

Back to Barbarism—Scientifically

H. J. MULLER



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ABUNDANT evidence is available that the Lysenko superstition is now spreading beyond the boundaries of the USSR. Nowadays one often hears the validity of the discoveries of genetics questioned in our country—and of course

particularly in the sections where Communist influence is strong. This is happening not only in the conversation of laymen, but in the columns of supposedly reputable newspapers and magazines. The same thing is true in other non-Communist countries. For example, the British *New Statesman and Nation*, in its issue of September 25, 1948, published a letter in defense of Lysenkoism which represented, from a scientific viewpoint, the depth of illiteracy. Similar discussions have been going on in French journals (e.g., *Les Lettres Françaises*), and in German publications. Yet scientists undertaking to answer the Lysenko myth have had considerable difficulty getting their articles published, even in the USA and Britain.

Naturally the situation is even bleaker in Soviet-dominated countries. In Czechoslovakia, many months before the Communist coup, a Lysenkoist from the USSR was appointed to redirect ideological teachings at Charles University, and Lysenko himself was elected a member of the Czech Academy. The geneticist delegates from Poland, Bulgaria, Hungary, Yugoslavia, and Czechoslovakia to the Stockholm Congress last July felt it necessary, in self-protection, formally to protest the attack on Lysenkoism made by the writer. In the Soviet zone of Germany, Lysenkoist propaganda is being widely disseminated, and German geneticists of high standing who suffered under the Nazis are again under attack. The Soviet Embassy in Venezuela is serv-

EDITOR'S NOTE—In "The Destruction of Science in the USSR," which SRL published last week, H. J. Muller, professor of zoology at Indiana University and one of the foremost American geneticists, told how the USSR Communist Party had sedulously built up the reputation of a geneticist of an ignorant peasant-turned-plant-breeder named Trofim Lysenko. Lysenko's dogmas, which last August were declared the "official" views of the Party, are—according to Professor Muller—superstitions that hark back to ancient times; in many important respects they resemble the Nazi dogmas about the superiority and inferiority of races and classes. Russia's leading bona fide geneticists have been obliged to disavow their criticism of them or have been caused to vanish into oblivion. In this article Dr. Muller points out the dangers such politically motivated assaults on science hold for the U. S. and all Western civilization

ing as the distributing center for South America for a Spanish translation of Lysenko's book "Heredity and Its Variability."

What causes the Communist officials to push Lysenkoism so strongly? To me, the answer is obvious: it is the type of mind that sees things as only black and white, yes and no, and so cannot admit the importance of both heredity and environment. Believing that it has found the complete answer to all the world's ills, through its particular way of manipulating environment, the Communist Party regards as a menace any concept that does not fit patly into its scheme for mankind. The genes do not fit into that concept, in its opinion, hence the existence of the genes must be denied. So narrowminded are the present leaders of Russia that they do not realize that, by their denial of the existence of genes, they have set up a doctrine according to

which the peoples of the world would be saddled, biologically, with the accumulated incubi of their respective past misfortunes, and would therefore be very unequal in inherent capacities.

Because the Communists have organized all their political units, even those in scientific institutions, pyramidally, like an army, they have created conditions inimical to free-thought processes. Such organization places a premium on subservience to those above and on arbitrary domineering over those below. It creates conditions where men rise by intrigue and by denunciation of others, rather than by merit. It is conducive to the amazing campaigns of defamation constantly being conducted against the conscientious workers in scientific institutions by their jealous but less capable Party "comrades."

Another major factor in the Russian attack on scientific inquiry is the perennial existence within the USSR of an emotional state resembling war hysteria, which permits any idea or activity to be damned or glorified merely by describing it as subversive or patriotic. For example, Vavilov was charged with national sabotage because he had conscientiously asserted that it might take five or more years for geneticists to develop certain improved and needed varieties of wheat, while Lysenko promised that, through direct modification of the development of the plants by



special treatments, followed by the immediate stable inheritance of these developmental changes, he could get as good results in a year and a half. Needless to say, Lysenko has not been able to make good his promise.

YET another deterrent to genetics is the existence of the mystical, pretentious state philosophy (which might better be described as a religion), known as "dialectic materialism." With this young and old are indoctrinated. All scientific work must be conducted and all scientific conclusions reached according to the precepts of this religion, as interpreted by its high priests. In this way the theory of the gene and of Mendelian chromosomal inheritance has been accused of being both "idealistic" and "mechanistic." These two heresies are supposed to be as opposite as the poles, yet both are anathema to the Party creed.

