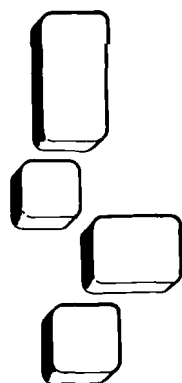# TECHNOLOGY
AND
CIVILITY

THE SKILL REVOLUTION IN POLITICS

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INTRODUCTION

A fascinating intellectual problem facing the political historian as participant observer of the contemporary scene is the relationship between long-term secular trends moving in one direction and short-term events pointing in another. Yet, the problem may be a pseudo problem. In our time, current trends and events are described, fashionably, by the prefixes "post" and "counter," and one hears a good deal about "post-industrial society" and "counter-culture" (or, as in my own field of political science, about a "post-behavioral revolution" which, it turns out, is more "counter" than "post," and which has succumbed to sudden death). It should be clear that I am not impressed by the prophetic voices of the kind one heard in the early seventies, in this country and abroad.

Nevertheless, these voices penetrated the groves of academe and forced themselves to our attention. Those were years of turmoil for universities and learned associations alike, from which there was little chance of escape. Those of us who found ourselves in positions of professional leadership had some obligation to respond, even though such action sometimes violated, as in my own case, a cherished sense of scholarly privacy. I personally had taken on a number of administrative responsibilities within the university as well as a number of organizational commitments outside it that exposed me to the tensions and conflicts of the period. All of the chapters in this volume were originally addresses or lectures given before professional audiences between 1970 and 1972. Lecturing gave me an opportunity to respond to those who, it seemed to me, were challenging the scholarly and scientific integrity of the university. If these papers are at times something less than objective, it is because I came to appreciate Edmund Burke's dictum that "the only thing necessary for the triumph of evil is for good men to do nothing."

It seemed to me then, and it seems to me now, that the scientific approach to the understanding of human affairs and, in the long run, to the solving of social problems is equally threatened by the enthusiastic advocates of the "technological fix" and by the cheerful apostles of a "greening community." Both speak in the name of a democracy that never was and never will be. The push-button democrats of a technology-dominated future seem to be as opposed to representative government as are the participatory democrats of the counter-culture. If the com-com engineers do not propose to vote with their feet as the counter-

culturists recommend, it is due more to good etiquette than to conviction.

"Com-Com Technology and Political Behavior" (Chapter 1) distinguishes, therefore, between a responsible orientation toward the future and an ill-conceived futurism of ideologues who see in the new computer-communication technology only "good" or "bad," depending on personal predispositions quite unrelated to what is empirically known about political behavior. A responsible future-oriented, but not futuristic, social science can deal in "developmental constructs" that serve to give direction to empirical research in the present, but it cannot afford to be prophetic. Unlike the futurism, characterized by what I call the "unless syndrome," that makes predictions into self-fulfilling or self-denying prophecies, a responsibly future-oriented social science, rather than ignoring past and present, builds on the continuity of past, present, *and* future. Such a social science assesses the potentialities for political behavior of the new technologies in terms of what is known about politics, on the one hand, and in terms of the reverse effects of political behavior on the new technologies, on the other. While the results of interactions between the com-com technology and a country's political propensities will undoubtedly have some effect on the operation of representative government, this effect is likely to be neither as benign nor as catastrophic as futurists of either right or left want us to believe.

The theme of likely citizen response to com-com technology is more directly treated in "Potential Effects of the Information Utility" (Chapter 2). Although push-button democracy is technologically feasible, it is improbable that the ordinary citizen will make more use of it than he does of today's ballot—for the simple reason that the new technology will increase rather than reduce information costs. Judging from all we know about political behavior, it is clear that citizens are not presently willing to exert themselves in the manner that models of rational action assume (and, for *theoretical* reasons, must assume). Insofar as the proper use of com-com technology would require citizens to become infinitely better informed about public issues than they are now, the interactive utility will not have the real-world political consequences envisaged by the more enthusiastic communication engineers.

