

the thymus in myasthenia is itself the victim of an autoimmune process — “thymitis” — which releases a humoral substance causing neuromuscular block. This substance is considered to be a normal constituent of thymus rather than an antibody. (In this context muscle antibodies are epiphenomena resulting from the coincidental presence of primitive muscle-like cells in the thymus, so that some antibodies against thymus also react with muscle.) Goldstein and his colleagues have provided interesting experimental evidence which indirectly supports the idea that damage to the thymus by autoimmune mechanisms may lead to altered neuromuscular transmission.⁶ There are, however, two objections which have not been fully answered. One is the incomplete success of thymectomy in curing myasthenia. The other is the occurrence, in 15 reported cases, of myasthenia months or years after apparently total removal of a benign thymoma.⁷ Clearly the thymus has not yet unlocked all its secrets.

ROBERT B. LAYZER, M.D.

*Department of Neurology
University of California
San Francisco*

REFERENCES

1. Katz B: Nerve, Muscle and Synapse. New York City, McGraw-Hill Book Company, 1966
2. Elmqvist D, Hofmann WW, Kugelberg J, et al: An electrophysiological investigation of neuromuscular transmission in myasthenia gravis. *J Physiol* 174:417, 1964
3. Elmqvist D, Lambert EH: Detailed analysis of neuromuscular transmission in a patient with the myasthenic syndrome sometimes associated with bronchogenic carcinoma. *Mayo Clin Proc* 43:689, 1968
4. Desmedt JE: Presynaptic mechanisms in myasthenia gravis. *Ann NY Acad Sci* 135:209, 1966
5. Strauss AJL, Smith CW, Cage GW, et al: Further studies on the specificity of presumed immune associations of myasthenia gravis and consideration of possible pathogenic implications. *Ann NY Acad Sci* 135:557, 1966
6. Goldstein G, Hofmann WW: Electrophysiological changes similar to those of myasthenia gravis in rats with experimental autoimmune thymitis. *J Neurol Neurosurg Psychiatr* 31:453, 1968
7. Kimura J, Van Allen MW: Post-thymectomy myasthenia gravis. *Neurology* 17:413, 1967

A New Ethic for Medicine And Society

THE TRADITIONAL WESTERN ETHIC has always placed great emphasis on the intrinsic worth and equal value of every human life regardless of its stage or condition. This ethic has had the blessing of the Judeo-Christian heritage and has been the basis for most of our laws and much of our social policy. The reverence for each and every human life has also been a keystone of Western medicine and is the ethic which has caused physicians to try to preserve, protect, repair, prolong and enhance every human life which comes under their surveillance. This traditional ethic is still clearly dominant, but there is much to suggest that it is being eroded at its core and may eventually even be abandoned. This of course will produce profound changes in Western medicine and in Western society.

There are certain new facts and social realities which are becoming recognized, are widely discussed in Western society and seem certain to undermine and transform this traditional ethic. They have come into being and into focus as the social by-products of unprecedented technological progress and achievement. Of particular importance are, first, the demographic data of human population expansion which tends to proceed uncontrolled and at a geometric rate of progression; second, an ever growing ecological disparity between the numbers of people and the resources available to support these numbers in the manner to which they are or would like to become accustomed; and third, and perhaps most important, a quite new social emphasis on something which is beginning to be called the quality of life, a something which becomes possible for the

first time in human history because of scientific and technologic development. These are now being seen by a growing segment of the public as realities which are within the power of humans to control and there is quite evidently an increasing determination to do this.

What is not yet so clearly perceived is that in order to bring this about hard choices will have to be made with respect to what is to be preserved and strengthened and what is not, and that this will of necessity violate and ultimately destroy the traditional Western ethic with all that this portends. It will become necessary and acceptable to place relative rather than absolute values on such things as human lives, the use of scarce resources and the various elements which are to make up the quality of life or of living which is to be sought. This is quite distinctly at variance with the Judeo-Christian ethic and carries serious philosophical, social, economic and political implications for Western society and perhaps for world society.

The process of eroding the old ethic and substituting the new has already begun. It may be seen most clearly in changing attitudes toward human abortion. In defiance of the long held Western ethic of intrinsic and equal value for every human life regardless of its stage, condition or status, abortion is becoming accepted by society as moral, right and even necessary. It is worth noting that this shift in public attitude has affected the churches, the laws and public policy rather than the reverse. Since the old ethic has not yet been fully displaced it has been necessary to separate the idea of abortion from the idea of killing, which continues to be socially abhorrent. The result has been a curious avoidance of the scientific fact, which everyone really knows, that human life begins at conception and is continuous whether intra- or extra-uterine until death. The very considerable semantic gymnastics which are required to rationalize abortion as anything but taking a human life would be ludicrous if they were not often put forth under socially impeccable auspices. It is suggested that this schizophrenic sort of subterfuge is necessary because while a new ethic is being accepted the old one has not yet been rejected.

It seems safe to predict that the new demographic, ecological and social realities and aspirations are so powerful that the new ethic of relative rather than of absolute and equal values

will ultimately prevail as man exercises ever more certain and effective control over his numbers, and uses his always comparatively scarce resources to provide the nutrition, housing, economic support, education and health care in such ways as to achieve his desired quality of life and living. The criteria upon which these relative values are to be based will depend considerably upon whatever concept of the quality of life or living is developed. This may be expected to reflect the extent that quality of life is considered to be a function of personal fulfillment; of individual responsibility for the common welfare, the preservation of the environment, the betterment of the species; and of whether or not, or to what extent, these responsibilities are to be exercised on a compulsory or voluntary basis.

The part which medicine will play as all this develops is not yet entirely clear. That it will be deeply involved is certain. Medicine's role with respect to changing attitudes toward abortion may well be a prototype of what is to occur. Another precedent may be found in the part physicians have played in evaluating who is and who is not to be given costly long-term renal dialysis. Certainly this has required placing relative values on human lives and the impact of the physician to this decision process has been considerable. One may anticipate further development of these roles as the problems of birth control and birth selection are extended inevitably to death selection and death control whether by the individual or by society, and further public and professional determinations of when and when not to use scarce resources.

Since the problems which the new demographic, ecologic and social realities pose are fundamentally biological and ecological in nature and pertain to the survival and well-being of human beings, the participation of physicians and of the medical profession will be essential in planning and decision-making at many levels. No other discipline has the knowledge of human nature, human behavior, health and disease, and of what is involved in physical and mental well-being which will be needed. It is not too early for our profession to examine this new ethic, recognize it for what it is and will mean for human society, and prepare to apply it in a rational development for the fulfillment and betterment of mankind in what is almost certain to be a biologically oriented world society.