Genetics is by no means the only science that has suffered in the USSR. Psychology was similarly set upon during the Thirties and largely destroyed. The branch of psychology which deals with the testing of aptitudes and abilities, in which considerable progress had been made in the USSR, was the special object of attack. In the field of medicine, certain very poorly supported theories—notably Speransky's theory, which attributes much of disease to the nutritional condition of nerve tissue—have enjoyed official favor to the detriment of more scientific approaches. In physics, the relativity theory narrowly escaped being condemned on dialectic materialist grounds, but adroit political maneuvering by the scientists finally saved

it. Even some distinguished astronomers have felt the consequences of the system.

This situation is all the more tragic because in the first decade and a half after the Revolution, public interest in science was great in the USSR; scientists enjoyed a high prestige, and were accorded considerable material support. Freedom of discussion, so essential to scientific development, was permitted in a high degree. In the last fifteen years, however, the politicians have tightened their grip on all phases of Russian life; as they intruded into intellectual activity, they cut off the creative imagination, interfered with communication and criticism and the scrupulous objectivity basic to scientific progress. A similar enfeeblement has of course taken place in the arts.

Although its accomplishments have been great, science as a widespread organized activity is exceedingly young in terms of human history. It is a tender plant, requiring a special soil; its growth is easily checked or destroyed by outside interference. Very few people appreciate its cardinal need: complete freedom of inquiry and of criticism. It is always being menaced by men who wish to inhibit or redirect it at vital points and to destroy its freedom. The conclusions it reaches often have the effect of overthrowing long-accepted dogmas; the established interests which depend on these dogmas are usually much more powerful than the scientists. While it must be left to find its ways, unhampered by interference on the part of those who do not understand it, it must be furnished the material support without which it would have neither personnel nor

facilities for work. Yet funds and recruits are not enough if its soul—spontaneous and independent inquiry—has been put into shackles.

When we criticize the Soviet attack on science, let us not, however, neglect the motes in our own eyes, nor the lesson it holds for our own practices. Well within the memory of many of us is the assault on the teaching of evolution in Tennessee, conducted by the Fundamentalists led by the politician William Jennings Bryan. The Scopes trial was only the most publicized of the scandals that resulted. The writer well recalls a session of the Texas legislature at which a preacher by the name of Norris delivered, by special invitation, a fanatical two-hour harangue on the doctrine of biological evolution and its "dangers"—Bolshevism, "nigger-loving," and the anti-Christ. The legislators listened attentively and frequently applauded. No qualified person was allowed to state the case for science. Subsequently the lower house passed a bill forbidding the teaching of evolution in elementary and high schools, and the state textbook commission ordered the removal of all mention of the subject from school textbooks, an order that was rigorously executed.

FORTUNATELY the movement as such has died down, yet its benighted influence is still pervasive. It is doubtful whether, in many regions of this country, there has as yet been any real recovery in the teaching of biology. Thus a basis has been laid for a popular misunderstanding which has prevented research in biological fundamentals from receiving adequate support, has hindered the comprehension of important genetic principles even in medical circles, and may at some future time facilitate the rise of Lysenkoism and other dangerous anti-scientific movements.

Still another potential danger to science lies in the practice of having scientific research supported by private foundations interested in their own ends rather than that of science as a whole, and by public funds administered by groups chosen by politicians or military men. Research has become increasingly expensive, and much of it is now dependent on such sources of funds.

It has been claimed that in the case of public-supported research, democratic procedure demands that at least the head of the administrative board be politically chosen, so that he will be responsible to the people. This is a curious argument. If the people wish, they can just as well leave the guidance of their expenditures for research to persons chosen



—Wide World.
"When we criticize the Soviet attack on science, let us not forget . . . the assault on the teaching of evolution" during the Scopes trial in Tennessee, led by the politician William Jennings Bryan (shown with Clarence Darrow, left).

by trustworthy scientific groups as to persons chosen by unscientific men who were elected to public office primarily to deal with quite different matters. During the recent war the government entered into large contracts with private firms, through which it entrusted them with great sums of public money in return for various industrial and even scientific services. No exception was taken to this practice because the firms were supposed to be expert in their lines. Why should the scientist have less prestige than the businessman and be considered less qualified for handling funds in his own field?