The simplistic view of democracy shared by technologists and anti-technologists is more fully treated in "Technology and the Fear of Civility" (Chapter 3). My argument is that their democratic protestations notwithstanding, the technological and anti-technological futurists share a mutual distrust of the democratic and civil politics that fail to reinforce their utopian aspirations. A politics of civility proceeds from the simple assumptions that one cannot have everything one wants, as the small child desires, and that tolerance and compromise are the mature person's responses to the existence of interpersonal constraints and environmental limitations. The conclusion one reaches is that the post-industrial technologists and the counter-culturists have more in common than meets the

eye. Fortunately, neither position is likely to defy the common laws of governance which, I suspect are more robust than the prophecies of things to come.

Whatever the outcome, futurisms of all kinds are inimical to the educational enterprise because they substitute fancy for fact, teleology for theory, and mystery for method. Persons victimized by siren songs of the new saviors— technological, counter-cultural, or, more recently, pseudo-religious—are not "educable" in any meaningful sense. To what extent the university as the central institution dedicated to learning can tolerate this situation, or is permitted to tolerate it, is a question of great concern. If the question is not to be answered by power politics, as I think it should not, it must then be answered only by those who are involved in effective, pragmatic educational decision making, inside and outside the academic community. It is certainly not surprising that speculation concerning the relationship between education and politics has always been of great interest, from the Greek philosophers down to the present. "Politics and Education: The Long View and the Short" (Chapter 4) reviews some past ideas and suggests some questions to be answered by research.

Academicians and philosophers, however, are not the only parties interested in the politics of education. There are also the politicians upon whose goodwill and support the educational enterprise ultimately depends. "Political Norms in Educational Policy Making" (Chapter 5), based on information from interviews with knowledgeable legislators in nine American states, presents some of the criteria of choice that guide these elected officials as public custodians of the educational enterprise. That their concerns and approaches to educational decision making deserve close attention, even if one disagrees with them, would seem to make pragmatic sense; but such sense does not always guide all constituents of the educational estate.

A pragmatic approach in educational policy is least likely to guide the students who increasingly seek to participate in university decision making. There is some risk in treating the early seventies as typical or prototypical, for too many issues all at once inspired the demand for "relevance" that had its own peculiar meaning in those years. As I look back on the events that occasioned "Reason and Relevance: On a Madness of Recent Times" (Chapter 6), I am still flabbergasted as to how they could have happened. The issue is not that the students reacted negatively to the troubles of the times—the war in Vietnam, the plight of the underprivileged, or the abuse of the natural environment. The issue is why the various protest movements took the anti-intellectual and intolerant forms they did. Protest as a means of petitioning rulers is as democratic as cheesecake is said to be American, but student protest behavior went beyond rational conduct. "Doing your thing" became the principal guide to behavior, regardless of intentions or consequences. Only the a-historical conscience can assume that everything is related to everything else in some mysterious way. Innocent of the

past and vague about the future, the student movement assumed causes and effects that were freed of the laws of causation.

It was in this intellectual atmosphere—of technological futurism, counter-cultural utopianism, and student rebellion—that I prepared "Skill Revolution and Consultative Commonwealth" (Chapter 7). If the previous chapters are critical and polemical, this last chapter is self-consciously scholarly, dispassionate, and disinterested. It is concerned with the future; it shows respect for the past; it is aware of present conditions; it deals with trends; it is stated in terms of proba-bility; and it is based on a large body of theory and research. The chapter presents a developmental construct, called "consultative commonwealth," which sug-gests that the future society will require skill and technology as necessary condi-tions of the good life, but that the traditional norms and rules of a free society will be equally necessary.

"Skill politics" is the critical variable in the emergent commonwealth of the last quarter of the twentieth century. Political modernity means that skill (spe-cialized knowledge, expertise) has replaced most other criteria for judging the capacity of elites to govern. Skill has replaced class and status as sufficient conditions for political advancement and rulership, regardless of whether the mode of recruitment into governing positions is electoral or bureaucratic.

