *Jacques Ellul*, eds. Christians and Van Hook, 148ff.

[68] Gregory S. Butler, "The Political Moralism of Jacques Ellul," *Humanitas*, 7 no. 2 (1994):43.

[69] For the exemplum of the ascetic, always in training, see Burckhardt (*Letters*, 157 [31 Dec. 1872]), and also Ortega y Gasset, *The Revolt of the Masses*, ch 7.