

EUTHENICS AND BIOGRAPHY.

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In the development or evolution of man, problems connected with the adjustment of the individual and the adaptation of the race have constantly arisen, due to a continually changing environment.

For man in the savage state life was extremely simple. Later, however, in the barbaric stage, a home, domestic life in a house, implied not only a permanent abiding place, but it also implied making conditions favorable for the continuation and rearing of the progeny; and thus Domestication (from *domus*, a house) is in reality the first step in civilization. However, civilization means an aggregation of homes, namely, urban conditions (from *urbs*, a city) giving us Urbanization as the process by which we have arrived at our present-day condition and under which civilization faces its destiny.

Therefore out of Domestication and Urbanization, with accompanying problems, may be woven a philosophy which will take into consideration the evolution of man, both ontogenetically and phylogenetically.

Although the life of the individual recapitulates the experience of the race; nevertheless even today man is called upon to meet societal conditions not in harmony with his ontological development. In other words, society exhibits vestigial conditions analogous to the vestigial organs of the body.

Under primitive conditions the rearing of the young was a simple matter, becoming complex with more and more town life, and very intricate under modern industrial city conditions, until now there arises the need for bringing together related data for a new art and science—Euthenics (from the Greek, well-being). More specifically, euthenics seeks to secure the best environmental influence for the physical, mental and moral development of the individual, particularly the young, and for the maintenance of health and vigor especially under modern industrial city conditions, as implied in the expression domestication and urbanization. But we must constantly remember that only the biologically fit are those who are able to reproduce.

The term Euthenics has however a more dynamic meaning than that conveyed by the expression “environmental influence”, or by ecology, or by mesology; it specifically implies acting, and not merely observing and recording. Therefore, in euthenics emphasis is placed upon teleclexis, the artificial or intentional selection, in distinction to genecelexis which refers to natural selection. Moreover, euthenics concerns itself with individuals, whereas sociology concerns itself with the mass.

In brief, Euthenics is a system—art and science—of improving individuals, especially the young, by a good environment. Perpetuating the improved and highly developed individual is the sphere of Eugenics, which seeks to improve the race by good breeding. Eubiotics has been defined as the art and science of living a life of “good health”, growing out of what we can do for ourselves with the environment under which we are compelled to live or may choose to live.

In 1908 the writer presented before this Academy a paper entitled "Biography and the Influence of Environment".¹ This was an attempt to show the increasing importance of the role of environment on human life under increasingly complex surroundings, with special reference to the consideration of a neglected factor.²

The domestication and urbanization of man, attended by a constant weeding out of those who are not adapted to house and town life, has been a long and painful process which is still actively going on today. In the study of this process one of the most important factors to be considered is the reaction due to inhaling infected dust. From the standpoint of the physician this reaction, *Coniosis* (Greek, *konis*, dust, and *osis*, a condition), or dust infection, may be looked upon as a protean disease, with clinical types for convenience of classification, description and treatment.³ Biologically and euthenically it must be considered as a reaction to an abnormal environment, largely avoidable and preventable.⁴

Man is an animal. Zoology is the science of animal life. But it should be kept in mind that to the zoologist "life history" suggests the life cycle of some animal and that usually his material for study is under control. In the case of man there is, however, besides the mere animal existence also a psychic life, dominated by the social inheritance, or civilization, and manifestly "human material" is not under a like control. Indeed, all sorts of sacrifices may be required to get long-continued original data on real life histories—the chief reason for the neglect of such studies.

The term Biography may or may not be synonymous with Life History as understood by the zoologist, but nevertheless the term biography may still be used restrictively to cover the field for the purpose of this paper. A literary friend interested in life histories expressed himself as follows: "Unfortunately the average published biography is commonly a literary composition, largely idealistic and eulogistic, sparsely critical in an adverse sense and then usually euphemistically expressed." The average biography or autobiography is almost worthless for real life-history purposes. But in another part of this paper reference will be made to notable exceptions, because they exemplify the fundamental truths of euthenics, as well as of eubiotics.