Skill is to the individual person what technology is to society. A society's technological developments in politically sensitive fields such as communication, computation, and education are accompanied by, if not predicated on, corre-sponding individual-level developments in a great number of politically relevant skills. Nevertheless, the technologically induced revolution in skills may come into conflict with traditional, and especially with democratic or representational, ways of elite recruitment and elite behavior. That these conflicts are soluble without the necessity of destroying either the new technology or the old politics is the burden of the argument.

Whether or not one sees technology and politics in conflict depends on one's attitude toward technology and also on one's conception of what politics is about. Alternative models of democracy, such as the participatory, the competitive, or the representational, and different models of the territorial allocation of authority are likely to make for different expectations concerning the skills that political elites should bring to the tasks of governance. The notion that skill elites are not detrimental to the functioning of a free society, but indeed desirable, has yet to be absorbed into a theory of democracy that satisfies the conditions imposed on politics by a high level of technology.

CONTENTS

1 COM-COM TECHNOLOGY AND POLITICAL BEHAVIOR

There is much speculation and little research on the impact of technological innovations on society or the political consequences of this impact. The question to be initially asked is, What makes for the helplessness of empirical research when it confronts the future? The question begets the answer: empirical research is not sufficiently future-oriented. While it is a commonplace to say that social science research is contextual, the context referred to is only the present or recent past. This is largely due to the emphasis on valid and reliable knowledge that makes social scientists shy away from locating their research in a frame of reference envisaging the future. In that respect social scientists are as rootless as the futurists; just as the futurists ignore empirical knowledge about the present, so social scientists ignore alternative constructs of the future that might give direction to their research.

A case in point is the potential effect of new developments in the computer and communication technology on politics. There is almost no research that would shed empirical light on the prospects before us. Instead, review of the literature suggests, there is an abundance of ax grinding, bellyaching, and self-serving speculation. This speculation would hardly deserve attention, were it not for the fact that it defines and molds the intellectual climate, especially as conveyed through the mass media, in which both public decision-makers and the attentive public orient themselves to the future. As one reads what futurists have to say, regardless of whether they are members of the establishment, so called, or of the counter-culture, so called, the impression is one of collective confusion. An incredible mass of nonsense is being spawned about the political impact of the computer and communication technologies. There was a time, in the years immediately before and after the Second World War, when propaganda analysis was an honorable pursuit in social science. This kind of study has been neglected in recent years; it deserves being revived. For ideological warfare threatens serious inquiry into the implications of the computer and communication technologies for politics and public policy. Social science cannot flourish and do its job in such an intellectual atmosphere. The needs of both public policy and social science require that ideological presuppositions about the implications of the computer and communication technologies for social and political life be unmasked.

There are four areas of concern about the socio-political implications of what will be called the "com-com technology."[1] First, there are implications for civil liberties and the protection of privacy. Here some fine work has been done and is being done by a few social scientists.[2] Second, there are implications of the com-com technology for administrative decision-making. The writing here is considerable and reasonably balanced because computers and communication linkages are already used as extensions of previously manual information systems, so that there is an experiential base for anticipating future developments.[3] There are problems, however, because these developments are tied up, in turn, with the unknown future of such social-engineering or procedurally rational strategies as programming-planning-budgeting, operations research, and systems analysis generally. Scholars in public law and administration will attend to these matters and through their research enlighten the main stream of political science. Third, there are implications of the com-com technology for public policy more generally—implications that involve the establishment of massive data banks and the creation of social indicators.[4] The controversies surrounding the suggestion for a National Data Center, some years ago, and the difficulties facing what is sometimes called the "social indicator movement" are familiar.

There is a fourth area of concern—the implications of the com-com technology for political behavior or, in the grand perspective, for representative government. This is the area where political science is mot immediately involved and where research on political behavior and political processes can make an immediate contribution. Political science has produced, in the last fifteen years or so, an impressive body of empirical research and much reliable knowledge on political behavior. But this knowledge is contextual in the present. Few political scientists have given much attention to its relevance for the future or conducted their research in a frame of reference that includes the future as a parameter. There is, of course, good reason for this—empirical researchers are not inclined to prophecy.

