VOLUME VIII, NO. 51
DECEMBER 21, 1955

VANISHING POINTS

ALBERT EINSTEIN will be remembered in human history for various achievements, but there seems a good possibility that his greatest claim to gratitude will lie in the fact that he made it necessary for men to try to think like philosophers.

It was, as we recall, an executive of the Metropolitan Opera Company who came up to Einstein one night when the physicist was attending the opera and asked him if the phrase, "There are no hitching posts in the universe," could be regarded as summing up the implications of relativity theory. The great man said yes, that the expression would do for a start. No absolute space, no absolute motion—no hitching post!

This was a way of explaining that the reference points of the Newtonian World Machine had become vanishing points. Further, Einstein's rendering of the cosmos could not be illustrated by a "model" which reflected the principles of mechanics. To grasp the relationships indicated by relativity, you had to understand the concept of Reimannian space (a space created and shaped by the things that are in it); and to understand the forces which operate in nature, you had to be willing to suppose that mathematical abstractions can and do express the ultimate forms of physical reality.

An article by Leonard Engel in the December *Harper's* tells simply and graphically what happened to the universe at Einstein's hands:

> Einstein suggested . . . that gravitation is a property of this Reimann space. Newton's apple fell to the ground, not because apple and earth were "attracted" toward each other but because space is so distorted by the presence of apple and earth that they tend to move toward each other. Similarly planets go around the sun because, in the presence of planets and sun, space is so curved as to provide the "tracks" the planets actually do follow. In the language of general relativity, material bodies generate gravitational "fields" around them; the fields distort space and thereby condition the motions of bodies within the fields.
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> At first glance, Einstein's concept of gravitation certainly seems queer. A little reflection will show, though, that our traditional idea of gravitation is no less queer. In the traditional view, gravitation is an "attraction" which material bodies exert instantaneously on each other. No time at all is needed for gravitational "force" to travel between two bodies, be they an inch or millions of light years apart. In other words, the "force" of gravitation is propagated with infinite velocity.
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> A force that travels with infinite speed should be (and would be, if we were not so used to the idea) as great a tax upon the imagination as a "force" that is a property of space. And Einstein's view has two distinct advantages over the traditional idea of gravitation. It is consistent with the non-existence of absolute motion, and it fits the observed facts better. It was Einstein's theory of gravitation, for instance, that finally cleared up the eccentricities of the orbit of Mercury (the planet stubbornly refused, to a small but significant degree, to obey Newton's law of gravitation) and that predicted the bending of light rays passing near massive bodies like the sun (an effect confirmed by British eclipse expeditions in 1919).

It was a great day for the physical universe when they found actual evidence to prove that it obeyed Einstein's laws. We could still say to ourselves that we know something about the world—that our theories are not just "theories," that the principles of our science, while conceptually unfamiliar and mathematically obscure, do indeed describe what is going on "out there."

These reassurances, however, as far as Einstein was concerned, were not going to last. Mr. Engel's article was written to tell about Einstein's latest—and perhaps greatest—achievement: the unified field theory. In 1953, in

an appendix to a new edition of his book, *The Meaning of Relativity*, Einstein announced that he had at last worked out equations which gave theoretical unity to both gravitation and electromagnetic force. These equations are of a type known as "non-linear partial differential equations," and are said to be "much more complicated than those of the original gravitation theory." Not much more has been said about them, for the reason that no one knows how to prove them correct. The gravitational equations could be tested in several ways, but the unified field theory is still only theory, and will probably remain so for a long time. Other physicists are apparently content to let matters rest as they are, using one set of equations to deal with gravitational phenomena, and an entirely different and unrelated set to deal with electromagnetic radiation. Some of them probably feel that Einstein went far enough in dissolving the physical universe into complex mathematics with his theories of relativity, and that pressing a unified field theory which cannot be related (so far) to experience at all, would be tantamount to destroying the human belief that the world of science is the world of Reality.

Engel has an interesting paragraph on the obligation of the modern scientist to maintain some sort of touch with the "real":

Unifying theories, revealing the order beneath the changing face of nature, have been sought since ancient times.