It is of course understood that a good stock of comparative illustrations and analogies drawn from plant and animal life is a valuable asset to both teacher and doctor in the study and application of euthenics; but analogies are not homologies, and they must not be pressed too hard—"The proper study of mankind is man".

From the old viewpoint, that of the physician dealing with sick people, the body was considered abnormal, and the old method sought to disentangle the various factors in the midst of complexity, laying chief

¹ It was realized that this title was cumbersome, and hence when Dr. Ellen H. Richards in 1910 coined the term "Euthenics" it was promptly adopted; this paper is in a measure an elaboration of the original theme.

² See "Dust—A Neglected Factor in Ill Health", *Trans. Ind. State Med. Asso.*, 1904, pp. 166-178.

³ See "Atypic Cases and Dust Infection", *American Medicine*, October 1, 1904.

⁴ See "Coniosis", *Proc. Ind. Acad. Science*, 1911.

stress upon the body itself. But the new method, that of the biologist and the evolutionist, stresses the environment and seeks a solution through a comparative study of the environment factors, beginning with the simple and following them into complex conditions.

Life in crowded industrial and commercial cities is becoming more and more complex; civilization threatens to become top-heavy, with an extinction of the mentally endowed. But there will always be those who survive. In the slums of the cities there seems to be developing a "John Chinaman" type—those who are able to thrive physically, but, alas, at the expense of mentality. This type of humanity is not considered by the biographer, but the life historian, the euthenist, the eugenist, the geneticist and the immunologist must concern themselves with the apparently insignificant or inferior types, with all who are able to reproduce.

The question may therefore be raised, is an Antaeus-like contact with the soil essential for the continued welfare of the mentally endowed? What do life histories teach?

Unfortunately, biographies, as already indicated, are not or only rarely real life histories, and hence the vital elements of euthenics have so far not been taught in our schools.

Euthenics actively concerns itself with man's environment. Making the environment favorable is an ancient art. Art precedes science. As a matter of fact attention to the factors of environment was a part of the commonplace efforts of man throughout his early development. We need only recall the attitude of the ancient husbandman and his efforts in making favorable conditions for his crops—including the preparation and cultivation of the soil, and the suppression of weeds and parasites—and for his domesticated animals, as well as for himself and his offspring.

Even in ancient law is revealed the emphasis placed upon the force and effect of the environment by the old law-givers. The Mosaic Law concerned itself definitely with personal hygiene and general sanitation; and it is therefore not a matter of wonder that men like Wesley, Kingsley and Booth preached the Gospel of Cleanliness.

Parents have always practiced what the term euthenics implies—making a favorable environment for the children, usually a wholly altruistic effort. In an earlier day, under rural conditions, a large family was an asset; but today, in the city, a large family may be a liability, and a single child, highly educated, may produce more parental pride, self-esteem or satisfaction and less care and worry than a large family of poorly educated or trained children.

Euthenics was practised by the master both altruistically and egoistically. A contented servant was of greater value than a dissatisfied one; and today the employer of labor is influenced by both altruistic and egoistic motives, presenting a very complicated modern social problem.

Perhaps all of us have had some experience in transplanting flowers from the woods, usually resulting in failure; likewise in bringing home pets, usually to live in more or less misery. A housewife may be unable to winter-over her potted geranium under "indoor climatic conditions,"

whereas the experienced florist makes plants bloom all winter. Ginseng when grown under massed conditions is very apt to become infected and the grower may lose his crop. Many people "keep chickens," perhaps penned up in a small yard covered with cinders but without anything "green." The result is "chicken-yard misery," without egg production. Egg production on a large scale is an art, requiring knowledge, and should be based upon scientific data.

In rearing children the changing environment, which is becoming more and more urban, must be considered. The teacher is supposed to be interested in the welfare of his pupils, at least while they are in the school, and therefore it may justly be assumed that the teacher seeks consciously or unconsciously an answer to questions similar to the following: What is a favorable school environment? What is a "proper" school-room temperature? What is a comfortable one? How do children react? Who are subnormal? Who are supernormal? To what extent do we consider time and place when we speak of "normal"? Are adenoids and enlarged tonsils, colds and catarrhs, anemia, etc., normal accompaniments of an abnormal environment?