There is now a voluminous literature on technology and the presumed impact of technology on all kinds of things—the environment, population, war and peace, leisure, social structure and social change, and even politics. Insofar as these writings report on and try to explain past and present developments, they are often solid and enlightening contributions to the understanding of human affairs. If and when they are biased, it is usually easy enough to detect the bias and make the necessary allowances. But when it comes to estimates of the consequences of technology and technological change for the future, the biases involved are often such pervasive components of what is being predicted that the future looks like Doomsday or the Golden Age, depending on the direction of the bias.

In general, writings about the future, whether by optimists or pessimists, have one axiom in common. Explicitly or implicitly, they argue that *unless we do something about this or that in one way or another*, the future will be what it is

predicted to be or it will not be what it is predicted to be. Unless humane values are cherished, unless long-range planning is introduced, unless there is reform of governmental institutions, unless there is birth control, unless there is law and order, unless there is this or that, the predicted consequences, good or evil, are surely to occur.

Two examples must suffice, one from the establishment literature and one from the literature of the counter-culture. Simon Ramo—a Ph.D., one is informed by the title page of his *Cure for Chaos*—believes in the systems approach. "So severe are some of our problems today that chaos threatens," he says, and continues:

> The systems approach to the analysis and design of anything . . . will provide no facility of infinite capacity. But allowing for all of these factors that we know are there, granted man's shortcomings and a ceiling on his resources and on his understanding of himself, it will lead us to designs and operations that will at least not be chaotic. The systems approach, if it is used wisely, is, at the least, a cure for chaos [5]

Theodore Roszak, also a Ph.D., is the author of *The Making of a Counter-Culture,* perhaps the most persuasive statement of what the counter-culture is about. "If the resistance of the counter-culture fails," Roszak prophesies,

> I think there will be nothing in store for us but what anti-utopians like Huxley and Orwell have forecast—though I have no doubt that these dismal despotisms will be far more stable and effective than their prophets have foreseen. For they will be equipped with techniques of inner manipulation as unobtrusively fine as gossamer. Above all, the capacity of our emerging technocratic paradise to denature the imagination by appropriating to itself the whole meaning of Reason, Reality, Progress, and Knowledge will render it impossible for men to give any name to their bothersomely unfulfilled potentialities but that of madness.[6]

Statements like these can be easily multiplied but there is no way of determining the validity of their explicit or implicit premises; the more distant the future, the greater are the benefits or disasters that are anticipated. While these statements have all the appearance of being valid, they are nothing more than justifications for action in the present that are given philosophical, theoretical, and even scientific respectability by being presented as inexorable consequences of contemporary trends. But trends have a way of reversing themselves and are not necessarily good indicators of the shape of things to come.

The trouble with futurology, however animated by radical, reformist, conservative, or reactionary predispositions, or anything else, is that because its predictions are predicated on contingencies presumably intervening between present and future, it is at best an exercise in self-fulfilling or self-denying prophesies. The "unless syndrome" is a guarantee that the futurologist will never be wrong. If things turn out as predicted, the contingent condition will

undoubtedly be found to have occurred; if things do not turn out as predicted, the contingent condition will be found not to have occurred. But if this is so, then one should turn to the serious study of these contingent conditions—the ''unless'' of predictions—and let the future take care of itself. Continuously revising one's estimates of the future has the quality of astrology.

It certainly serves no good purpose to substitute one image of the future for another. Introducing new assumptions does not improve the quality of anticipation. The ''unless syndrome'' is at best a self-serving demand that something be done, and it serves perhaps as a stick for browbeating recalcitrants and opponents into doing it. This is the true meaning of what the latter-day Luddites of the counter-culture and the latter-day technocrats of the establishment are doing when they formulate their prognostications.

Yet, the future is important and images of the future are important precisely because they shape what is done in the present. Regardless of whether they are conscious or unconscious, assumptions about the future, like other biases, are built into research. Making one's images of the future explicit improves the quality and relevance of writing and research. But in constructing these images one should bring to the task the same spirit of disinterested inquiry that is cherished in research. The future should be inviolable. To use the future in the name of science in order to bring about change in the present is to abuse science. Under these conditions little or no credibility can be assigned to predictions.