But the gravest present danger to American science stems from the activity of the super-patriots who, on the plea that they are battling totali-

tarianism and defending democratic freedoms, are themselves attempting to fasten the very evils they warn against upon our own country. The Un-American Activities Committee is only the most glaring illustration of these practices. The hysteria it has helped to foment has already driven many of our better scientists out of their chosen work.

Even in my own field of genetics, which is relatively unconnected with national defense, this hysteria is having unfortunate consequences. For example, last summer one of the foremost and most respected American geneticists was prevented from attending the International Congress of Genetics in Stockholm when the government refused to issue him a passport. The reason given for this was

that he had once been a member of "The American Committee to Save Refugees," an organization not on the list of those officially considered subversive. True, the USA prevented only one of its geneticists from attending, while the USSR did not allow any of its citizens to be present. But we cannot take the Soviet Union to task with a quite clear conscience.

When we criticize the shocking treatment accorded scientists in Nazi Germany and which is now being given them in the USSR, we must also exert ourselves to prevent the same thing from happening in our own midst. Otherwise, we shall gravitate back towards that state of stultifying intolerance which from time immemorial has been accepted as normal by barbaric societies.

Political Economy: Basic Text

By Irwin Edman



Free Enterprise

FREE ENTERPRISE, so thinks Big Biz
Is all the enterprise there is.
It's what has made the country great,
Built up the city and the state,
Brought lots of work to banks and tellers,
Made fortunes, say, for Rockefellers,
Raised mobs from poverty's abysm,
By Rugged Individualism—

All this before the aggravation
Of Bureaus and of Regulation,
When pioneers with ploughs and axes
Won the West, unplagued by taxes.



Planned Economy

NOW let us with the Leftist boys
Praise Planned Economy, its joys
Where rail and planes and steel and coal
Are snug in Federal control
And everything's thought out and done
In lovely central Washington,
And all from fisheries to phones
Is stuff the Public runs and owns
And all our work and all our play
Well-ordered by the U.S.A.



Inflation

WITH wages high and prices higher,
Up goes everybody's ire,
And when costs climb to the top,
Buyers petulantly stop,
And then, alas, comes a Recession,
Depressingly, once called Depression.



Economic Scholars

UNLESS (though the provincial hollers)
Our foreign clients pay with dollars,
They cannot buy; we cannot sell—
Comes war, comes revolution—Well,
Clearly there *must* be a plan
By Marshall or some other man.



Law of Supply and Demand

WHEN there are lots of pigs and sheep,
Lamb chops, bacon and ham are cheap,
When these prized animals are few,
And sought by you and you and you.
It is, I think, superbly clear
That ham and chops and roasts are dear.
This, I am certain, is the gist
Of more than one economist.
Meat is cheap where lots of meat is
Sums up more than one well-known treatise.



Banking and Currency

FINANCE I cannot manage to
Make clear to me, much less to yoo.
Hard currency, I think, is fine,
(Would a lot of it were mine!)
For further learning I would thank
The reader to consult his bank
Or Bernard Baruch who's no fool,
Or Babson or the Wharton School.
All these could well expatiate
On time loans or the discount rate,
And give much-needed explanation
Of something called amortization.
For me, it takes all my small talents
To make my modest checkbook balance.

Fiction. One of the most remarkable phenomena of the American literary scene since the war has been the belated discovery of the work of the philosopher-novelist-playwright Jean-Paul Sartre. Eight volumes from the pen of the prolific and versatile Frenchman were published this year and last, with still another scheduled for early 1949. Some of these recently-published books were written a dozen years ago. The same pattern seems about to be repeated in the case of Herbert Read, English poet and critic. Read's autobiography, "The Innocent Eye," critically acclaimed when Henry Holt published it last year, was issued in Britain back in 1933; his fantasy, "The Green Child," published this week by New Directions and reviewed below, first appeared in the London bookstalls in 1935. It seems likely that the interest these two books has stirred will lead to the publication of more of Read's work over here.

An Idea, an Accident, a Fantasy

THE GREEN CHILD. By Herbert Read. New York: New Directions. 1948. 195 pp. \$2.75.

