Volume II, No. 26
June 29, 1949

TECHNOLOGY VERSUS MAN

THE lead article in MANAS for June 1**,** "The Quick and the Dead," which was largely a review of Friedrich Georg Juenger's book, *The Failure of Technology,* has evoked a comment which we are glad to print and discuss, for the reason that Juenger's book, in our opinion, is well worth further discussion. Our critic writes:

> Juenger's book states the consequences of something he does not understand and attributes those consequences to technology. Review your history. Technology flourished remarkably from 1100 to 1500 in Europe without the terrible consequences we know. From 1500 to 1600 the real income of the English workingman declined fifty per cent while interest rates rose from a historic low (before the fifteenth century) to a historic high. The greater the productivity of labor, thereafter, the greater the misery. Clearly, that condition cannot be attributed to technology. It had developed under the most primitive technology in the ancient world. . . . Superficial explanations have consequences in keeping us in ignorance. I suggest the need for a greater degree of skepticism for pat ideas.

We thought that the careful qualifications in our discussion of the effects of *modern* technology would cover objections of this sort—which, quite naturally, were anticipated—but apparently those qualifications need greater emphasis.

The estimate of *The Failure of Technology* given in "The Quick and the Dead" was based upon Juenger's analysis of the kind of *thinking* which has accompanied the rise of modern technology, is associated with it, and which, except for exactitude in analysis, may be identified with it. Interpreting Juenger, our article said:

> Technology is the enemy of life, or—to make an essential correction—technology as we seem to understand it and undoubtedly use it, is the enemy of life. . . . *The Failure of Technology* is much more than a big intuition about the menace of the machine. It is a profound investigation of numerous phases of industrial society in the light of Juenger's central critical thesis—that the assumptions of technology, as we conceive and apply them, are at continuous and merciless war with the human essence.

Anyone who reads Juenger's book carefully will recognize that it is no naive indictment of mechanics, but a study rich in subtleties. There is important truth in this book because it is the product of long and intensive thinking about particularly important aspects of the human situation in the twentieth century. Juenger shows that he is possessed of the qualities of concentration, imagination and integrity of mind. The same qualities in other writers and students have produced the same effect. Guglielmo Ferrero, one may say, made the same sort of extraordinary contribution to the problems of government in *The Principles of Power* (Putnam, 1942), after the same sort of exhaustive reflection. And Ortega, who was mentioned in our review, wrote his *Revolt of the Masses* with a similar inspiration.

Our admiration of the Juenger book was no lighthearted momentary enthusiasm, but an attempt to convey to MANAS readers our sense of the enduring importance of *The Failure of Technology.* And while on the subject, another book dealing with this problem should be mentioned—Edward J. O'Brien's *The Dance of the Machines,* which is a brilliant if impressionistic review of the processes of the mechanization of man.

What, exactly, has Juenger done in this book? He has demonstrated, we think, that the logic of technology —whenever technology is allowed to develop its processes as ends in themselves—becomes the logic of the devaluation of man. Of course, the devaluation of man is rationalized in other ways—the man-hating religions of the world are cases in point. But in our epoch, the religious

demeaning of man is only an echo of the past, and effective dehumanization comes as a consequence, direct or indirect, of the thinking which is associated with modern technology. For technology, as Juenger and as we are using the term, means considerably more than skill in the control and manipulation of the forces of nature. It means also the delusion that the sacrifice of human values for subhuman ends can somehow repay that sacrifice and in time elevate the subhuman ends so that they will serve a universal human good.

Modern civilization, Juenger maintains, fails to distinguish between human achievement and technological achievement. What is human achievement? It is self-reliance, moral responsibility, courage—moral courage; it is independence of mind and impartiality in it is the mood of kindness, and patience with the weaknesses and limitations of others; it is vision—the vision which sees both the needs and the possibilities of human beings, and it is the will to serve the one and to encourage the other.

Now technology, obviously, as skill in the use of the unintelligent forces of nature, is entirely indifferent to these qualities. The invention of the wheel did not make men better or worse. The passing of the horse and buggy marked neither the end of the Golden Age nor the beginning of the Millennium. But Juenger is not so much concerned with the rise of technology as with the rise of a delusion about technology. Juenger opposes the idea that technology is the Good News of Salvation. He maintains that to believe this about technology is to transform its spread into a process of damnation.