> Empedocles of Sicily believed that matter was made up of varying proportions of air, water, fire, and earth as basic elements; Leucippus argued the existence of atoms; a thousand others whose names are forgotten have suggested the ultimate nature of things. Modern seekers after a unifying theory, like Einstein, have had both an advantage and a disadvantage over their predecessors. They have had the aid of modern mathematics, a powerful tool. At the same time, they are not free, as the ancients were, to speculate. In this day, we demand that theories of the ultimate nature of things be tested by physical reality; they must prove themselves by predicting phenomena that can be verified by observation.

Well, suppose, on the one hand, that Einstein did hit upon a correct formulation for relating gravitational and electromagnetic phenomena (we are practically obliged to make this assumption, at least tentatively, since, as Engel says, "Einstein's most marked characteristic was ever a remarkable instinct for the grain of truth hidden in a labyrinth of confusing appearances"); but suppose, also, on the other hand, that verification of his unified field equations remains impossible (Engel says that we "may have to wait on the discovery of new methods of dealing with non-linear partial differential equations," which could easily occupy able mathematicians for decades). This would be an unpleasant situation for scientific thought, for to make both these assumptions is the same as declaring that the truth about the physical universe has lost touch with physical experience. It puts us back with Empedocles and Leucippus and all the other philosophical cosmologists of the past.

But the fact is, except for people like Mr. Engel who are able to follow the work of modern physicists, that is about the position we are in right now. We may not *feel* ourselves to be in that position, but this is only because we take our confidence in the known world of physical reality on faith—we trust the experts.

We have, in short, our sense of physical reality at second hand. This has always been true of many men, but a high school student, if he wanted to, could grasp the fundamental mechanical relationships of Newtonian physics and thus acquire a measure of first hand conviction about the validity of scientific knowledge. Anyone could go to the library and study up on gravitation and work out the equations. But after Einstein's theories of relativity became the basis of modern physics, this was no longer possible except for the very few. Physics became an esoteric subject known only to a handful of incredibly skillful mathematicians. And now, Einstein, moving onward to a grand synthesis of the laws of nature, has left behind not

only the theoretical physicists, but, in a sense, Nature herself. And then he died.

It makes you wonder. It makes you wonder if the scientific epoch of modern civilization has not reached some sort of ending; or, at least, if the curtain is not coming down on the first act.

Until now, the scientific age has had three great and all-pervasive influences or effects. First, it gave modern man a sense of knowing by non-philosophical and non-religious means what the world is made of and how it works. By doing this, it removed the concentration of men's minds from religious problems and issues and placed it on technological problems and issues. Third, it has vastly transformed the actual scene of human life, through scientific discovery and invention.

It seems reasonable to speak of the end of the first act of the drama of science, since Einstein, in a single generation—his own lifetime—has returned nearly all of us to an age of faith. Even in his own case, the unified field theory was an "act of faith." His was, of course, an *educated* faith. Ours isn't, or is only partly so. And his faith was a very different thing from conventional "religious" faith. His faith was grounded in the conviction that the universe is orderly and of rational construction, and that, therefore, the human mind ought to be able to encompass its processes. We, on the other hand, usually mean by religious faith a faith that is "great" because it ignores, denies, or is indifferent to what we know of nature and natural processes. The mystic's faith is something different, again, since the mystic gains his conviction by an interior process of self-discovery. If it were necessary to "classify" Einstein's faith, it might be best to describe it as mystical, since it has an inward origin, but it is also a rational faith, since it is schooled in the discipline of mathematics.

Well, what shall we do, while we are waiting for the mathematicians and the physicists to develop a means to test the unified field theory?

Perhaps we ought to make peace with the idea that our great confidence in the scientific account of nature and man as a description of things as they "really are" has been little more than an elaborate illusion—an illusion that bore great fruit for a while, but eventually broke down. If, now, we must learn to be men of faith—if science itself is destined to drive us to some kind of faith—we had better decide to retain at least the disciplines and rigors of scientific thinking, even if we must part with the illusory assumptions that for so long we believed were part of scientific "truth." If we are bound to enter, will ye nill ye, an age of faith, we can at least try to adopt the faiths that have the most likelihood of being true. What better evolutionary role can be found for the human mind?

