Authoritarian and Democratic Technics

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"DEMOCRACY" IS A term now confused and sophisticated by indiscriminate use, and often treated with patronizing contempt. Can we agree, no matter how far we might diverge at a later point, that the spinal principle of democracy is to place what is common to all men above that which any organization, institution, or group may claim for itself? This is not to deny the claims of superior natural endowment, specialized knowledge, technical skill, or institutional organization: all these may, by democratic permission, play a useful role in the human economy. But democracy consists in giving final authority to the whole, rather than the part; and only living human beings, as such, are an authentic expression of the whole, whether acting alone or with the help of others.

Around this central principle clusters a group of related ideas and practices with a long foreground in history, though they are not always present, or present in equal amounts, in all societies. Among these items are communal self-government, free communication as between equals, unimpeded access to the common store of knowledge, protection against arbitrary external controls, and a sense of individual moral responsibility for behavior that affects the whole community. All living organisms are in some degree autonomous, in that they follow a life-pattern of their own; but in man this autonomy is an essential condition for his further development. We surrender some of our autonomy when ill or crippled: but to surrender it every day on every occasion would be to turn life itself into a chronic illness. The best life possible—and here I am consciously treading on contested ground—is one that calls for an ever greater degree of self-direction, self-expres-

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This paper is Mr. Mumford's speech at the Fund for the Republic Tenth Anniversary Convocation on "Challenges to Democracy in the Next Decade," held in New York City, January 21, 1963. The article is published in *Technology and Culture* by permission of the Fund for the Republic and the Center for the Study of Democratic Institutions.

sion, and self-realization. In this sense, personality, once the exclusive attribute of kings, belongs on democratic theory to every man. Life itself in its fullness and wholeness cannot be delegated.

In framing this provisional definition I trust that I have not, for the sake of agreement, left out anything important. Democracy, in the primal sense I shall use the term, is necessarily most visible in relatively small communities and groups, whose members meet frequently face to face, interact freely, and are known to each other as persons. As soon as large numbers are involved, democratic association must be supplemented by a more abstract, depersonalized form. Historic experience shows that it is much easier to wipe out democracy by an institutional arrangement that gives authority only to those at the apex of the social hierarchy than it is to incorporate democratic practices into a well-organized system under centralized direction, which achieves the highest degree of mechanical efficiency when those who work it have no mind or purpose of their own.

The tension between small-scale association and large-scale organization, between personal autonomy and institutional regulation, between remote control and diffused local intervention, has now created a critical situation. If our eyes had been open, we might long ago have discovered this conflict deeply embedded in technology itself.

I wish it were possible to characterize technics with as much hope of getting assent, with whatever quizzical reserves you may still have, as in this description of democracy. But the very title of this paper is, I confess, a controversial one; and I cannot go far in my analysis without drawing on interpretations that have not yet been adequately published, still less widely discussed or rigorously criticized and evaluated. My thesis, to put it bluntly, is that from late neolithic times in the Near East, right down to our own day, two technologies have recurrently existed side by side: one authoritarian, the other democratic, the first system-centered, immensely powerful, but inherently unstable, the other man-centered, relatively weak, but resourceful and durable. If I am right, we are now rapidly approaching a point at which, unless we radically alter our present course, our surviving democratic technics will be completely suppressed or supplanted, so that every residual autonomy will be wiped out, or will be permitted only as a playful device of government, like national ballotting for already chosen leaders in totalitarian countries.

The data on which this thesis is based are familiar; but their significance has, I believe, been overlooked. What I would call democratic technics is the small scale method of production, resting mainly on human skill and animal energy but always, even when employing machines, remaining under the active direction of the craftsman or the

farmer, each group developing its own gifts, through appropriate arts and social ceremonies, as well as making discreet use of the gifts of nature. This technology had limited horizons of achievement, but, just because of its wide diffusion and its modest demands, it had great powers of adaptation and recuperation. This democratic technics has underpinned and firmly supported every historic culture until our own day, and redeemed the constant tendency of authoritarian technics to misapply its powers. Even when paying tribute to the most oppressive authoritarian regimes, there yet remained within the workshop or the farmyard some degree of autonomy, selectivity, creativity. No royal mace, no slave-driver's whip, no bureaucratic directive left its imprint on the textiles of Damascus or the pottery of fifth century Athens.