The country doctor deals with people living more or less isolated, rarely coming in contact with others or with the sick and diseased—unlike the physician in the large city where there is a constant and many-sided contact with all sorts of ill health and disease producing causes. The small town doctor occupies middle ground, and when a new doctor comes to town he is at once sought out by the old chronics who are still hopeful of being cured. "Hope springs eternal in the human breast." Some at least expect relief from annoying symptoms. But the physician may conclude that some individuals are misplaced, unadapted and mal-adjusted, and reacting to what is to them an abnormal environment.⁵ One can of course differentiate between those who readily accept the explanation of "reacting" and who will make an effort to change their environment or "change climate," and those who will not or can not. The small town doctor can not readily write and publish real "case reports"; the country doctor can not do so at all—it would mean professional suicide. The city physicians can and do write freely, but when a patient moves, and the city populace is becoming more and more movable, data come to an end, which is another reason why real life histories are rare.

Medical journals teem with clinical reports and case reports. Usually they begin very abruptly and perhaps terminate with equal abruptness—"in the midst of things." What conclusions, it may be asked, can be drawn from the average medical case report in regard to life histories or to eugenics or eugenics? Almost none.⁶

The physician, the surgeon, the nurse and the social worker are all interested in the welfare of what we commonly call the patient—and

⁵ Consider what may occur where the air is full of infection, where men chew tobacco and spit where they please and set a low standard of cleanliness, encouraging catarrhal and tuberculous persons to add their contributions to sidewalks and floors of public buildings. Under such conditions, infected dust is a definite entity, just as the reaction may be definite.

⁶ Among the material shown a year ago on account of "Eugenics and Life History", were a number of original hospital clinical records and case reports.

at times the environment may be the most important factor. The sanitarian and the hygienist play a great role in eugenics—the more sanitation, the less probable need for individual hygiene; in other words, the more favorable the general environment becomes for the individual, the less need for his giving attention to details—details, which readily become those petty details with which the introvert so largely concerns himself.

When sanitary engineering supplies cities with clean water, typhoid fever begins to disappear, and papers on this disease become fewer and fewer in the medical journals, and in time the special treatises begin to disappear. On the other hand, treatises on tuberculosis are becoming larger and larger; some now appear in three-volume sets. Sanitation of the air is still a problem for the future.

As already mentioned, no matter how bad the slum conditions may be, there are always individuals who are adapted; but civilized communities are more and more asking the where, when, and why of things. The Eugenists are beginning to demand better breeding; the Euthenists better environment.

In addition, more is being heard of so-called “degenerative diseases”. The term includes cases of high blood pressure⁷ and high acidity, and various “hyper” diseases, with a life cycle of perhaps 50 years. Papers and books on heart disease are becoming more and more plentiful, and still we continue to treat the sick “in the midst of things”, where all sorts of inflammation is followed by scar tissue, with lessened vitality—just as in the days of Sydenham 250 years ago.

In the large city, the factors that enter into the matter of health and disease are so numerous and so varied that it is impossible to disentangle them. The physician does the best he can in treating his patients; many want relief merely from annoying symptoms. The surgeon “sits in his office and waits until a man is ripe for an operation.” Health supervision has been in the past, and still is today, a dream of the future.

Many do not readily grasp the idea that man for countless ages has been an open air animal and has led a very simple life, and that the process of domestication and urbanization, adaptation to life under house and town conditions, has been a slow and painful one, with a weeding out of the unadapted and unadjusted, a process that still continues. But usually Nature does not kill abruptly; she sends all sorts of warnings, but these we should not misinterpret. In the case of the common, everyday “symptoms of ill health” we should constantly ask, “Where, When, Why,” and then we may find that most of the common symptoms are blessings in disguise—warnings, danger-signals to be heeded.

When Patrick Henry said, “I have but one lamp by which my feet are guided, and that is the lamp of experience”, he laid down the principle that must govern us in the interpretation of biography in the

⁷ The subject of “blood pressure” (like that of a proper dietary) is yearly becoming more and more complicated. Yet how simple it may be when considered from the biologic and evolutionary viewpoint; and how simple the solution to those who are wise, and early see the handwriting on the wall, and are able to act.

application of the science and art of Euthenics for the benefit of the young.