What is this logic to which Juenger is opposed? First are the premises—almost unquestioned premises—in a society of true believers in the blessings of technology. It is assumed, for example, that improved means of production can raise the standard of living and reduce poverty and want. It seems silly to deny this assumption, and yet it can be challenged in two ways. What, for example, does "improvement" mean? A Gandhian economist has described a village community where a local entrepreneur decided to install primitive power looms to take the place of hand-weaving. The owner of this primitive mill soon destroyed the economic balance of his community by depriving the hand-weavers of a livelihood and by saturating the local market with the product of his looms. Soon the mill had to look elsewhere for an outlet for its cloth, and when the cloth could not be sold, the factory hands were laid off. Was this "improvement"?

This is not an argument against power looms, but an argument against the idea that increased production is an "absolute" good. In a simple, village society, this point becomes obvious, hardly worth repeating, but in a complex industrial and frankly competitive society, both social and "practical" arguments against increased production seem ineffectual and weak. The competitive society is ruled by the law of the strong—if a man can put other men out of business by producing more goods more cheaply than the others, he is only demonstrating natural and economic law.

The second challenge to the assumption that increased production will reduce poverty and want has to do with the quality of the production and the quality of the poverty and want. The man who makes something gives what he makes a portion of his life, his "genius." It may be readily admitted that technology need not destroy these elements of craftsmanship in the manufacture of useful articles, but if technology is used to multiply productiveness without regard for the long-range human relationships involved, a gross acquisitiveness soon takes the place of the craftsman's mood and interest in what he makes. His creative powers undergo a conventionalized desecration; he is craftsman no more, but a man who has sold his birthright for a mess of pottage. And because he will probably become a man of wealth, a power and an object of admiration in the

community, this desecration gradually assumes social acceptability. Meanwhile, the fascinations of technology serve to justify the desecration. Machines are inhuman wonders; their efficiency for the purposes for which they were created—the making of more goods faster—benumbs the understanding of the man who watches them. Surely, a miracle like this can only do good! And what is the good they do? Why are machines desired by men in business? Because machines make men rich.

So, starting with the natural functioning of human inventiveness and skill in the fabrication of goods, technology transforms not only the processes of manufacture but reshapes their ends. Technology sanctifies the logic of acquisition and by its impressive achievements it spreads the degradation of man. The want and poverty which afflict an industrial society are as much deprivations of the human spirit as they are deprivations of food, clothing and shelter.

At the same time, "improved means of production" do accomplish mechanically something of what is expected of them. The markets are flooded with cheap commodities—some of them creditable and useful, many of them not. Prices are lower and more and more "wants" are "satisfied." Vast sums of money are accumulated in private hands, and much larger amounts available to public agencies through taxation. Technology, added to wealth, evolves into power, and as it grows stronger builds bastions of control which determine the pattern of all major economic relationships, and eventually this pattern ramifies to include many of the political and social relationships of the population. Technology and wealth, together, construct the foundations of the mass industrial society of today.

It is after this has occurred that men begin to feel the effects of the dehumanizing processes of technology—not technology in itself, but technology as a theory of progress, as means which have been mistaken for ends. This sort of technology, as Juenger's analysis so lucidly shows, proceeds on the assumption that efficiency in big operations will solve all problems. Note the word *operations.* Operations are things which are done *to* other things—whether the "thing" is a human body in a surgical ward, a mass of earth to be moved from one place to another, or an enemy capital to be demolished by atom bombs.

Technology is the application of scientific knowledge to overcome the recalcitrance of matter and to direct the unintelligent forces of nature. Technology creates a mold for matter and a channel for energy and then it requires men at one end to fill the molds and feed the channels, and many more men at the other end to buy, sell, or "distribute" what comes out of the molds and the channels. As technology gains greater mastery, this process increases its pace. Finally, a kind of fever becomes typical of "successful" technological operations—a disease whose symptoms may be observed whenever two or three manufacturers gather to talk about their businesses, or when their employees meet to discuss other aspects of the technological process. It is a process which has largely absorbed the lives of many millions of human beings.

We have grown so far away from what might be called the right, the social, the moral use of technology that it seems almost impossible to suggest how a wholly constructive technology would work. It would be technology-in-proportion—but in proportion to what?

Probably, this question can not and should not be answered until other, more fundamental inquiries have been dealt with. Juenger, as we recollect, does not raise this question at all, which might be taken as a limitation of his book. But there, we think, is the place to become wary of "pat ideas," as our correspondent suggests. It is no defect of Juenger's that he stops with diagnosis, but rather the caution of a serious and responsible thinker.

We have read over carefully "The Quick and the Dead," trying to find some statement which

might justify the charge of offering a "superficial explanation." It is true that we make high claims for Juenger. But we are now moved only to return to and repeat the thesis before developed: that any man who helps the reading public to understand the ways in which the moral human being has been placed at a discount in modern society has made a contribution of the greatest importance. For such a man has begun to work for the restoration of human dignity and has raised a new banner to human potentiality.

