

# BOOK REVIEWS

## **The Living State With Observations on Cancer**

A. Szent-Gyorgyi

Academic Press, 1972, N.Y., 114 pp.

I first read this book just before it was released by Academic Press and was enormously impressed by the brilliant intuitive logic displayed by Dr. Szent-Gyorgyi, by his remarkable grasp of the ways of biochemical research, and by his extraordinary discoveries. If ever a man was justly awarded the Nobel prize — this is the one. When I heard Dr. Szent-Gyorgyi speak at the second annual meeting of the Academy of Orthomolecular Psychiatry (San Francisco, 1973), I was inspired by his intense dedication to truth in research, no matter who and what the opposition. I hope that members of the Academy were equally inspired.

This little scientific gem is best described by Dr. Szent-Gyorgyi himself. He wrote, "My own scientific career was a descent from higher to lower dimension, led by the desire to understand life. I went from animals to cells, from cells to bacteria, from bacteria to molecules, from molecules to electrons. The story had its irony, for molecules and electrons have no life at all. On my way life ran out between my fingers. The present book is the result of my effort to find my way

back again, climbing up the same ladder I so laboriously descended. Having started in medicine, it is befitting that I should end with a medical problem, cancer, which took away most of what was dear to me."

Dr. Szent-Gyorgyi suggests that life may be described (1) as a decrease in activation energy by enzymes, (2) the conservation of energy and its investment in new reactions, and (3) photosynthesis. These reactions take place in a watery medium. Water by its extraordinary physicochemical properties is the hub of life. Of these properties, water bonding and the effect on chemical reactions is one of the most interesting. These are described in this book.

Then there is a lucid and beautiful description of muscle in motion, how myosin and actin combine to form a complex part of even a more complex system, and how this system using energy from ATP and by reacting with water causes contraction of muscle.

Life exists because plants and animals can defend themselves against invasion. There are two main vegetable defense systems, (a) the polyphenoloxidase, (b) the peroxidase system. His research into the peroxidase system and its inhibitors led to his isolation of ascorbic acid from Hungarian peppers. With a delightful sense of humor he proposed it be called "ignose" (for no one knows what it is), and later Godnose (for only God knows), but

the editor of the journal would not accept these, and suggested "hexuronic acid," which turned out to be wrong.

A chance breakfast with a stranger who remained free of colds as long as he ate wheat germ for breakfast led to his discovery that it contained methoxyhydroquinone (MH). MH systems require manganese. As a result, Dr. A. Szent-Gyorgyi breakfasts on wheat germ (which provides MH and manganese), on a banana, and on 1 gram of ascorbic acid. He has remained free of colds since.

My conclusion is that everyone should use fresh wheat germ each morning with ascorbic acid, but that we should also obtain ample quantities of vitamin A because of its beneficial effects on surfaces. These three ingredients should provide powerful protection against colds.

Dr. Szent-Gyorgyi fully endorses Dr. L. Pauling's conclusion on the cold, and is critical of the minimal daily requirement concept. He properly attacks the view, "If we lack ascorbic acid we develop scurvy. If we do not have scurvy, we have enough ascorbic acid." Scurvy is not the first evidence of ascorbic acid deficiency but is its premorbid symptomatology.

His investigation of animal defense systems led to his isolation of retine, which has anti-growth properties. Certain liver extracts have marked anti-growth properties. Retine may represent a class of chemicals known as ketone aldehydes which keep cells at rest so they can pursue their differentiated functions. It occurred to me as I read this section that perhaps this is one of the functions of the aminochromes derived from dopamine, noradrenalin, and adrenalin. Adrenochrome is a very potent mitotic poison. Perhaps increased quantities of these aminochromes, which I have suggested are present in schizophrenics, accounts for the decreased incidence of cancer in schizophrenic patients.

A rational society would have Dr. A. Szent-Gyorgyi as research director of a very large institute, charged with the conduct of innovative cancer research.

A measure of our rationality is the difficulty he has in getting enough research funds to keep his modest laboratory going.

I recommend his book to everyone, especially those who now and then feel discouraged by the

enormity of the problems they face and by the irrationality of the opposition. It is a fine gift for one's colleagues and friends.

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**THE PSYCHIATRIC  
PROGRAMMING OF PEOPLE**

**H. L Newbold**

**Pergamon Press Inc.**

**Maxwell House, Fairview Park**

**Elmsford, New York 10523**

**1972, 110 pp.**

A model is a device for examining and clarifying phenomena. Thus, a model of an airplane in a wind tunnel helps the engineer design a real plane which flies better. No one should confuse the model for the real object. Models can also be used to educate people about complex phenomena by highlighting and simplifying basic aspects of the phenomena. Again no one should believe that, having mastered the model, he has mastered the real process but he will be much closer to this objective. This is what Dr. H. Newbold, one of the pioneer Orthomolecular psychiatrists, has done in this excellent little book.

The real process is the treatment of mental illness. The model is the computer. A computer consists of hardware (the device itself, wires, transistors, wheels, etc.) and software (the detailed instructions or program which are fed into the hardware).

In an engaging and lucid style, the author compares the nervous system (brain, senses, etc.) with the computer. Both have hardware, both receive information, the brain through the senses, the computer by way of cards, tapes, or voice command. Both must be programmed, the computer by entering the appropriate software (the instructions, or commands) which the hardware must obey, the person by his life experiences, which include education, rewards, punishments, previous treatment, and so on, which he will most often but not always obey.