REVIEW

THE FUTURE AND NEVIL SHUTE

JUST how we missed making extended comment upon Nevil Shute's 1953 novel, *In the Wet,* has not yet been determined. Every book this author produces is worth reading for a number of reasons, and our Shute score includes reviews of *Round the Bend, No Highway in the Sky, The Chequer Board* and *The Far Country.* Shute is of that rare breed able to demonstrate that a story can be absorbing without melodrama, constant spectacular action, or detailed descriptions of the passage of *amour.* He also deals in unusual and provocative ideas, returning, in *In the Wet,* to exploration of the possibilities of reincarnation—the theme of his pre-war tale, *An Old Captivity.*

An effort to detail the many situations and perspectives woven into this story might give the impression of overcrowding, but a reading of *In the Wet* will not. The scene opens in Australia, with a Church of England priest braving illness and flood to offer the last rites to a derelict named Stevie. After absolution had been given—Stevie was not particularly interested, deriving more comfort from a Chinese Buddhist who shared his hut in the bush—the Churchman falls into a feverish coma, somehow blending his consciousness with that of the dying man. Stevie had previously indicated his belief that death would mean simply a transfer from the consciousness of one life to that of some future existence, and the priest shares Stevie's vision of his next life—between 1975 and 1980.

As David Anderson, a quadroon, Stevie finds opportunity to bring the best and strongest characteristics of his nature into play, becoming, through education and determination, a Wing Commander in the Australian Air Force. Finally assigned to the Queen's special Flight, Anderson also is confronted by English and Dominion politics.

Here, Mr. Shute—who moved to Australia a few years ago—undertakes serious thought about the future of England and the Commonwealth nations. The most interesting challenges are, naturally, in the newer countries, while a continually rising birth rate leads to discouraging congestion on the British home island. But *In the Wet* gains distinction in prophesying by sticking to logical, slow projections of the present. We are accustomed, nowadays, to read of spectacular, even cataclysmic, alterations in international geography, and vast changes wrought by politics, air travel, automation, etc., in novels about the future. It is therefore a relief to read about 1980 as if it might be understandable from the perspective of the present.

Shute shares with some other English writers an interest in "royalty." The following is from an author's note:

> As a background to this story, I have tried to picture the relations of the countries in the British Commonwealth as they may be thirty years from now. No man can see into the future, but unless somebody makes a guess from time to time and publishes it to stimulate discussion it seems to me that we are drifting in the dark, not knowing where we want to go or how to get there.
>
> The Monarch is the one strong link that holds the countries of the Commonwealth together; without that link they would soon fall apart. If any forecast of Commonwealth relations in thirty years time is to be made, it is vacant ant sterile unless also it contains a forecast of the position of the Monarch, and gives warning of the strains and tensions that in thirty years may come upon that very human link.
>
> Since personal strains and tensions must inevitably affect the future of the Commonwealth, it seems to me that fiction is the most suitable medium in which to make this forecast. Fiction deals with people and their difficulties and, more than that, nobody takes a novelist too seriously.

It is not difficult to find theoretical links between Mr. Shute's metaphysics and his theories of social progress. Viewing human evolution in individual rather than collective terms, he sees an infinite "ladder of being" reaching to heights which anyone may determine to climb. As with the Cambridge philosopher, John MacTaggart, reward and punishment come to each through the results of his own actions, in future existences, and the better life a man now merely dreams of may become actuality during his next cycle of earthly existence. This anticipation, called "karma" in Eastern philosophy, gains affirmative Western expression with emphasis on the good which a man may in the future achieve, rather than upon the travail he may escape by "cutting the bonds of karma." Thus Stevie, when reborn as quarter-caste "David

Anderson," is on his inner way upward, even though the outer circumstances of his birth at first weigh heavily against him. Part of David's triumph, incidentally, is his full acceptance of his parentage. The following paragraphs illustrate how easily, in terms of Shute's philosophy, a man may solve the "color problem" in his own life, and help others indirectly:

> He cut a round off the pineapple on the cabin table. "David's the name," he said. "But most people call me Nigger. Nigger Anderson." He passed the pineapple up to her in the cockpit on a plate, with a bowl of sugar and a knife and fork.
>
> "Why do they call you that?" she asked.
>
> "Because my mother was a half caste," he replied. "I'm a quadroon." He climbed out into the cockpit and filled her glass with the sherry and his own with the tomato juice. He raised his to her. "Here's to the black and white."
>
> "It's pretty mean to call you that," she said. "Not many people do that, do they?"
>
> "Everybody," he said cheerfully. "Everybody calls me Nigger Anderson. I rather like it.
>
> "I can see that you put up with it," she said quietly. "I can't believe you like it."
>
> "Well, I do," he said. "I don't know much about the white side of my family, but on the black side I'm an older Australian than any of them. My grandmother's tribe were the Kanyu, and they ruled the Cape York Peninsula before Captain Cook was born or thought of."
>
> She smiled. "And Wing Commander Anderson doesn't give a damn who knows about it."
>
> "That's right," he said "I don't. I'd rather people called me Nigger Anderson than that they went creeping round the subject trying to avoid it."

