

Books

Science: Servant or Master? by Hans J. Morgenthau

(New American Library; 153 pp.; \$6.95)

Robopaths by Lewis Yablonsky

(Bobbs-Merrill; 204 pp.; \$7.95)

The Science of War and Peace by Robin Clarke

(McGraw-Hill; 335 pp.; \$10.00)

The Acceleration of History by Gerard Piel

(Knopf; 369 pp.; \$8.95)

Craig Liske and Robert Schulzinger

The specter of technology haunts all four authors. Their collective concern is the impact of technology on the social and political relations of modern man. The core of each author's argument is that technology now grows at an ever increasing rate and that this vast proliferation has created a corps of technocrats who, because they possess knowledge too arcane for the general public, are beyond the control of traditional political and legal restraints. The rate of change needs human ability to adapt.

None of this is very new. At least since Max Weber, works decrying the loss of political responsibility to a managerial élite have been standard fare at the bookstalls. Beginning with the publication of Don Price's *Science and Government*, Ralph Lapp's *The New Priesthood*, Daniel Greenberg's *The Politics of Pure Science* and Derek Price's *Little Science, Big Science*, to mention only the best, such commentaries themselves have

exhibited a form of exponential growth. Now Gresham's law is at work; the bad analysis is driving out the good.

The earlier critiques of the scientific estate had the virtue of being written by men who were at once well informed about science and close students of politics. With the exception of Gerard Piel, the sophisticated publisher of *The Scientific American*, the four authors here frequently go over their heads when discussing both politics and science. The skills which served Hans Morgenthau so well in the analysis of international politics (his vast erudition combined with good common sense) fail him when he takes on questions of technology and politics. The skills which served Robin Clarke well as a popularizer of science fail him in his attempts to understand the political impact of science. Lewis Yablonsky, whose claim to fame is founding the California Institute of

Psychodrama, appears to have had no such skills to squander. These authors have drained of their content and rendered trivial what were once insightful and provocative ideas.

When a student fresh out of graduate school rushes one of his recent term papers into print, we all understand. He is simply publishing lest he perish. He is to be excused. When one of the most published scholars on the horizon dusts off an old term paper which, in his wisdom, he banished to the files thirty years ago, we are mystified. He is not so easily forgiven.

Hans Morgenthau in *Science: Servant or Master?* presents his readers with good cause to be mystified. The first of the book's three essays, "The Meaning of Science," is at once pompous, sophomoric, poorly written, badly argued and irrelevant. Morgenthau introduces old ideas as original insights. He creates and abandons definitions. He imagines paradoxes that do not exist. He condemns scientists for crimes they never committed and faults disciplines for failing to achieve goals they never set. In this essay the twentieth century is indicted and found guilty in an eighteenth-century court.

The piece reeks of literary references and allusions. At one point the reader is asked: "Who could forget the noble incident of the balking horse on the bridge of Neuilly that is supposed to have transformed the soul of Pascal?" Who indeed? At other junctures Morgenthau invokes Plato, Aristotle, Shakespeare, Jachmann, Goethe, Nietzsche, Daudet and D. H. Lawrence to substantiate his points. These invocations demonstrate an embarrassing truth. Morgenthau's arguments have been made before and more persuasively by men who spoke to their own age.

Morgenthau begins: "We are referring to science in its broadest meaning of scholarship, comprising the natural, social, and humanistic sciences." The core of this science (scholarship) "is the attempt to make experience conscious in reason in a theoretically valid systematic way." Thus "reason" is the core of science.

Just as the reader adapts himself to this perspective, Morgenthau quite suddenly (dare one say arbitrarily?) begins to argue that it is not "reason" which forms the core of science, but rather "moral strength":

What makes a true scholar . . . is the moral strength to raise the question of the meaning of knowledge itself and to answer it by searching not for knowledge of any kind, but for the knowledge that is worth knowing.

From this basic point the old arguments and internal contradictions spread through the essay like a terminal cancer. The reader leaves the essay firmly convinced about the virtue of burning old grad school papers.

Morgenthau's two subsequent essays represent explicit efforts to interpret the impact of science on the politics of the sixties. Shorn of most of the literary references and philosophical posturing of the earlier essay, these two shorter pieces are both more interesting and more articulate. Morgenthau focuses on the relationship between scientists (read natural scientists) and the men charged with the decision-making responsibility of the state. How, Morgenthau asks, can the polity share in the knowledge of the scientist without at the same time bestowing undue political power upon the scientific estate?