It is for these reasons that Harold D. Lasswell's exceptionally self-conscious and disinterested formulation of the problematics involved in the study of the future is so appropriate. Long before the futurist craze of the last decade or so, Lasswell concerned himself with the future and its implications for both political science and public policy. He suggested that any problem-solving approach has five intellectual tasks which he characterizes as goal thinking, trend analysis, specification of conditions, projection, and the formulation of alternatives. All five tasks enter the formulation of a ''developmental construct'' which in its methodological sophistication sharply contrasts with the naïve images of the future to which we are treated in the literature on the impact of technology.[7] A developmental construct, Lasswell writes,

> is a speculative model in which the present is characterized as a transition between a selected pattern of events located in the past and a pattern imputed to the future. No claim of scientific validity is made for the model, although the present state of knowledge is taken into account in setting up the hypothesis. The developmental construct is not a simple extrapolation of recent trends, but a critical weighing of future outcomes considered as an interacting whole. By highlighting some major possibilities we may be led to revise our previous estimates of the situation and to guide our research and policy activities with a view to taking advantage of emerging opportunities for analysis, insight, and perhaps control.[8]

It is the image of the future, then, that guides what is done in the present by way of research or policy, and not the other way around as in the case of ''unless

propositions.'' A concern with the future impact of the com-com technology on politics derives from the need to guide research in the present. The com-com technology's effect on politics is of interest not because there is an immanent virtue in futurology, but because it can serve to give significance and direction to research in the present which, as Lasswell puts it, "is characterized as a transition between a selected pattern of events located in the past and a pattern imputed to the future." The pattern imputed to the future is a proper subject of social-scientific investigation. For "imputation" is something less than prediction, yet something more than divination.[9]

Now, the strange thing that can happen on the way to the future is that it will prove shocking only in retrospect. The trouble with Alvin Toffler's book, *Future Shock,* does not lie in his data but in his divination. Toffler defines future shock as the "dizzying disorientation brought on by the premature arrival of the future," and says that it "may well be the most important disease of tomorrow." Like all good futurists, he protects himself by the usual contingent *unless*: "Unless intelligent steps are taken to combat it, millions of human beings will find themselves increasingly disoriented, progressively incompetent to deal rationally with their environments."[10] Needless to say, if the predicted future does not materialize, then obviously something has been done about it. In contrast to Toffler's expectations, precisely because modern man is living in a time of greatly accelerated rates of change, the future is always so close at hand that it is anything but shocking. Modern man is amazingly adaptable and readily accepts technological innovations. The contemporary young are nurtured on television; moon travel seems reasonable to them; and the com-com technology is something they will take in stride.

The exhilarating aspect of present-day technology is that one need not just contemplate the future but can, in effect, live it as it unfolds. The late fifties of this century were still the age of the desk calculator and the counter-sorter or, at best, the IBM 101. Indeed, computers seemed to be rather unwieldy things. In the early years of the computer there was endless talk about programming and compiling and debugging. One rarely hears this talk today.

Some years ago a conference with the intriguing title "Information Utilities and Social Choice" was held at the University of Chicago.[11] By this time, computers could store an almost endless amount of information; they could calculate ten to the seventh or eighth power as fast as man could; simultaneous access through time sharing and consoles had made it possible to be at two places at the same time; and ingenious programs and sub-routines were available for getting quick answers to one's problems. There was no talk about frustrations in using the computer in research as had been common in the early sixties. Instead, the talk was about something altogether new, something that had become technologically feasible but was still impractical—the interactive information utility. And the talk was not about what this utility could do in research, for its research uses were taken for granted; it was about the possible effects of the utility on

politics in the real world. The future seemed to be right there in the conference room.