The great interest in Gandhi and Gandhian thinking shown in these pages from month to month is partly explained by the fact that Gandhi devoted much of his life to thinking through the problem of technology-in-proportion. Gandhi, it is true, could start almost "from scratch" in India, where, in many villages, learning how to use a spinning wheel was a first step in technological advance, but his writings show thorough-going attention to the question of *how much* technology the Indian village could absorb and be benefited by, without becoming victim to the technological delusion. Gandhi's alleged "primitive" ideas are rather evidence of his advanced thinking on behalf of the welfare of man.

In America, we speak of "mill towns," mining regions, ports of maritime trade, financial centers, and sites significant for military importance—Los Alamos and Oak Ridge, for example. But what city or town is famous for the quality of human beings who live there? There are some cities, it is true, which are known principally for the institutions of learning which they harbor—Cambridge means Harvard University, Ithaca means Cornell, and Yellow Springs means Antioch College—but beyond these and a few others, there is hardly a community in the United States that stands for some unique human excellence.

The technological civilization begins by building bigger and better mousetraps, until its pathways become highways reaching from factory to factory, from store to store, seldom from man to man. But there are more important things to do with our lives than trapping mice, and selling the rest of the world the products of our efficiency. It is Juenger's discovery that the mouse-trapping civilization eventually becomes a mantrapping civilization, and this discovery is important because the civilization is our own.

Letter from SWITZERLAND

GENEVA. —On May 22 the Swiss government presented a referendum to the country on a hotly debated proposition—the Bircher Bill, involving the creation of an administration devoted to the registration of every Swiss man, woman and child, and to their classification according to possible susceptibility to tuberculosis. Under this measure, citizens would have been obliged twice a year to submit to radioscopic examination. Their record thus established would follow them wherever they went, available to any employer, with doctors obliged to violate their customary medical discretion, by revealing any case known to them.

It was proposed to send away all tubercular patients, even those whose reactions are "negative"; to enforce hospitalisation and to separate children from their parents. Coercion of families was to be effected by the suppression of their insurance and by an additional fine of 1,000 Swiss francs if they refused state-controlled and state-imposed treatment. This last would have been a step toward supporting the campaign to legalize enforced inoculation of all citizens, including babies.

The Bircher Bill went down to a crushing defeat of 600,000 votes to 200,000. The Swiss once more made it clear that they will neither submit to regimentation, nor will they accept the yoke of an official surveillance which would be as useless as it would be irksome. Incidentally, *after election results were known*, it was announced on the radio that Monsieur Bircher, who originated and worked so hard for the Bill's adoption, is a director of companies engaged in the manufacture of hypodermic needles and X-ray apparatus. Interestingly enough, no use of this argument was made to sway the vote by those who opposed the measure. What they did say was that the bill would lead to the extinction of innate feelings of modesty and discretion and turn the population into a herd of sheep, driven willy-nilly into the experimental laboratory of a police state.

We need hardly enter into the abuses that would be open to unscrupulous doctors or to financial interests whose profits demanded the pushing forward of one or another medicine. Under such a system, moral principles and the respect for human dignity would be lost in medical files and finally obliterated by the blind application of legal control.

Already, in this little country, there are many public and private as well as Red Cross organizations specially created to detect tuberculosis and to care for afflicted families. School children, factory workers and those living in crowded areas are urged—but not forced—to visit a clinic once a year for a radiological check-up of heart and lungs at the nominal cost of one franc per person. Suspects are advised to go to their own doctors. In cases of financial stress, special insurance funds are available and the sick are sent to sanatoria in the country or in the mountains, according to their needs. And if these funds fall short of the demand, the *Ligue Anti-Tuberculeuse* steps in.

The interests backing this bill distributed alarming pamphlets giving accounts of extreme cases and of the likelihood and danger of contagion. They spoke of an advancement of social progress and of civic responsibility, and glorified that sentiment of "fellowship" which, it was claimed, will result for a country when all its citizens work under the authority of the State—for their own good! The direct opposition of this idea to the Swiss form of government was ignored.

Freedom of conscience and the right of individual choice has always been one of the outstanding characteristics of the Swiss, so that the defeat of the Bircher Bill came as no surprise.