Mr. Shute is a strong supporter of the Multiple Vote system, under which the weight of individual ballots is measured by the voter's education, family responsibility, and service to the community. In the time of this story, Australia has long used this system successfully, and indirectly induces a struggle between reactionary and progressive forces in England over the issue. Shute makes one of his characters explain why England must eventually come to the Multiple Vote as a synthesis between Democracy, Socialism, and the aristocratic tradition. The speaker is Wing Commander Anderson's intended bride looking back from 1980:

> "I think the historians will say that Socialism has been a good thing for England," she said thoughtfully. "All countries go through good patches and bad patches, and England has been going through a bad patch for the last forty years. It's probably not far from the end now. When we can feed our population things will suddenly improve, and the economists say that's only about five years ahead. Then, maybe, we can try free enterprise again. But in the meantime we've got to work together to get through the mess, and Socialism's probably the best for that."
>
> "That may be so," he said. "But we Australians aren't quite in the same boat."
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> "You've got to try and understand," she said. "You've got to understand why England has developed differently to your country."
>
> "And now you've got to try and understand what an illogical people the English are," she said. "A country so strongly Socialist as England is ought to be a republic. The Crown rules by divine right, and that's still the essence of the Crown's position in this country. That right conflicts entirely with all the principles of a democracy, especially a Socialist democracy. Any other people but the British would have done away with the Crown long ago, but the British aren't like that. They love their Kings and Queens. The British people won't have the Crown touched. They won't even have the Royal Palaces touched. When the Bevan government tried to put the Inland Revenue into Hampton Court in 1960 it brought down the government and the Conservatives got in. It was the Queen who gave up Balmoral and Sandringham for economy, and the British people didn't like that much. The British people are completely Royalist at heart, and yet they're Socialist. It's quite illogical, but that's the way they are."

As we remarked at the outset, a review of *In the Wet* may give the impression of an over-crowded novel—but the crowding is with meaning.

COMMENTARY

WASTING A GOOD MAN'S TIME

LAST month (Nov. 20) Robert M. Hutchins, president of the Fund for the Republic, was interviewed in the television program, "Meet the Press." We secured a transcript o£ the interview, hoping to find in it what doubtless Mr. Hutchins and others hoped would be in it—some good statements on what the Fund for the Republic is accomplishing in behalf of civil liberties in the United States.

The interview was the big disappointment of the month. The "four of America's top reporters" spent most of their time trying to extract from Mr. Hutchins an admission that he would "hire a communist." They didn't succeed in getting a flat answer to this question, for the obvious reason that a flat answer would be meaningless, so far as the purposes of the Fund for the Republic are concerned. One of the reasons for the existence for the Fund for the Republic is to point out why flat answers to questions like that are of no value, so Mr. Hutchins spent his time resisting the efforts of the four "top reporters" to get one. It was all a waste of time—a waste of the reporters' time, a waste of Mr. Hutchins' time, and a waste of the time of the audience.

Mr. Hutchins was able to say a few things:

> The Fund for the Republic is committed to the proposition that communism is a menace. The Fund for the Republic is also committed to individual liberty and individual rights. The Fund has condemned boycotting and blacklisting, it has insisted on due process and the equal protection of the laws; it has also condemned guilt by association. The principle is that the individual stands on his own merits. . . . This principle was enunciated very often by the late Senator Robert A. Taft. Therefore, what I was trying to do, in my answer to the question to which you refer, was to dramatize the proposition that the individual must be judged on his individual merits.

But Mr. Hutchins was not permitted by the reporters to explore at any length the deep-lying issues in all problems of civil rights. The reporters were out to "get" Mr. Hutchins—to make him say something that would make the wrong kind of headlines for Mr. Hutchins, and for the American people. They couldn't make him say what they wanted him to say, and they didn't let him say anything else.

This experience of Mr. Hutchins on television reminds us of what Ortega said in his last years: "In times of great passion, the duty of the intellectual is to remain silent, because in times of passion one has to lie, and the intellectual has no right to lie."