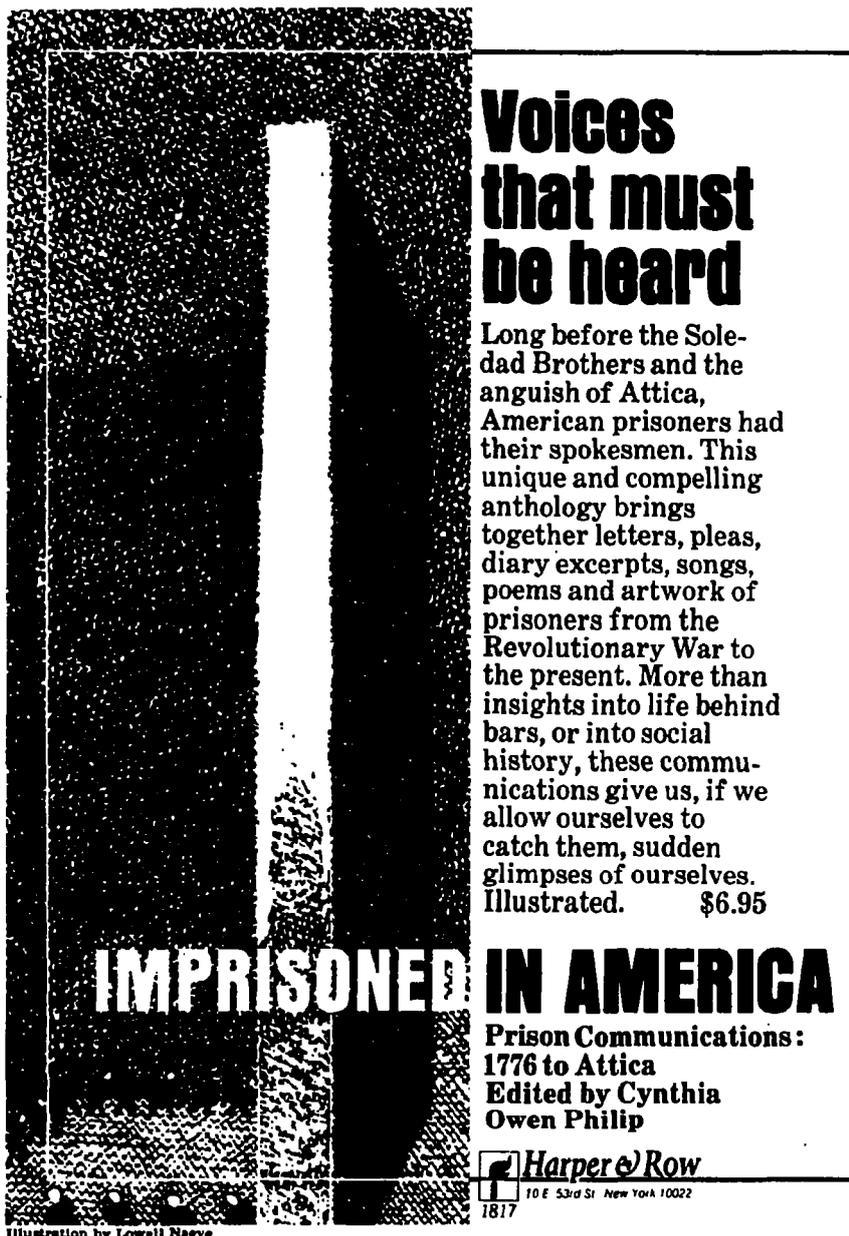
Surprisingly, at the core of Morgenthau's concern lies an apparent naiveté about science in politics. His warnings about the politicization of science and the antidemocratic implications of a scientific élite flow from an assessment of the political power of scientists which no analysis will support and which, indeed, his own arguments do not support. Identifying MIT, SRI and the Hudson Institute as the true home of the "power élite" only compounds the error of Mills and Domhoff. Moreover, Morgenthau's revelation that the policy advice of scientists typically stems from philosophic preferences will come as no news to the decision-makers and the public who have been hearing that advice. All

save Morgenthau long ago recognized that the debates between the likes of Teller and Pauling are no less political than those between the likes of McGovern and Nixon.

Morgenthau's message that science without morality will not save us and that man must look to himself and not his technologies for salvation is not the stuff of which yet another book ought to have been made.