SWITZERLAND CORRESPONDENT

REVIEW
THE OUTERMOST HOUSE

WHILE no rules can be made about such things, it seems that everyone should take time off from his ordinary pursuits to discover what it means to have organic life on earth—to break away for an hour, a day, a year, from the artificial routines of civilized existence and begin to feel, contemplate and finally to know the routines, which are better called rhythms, of Nature. It is a truism, perhaps, that in order to know Nature, one must first have longed to know her, and have already grasped in some intuitive fashion the principle of that great Beinghood in which living things participate, but surely it is another truism that all sense of self-consciousness, all "knowing," has some kind of a beginning, else the process of human growth could not be understood at all.

This, at least, is what we gain from reading Henry Beston's *The Outermost House,* first published in 1928 and reissued this year by Rinehart. We have much admired Mr. Beston's work since reading his articles in the *Progressive,* but this book generates much more than "admiration," for one lays it down with a sense of genuine discovery. *The Outermost House* is the sort of book that makes you pursue your friends with fingers holding two or three places in the volume, until they will quietly listen and be converted.

The Outermost House tells the story of a year of solitary living in a little house on Cape Cod. The outer cape, where Mr. Beston made his home, "stands a full thirty miles out in the North Atlantic," paralleling the lanes of ocean-going craft for fifty miles. It is a fearful region for sailors, with wrecks and loss of life almost every year. The beach itself is a palimpsest of seamen's tragedy, layer upon layer of sand concealing the fragmentary evidence of disasters through centuries.

There is an impersonal might in the ocean off Cape Cod, but no malignity. The death it brings is chaste, despite its sudden agony, and the strength of the country, the strength of the sea, and the strength of the men of that country and sea have a sturdy beauty that reconciles the struggle with the elements and makes it good.

Through Mr. Beston's eyes and mind a bleak stretch of beach becomes a universe of life—a special universe, perhaps, but one with the symmetry of its qualities and the full variety and color of any universe anywhere. The author, of course, has rare sensibility, but he is wholly lacking in the breathless wonder of indiscriminate praise of the "natural." His pages pulse with the authentic movement of life on the Cape: it is as though the reader himself visited that desolate barren, opened his eyes and ears, and then his heart, to the riches that hide from the casual visitor, the timid intruder from the city.

The joys of "poetry" escape some people—somehow, most "poetry" seems a kind of indulgence of the sentiments, a personal preoccupation which doubtless has some purpose and use, yet a purpose that too frequently celebrates matters of relative unimportance. There is no "poetry" in Mr. Beston's book, but, for this reader, at least, it has most of the virtues to which any poetry can pretend. From his new Foreword and from the concluding chapter we take passages which embody these excellences, and more. Reading over the book itself, the author found what he had put there twenty-one years before, noted and reaffirmed it:

> It is the meditative perception of the relation of "Nature" (and I include the whole cosmic picture in this term) to the human spirit. Once again, I set down the core of what I continue to believe. Nature is a part of our humanity, and without some awareness and experience of that divine mystery man ceases to be man. When the Pleiades and the wind in the grass are no longer a part of the human spirit, a part of the very flesh and bone, man becomes, as it were, a kind of cosmic outlaw, having neither the completeness and integrity of the animal nor the birthright of a true humanity. . . .

At the end of the book, he had written:

> During the months that have passed since that September morning some have asked me what understanding of Nature one shapes from so strange a year? I would answer that one's first appreciation is a sense that creation is still going on, that the creative forces are as great and as active today as they have ever been, and that tomorrow's morning will be as heroic as any of the world. *Creation is here and now*. So near is man to the creative pageant, so much a part is he of the endless and incredible experiment, that any glimpse he may have will be but the revelation of a moment, a solitary note heard in a symphony thundering through debatable existences of time. . . .
>
> Whatever attitude to human existence you fashion for yourself, know that it is valid only if it be the shadow of an attitude to Nature. A human life, so often likened to a spectacle upon a stage, is more justly a ritual. The ancient values of dignity, beauty, and poetry which sustain it are of Nature's inspiration; they are born of the mystery and the beauty of the world. Do no dishonour to the earth lest you dishonour the spirit of man. Hold your hands out over the earth as over a flame. To all who love her, who open to her the doors of their veins, she gives of her strength, sustaining them with her own measureless tremor of dark life. Touch the earth, love the earth, her plains, her valleys, her hills, and her seas; rest your spirit in her solitary places. For the gifts of life are the earth's and they are given to all, and they are the songs of birds at daybreak, Orion and the Bear, and dawn seen over ocean from the beach.