Well Mr. Hutchins won't lie, and he won't remain silent. He must expect, we suppose, to be punished by having to waste his time.

CHILDREN
. . . and Ourselves

DANGEROUS DAN HUTCHINS

MANAS has more than once been accused of a tendency to "hero-worship," and, in the field of education, a person we are apt to be accused of hero-worshipping is Robert M. Hutchins. Since our present endeavor—a comment on the attacks against the Ford Foundation's "Fund for the Republic" which Hutchins directs—will probably constitute another enlogy on the former President of the University of Chicago, a word on "hero-worship" may be in order.

A hero, we take it, comes to be considered such for one or both of two reasons. The man who sees something most other men don't see, and who bases creative action upon it, demonstrates his worth to the society of men by helping them to glimpse a new light. Leaders in thought belong to this order, whether educators, philosophers, scientists, or mystics and religionists. A man with important ideas deserves being called a hero, because the human race owes everything to ideas, and the human race sometimes deserves having heroes to inspire it because it sometimes recognizes them, at least when the quality of their thought has been isolated in the perspective of history. The hero is better than most people, though, precisely because he knows what he is doing without waiting for "history" to tell him he is right. He is, of necessity, a one-man minority. He would like history to catch up with him, and pulls it along as far and as fast as he can, but if the rope slips he keeps on climbing anyway. So the hero needs to be original, he needs to have principles he believes in. Since Mr. Hutchins seems to us to qualify on all these counts, he becomes an excellent candidate for admiration.

Hutchins is certainly controversial enough to catch the interest of youth. His years at Chicago, first as President and then as Chancellor, were enlivened by the efforts of irate reactionaries to get rid of him. In those days he went around saying that a good college administrator should be a troublemaker, forcing both students and faculty members to face ethical issues squarely, even when they preferred a life of conventional time-serving. Hutchins stated his position in regard to Communism flatly: Communism, he said, should be taught about in all our universities by those qualified to teach it, not so that youths would *become* Communists, but so that they would learn enough not to.

Hutchins has made it a matter of life-long principle to see that he is thoroughly disliked by all the wrong people. Today, as President of the Fund for the Republic, he has precipitated a storm of debate. He insists that America live up to its reputation as a land of free thought, and backs his insistence by liberal distribution of funds for the defense of minority opinions and the rights of minority groups. Since Communism, at the present time, fits both categories, Hutchins has been forced to repeatedly declare that even a communist is entitled to his opinions, and that Communists should be fired only when they fail to do their jobs properly. Despite this, and because the former Chicago Chancellor is one of the most effective educational philosophers around today—something rather different from belonging to a school of educational thought—the "Fund" has a good chance of winning popular understanding and approval, given time. However, the American Legion, according to *Time* for Nov. 28—and this should surprise no onc is on the other side of the fence, National Commander Wagner recently declaring that "The Fund for the Republic is giving comfort to the enemies of America. . . . We are convinced that the Fund is doing evil work" *Time* itself, in as neat a job of fence-straddling as this expert in the field has ever managed, covers its bets nicely, concluding with these sentences: "Most recent attacks on the Fund for the Republic are nonsense. The others, which may keep the Fund in the headlines, have to do with the personality of Robert Hutchins, scholar and debater and, by his own choice, a displaced person." *Time* makes it clear that mature,

balanced men naturally classify Hutchins as an oddball. He isn't *wrong,* exactly—at least, *Time* isn't going to say he's wrong, since the oddball just might win out—but he is a "character." It is his "personal tendency" which results in all the furor, not matters of principle. So *Time* wouldn't like youths to consider Hutchins a hero, or anything even vaguely like it—too risky.

Some of the smaller daily papers are giving the Fund and its President a fair break—at least those which happen to have liberal editors. For example, the Los Angeles Mirror *News* for Oct. 25 plays up the fact that some people are literally offended by even the *idea of* "civil rights" for unpopular minorities, and that this reaction is what Hutchins is really up against. Allowing Hutchins a fair chance to speak for himself, the editors queried him about accusations that Fund research into government security methods threatens "national security." Hutchins explained:

> Nobody in the Fund is anxious to make the United States insecure. The question is—is it possible to protect the security of the United States without sacrificing the traditional liberties of the American people?
>
> If the Fund finds it is possible, we'll say so. If not, we'll publish that.
>
> If it turned out that we had a system here which seriously endangered the rights of the individual as we have understood them, without accomplishing the avowed purpose of the system, this is something we ought to be glad to know.
>
> I can't think of anything that you can do in the field of civil liberties that will not offend certain people.
>
> It is obvious that if powerful people were not involved in injustice, that if they didn't have a vested interest in it, it wouldn't exist.
>
> We will publish the facts with a view to getting them discussed. The people in this country are not going to give up the Bill of Rights if they know they're doing it.

