

A PLEASANT FANCY

A BOOK REVIEW

DR. ARTHUR B. GREEN, Massachusetts

Mirage of Health—Utopias, Progress & Biological Change, René Jules Dubos, New York, Harper & Brothers, \$4.00.

One of the most significant books of recent years, though bright and warm with style and charm—or perhaps because of these—it is scientific. The sweep over thought and learning, and the ventures into letters and the arts, set Dr. Dubos high above the scientific laboratory which is his profession. He looks at human history and the humanities as laboratory men seldom seem to do in order to put his special field in perspective, and for that purpose he seems to fix no bounds on curiosity. Eager to sound any waters for his chart of the human coastline, he does make an omission that is shocking if not a bit scandalous.

Mirage of Health is one of a series planned and edited by Ruth Nanda Anshen, entitled "World Perspectives", that is "born out of this consciousness of man's spiritual poverty and conceptual failure", and "attempts to evoke not a rebirth of good will but vigorous ideas capable of overcoming misconceptions and confusing traditions and of restoring man's faith in his spiritual and moral worth and in his place in the cosmic scheme". The Board of Editors of "World Perspectives" includes Niels Bohr, Richard Courant, Hu Shih, Ernest Jackh, Robert M. MacIver, Jacques Maritain, J. Robert Oppenheimer, I. I. Rabi, Sarvepalli Radhakrishnan, Alexander Sachs.

To begin with, *Mirage of Health* gives the view of physician-philosopher Virey in 1820 that naturally man has an instinct of health which enables man to adapt himself to the world he lives in, but that unnaturally this has been lost in the process of civilization so that science must now rediscover what was once instinctive by putting it in the form of exact knowledge. It might be expected that an apostle of exact knowledge such as Dr. Dubos would take up with that view happily, but this is one of the things he says about it: "As we shall see, however, and general opinion

notwithstanding, it is not exact laboratory science that has provided modern man with the best substitute for the instinct of health postulated by Virey. The most effective techniques to avoid disease came out of the attempts to correct by social measures the injustices and the ugliness brought about by industrialization. The contrast between the conditions of civilized man and the idyllic natural state described by the discoverers of the South Pacific became particularly shocking with the advent of the Industrial Era. The huge populations suddenly crowded into the factories and tenements of the mushrooming cities lived in squalor and were exposed to great physical and emotional hardships. Their privations and physiological misery created everywhere social and health problems so acute that they became an obsession for the European conscience. As a result, reform movements started all over the Western world almost spontaneously and simultaneously, and their momentum increased during the second half of the nineteenth century."

As early in the book as this, Dr. Dubos spots himself as a scientific liberal. But not altogether uprooted yet from tradition, for he remarks: "There is no reason to doubt, of course, the ability of the scientific method to solve each of the specific problems of disease by discovering causes and remedial procedures". Actually there is every reason to doubt. For actually the cause lies within the sick person and does not reach him from outside or far off, and the sick person will be made sick, as Kent so well explains, by every circumstance, and the nature of the sickness will pertain to the nature of the person. To imagine a separate cause for every "specific problem of disease" is simply to imagine. To address the research to any one-specific problem of disease takes no account of that inescapable fact and the result in the end is futility. Indeed, there is much evidence liberally cited by Dr. Dubos in the book on this very point and were it not for his shocking omission he would have no trouble recognizing it and making it one of the telling merits of his work.

Dr. Dubos writes a long chapter on "Biological and Social Adaptation". He traces the struggle of living creatures to adapt themselves to the world around them, even down to the microscopic in size. He speaks of the unexpected consequences of

transplanting forms of life from their native habitat to new fields and the unbalancing of nature's wise provisions by the process. Coming back to man, he credits man with being perhaps the most highly adaptable, but nevertheless: "Because it affects the daily life of every person in a fairly direct and obvious manner, nutrition constitutes a convenient subject to illustrate the vagaries which render so unpredictable the future trends of social evolution. But any other aspect of life would provide as telling examples. Thus, excessive concern for security and for comfort may indirectly cause hereditary changes that decrease man's ability to meet biological threats. The wild Norway rat is fierce, almost untamable, but has an extraordinary ability to resist all sorts of stresses. In contrast, its laboratory-bred counterpart is docile and easily handled but reacts poorly to stress and fatigue, probably as a result of atrophic changes in its adrenal glands. Well-domesticated man, although highly desirable as a good citizen, may prove to be a poor biological specimen when placed outside the sheltered social environment to which he has learned to conform."

In the living world a struggle goes on for survival and the attempt is made to ease that struggle by association or partnership, where there is enough intelligence and self-discipline. The Victorian dictum of survival of the fittest, put forth by Spencer and his contemporaries, satisfactorily paid compliments to those who had survived, and put aggressiveness to the fore as a reigning quality. This ground the book covers a bit more briefly. And it goes on to consider man and the world of microbes. Microbes are at the center, perhaps, of Dr. Dubos' professional field, but again he takes the liberal unrestricted view. He notes the coincidence that Pasteur's first paper on the germ theory of disease in 1857 appeared just one month before Charles Darwin formally submitted his theory of evolution. But as a theory of disease, Dr. Dubos points out some of its shortcomings: "It is rarely recognized, but nevertheless true, that animals or plants, as well as men, can live peacefully with their most notorious microbial enemies. *Phytophthora infestans*, the very fungus that caused the disastrous potato blight in the 1840's, is still prevalent over the potato fields in Ireland and in the rest of the world. But man has learned to use farming methods that permit the potato to thrive

even though the fungus be present. Every year millions of white mice are raised in sanitary environments to meet the needs of laboratory science. Yet all these sleek-looking animals carry in their organs hosts of bacteria and viruses which are potentially capable of killing them but cause disturbances only when other things go wrong in the breeding colony." He goes on:

"Similarly, almost all human beings, Americans included, become infected with a host of microbial parasites of one sort or another. Bacteria such as tubercle bacilli, streptococci, or staphylococci, many types of viruses potentially capable of producing influenza, intestinal disorders, or various forms of paralysis, all kinds of protozoa and worms, are commonly present in the tissues of individuals who consider themselves hale and hearty. . . . In brief, the presence of pathogens in the body can bring about disease, but usually does not. The world is obsessed—naturally so—by the fact that poliomyelitis can kill and maim several thousand unfortunate victims every year. But more extraordinary, even though less dramatic, is the fact that millions upon millions of young people become infected with polio viruses all over the world, yet suffer no harm from the infection." He sums up: "The dramatic episodes of conflict between men and microbes are what strikes the mind. What is less readily apprehended is the more common fact that infection can occur without producing disease."

Broad scanning of the compelling subject of epidemics seems to Dr. Dubos to show that the living can adapt themselves to dangers and ward off threats of disaster by experience, but as he puts it, "Striking as it is, the epidemiological evidence that evolutionary adaptive processes play a decisive role in resistance to disease fails to carry conviction—especially for those reluctant even to consider the possibility that natural forces are more effective than medical procedures in the long run". So Dr. Dubos pays courteous respects to the medically closed mind.

He pays his respects to Pasteur himself by citing the studies on diseases of silkworms where the report concludes that microorganisms in the intestines of the worms were "more an effect than a cause of the disease", and the chapter ends with an epigram of George Bernard Shaw in the preface to *The Doctor's Dilemma* :

"The characteristic microbe of a disease might be a symptom instead of a cause."

Environment as a source of disease fills a major chapter in the book, as it is from environment that micro-invaders are assumed to come. This idea typifies the tendency in recent times to look for a precise external cause. But Dr. Dubos marks it as odd that lately the more vague and abstract idea of harmony is beginning to supplant the idea of precise cause as a way of distinguishing between a state of illness and a state of health. This is a change that he thinks seems to be swinging medical thought back once more to Hippocrates.

In the center of the book comes the heaviest chapter, where Dr. Dubos considers the gods of healing, and here he diverges most strenuously from the line of accepted doctrine. After tracing through history the assumptions made about the origins and nature of sickness, he presents the philosopher's search for health and this brings him to something of a slap at modern custom. He remarks that according to Hippocrates there would be a good chance of escaping sickness if men lived reasonably. On that theory, certain social philosophers came to think that in a well-governed society physicians would be little needed, and Plato so long ago thought the need for many hospitals and doctors was a mark of a bad city.

(To be continued)

—*The Layman Speaks, Sept., '59*

KOCH'S INFECTION

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not claimed that Homœopathy will cure all cases but the Homœopathic profession well acknowledges the role of Surgery and other methods absolute necessary.

(Concluded)

—*Souvenir, W. B. State Homœo. Practitioners' Conference, '64*

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When large populations concentrated in cities and worked in factories, the individual point of view gave way to the collective, for the conditions gave rise to collective illnesses. This was felt first in England where the Industrial Revolution first took hold. Collective illnesses caused doctors to think of collective causes, and this gave rise to great faith in the germ theory. But it was not the germ theory that Max von Pettenkofer used when he persuaded the city fathers of Munich to bring in abundant clean water and to dilute the city sewage downstream in the Isar. Still, this measure cleaned up the city, reduced the typhoid rate by more than a factor of five and made Munich one of the healthiest of cities. Barcelona and Alicante had no more yellow fever after the anti-filth campaigns of 1804 and 1827. And a strong paragraph in the book is this one:

"Much statistical information is available to document the distant origins of the progress in the control of infection, but two examples will need suffice. The mortality caused by tuberculosis in Europe and North America has been falling continuously and almost at a steady rate since the middle of nineteenth century. From a high point of approximately 500 per 100,000 population in 1845 the mortality had come down to less than 200 at the turn of the century and to 50 in 1945, a tenfold decrease. Yet no drug therapy was available during this period, vaccination was not practiced, and the few therapeutic procedures that were available had but limited value and reached only a very small percentage of the tuberculosis population. The decrease in the severity of measles presents an equally startling picture. No technique of vaccination, no drug, no therapeutic procedure is as yet known to deal with this disease. Nevertheless, the accumulated knowledge of old experienced physicians con-

and be troublesome, something had to be favorable to them in the host; and he said that he thought the future of medicine lay in finding out what that something is. This was so divorced from customary laboratory thinking and came so straight from a laboratory man that it ought to have got more applause than it did, especially from homœopaths toward whose thinking Dr. Dubos was so far leaning. He was actually on the brink of the vital force itself and was in good position to learn how to deal with it. Not a single homœopathic physician sensed the opportunity or offered a helping hand to Dr. Dubos. (*Concluded*)

—*The Layman Speaks, Sept., '59*