Such writing, in *The Outermost House,* presses itself forward with the tumultuous insistence of thinking that will out. There is no straining after philosophy, no grabbing at morals for didactic purposes. This book is as natural as the sea and the land from which it was born, and if prophetic fervor bursts from its mooring of words, this is because the book has a heart which beats and quickens and comes to rhythmic climaxes of expression within itself. It is the philosophy which rises from the heart that moves the reader, speaking to him with neither zeal nor guile, but as the sea or the sky might speak to him, for the sea and the sky and the heart of man have much in common.

The gamut of *The Outermost House* ranges from the tints of color on a seagull's neck to midnight adventures on the lonely beach. Minute observation passes imperceptibly into revery and moves on to recollection and new observation. Wild things are no strangers, but friends, almost intimates, to Mr. Beston. He is not a sentimental "nature-lover," but one who has learned to recognize the birds by name and by call—all the secret sounds of the night have meaning to him. His only human companions are the men of the coast guard, for whom he has the greatest respect.

One thing we noticed in particular about this book: words which are so often used without meaning—as though the writer said to himself, "Now I must have an adjective"—regain their essence as Mr. Beston uses them. Perhaps he dipped his language in the North Atlantic and rubbed it dry with seaweed and sand, but whatever he did, the words are all alive and fresh with the spirit of his mind.

COMMENTARY
"FRONTIER GANDHI"

FOR more than a year, Abdul Ghaffar Khan, known throughout India as the "Frontier Gandhi," has been kept in prison by the government of Pakistan. The fate of this friend and colleague of M. K. Gandhi was recently brought to international attention by the protest of Pandit Nehru, Prime Minister of India, against the Pakistan claim that Abdul Ghaffar had engaged in a treasonable plot involving his "Peoples Organization," and against the insinuation that India gave its support to the alleged plot against the Pakistan government.

Abdul Ghaffar Khan is a giant Pathan chieftain of the Northwest Frontier Province (formerly of British India, now part of Pakistan) who became convinced that Gandhi's method of resisting tyranny is the right one. His story ranks with the fantasies of Oriental romance. As Krishnalal Shridharani wrote some years ago in *Asia:*

> When this chieftain of the Pathan sharpshooters became an apostle of nonviolence, it was miracle enough, and when he went on, in turn, to convert many of his turbulent Pathans to the Gandhi movement, the effect throughout India was tremendous. Everything the British could do to oppose him only seemed to aid his cause. And, although the Pathans—whom the British Tommies; describe as "half Apache, half Irish and the other half double-cross!"—lack the Hindu's tradition of *Ahimsa*, or noninjury to any living thing in thought, word or deed, and have nothing comparable to the Hindu caste system or age-old belief in *Karma* and the efficacy of suffering, this very fact is of great significance to the strategists in the field of nonviolent direct action. For, if what has been true of the Indians of the plains can be shown to be true also of the "cruel and bloodthirsty" Pathans of the hills, it gives the lie to the general charge that *"Satyagraha* is a weapon of the vegetarian weaklings of India."

The Khan became a convert to Gandhi's doctrines shortly after the Amritsar Massacre in 1919. One of his first acts as a Gandhian was to establish a Nationalist school in Utmanzai. This school became the nucleus for the development, over the years, of a vast organization now known as the *Khudai Khidmatgars,* numbering some hundred thousand volunteers, all of whom are pledged to nonviolence.

These followers of Abdul Ghaffar, Nehru declared, "showed a remarkable example of peaceful action, even under the greatest provocation, and set a standard which it was not easy to follow even in other parts of India. Abdul Ghaffar Khan took the doctrine of nonviolent action to the brave and warlike Pathans and turned their great energy into peaceful channels." Of their leader, the Khan, he said:

> It is impossible for any person acquainted with this gallant fighter for freedom to believe that he can be associated in any way with any underhand activities. His outstanding qualities are straightforwardness, integrity, courage and a devotion to the cause of his people.

During India's struggle for freedom, the British, when they found that the "Frontier Gandhi" could not be bought, sentenced him to three years in "Hell Prison" at Dehra Ismail Khan. He wore shackles so small that they cut into his flesh, causing infection. When at last freed, he had lost one hundred of his normal two hundred and twenty pounds, and six of his teeth.

Emerging from prison with a toothless smile, he said, "With love you can persuade a Pathan to go to Hell with you, but by force you can't take him even to Heaven." This is the man whom Pakistan has imprisoned as a "plotter"—a man who, for nearly thirty years, fought without deceit and without violence for the cause of Indian freedom.