These issues are alive enough, we repeat, to attract the interest of young people, and parents and teachers should give both the issues and the youths a chance by affording opportunity for discussion. Nor are the benefits of such discussion limited to the possible acquisition of a hero. The argument Hutchins is making was made a long time ago, by the men who framed the Declaration of Independence and the Bill of Rights. A good way, the best way, to study U.S. history is to become vitally concerned with a present issue of political policy, and to then discover the intent of the framers of our Constitution in this regard, also the history of shifting opinions since.

An excellent contribution on the philosophy of civil rights is supplied in a recent article by Judge Florence Allen of the U.S. Court of Appeals, appearing in the *American Bar Association Journal* for October. Under the title "Fair Trial and Free Press," Judge Allen writes:

> The men who wrote the First Amendment to our Constitution had abandoned the doctrine of eighteenth century England declared by Dr. Samuel Johnson: "Every society has a right to preserve public peace and order and therefore has a good right to prohibit the promulgation of opinions which have a dangerous tendency." They had witnessed cruel prosecutions of English citizens for publishing criticisms of government. They had decided with Milton that they desired "the liberty to know, to utter and to argue freely, according to conscience' above all liberties." They had seen with their own eyes the long prosecution of John Wilkes for criticizing the King, which would in our times be considered ordinary political comment. They intended to establish actual and enforcible freedom of speech and of the press and therefore, at the overwhelming demand of public opinion, they inserted in the Constitution the First Amendment guaranteeing these rights to every citizen.
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> The founding fathers were also aware of the gross violation of human rights which not too long ago had existed in Great Britain with reference to trials, particularly of men charged with treason. Sir Walter Raleigh was convicted upon evidence generally conceded to have been insufficient, and sentenced to death in 1603 for treason. He was only charged with misprision of treason, that is to say, for concealment or some passive act in connection with the treason of others. His sentence was reprieved and he was confined in the Tower for thirteen years. In

1616 he was released and, incurring the displeasure of the government, at the demand of the ambassador of a foreign power, he was beheaded in 1618 under the suspended sentence of 1603. Raleigh and countless others condemned in unfair criminal trial, the founding fathers determined to preserve, not only freedom of speech and of the press, but the right of jury trial, the right to counsel, the right to be convicted only under due process of law.

After all, our liberty is based not only on freedom of the press, vital as that is. It also is based upon freedom of the individual. Freedom from conviction on hearsay testimony.

FRONTIERS

Notes on the Healing Arts

AMERICAN readers only slightly familiar with the attitude of orthodox medical practitioners toward chiropractic are likely to be amazed by the latest development in medicine in West Germany. Chiropractic, it seems, is rapidly and openly being embraced by German doctors!

The causes of this astonishing development are several, according to C. W. Weiant, Dean of the New York Chiropractic Institute, who tells the story of the new German interest in the September *Journal* of the National Chiropractic Association. First of all, as a condition rather than an explanation of the interest, Germany has no "AMA," and nothing corresponding to it. Dr. Weiant writes:

> Each [German] doctor is free to express his own opinions without fear of reprisals. True, there is an old-guard conservative faction, and this group has, in a few instances, succeeded in depriving overenthusiastic champions of chiropractic of their university connections, but by and large it is the newer liberal groups who dominate the field.

A second condition which may contribute to the interest in chiropractic is found in the fact that there are too many doctors in West Germany—some 60,000 too many, according to an estimate and the competition for professional survival is severe. Since a "new" method of healing is usually a good means to acquire patients, chiropractic may be gaining popularity for this reason as well. Further, since in the past chiropractic has been little known in Germany, and has never been an economic threat to orthodox medicine, there is no history of rivalry to cast a shadow on the new trend, and, as Weiant notes, "no need to resort to the face-saving device of concealing chiropractic under the name of physical medicine."