If this democratic technics goes back to the earliest use of tools, authoritarian technics is a much more recent achievement: it begins around the fourth millennium B. C. in a new configuration of technical invention, scientific observation, and centralized political control that gave rise to the peculiar mode of life we may now identify, without eulogy, as civilization. Under the new institution of kingship, activities that had been scattered, diversified, cut to the human measure, were united on a monumental scale into an entirely new kind of theological-technological mass organization. In the person of an absolute ruler, whose word was law, cosmic powers came down to earth, mobilizing and unifying the efforts of thousands of men, hitherto all-too-autonomous and too decentralized to act voluntarily in unison for purposes that lay beyond the village horizon.

The new authoritarian technology was not limited by village custom or human sentiment: its herculean feats of mechanical organization rested on ruthless physical coercion, forced labor and slavery, which brought into existence machines that were capable of exerting thousands of horsepower centuries before horses were harnessed or wheels invented. This centralized technics drew on inventions and scientific discoveries of a high order: the written record, mathematics and astronomy, irrigation and canalization: above all, it created complex human machines composed of specialized, standardized, replaceable, interdependent parts—the work army, the military army, the bureaucracy. These work armies and military armies raised the ceiling of human achievement: the first in mass construction, the second in mass destruction, both on a scale hitherto inconceivable. Despite its constant drive to destruction, this totalitarian technics was tolerated, perhaps even welcomed, in home territory, for it created the first economy of controlled abundance: notably, immense food crops that not merely supported a big urban population but released a large trained minority

for purely religious, scientific, bureacratic, or military activity. But the efficiency of the system was impaired by weaknesses that were never overcome until our own day.

To begin with, the democratic economy of the agricultural village resisted incorporation into the new authoritarian system. So even the Roman Empire found it expedient, once resistance was broken and taxes were collected, to consent to a large degree of local autonomy in religion and government. Moreover, as long as agriculture absorbed the labor of some 90 per cent of the population, mass technics were confined largely to the populous urban centers. Since authoritarian technics first took form in an age when metals were scarce and human raw material, captured in war, was easily convertible into machines, its directors never bothered to invent inorganic mechanical substitutes. But there were even greater weaknesses: the system had no inner coherence: a break in communication, a missing link in the chain of command, and the great human machines fell apart. Finally, the myths upon which the whole system was based—particularly the essential myth of kingship—were irrational, with their paranoid suspicions and animosities and their paranoid claims to unconditional obedience and absolute power. For all its redoubtable constructive achievements, authoritarian technics expressed a deep hostility to life.

By now you doubtless see the point of this brief historic excursus. That authoritarian technics has come back today in an immensely magnified and adroitly perfected form. Up to now, following the optimistic premises of nineteenth century thinkers like Auguste Comte and Herbert Spencer, we have regarded the spread of experimental science and mechanical invention as the soundest guarantee of a peaceful, productive, above all democratic, industrial society. Many have even comfortably supposed that the revolt against arbitrary political power in the seventeenth century was causally connected with the industrial revolution that accompanied it. But what we have interpreted as the new freedom now turns out to be a much more sophisticated version of the old slavery: for the rise of political democracy during the last few centuries has been increasingly nullified by the successful resurrection of a centralized authoritarian technics—a technics that had in fact for long lapsed in many parts of the world.

Let us fool ourselves no longer. At the very moment Western nations threw off the ancient regime of absolute government, operating under a once-divine king, they were restoring this same system in a far more effective form in their technology, reintroducing coercions of a military character no less strict in the organization of a factory than in that of the new drilled, uniformed, and regimented army. During the transitional stages of the last two centuries, the ultimate

tendency of this system might be in doubt, for in many areas there were strong democratic reactions; but with the knitting together of a scientific ideology, itself liberated from theological restrictions or humanistic purposes, authoritarian technics found an instrument at hand that has now given it absolute command of physical energies of cosmic dimensions. The inventors of nuclear bombs, space rockets, and computers are the pyramid builders of our own age: psychologically inflated by a similar myth of unqualified power, boasting through their science of their increasing omnipotence, if not omniscience, moved by obsessions and compulsions no less irrational than those of earlier absolute systems: particularly the notion that the system itself must be expanded, at whatever eventual cost to life.