CHILDREN
. . . and Ourselves

OUR discussion last week of Bronson Alcott, philosopher—and educator-friend of Emerson and Thoreau—affords historical perspective for evaluation of the comparative virtues of "progressive" education and more "classical" types of learning. Most teachers are aware of the strongly differing points of emphasis which emerge in recommendations for teacher-training, made, let us say, by John Dewey and Robert M. Hutchins. Dewey is associated with the "learning by doing" school of teachers, who insist that the child must be given a maximum of freedom plus a maximum of opportunity for manual activity, and then encouraged to learn something of the complexities of the modern world by analogies made from fairly spontaneous play with blocks, clay and similar materials which may help the child to create something tangible. Hutchins has emphasized, though principally at the collegiate level, the necessity for a consideration of moral values. The implications of his emphasis upon a first-hand study of great philosophers and authors, however, do lead to a reconsideration of the many intangible values which may be derived from a familiarity with the classics. So it is not surprising that many Progressive educators tend to regard Hutchins as something of a throwback to the days of an old and outmoded educational system.

In the work of Bronson Alcott, we recognized an anticipation of Hutchins' primary concern with values and with instruction in the rudiments of psychology, but in Alcott's time it was comparatively easy for the child to come to terms with the basic facts of economy and produce. A reading of the foreword of *I Learn from Children*, a book by eighty-one-year-old Caroline Pratt, a "Progressive" pioneer, provides an excellent explanation of why so many educators endeavor to familiarize children with the practical aspects of our society:

How utterly the life of a child in this country has changed during my lifetime I would scarcely believe if I had not seen it happen. Three-quarters of a century have spanned the change: my father was a Civil War veteran; I remember the day we all went down to the store to see my mother make our first call on a telephone; I remember watching the explosive progress of the first automobile down our village street.

Put it this way, as the statistics put it: before 1867, the year I was born, only one out of every six people lived in cities of more than 8,000 inhabitants, and there were only 141 such cities; by 1900, one out of three people lived in such a city, and the number of those cities was 547.

I have seen the world of the child grow smaller and smaller. From the wide wonderful place of my childhood, it has become a narrow cell, walled about with the mysteries of complex machinery and the hazards of a motor-driven urban setting.

When I grew up in Fayetteville, New York, school was not very important to children who could roam the real world freely for their learning. We did not merely stand by while the work of our simpler world was done; I drove the wagon in haying time, sitting on top of the swaying load, all the way to the barn.

No one had to tell us where milk came from, or how butter was made. We helped to harvest wheat, saw it ground into flour in the mill on our own stream; I baked bread for the family at thirteen. There was a paper mill, too, on our stream; we could learn the secrets of half a dozen other industries merely by walking through the open door of a neighbor's shop. Our really important learning, the learning how to live in the world into which we were born and how to participate in its work, was right at hand, outside the schoolhouse walls.

This is the change I have seen, from a world in which children could learn as they grew in it, to a world so far beyond the grasp of children, that only the school can present it to them in terms which they can understand, can prepare them with knowledge of it so that they can take their places in it with confidence when the time comes.

This is why, between my eighteenth and my eighty-first birthday, I have sat down to tell the story of my own adventure in the teaching of children, an adventure which has absorbed me during an entire lifetime.

Miss Pratt's book is significantly titled. It indicates why she was able to feel the growing disparity between the needs of children and what formal education offered them. It was as if the confusion of the young was a kind of personal entreaty to Miss Pratt to re-establish some means by which the child could grasp the overwhelming complexities of modern urban living. It is also apparent that Miss Pratt was not simply a Manual Arts teacher, uninterested in philosophy and psychology. From her earliest years as a teacher, she felt that education in the modern industrial world should serve two roles at the same time—the school had to exist not only to help create or improve social and personal values, but also as a connecting link between the child and his environs. Toward the close of her instructive little volume, Miss Pratt expresses ideas which seem identical with those of Dr. Robert Hutchins:

> Their [the children's] grasp of the elusive principles of human behavior was in every way astonishing, and I became convinced of their ability to go further and apply their discoveries to the problems which arose in their own groups, even in their own personal lives. There is really no reason to save psychology for college years; such studies, begun as we began them with thirteen-year-olds, and continued in high school, would do more to prepare children for solving future social problems than any amount of time spent on so-called Social Studies.
>
> In one of our discussions—this with the entire group of Thirteens—the young observers were able, with help, to divide the children they had watched into groups: those who responded to a drive within themselves, and those who depended on a stimulus from outside, such as attention or applause, to make them function.