Lewis Yablonsky's *Robopaths* is

not just superficial; it resembles a parody of a sophomore's windy overnight essay on the "Important Themes of Sociology I." The book's argument is as straightforward and shallow as it is unoriginal. Yablonsky claims that one unfortunate consequence of modern industrial society has been the development of a new and frightening type of person, the "robopath." Readers of any sociologist since Durkheim know what ails



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this modern fellow. Briefly stated, the new man lacks a sense of his own worth, is alienated from his past and drifts like a zombie through the present. His personal esteem truncated, this hapless victim of a technological age plays out one of several fates. Either he leads a pointless, wretched and lonely life, or he engages in antisocial activities such as crime and suicide, or succumbs to the appeals of extremist political movements.

Sketchy as the foregoing account of the costs of technology is, it serves fully to describe Yablonsky's notions of modern American society. Like Morgenthau, Yablonsky makes mechanical (one is tempted to say robot-like) invocations of the classics of popular sociology—David Reisman, Erich Fromm, C. Wright Mills. Like Morgenthau, he exhibits all the faults and none of the virtues of the great popular sociologists. He lacks their flair for language and their gift for incisive generalizations which remain provocative even when wrong. Unlike the critics he parrots, Yablonsky seems incapable of sustaining historical or quantitative argument.

The reader never learns exactly when the "robopathic" personality developed, and he is left totally in the dark as to how many of these sorry souls are at loose in the world. Is their number increasing? decreasing? Are they in positions where they can harm others as well as themselves? Yablonsky does not say, and he writes so poorly that ultimately the reader does not care to hear his answers.

On those rare occasions when Yablonsky does not fill his pages with interminable quotations and speaks in his own voice, he treats the reader to a barrage of trendy neologisms: "miniproblems," "megaproblems," "innovation groups," "counterculture" (one word). All of these new words for old ideas coexist in a prose style whose favorite prefix is "super-" and whose favorite adjective is "plastic."

Yablonsky concludes that we should all enroll in institutions like his California Institute of Psychodrama to purge ourselves of robopathic tendencies. Now anyone has a right to

advertise his business, but the reader is not obligated to deal with the ads as though they are significant social commentaries.

Robin Clarke begins his explorations of *The Science of War and Peace* with a few statistical sleights of hand. He argues that "every half century the percentage of the world population killed in war goes up by four or five times. On this basis, there will be no population explosion to worry about in the second half of the next century; sometime in the next 80 to 130 years virtually 100 per cent of the world population will be killed in war." As an added touch Clarke provides a data-filled chart so the skeptic may draw his own conclusions.

Some may have thought such thinking went out of style shortly after the demise of Malthus. Not so. Clarke quickly assures the reader that what we have here is a breathing, walking, true believer:

It is my belief that we are doing our utmost to ensure that the horrific extrapolations of the war explosion will be fulfilled ahead of time. I can see few arguments to contradict this but I can see a great many reasons for believing that we will indeed bring about the fate which history predicts we shall suffer.

Such passages set the tone. Before we dismiss it, it is worth noting that, unlike two of the other works reviewed, Clarke's book is a book. He identifies a theme and sticks to the task of explicating that theme coherently. Clarke includes a wealth of factual material on technological and scientific developments, along with a provocative interpretation of their import. He presents both the facts and the interpretation in a most literate and readable fashion. Here his skills as a popularizer of science serve him admirably.

Clarke introduces the reader to the details of nuclear technology and then devotes successive chapters to arguing that this otherwise admirable technological accomplishment contributes heavily to a superpower arms race, a worldwide pollution

problem and a grinding cycle of poverty, hunger and aggression.

Clarke does not limit his indictment to the achievements of the physical scientists and engineers alone. The social scientists too come in for scrutiny and criticism. Indeed, the best part of the book is Clarke's tour through the works of Richardson, Boulding and Rapaport. While Clarke gives the social scientists no parallel blame for sustaining the arms race or saddling the globe with pollution, he does make clear that where the natural sciences have failed we should not expect the social sciences to succeed quickly. Clarke's point is that social science like natural science has potential for both good and evil. Thus his opinion of peace research:

. . . this new science, like all the sciences that went before it, could be misused. When the young Turks of peace research made their challenge, they charged that up to that time peace research had been no more than "a technology of pacification." It was a fair charge. A similar charge can be made of revolution research. What may come out of this activity may be no more than a "technology of revolution"—a technology which could easily be adopted and misused by groups who themselves have nothing to offer other than a lust of power. This, of course, is a danger of any technology that seeks to improve the human condition.

In short, Clarke argues that while science and technology have together provided the solution to a sizable number of technical problems, they have provided solutions to none of the three or four basic political problems plaguing mankind. Indeed he argues that they have typically aggravated these problems.

We are back to Morgenthau. Science has not saved us, and probably will not do so. Neither author gets beyond a rather tired and obvious theme. Neither man expands our understanding of the politics of science.