Through mechanization, automation, cybernetic direction, this authoritarian technics has as last successfully overcome its most serious weakness: its original dependence upon resistant, sometime actively disobedient servo-mechanisms, still human enough to harbor purposes that do not always coincide with those of the system.

Like the earliest form of authoritarian technics, this new technology is marvellously dynamic and productive: its power in every form tends to increase without limits, in quantities that defy assimilation and defeat control, whether we are thinking of the output of scientific knowledge or of industrial assembly lines. To maximize energy, speed, or automation, without reference to the complex conditions that sustain organic life, have become ends in themselves. As with the earliest forms of authoritarian technics, the weight of effort, if one is to judge by national budgets, is toward absolute instruments of destruction, designed for absolutely irrational purposes whose chief by-product would be the mutilation or extermination of the human race. Even Ashurbanipal and Genghis Khan performed their gory operations under normal human limits.

The center of authority in this new system is no longer a visible personality, an all-powerful king: even in totalitarian dictatorships the center now lies in the system itself, invisible but omnipresent: all its human components, even the technical and managerial elite, even the sacred priesthood of science, who alone have access to the secret knowledge by means of which total control is now swiftly being effected, are themselves trapped by the very perfection of the organization they have invented. Like the pharoahs of the Pyramid Age, these servants of the system identify its goods with their own kind of well-being: as with the divine king, their praise of the system is an act of self-worship; and again like the king, they are in the grip of an irrational compulsion to extend their means of control and expand the scope of their authority. In this new systems-centered collective, this

Pentagon of power, there is no visible presence who issues commands: unlike Job's God, the new deities cannot be confronted, still less defied. Under the pretext of saving labor, the ultimate end of this technics is to displace life, or rather, to transfer the attributes of life to the machine and the mechanical collective, allowing only so much of the organism to remain as may be controlled and manipulated.

Do not misunderstand this analysis. The danger to democracy does not spring from any specific scientific discoveries or electronic inventions. The human compulsions that dominate the authoritarian technics of our own day date back to a period before even the wheel had been invented. The danger springs from the fact that, since Francis Bacon and Galileo defined the new methods and objectives of technics, our great physical transformations have been effected by a system that deliberately eliminates the whole human personality, ignores the historic process, overplays the role of the abstract intelligence, and makes control over physical nature, ultimately control over man himself, the chief purpose of existence. This system has made its way so insidiously into Western society, that my analysis of its derivation and its intentions may well seem more questionable—indeed more shocking—than the facts themselves.

Why has our age surrendered so easily to the controllers, the manipulators, the conditioners of an authoritarian technics? The answer to this question is both paradoxical and ironic. Present day technics differs from that of the overtly brutal, half-baked authoritarian systems of the past in one highly favorable particular: it has accepted the basic principle of democracy, that every member of society should have a share in its goods. By progressively fulfilling this part of the democratic promise, our system has achieved a hold over the whole community that threatens to wipe out every other vestige of democracy.

The bargain we are being asked to ratify takes the form of a magnificent bribe. Under the democratic-authoritarian social contract, each member of the community may claim every material advantage, every intellectual and emotional stimulus he may desire, in quantities hardly available hitherto even for a restricted minority: food, housing, swift transportation, instantaneous communication, medical care, entertainment, education. But on one condition: that one must not merely ask for nothing that the system does not provide, but likewise agree to take everything offered, duly processed and fabricated, homogenized and equalized, in the precise quantities that the system, rather than the person, requires. Once one opts for the system no further choice remains. In a word, if one surrenders one's life at source, authoritarian technics will give back as much of it as can be mechanically graded, quantitatively multiplied, collectively manipulated and magnified.