There is still another interesting parallel between the activities of Miss Pratt, a "radical" Progressive, and the work of Dr. Hutchins at the University of Chicago. Hutchins waged a vigorous warfare against the idea of professorial profits. He suggested that the entire faculty of Chicago become a huge cooperative, each teacher reserving only those funds which were necessary to him, according to number of dependents, etc., with all outside earnings from lectures and books to be turned over to the University. Miss Pratt strenuously avoided, in her formation of the City and Country School in New York, the existence of a Board of Trustees. Together with her staff, she took on the entire financial responsibility for the school in order to preserve academic freedom, and, we suspect, to set her children a good example. Miss Pratt's children learned to run their own activities. In the City and Country School, children graduated from block-play to some sort of school job. The eight-year-olds became shop-keepers, handling the stationery and chalk for the entire school, keeping accounts and receiving small salaries. Further jobs were created in the print shop, toy repair shop, and so on.

Miss Pratt's method of instruction frequently began with trips to surrounding centers of industrial activity. Her school was situated near coal barge docks, bakeries, and wholesale markets—the essential roots of the city's economic life. Then, as the returning children began to ask questions or began to imitate in play the activities they had seen, Miss Pratt proceeded in informal discussion to encourage their understanding. But it is apparent that Miss Pratt sought all of these things simply as a focus for the development of the mind. She wanted the child to have roots just as sure as must be the roots of agriculture in the life of a nation. She discovered that once the focus was established, she had excellent opportunity for practical philosophical discussions. As the children's confidence in mastering their total environment increased, she was able to assign research projects which took the children into literature—and even into the philosophy of Confucius. Also, by this sort of backdoor approach, the classics once more put in an appearance in the City and Country School.

It seems to us that the Alcotts, the Hutchins', and the Caroline Pratts are brothers and sisters under the skin. In the first place, they were all revolutionaries. Each chose different points of emphasis in order to supply what he felt to be terribly important needs in the way of a more

constructive environment for young people. All of them were enemies of formalism. So, instead of calling Bronson Alcott a whimsical mystic, Caroline Pratt an unaccountably enthusiastic superintendent of a "Play School," and Robert Hutchins a mistaken metaphysician, it may be of greater value to place the best contributions of each side by side and see how well they supplement each other. The common quality of greatest educational value in all three teachers is faith in the moral and mental capacities of the individual child. That was why Bronson Alcott taught even his youngest a type of conversation that implied a certain equality. That was why Caroline Pratt was willing to let her children create their own interests in a type of symbolic play activity, and that is why Robert Hutchins insists that each man recognize the extent to which he is by inalienable birthright the only philosopher and psychologist who can solve his own problems.

-

FRONTIERS
Freedom's Withering Roots

IN the May 11 issue of MANAS, this Department reported that a teacher of chemistry had been discharged from Oregon State University for agreeing with the theories of the Soviet plant-breeder, T. D. Lysenko. This was in error, for the chemist, Ralph W. Spitzer—a man whose professional competence is vouched for by Linus Pauling of the California Institute of Technology—was only *accused* by A. L. Strand, president of Oregon State, of agreeing with Lysenko.

Gathering this much from an American Civil Liberties Union meeting held recently in Los Angeles, we called Dr. Pauling's office at Cal Tech (he is also President of the American Chemical Society) and obtained the dates of the issues of the *Chemical and Engineering News* (Dec. 27, Jan. 31, March 28) in which the controversy is aired. Having sent for and read these issues, we can now make a correct report.

The trouble began with a *C & E News* editorial strongly approving Prof. H. J. Muller's recent criticism of "State Science" in the Soviet Union. Dr. Spitzer took exception to the tone of this editorial, writing to *C & E News* that it might better have urged attention to the documentary record of Lysenko's views. While Dr. Muller had called the Soviet controversy over genetics "a brutal attack on human knowledge," Dr. Spitzer wrote:

> . . . a perusal of Lysenko's report [to a recent meeting of Russian scientists] shows that the issue is largely over matters of technological fact and theory. Are vegetative hybrids possible? Mr. Lysenko has samples. Can the heredity of organisms be changed by changing the environment at an appropriate time and in an appropriate way? The Michurinists have changed 28-chromosome spring wheats to 42 chromosome winter wheats by suitable temperature treatment during several generations. . . .

In other words, the Michurinists, of whom Lysenko is the leader and champion, may have made a contribution to agricultural science. Dr. Spitzer thinks their claims are worth investigating. He goes on to discuss the "political" aspect of Soviet science:

> The feature unique to the Soviets is that all enterprise is socially planned and financed, and therefore practical decisions are made publicly by the Communist party, which is largely responsible for keeping up production in all fields, with the technical advice of large bodies of scientists. These decisions are usually worked out in the form of vociferous controversies, often lasting for a decade or more. Judged in the light of the Soviet social structure, this method of allotting funds and responsibilities does not seem less democratic than our method of allowing boards of directors, Congress, or the military to decide (often on a smaller scale) which branches of science and which projects to encourage.