Reviewed by BEN RAY REDMAN

IT IS regrettable, I think, that readers should be invited to approach this American edition of Mr. Read's fascinating fantasy by way of Kenneth Rexroth's introduction. Mr. Rexroth is an original and interesting poet in his own right, but the encomiums which he heaps upon the delicate body of "The Green Child" are tributes of undisciplined enthusiasm rather than expressions of just critical appreciation, and are calculated, by their range of comparative reference and their unqualified celebration of superlative virtues, to excite expectations that could hardly be satisfied by anything less than a major masterpiece. This is a pity, for, whatever else "The Green Child" may be, it is not of major caliber; and our enjoyment of its seductive qualities is hindered rather than helped when it is cried up as "one of the most sustained products of conscious rapture in our literature," when we are assured that the sheer perfection of its writing will make it hard for us to believe our eyes as we read.

To put it bluntly, this is tall talk. Or shall we call it an example of verbal intoxication? For rapture is a state of mental transport or ecstatic delight, and surely the first and second parts of Mr. Read's story are no products of such a state; nor is the third part, with the possible exception of its closing paragraphs. Again, Mr. Read writes well, and more than that he writes beautifully, with a masterly control of diction, accents, and rhythms which reminds us that one of his many books is devoted to English prose style. But, even so, his

accomplishment is not so remarkable as to evoke incredulity.

I have stressed the fact that "The Green Child" is composed of three parts, because its divisions are not merely those of convention or convenience. The story is shaped in the form of a triptych, the panels of which differ from one another in mood, style, and subject, while still contributing harmoniously to the total design and artistic effect. The first panel is provocative, lightly veiled in

mystery, subtly exciting, done with deft strokes that arouse curiosity and lead us on. The second is an admirable example of terse, meaningful narration, as brisk and sure in its movements, and as lucid, as the tales of Voltaire. The third is pure fantasy—a plunge into depths that we have only glimpsed before, but towards which we have steadily been moving.

When we first meet Olivero, who was born Oliver, he is returning to England, in 1861, after a thirty years' absence, to revisit the scenes of his boyhood, trace the paths his youthful feet once followed, and, if possible, learn the explanation of the "green children" who had appeared in his village shortly after he took leave of it—"two children, apparently about four years old, who could not speak any known language, or explain their origin . . . who were lightly clothed in a green weblike material of obscure manufacture," and "further distinguished by the extraordinary quality of their flesh, which was of a green semi-translucent texture, perhaps more like the flesh of a cactus plant than anything else, but of course much more delicate and sensitive." Walking by night, along the baffling course of a stream which flows in a direction precisely opposite to the direction he remembers, Olivero finds himself suddenly involved in scenes of mystery and violence,



THE AUTHOR: Herbert Read, called by Graham Greene a "rather dry, sophisticated critic," calls himself an "anarchist, romanticist, and agnostic." But, he reflects, "I am glad that I was born soon enough to be brought up on the Bible." He spent his first nine years, from 1893 on, in sight of Yorkshire's moors and wolds. The Read farmhouse had flagstone floors and beamed ceilings, from which hung sides of bacon, and the governess-taught lad was initiated in the hunt by the traditional rite of bleeding his face with a severed fox head. At eleven, his father dead,

he went to an orphanage. At fifteen, he was a £20-a-year bank clerk—a "true-blue Tory"—with a shilling's allowance a week to buy books. Inspired by Tennyson, he began writing daily poems, then learned French, German, and Italian to read classics in the original. He paid for publication of his first book of verse, of which twenty-two copies were sold. He ordered the rest pulped. War broke out. He was drafted from the University of Leeds, commissioned a captain in the Yorkshire Regiment, served four years, received the DSO and Military Cross. After the Armistice he was for three years assistant to His Majesty's Treasury. "The business of coordinating details never seemed irksome for me," he says. Nightly from 10:00 until 12:00, inasmuch as "a routine occupation imposes a rhythm on life," he continued the critical essays he'd begun with T. E. Hulme as subject, and wrote more poetry. "The Green Child," his only novel, owes its English publication in 1935 "to an unexpected break in routine." Untrained when he joined the Victoria and Albert Museum's ceramics department, he soon became art historian, critic, and teacher (Edinburgh and Liverpool universities and Trinity College, Cambridge). By 1946 he was a publisher. He has been married twice, says, "All other sensuous experiences are as nothing to the perception of poetic beauty."

—R. G.