"Is this not a fair bargain?" those who speak for the system will ask. "Are not the goods authoritarian technics promises real goods? Is this not the horn of plenty that mankind has long dreamed of, and that every ruling class has tried to secure, at whatever cost of brutality and injustice, for itself?" I would not belittle, still less deny, the many admirable products this technology has brought forth, products that a self-regulating economy would make good use of. I would only suggest that it is time to reckon up the human disadvantages and costs, to say nothing of the dangers, of our unqualified acceptance of the system itself. Even the immediate price is heavy; for the system is so far from being under effective human direction that it may poison us wholesale to provide us with food or exterminate us to provide national security, before we can enjoy its promised goods. Is it really humanly profitable to give up the possibility of living a few years at Walden Pond, so to say, for the privilege of spending a lifetime in *Walden Two?* Once our authoritarian technics consolidates its powers, with the aid of its new forms of mass control, its panoply of tranquillizers and sedatives and aphrodisiacs, could democracy in any form survive? That question is absurd: life itself will not survive, except what is funneled through the mechanical collective. The spread of a sterilized scientific intelligence over the planet would not, as Teilhard de Chardin so innocently imagined, be the happy consummation of divine purpose: it would rather ensure the final arrest of any further human development.

Again: do not mistake my meaning. This is not a prediction of what *will* happen, but a warning against what *may* happen.

What means must be taken to escape this fate? In characterizing the authoritarian technics that has begun to dominate us, I have not forgotten the great lesson of history: Prepare for the unexpected! Nor do I overlook the immense reserves of vitality and creativity that a more humane democratic tradition still offers us. What I wish to do is to persuade those who are concerned with maintaining democratic institutions to see that their constructive efforts must include technology itself. There, too, we must return to the human center. We must challenge this authoritarian system that has given to an underdimensioned ideology and technology the authority that belongs to the human personality. I repeat: life cannot be delegated.

Curiously, the first words in support of this thesis came forth, with exquisite symbolic aptness, from a willing agent—but very nearly a classic victim!—of the new authoritarian technics. They came from the astronaut, John Glenn, whose life was endangered by the malfunctioning of his automatic controls, operated from a remote center. After

he barely saved his life by personal intervention, he emerged from his space capsule with these ringing words: "Now let man take over!"

That command is easier to utter than obey. But if we are not to be driven to even more drastic measures than Samuel Butler suggested in *Erewhon*, we had better map out a more positive course: namely, the reconstitution of both our science and our technics in such a fashion as to insert the rejected parts of the human personality at every stage in the process. This means gladly sacrificing mere quantity in order to restore qualitative choice, shifting the seat of authority from the mechanical collective to the human personality and the autonomous group, favoring variety and ecological complexity, instead of stressing undue uniformity and standardization, above all, reducing the insensate drive to extend the system itself, instead of containing it within definite human limits and thus releasing man himself for other purposes. We must ask, not what is good for science or technology, still less what is good for General Motors or Union Carbide or IBM or the Pentagon, but what is good for man: not machine-conditioned, system-regulated, mass-man, but man in person, moving freely over every area of life.

There are large areas of technology that can be redeemed by the democratic process, once we have overcome the infantile compulsions and automatisms that now threaten to cancel out our real gains. The very leisure that the machine now gives in advanced countries can be profitably used, not for further commitment to still other kinds of machine, furnishing automatic recreation, but by doing significant forms of work, unprofitable or technically impossible under mass production: work dependent upon special skill, knowledge, aesthetic sense. The do-it-yourself movement prematurely got bogged down in an attempt to sell still more machines; but its slogan pointed in the right direction, provided we still have a self to do it with. The glut of motor cars that is now destroying our cities can be coped with only if we redesign our cities to make fuller use of a more efficient human agent: the walker. Even in childbirth, the emphasis is already happily shifting from an officious, often lethal, authoritarian procedure, centered in hospital routine, to a more human mode, which restores initiative to the mother and to the body's natural rhythms.

The replenishment of democratic technics is plainly too big a subject to be handled in a final sentence or two: but I trust I have made it clear that the genuine advantages our scientifically based technics has brought can be preserved only if we cut the whole system back to a point at which it will permit human alternatives, human interventions, and human destinations for entirely different purposes from those of the system itself. At the present juncture, if democracy did not exist, we would have to invent it, in order to save and recultivate the spirit of man.