If there is a failure in the hardware, it will be unable to respond appropriately to the software (to the information received by the computer.) This will lead to one sort of mental illness, of which schizophrenia is a very good example. On the other hand, the software may be at fault, i.e., a technician has inserted the wrong program (instructions) or the life experiences have been faulty. The wrong rewards and punishments may have led to the software breakdown. Again the performance of the computer will be wrong, and another kind of mental illness is produced, perhaps hysteria or some personality deformation. It is possible there is a defect in both hardware and software which leads to a very complicated form of mental illness. It is very likely that in most cases there is a major breakdown in either hardware or software with a minor reactive dysfunction in the other.

Treatment, therefore, depends upon the site of the breakdown, i.e., upon the diagnosis. If the hardware is malfunctioning, no amount of software tinkering (reprogramming) will repair the computer (machine, person). Even if tinkering is partially successful, one is still left with a faulty hardware which has been somewhat reprogrammed. Schizophrenia is a very good example. No amount of software tinkering will repair the computer because the hardware is poisoned and cannot function properly. The schizophrenic patient simply cannot respond except to the simplest sort of reprogramming. The appropriate treatment is to restore the integrity of

the brain, which means to correct its biochemistry.

Similarly, if the software is faulty, no amount of tinkering with the hardware will be of any help. To attempt to correct the biochemistry of the brain when it is already functioning normally is foolish and futile. What is needed is a thorough reprogramming, a thorough revision of the software, i.e., the application of behavioral therapy. This includes specifically aimed therapy as well as totally diffuse psychoanalysis. If both hardware and software are faulty, then it is obvious both aspects of computer dysfunction must be corrected.

This is the subject matter of this book. Dr. Newbold develops his theme in a very simple and direct manner, moving from very simple concepts to ones more complicated. He builds the model slowly, carefully, and skillfully, and like any skillful therapist he reprogrammes the reader as he reads this book.

Any therapist who reads and understands this book will be a better therapist, more skillful, more patient. Any patient who reads and follows this book will be a better patient. Any relative who studies this book will become a better ally to both the therapist and the patient. By bettering the patient, therapist, and relatives, the recovery rate will be much higher and the time required to achieve this much shorter.

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**THE MIND GAME:  
WITCHDOCTORS AND PSYCHIATRISTS**

**E. Fuller Torrey, M.D.,**

**a Bantam Book, September, 1973. \$1.50.**

"E. Fuller Torrey, M.D., is a psychiatrist who has slowly come to realize that he is a witchdoctor." He is also an anthropologist

and is thus qualified to explain the similarities, in a variety of cultures, between the psychiatrist and the witchdoctor. The book claims that these similarities are important and that each could learn from the other.

It dismisses the claim that witchdoctors are engaged in "mere magic and superstition" (p. 9.) "The techniques used by Western psychiatrists are with few exceptions on exactly the same scientific plane as the techniques used by witchdoctors. If one is magic then so is the other. If one is prescientific, then so is the other. The only exceptions to this are some of the physical therapies, in particular some drugs and shock therapy, which have been shown in controlled studies to be effective in producing psychiatric change. None of the psychosocial therapies has been so shown. In fact efforts to show this — so called 'outcome studies' — have been notoriously negative for reasons we will come to later."

The author believes that psychotherapy is essentially an exercise in communication. The communication has to be adapted to suit the various cultures. The "magic word" telling the patient what is wrong provides reassurance. The magic words ("The Principle of Rumpelstiltskin") are important components of both disciplines.

A further discussion of the essentials of psychotherapy is provided and the similarities in techniques, in basic principles, selection, and authorization of therapists are discussed. There are certainly many similarities and even the criticisms levelled at both groups are similar (p. 68):

"One of the most common criticisms of witchdoctors is that they use harmful, even fatal, drugs. As is true for many of the stereotypes we are dealing with, it is probable that we overestimate the harmful techniques of other therapists and underestimate the harmful aspects of our own techniques. Put another way, we overvalue our own techniques and undervalue the other techniques."

The chapter on the efficacy of witchdoctors, psychiatrists, and untrained therapists includes some interesting discussion. The author claims that the witchdoctors are generally effective and dismisses the studies of Eysenck and others which show the ineffectiveness of psychotherapy on the grounds that "they conceive of psychotherapy too narrowly." He further argues, "Indeed if psychotherapy did not 'work' it would have long since died off with the dinosaur and the dodo bird."

The author claims that many untrained therapists are very effective. He cites a study (p. 132) in which "the students got better results than the professionals. Two patients were also used as therapists in this study, and got results comparable to the professionals but not as good as the college students."

But implications of comparing witchdoctors and psychiatrists are, according to the author, important. Witchdoctors and psychiatrists are but cultural variations of a special service or profession, and it is therefore important to utilize professionals who share a common culture with their patients. The importance of culture in using untrained or nonprofessional therapists is also stressed.

Although the author writes, "Finally and most importantly, the book is an appeal for open minds and hard data," many readers may consider this book as an adventure in never-never land. First, if psychotherapy cannot be shown to be relatively effective, it does not matter whether the therapists are witchdoctors, psychiatrists, or plumbers. The case that Dr. Torrey makes about the efficacy of psychotherapists is weak, and he disregards the lack of evidence which does not give us "hard facts" about the therapist's effectiveness.

Secondly, there is no evidence to show that anyone with common sense and some practice could not do as well as most psychotherapists, be they highly qualified psychiatrists or experienced witchdoctors.

The book also reveals the general rejection of the medical model in psychiatry. The "magic" words should be a medical diagnosis, based on scientific evidence, and the treatment should be based on therapies which have proven to be successful, both empirically and in carefully designed studies.

However, many will find this book interesting and valuable because it is well-written, is thought provoking in several areas, and gives us some interesting views on psychiatric treatment in a variety of cultures.

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