Thus Dr. Spitzer is on record as advocating an impartial study of the claims of Lysenko, but takes a see-no-evil view of the way in which the Soviet biologist rose to power. He is silent, that is, on this latter subject, although a major aspect of the controversy about Lysenko *outside* of Russia has to do with what has become of the men who opposed his theories. It is naturally upsetting to a man like Prof. Muller, who was senior geneticist of the Institute of Genetics of the Academy in Leningrad and later in Moscow (September, 1933 to March, 1937), to learn of the death or disappearance of several of his colleagues, and to recognize almost certain evidence of the intimidation if not terrorization of still others. And it is natural, also, for people who take such matters seriously to regard with some querulousness Dr. Spitzer's blithe comparison of Soviet and American methods of control over scientific enterprise.

But Dr. Strand, the president of Oregon State University, did not stop with querulousness. He fired Spitzer from the faculty and denounced him in the *Chemical & Engineering News* as supporting "the charlatan Lysenko in preference to what he must know to be the truth." Replying, Spitzer said:

> Without taking a position with regard to the validity of the scientific hypotheses involved, I referred to some of Lysenko's arguments and urged American scientists to investigate these controversies from firsthand sources....
>
> President Strand cites evidence to show that the Communist Party of Russia approves Lysenko's theories, a fact which I noted in my letter. He then concludes that I follow the party line because he alleges I support Lysenko. As pointed out above, I did not support Lysenko in my letter; in any case, it is absurd to reason that agreement with a Soviet

> scientific theory is evidence of adherence to a party line.
>
> The basic charge that, due to alleged adherence to "the party line," I have "lost the freedom that an instructor and investigator should have" is not based upon a criticism of my teaching and research, but on the faulty reasoning outlined above. It is therefore my opinion that an injustice will be done both to me and the people of Oregon if this violation of academic freedom is allowed.

Quite evidently, Spitzer's position is logically impregnable, and the indignation of the friends of academic freedom wholly justified. This question is really not at issue, here, but rather the problem of the mournful and puzzled whispers among the friends of academic freedom . . . "Of course, Spitzer must be defended; Strand's action is without excuse; but why—*why* did Spitzer have to show such sympathy for the Soviet political system, defending it the way he did?"

People will defend Spitzer on principle, but it is doubtful that he will get his job back again. It is even doubtful that the civil liberties "front" against such dismissals or against the witch-hunting activities in Washington and elsewhere will have very much effect, in the long run. The civil libertarians are fighting the oncoming shadows of totalitarian psychology, but they have no weapons, really, except the slogans of democracy. These slogans are based upon principles, and therefore they have the effect of releasing the positive energies of those who believe in the principle of freedom of opinion, but it remains a fact that the idea of freedom of opinion is losing its moral power in the United States. Why should this be? Because so few people regard *opinions* as having very much importance—as having more importance, that is, than wealth, ease, and security. The free life, in other words, must be the creative life, or the freedom will cease to be prized. A man does not have to be "free" in order to be well-fed and secure. Too often, he can buy what seems to be a stably pensioned security by forgetting about the "abstraction" of freedom. Anyhow, he may say to himself—if he thinks about it at all—freedom is a "relative" thing.

So, it seems to us, while indignation meetings about Spitzer's dismissal doubtless serve to call attention to the dominion of suspicion and fear in the academic world, a much more fundamental attack on the problem is needed. It would be possible, for example, to examine the claims of the Michurinists in an interested and friendly spirit—to do, that is, exactly what Dr. Spitzer proposed should be done—without in the least jeopardizing free American institutions. If the American way of establishing scientific facts is by impartial investigation, and not by political caucus, then why not prove it beyond any possible doubt?

In the interest of international amity and cooperation, Dr. Strand, instead of discharging Dr. Spitzer, might have announced a research project which would test the most likely of the claims of Lysenko, while ignoring as beneath a scientist's attention the political dogmas with which the Russian plant-breeder's ideas have become associated. This would be one way of showing that, in the United States, scientific facts are determined by experiment, and not by purging the opposition.

What other way is there to show the Russians that terrorism is not a necessary part of the administration of a national agricultural policy? It would also have the effect of demonstrating to men like Dr. Spitzer that there is indeed a vast difference between the Soviet method of public administration in relation to the applied sciences and the policies of educational administrators in the United States.