A single theme unites the decade of essays Gerard Piel has collected in *The Acceleration of History*:

namely, no matter how fast and complicated technology grows, the informed public has the ability and the duty to understand and control it. This is to be expected from the publisher of *Scientific American*, a journal founded on the principle that the intelligent public can and must understand science. To Piel's credit his essays explain lucidly the public's obligation to retain its civilized and human values in the machine age.

The title essay sets the stage by describing the exponential growth in scientific achievement over the course of all human history. By now, Piel says, the doubling time for discoveries in basic science has been reduced to less than fifty years. Faced with this bewildering proliferation of knowledge and technology, Piel sees laymen slipping into a desperate fatalism, a luxury he says we cannot now afford.

Piel poses solutions to this sense of impotence in the remaining essays, most of which concern education and public science policy. In a section appropriately entitled "common sense," he skillfully attacks the myth of "two cultures" of science and humanism (here the contrast with the garbled efforts of Morgenthau on the same topic are striking). Science, says Piel, has always been a humanistic discipline, created by men for human ends. What are you afraid of? he seems to be asking the new opponents of science. He places his essays on the role of the university and the scientist in American society under the rubric "The Treason of the Clerks." Here Piel consciously puts himself in the tradition of Julien Benda and tacitly follows the arguments of such current critics of the university as Noam Chomsky. Piel chides intellectuals for their sheep-like subservience to the transitory political aims of the state and their perversion of the truth-seeking role.

Today there is nothing startling in criticizing scientists and universities for whoring after government money and forgetting their educational mission. In the early sixties, however, when Piel wrote these essays, science was unthinkable without the succor of the grant-contract system, and the

"multiversity" was regarded as the greatest boon to free inquiry since the endowment of the library at Alexandria. In those palmy days, Piel's voice sounded lonelier and more original.

Piel's tone is informed and urbane. Yet he can raise eyebrows with astonishing generalizations worthy of Hans Morgenthau, e.g., "Without doubt, the most revolutionary idea in the life of man was the concept of inertia advanced in 1638 by Galileo." Piel can also provoke unintended belly laughs, as in his description of the Harvard commencement as "the most resplendent annual rite of our democracy." Tell that to the organizers of Macy's Thanksgiving Day Parade! Nonetheless, the essays are useful as a record of what was on the mind of a good popularizer of science during a turbulent decade. If most of the essays now seem passé, as they do, that too constitutes something of a tribute to Piel's glimpse into the acceleration of history.

We will be getting many more books of the type reviewed here; such is the self-sustaining nature of exponential growth. But now everyone knows, or should know, that scientists are political animals and that what scientists do has political impact. What we need are precise descriptions of the politics of science. Such descriptions would compare the politics of science with those of diplomacy, of welfare and of civil rights. Such descriptions would compare the rhetoric of science to the rhetoric of other political issues and explain how the language of science has acquired a symbolic importance equal to that of such old saws as "the national interest" or "free enterprise."

We do not need more general essays on the subject of science and politics written by outsiders (Morgenthau on science, Clarke on politics). We rather need detailed analysis from trained historians and sociologists of science. One hopes that a better understanding of the politics of science will contribute to a better politics and, who knows, to a better science.

The Planetary Man by Wilfrid Dasan

(Macmillan; 380 pp.; \$9.95)

John C. Koritansky

Wilfrid Dasan has now published the second volume of the work he entitles *The Planetary Man*, including, under the same cover, a revision of the first volume published in 1961. Volume 2 is called *An Ethical Prelude to a United World*; the first, *A Noetic Prelude to a United World*. The foreword promises yet a third volume, *A United World*, although the author makes no promises as to the date of completion, nor does he indicate what he thinks remains to be written on the subject. Dasan's readers will find it useful to have the first volume published along with the second, since the latter not only depends upon the former, but the first volume actually anticipates nearly every theme sounded in the second.

In the introduction Dasan gives a cogent statement of the starting point of his argument—and of the difficulty with it. He mentions in order Descartes, Husserl and the existentialists by way of defining the modern philosophical tradition of individualism. The existentialists represent the most extreme anti-idealistic position by making intentionality the primary concept. "The individual subject, standing in the center, gives vision and meaning to a world of his choice." This radically anti-idealistic individualism is unacceptable to Dasan:

For it overlooks the fact that of the notion of existence or individual as existent nothing can be said. Existence is not an object of knowledge unless it can be somehow essentially incarnated. . . . When existentialists, therefore, in order to escape the accusation of idealism insist that their aim is existence, they must of necessity endow this existence with some feature, whether it be anguish or hope, boredom or nausea, some-