But the individual must be saved from the necessity of waiting for his own experience in order to have a lamp to guide him in his future wanderings, and it is therefore conceivable that Patrick Henry referred to the experience of man in general—history in its broad sense. More specifically, however, man should realize that for his own welfare great lessons may be drawn from the study of biography, a term first used by Dryden, in 1683, as “the history of particular men’s lives”.

Since Dryden’s time there have been all sorts of biographies and biographers. The esthetic literary type of biographer follows as his ideal “the faithful portrait of a soul in its adventure through life”; this is also the ideal of the preacher and moralist.

At present a new ideal of biography is developing. The scientific method, already applied in so many departments of human endeavor, is finding a new field in transcribing the record of the individual’s experience, thus re-emphasizing the ancient Greek injunction, “Know thyself,” which modernly interpreted indicates that “the proper study of mankind is man”. This includes his experience and his reactions to his environment, which thus becomes the lamp that shines upon his future path, and may enable him to avoid learning some valuable and profitable lessons through bitter experience.

Charles Dickens had a rule that for every hour indoors there should be an hour of outdoor life. So long as he followed his own rule he fared very well. The great importance of offsetting too much indoor life by outdoor life can scarcely be overemphasized. But few can do it properly in the crowded city; and hence the great importance of the seventh day of rest, the eight hours of recreation and relaxation, the value of golf to the business man, the good results of motoring into the open country, or a winter in Florida or California, all of which are concerned with and emphasize the environmental factors.

Reference has just been made to the rule which Charles Dickens observed—offsetting indoor life by outdoor life. This may be considered a real discovery by Dickens which resulted in salutary effects upon his well-being, but it was in reality the application of a sound euthenic principle. What Dickens discovered for himself, many others have likewise noted in their own environmental reactions. However, few indeed have profited by their experience, and it may even be questioned whether a man always is able to properly interpret his own reactions. Therefore, in the euthenic interpretation of biographies much can be learned by reading between the lines; and often the biographer, and more particularly the autobiographer, may unconsciously reveal the working out of these euthenic principles—the application of our knowledge to the end that the adjustment of our environment will contribute to our welfare.

A year ago the writer presented before this Academy a lot of material, in illustration of Euthenics and Life History, varying from simple accounts, case reports, to autobiographic accounts, and case reports which in the course of years expanded into actual life histories—real biography. These histories have been used since 1905 in seeking to interpret the “lives of the dead” for the purpose of determining

what lessons might be learned from biographies, particularly in regard to the influence of environment. Preliminary papers were presented before this Academy in 1905 and in 1908.

Thomas H. Huxley's biography was referred to in both of these papers, the explanation of his ills and life-long ill health being along the line of the domestication and urbanization of man, and of reacting to bad air. It was an interpretation, with the object of inducing the discriminating reader to read between the lines and seek to interpret his own reactions. To the life historian and to the euthenist the "Life and Letters of Thomas H. Huxley"⁸ are invaluable. On the other hand, to his pathetic complaint—"I do wish I could sometimes ascertain the exact *juste milieu* of work which will suit . . .", the student of domestication and urbanization might be able to give a satisfactory reply.

In the interpretation of biographies from the euthenic viewpoint a departure must be made from the usual method. Formerly, and popularly still, there were only two great categories—health and disease. A man who has "symptoms" is assumed to have some disease. The old method scarcely considered the where, when and why of the common symptoms, and health and disease were considered to be entities. But the biologist and euthenist seek to differentiate between these extremes, using a third or middle term, and making three categories—ease, unease, and disease. Health constantly fluctuates between ease and unease, and although in the end all must die, yet after all death may be merely a terminal event, with no relationship to life-long ill health. As already stated, the normal or healthy body reacts to an abnormal environment. Common everyday symptoms are to be looked upon as warnings from Nature—as danger-signals to be heeded; and the "old chronic" who does heed them lives on to old age. The euthenist's interpretation is one that appeals to the student who is biologically trained, as biology emphasizes the great importance of environment.⁹

Euthenics is a word to conjure with among parents and the young who have reached the age of understanding. The term must not be confused with Eugenics, a subject for which some have an aversion, for parents feel that they cannot change the past. They had to accept what Nature gave them, and they can transmit only their own hereditary characteristics and traits. But the environment can be altered; if efforts fail locally, there is always the alternative of removing to a better environment.