Present at the conference were two types of people. In one room were computer scientists and engineers; in another were social and political scientists. It was not clear what, in the joint concluding session, the two groups learned from each other; but the social scientists seemed to take more seriously what the computer people had to say about the future of the com-com technology than the computer people seemed to take seriously what the social scientists had to say about the consequences of the new technology for politics. The reason for this is very simple: it is much easier to comprehend technology than to comprehend political behavior. In general, the social and political scientists did not expect dramatic changes in political behavior and processes as a result of the interactive information utility, though they were sensitive to possible changes at the margins. And these marginal changes may yet be significant enough to make it mandatory to give them serious attention before they occur.

The description given here of the interactive information utility will be brief and stylized, to convey only some impression of what is being envisaged on the technological side. The interactive information utility is simply a two-way combination of computation and communication made possible by coaxial television or, as it is better known, Cable TV (CATV). Computation in this connection means the processing, storage, and retrieval of information; communication means the transmission of information through interaction between man and machine. The potentialities of the computer are now well known. Coaxial television will make possible the reception of communications on as many as forty to fifty channels. The two-way system involves, in addition to the TV set, some kind of typewriter or teletype board that permits instant communication between sender and receiver, be it man or machine. Existing prototype systems are reported to be able to handle as many as 10,000 messages in about one second.[12] In other words, the interactive information utility is only a technological extension of current man-to-man feedback systems between TV senders and receivers via telephone communication or the man-machine exchanges with which we are familiar.

The concern here is not with the technological aspects of the new utility or its economic feasibility. In regard to the former, one can assume that a decade or two from now CATV or narrow-casting will have effectively replaced broadcasting TV. The economic feasibility of the multi-channel system is still an open question; but let us assume that it has also been solved. From the point of view of those who see in the com-com technology the promises of increased societal democratization this is, of course, a crucial question. If the economics of CATV are such that only the well-to-do can avail themselves of the utility, its democratic communication potential is jeopardized. There are other problems as well. The concept of utility means not only that it must be purchased but also that it is

subject to government regulation. But the information utility does not just distribute raw materials like electricity or water; it requires software support, that is, a programming language that is simple and largely self-defining so that it can be widely used; and it requires manageable and efficient organization of data. But, again, let us assume that all of these problems are solved and that the utility is a genuine facility for the entire population—the rich and the poor, the educated and the uneducated.[13] What are its likely consequences for political behavior and political processes?

One could, at this point, cite any number of rather naïve prognostications of the benign consequences of the com-com technology for democratic politics. A cynic might be inclined to write off these prognostications as a kind of sales pitch of the technologists. But this would be doing them an injustice. Many of them are sincere in their faith that the new utility would usher in a new Jeffersonian politics. As Don K. Price pointed out some time ago,

> Their ideal would be an egalitarian democracy, with all issues decided by votes of private citizens who have not been corrupted by service in the bureaucracy, and all of whom are earnestly studying science. The ideal has been depicted—with an admission of its lack of realism but still as an ideal—as a system of electronic communication in which every citizen could watch and listen to a Congressional debate and then register his vote instantaneously in a national referendum.[14]

Interestingly, Professor Price cites in this connection no other than Simon Ramo, Ph.D., who has already been mentioned as an advocate of the systems approach.[15] But one need not set up the technologist as a straw man. Professor Zbigniew Brzezinski, a responsible political scientist, has written a very interesting book, *Between Two Ages: America's Role in the Technetronic Era*. Brzezinski, speaking of the Constitution, is careful to point out that "needed change is more likely to develop incrementally and less overtly. Nonetheless, its eventual scope may be far-reaching, especially as the political process gradually assimilates scientific-technological change. Thus, in the political sphere the increased flow of information and the development of more efficient techniques of coordination may make possible greater devolution of authority and responsibility to the lower levels of government and society."[16] It is difficult to quarrel with this estimate, but in a footnote Brzezinski goes gung-ho into the future:

> These techniques could also be used to improve electoral procedures and provide for closer consultation between the public and its representatives. Existing electoral machinery in the United States—in regard to both registration and voting procedure—has simply not kept up with innovation in electronic communications and computation. Reforms (such as electronic home-voting consoles) to make it possible for representatives of the public to consult their constituents rapidly, and for these constituents to express their views easily, are both technically possible and likely to develop in view of growing dissatisfaction with present machinery. More