Dr. Weiant does not cite statistics, but his article makes plain that the medical attention to chiropractic is no momentary fad, but a genuine broadening of attitude among German physicians. It began in 1950 with the lectures of a professor of surgery at the University of Hamburg, who had learned the techniques from an American graduate of the Palmer School of Chiropractic. The surgeon wrote articles approving and describing chiropractic methods for the German medical journal, *Hipokrates,* urging his colleagues to use them. Weiant comments:

> It is a little difficult to realize at once the sensational character of these two articles and their impact on German medicine. Actually, nothing remotely comparable has ever occurred in the United States. It is as though the chief of surgery at the Mayo Clinic, or an outstanding professor of surgery at one of our leading medical schools, were to write a lead article for the *Journal* of the AMA extolling chiropractic and calling upon all physicians to apply it in their respective practices.

Since this initial impulse, the interest has widened. Texts in German on chiropractic are appearing and other professional periodicals are devoting space to the subject. One recent article was headed: "On the Necessity and Form of the incorporation of Chiropractic in Medicine."

The chief problem at the present time, Dr. Weiant points out, is provision of adequate education in chiropractic for Germans who want to use it. The difficulty in learning chiropractic has led to some quackery and pretense, with occasional results which are undesirable. Weiant proposes the establishment of "a creditable school of Chiropractic on German soil," to train German citizens to become bona fide chiropractors. Nor is Germany the only field of this interest:

> Already the German chiropractic epidemic is spreading to France, where, it is said, no fewer than 10,000 persons—masseurs, physiotherapists, kinesiotherapists, physicians, and pure laymen—are holding forth as practitioners of chiropractic.

We keep on discovering medical "secrets." The latest one brought to light is the weird psychic effects of cortisone and ACTH—hormonic substances made from animal ductless glands, the adrenals and the pituitary—reported at considerable length in the *New Yorker* for Sept. 10

by Berton Roueché. The list of serious diseases which the new drugs palliate (they do not cure, but greatly reduce pain and other symptoms) occupies fifteen lines of *New Yorker* ten-point and ranges from rheumatoid arthritis to gout, hay fever, ivy poisoning and baldness! These substances are plainly "miraculous" in their effect. Almost paralyzed arthritics are sometimes able to walk without pain after less than a week of treatment.

The *New Yorker* article, however, does not celebrate the extraordinary alleviative qualities of cortisone and ACTH, but is devoted to certain other results which have made eminent specialists exclaim, "We are dabbling in the unknown with dangerously potent tools." Roueché writes:

> It [cortisone] can also unhinge the mind. Mental derangements unequivocally attributable to cortisone have been reported by hundreds of clinicians. In many cases, these disturbances simulate with absolute fidelity the syndromes classically characteristic of paranoia, schizophrenia, and manic-depressive psychosis.

This is prefatory in the *New Yorker* to the story of a New York schoolteacher's life with cortisone; he was treated with it for periarteritis nodosa. He got well, or seemed to, but in time he also went crazy, or seemed to. What his doctor finally discovered was that the teacher was suffering from "a cortisone-induced manic-depressive psychosis." Eventually, treatment was switched from cortisone to ACTH, and the teacher, who now takes forty units of the latter drug every four days, has been "comfortably free" of the symptoms of either periarteritis nodosa or manic depressive psychosis, since April, 1954. You have to read the story to get the full impact of what happened to him, and what cortisone and ACTH can do, for and against you. In any event, readers are bound to wonder about the mysteries of the body, the ductless glands, and the relation of these to the mind.

The latest report of the Menninger Foundation (for 1954-55) has some disturbing facts about the mental health of the nation. Dr. William C. Menninger, General Secretary of the Foundation, writes:

> At the latest count there are 750,000 persons in our mental hospitals—as many as in all other kinds of hospitals combined. Outside of hospitals more than ten times that number are suffering from severe mental or emotional disturbance: the alcoholic and the addicted, the delinquent and the criminal, the suicidal, the incompetent, the chronically unhappy—the one of every sixteen Americans whose personality problems keep them from enjoying useful, effective, satisfying lives.
>
> As a matter of fact, even this figure is too low. We have known for years that about 50 per cent of the patients of general practitioners are actually suffering primarily from emotional disorders. The Menninger Foundation's survey of mental health in industry is pointing up the extent of the "minor" emotional disturbances which result in absenteeism, accident proneness, chronic dissatisfaction, inability to take or give orders, and many other more intangible costs to industry. All of us are at times and in some degree affected by mental ill health. We may be persistent worriers or have difficulty in controlling our tempers; we may be sleepless in our beds or lonely in a crowd; we may have ulcers or high blood pressure; perhaps we just can't get along as well as we should with our wives, our husbands, our children, our friends or business associates.
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> Polio may have struck one out of 300, cancer may strike one out of five; mental ill health affects one out of one.
>
> Any move to strengthen the forces directed against mental illness is, therefore, not only welcome, but necessary. As of last year, these forces were still woefully weak. Of 175,000 physicians in the United States, only 8,000 were practicing psychiatry, the specialty in medicine which accounts for half of their patients. Although mental illness costs the U.S. over $2 billion a year, only $10 million—one-half of one per cent of this cost—was invested in research to cure and prevent it.
>
> This is not to say that the picture is entirely black. There is a growing realization that most mental illness can be cured. Several of our better-staffed state hospitals have demonstrated that four of every five mental patients can be discharged within a year of admission. The public is now beginning to ask why, in most mental hospitals, the figures are reversed, why 60 per cent of the 250,000 new patients

admitted each year never leave these hospitals alive. They are beginning to ask why all state hospitals cannot be centers of treatment and hope, instead of asylums, however humane, for custody and despair.

For those who suppose that the days of medieval disregard of human misfortune and suffering have long been past, Dr. Karl Menninger, Chief of Staff at the Foundation, included the following note on current practice in an American mental institution, in his "Reading Notes" (a mimeographed bulletin in which Dr. Karl shares with friends, colleagues, and students the fruits of his wide and diversified reading):

> . . . hear how the top management of the Laurelton (Pennsylvania) Village teaches mentally defective patients: According to the press, ungrateful and unappreciative mental defectives who violate rules are locked in cells 4 feet by 8 feet for periods up to six months, forbidden to speak to anyone, supplied only with cold water to wash, and given food through a slot in the cell door.
>
> There was a good deal of bitter talk during the war about how the German citizens didn't need to play dumb regarding the atrocities of such places as Buchenwald; they knew damn well what was going on all the time! Very well, then, citizens of Pennsylvania, how now? How now?

Then there is this note, gleaned by Dr. Karl from *The Women of Magliano* by Mario Tobino (Putnam, 1954):

> It will astonish American readers to learn that in Italy it is considered comforting and warming to throw a pile of seaweed into the cells of naked patients for them to play with, tangle up in and even use for partially draping their naked bodies.

We had another subject planned for discussion here, but have neither the space nor the confidence to carry out the idea. The subject is cancer. We have a stack of material—magazine articles, pamphlets, a couple of books—but the more we read, the more the subject turns into a bog of confusion. There is so much righteousness, indignation, and assertion connected with most writing about cancer that the reader tends to lose confidence in both orthodox and unorthodox "authorities." It seems clear, however, that medical politics plays far too great a part in the confusion, and that there is vast room for intelligent variety in cancer research.

Two items in all this literature seem well worth brief notation. The first is a statement by Sir Ronald Ross, famous research worker on malaria. He said:

> I believe that institutional research has never yet solved one of the great problems of nature, including those of medicine. I will venture to predict that it will never solve any of the problems connected with cancer. The discoverer, like the poet, is an individualist. He must not be controlled by any committee and he must choose his own time and place.

The other item is a statement of conclusion by Dr. Max Gerson, translated from an article, "Cancer, a Problem of Metabolism," which appeared in a German medical periodical in 1954. He says:

> Human beings have brought upon themselves the disease of cancer by their ungoverned self-indulgence, their urge for luxurious living, and increasing evils of our civilization. These human weaknesses, constantly stimulated by deep-seated instincts, can never be eradicated. Thus cancer will be a continuous and ever increasing threat to humanity.
>
> Only a few will submit for a sufficiently long time to moderation and restrictions, and the more natural nutritive regime of the diet therapy. Few people will turn to it as a prophylactic measure. When they are ill and have no other choice, they will submit to a more natural system of living.
>
> This is the conclusion I have drawn from my long years of practice. Discouraging though it may be, it must not prevent doctors from continuing their efforts in the direction of research and therapy.

One final fact: Dr. Weston Price reports in *Nutrition and Physical Degeneration* that he found no trace of cancer or other degenerative diseases among peoples who live on a simple diet, such as certain natives of South America and India.