As already mentioned, that which is implied by the expression, "the influence of environment" is an ancient art, and has been followed empirically from the beginning. Much is to be expected when Euthenics is taken up systematically, and when the schools teach "How to Live", with special reference to those eight hours that are supposed to be devoted to recreation and relaxation from labor.

⁸ On account of the numerous references to ill health this biography makes depressing reading, which however will become intensely interesting to any one who may be able to read it in the light of the Domestication and Urbanization of Man. When Huxley retired to Eastbourne, on the south shore, he took a new lease on life.

⁹ The biological explanation, as above indicated, may, moreover, show why "isms" and "pathies" flourish, and, once properly understood, such an explanation will take the ground from under the feet of the healers and curers.

The matter of vocational training has received considerable attention in recent years. There are of course pros and cons as to the amount of time the schools should give to the subject, largely determined by time and place. On the other hand, the eight hours of avocation have been neglected. We need only consider that in addition to recreation and relaxation many resort also to sedation—the use of alcohol, tobacco, opiates and coal tar synthetics—and more recently glandular extracts have come into use. On the other hand, teaching the young to play is essentially a euthenic measure, tending to displace the use of sedatives.

Euthenics is a new science, to which all can contribute. In time it will become technical, and then special problems will be worked out by those with special training. There is urgent need at present of bringing together related data pertaining to euthenics and organizing this material for practical use. Some of the material used in demonstrating the value of eugenics—improving the race—may be equally valuable in support of euthenics—improving the environment of the individual.

Material for making simple observations is to be found on all sides. We can, for instance, note the influence of environment on ourselves, on our relatives and friends and those with whom we come more or less in contact. This is learning from experience, and as Lowell says "One thorn of experience is worth a whole wilderness of warning." Although opportunity for obtaining first-hand and long-continued data is within the reach of few, yet, on the other hand, the interested school instructor will find much data in biographies, material that will enable him to markedly aid in guiding the young under his care, to stimulate them to make a conscious effort in giving attention to the influence of environment upon their health or well-being. Such lessons may prompt them in a measure to adopt certain fundamental rules looking to the control of simple environmental factors, to assume an attitude that will become habitual in guarding their health, in the same way that attention is given to protective measures in matters of food, shelter and clothing.

We hear more or less of the term "degenerate". Applied to man the implication is really terrible. But after all the term may really mean a deterioration, or a stunting, or a depauperation on account of unfavorable life conditions—physically, mentally, morally. Nature has no favorites—only those able to survive. Man must take care of his own. Before resorting to the extreme measures of some eugenisists, in the case of "degenerates", it may be best to first determine what euthenics may do for them, or their kind, and particularly for that unfortunate group of individuals contemptuously referred to as "neurotic"—individuals who react acutely to an abnormal environment.

Euthenics in its first stages is mainly concerned with education in the true sense of training. The attention of the individual and next that of the community must be given to the subject. The diffusion of knowledge on this highly important aspect of the welfare of man is the first great step in preparing the soil for the germination of right thinking in regard to right living. Under simple life conditions, educational requirements were few and simple; then the three R's sufficed, and they still suffice for many; but under city conditions education must

more and more consider the environment under which people live and have their being.

It is too commonly assumed that the highly mentally endowed are "able to shift for themselves", when as a matter of fact they are often submerged—the over-crowded college may even deny them the opportunity of an education. Saleeby defines education as "the provision of an environment". Such a definition at once enables us to understand the limitations of the educative process. "Education can only educate what heredity gives. Heredity gives not actualities but only potentialities. Much is to be expected from the entrance of woman into politics, for she has always been concerned with factors of environment. Above all, although eugenics is still a future objective, euthenics is the need of the hour, and attention to the environment will bring positive and immediate results. The philosophy of domestication and urbanization has within its scope the consideration of the most vital problems affecting the future of the race.

