

ALDOUS HUXLEY'S VIEWS ON EDUCATION

by

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CURRICULUM STUDIORUM

Mahabir R. Maharajh was born April 18, 1921, in Trinidad, B.W.I. He was granted the degree of Bachelor of Arts by the University of Western Ontario, London, Ontario, in June 1950. He received the Master of Arts degree in Pharmacology, from the University of Toronto, in November 1954. The title of his thesis was The Effects of Ethanol, Disulfiram and Cyanamide on Bleeding Volume.

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INTRODUCTION

Aldous Huxley was born of a family of intellectuals and scientists, many of whom were interested in education. T. H. Huxley and Matthew Arnold, his grand-parents, (like their contemporary Newman), were leading proponents of education in the nineteenth century. Today, the two brothers, Julian and Aldous Huxley, have continued that interest in education although with apparent divergent if not opposite viewpoints. The former seems to take a materialistic and utilitarian stand whereas the latter a humane and moral one.

This dissertation is an attempt at a critical and orderly presentation of Aldous Huxley's views on formal aspects of education. It is a study of his views of techniques (of the "how" of education) rather than the "what" of education. Some of his views on the underlying philosophy of education will be touched upon, but the basic aim of this dissertation is to stress his views of the machinery of modern education, the systems used to train students.

The broad concepts of education as seen in his books, Science, Liberty and Peace, The Perennial Philosophy, The Brave New World Revisited, or his other philosophic novels, are not dealt with in this study. This latter part of his more serious writings could be termed - philosophy of education. It treats such subjects as education for liberty, for brotherly love, compassion and for non-attachment and

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might well provide a student with a rich source of thought to explore for a doctoral thesis. The last chapter, "The Ideal Systems of the Future", in the present work, merely gives some hints as to Huxley's more basic concepts on education. The other chapters contain his views on formal education. In the first chapter, we consider his views of Infant Education. This phase of education extends to the fifth or sixth year of the child. Early childhood education, Huxley (like most psychologists) believes to be important and argues that it has a great influence on later life. His views on early childhood education are in the main an extension of the Montessori Method which will be outlined later. Primary education extends to about the eleventh or twelfth year and secondary education extends to the eighteenth. These limits are approximate as Huxley believes that education should be individual involving no rigid rules. The curriculum, he says, should vary in degree and kind to fit the individual character. By that, he does not mean that children should be pampered. On the contrary, he is an advocate of a stiffer curriculum than the present ones. He recommends the Dalton Plan (to be discussed later) in the education of youth as this is based primarily on individual education. At the university level, Huxley considers overspecialization to be one of the main drawbacks to our modern educational systems. Education, he claims, should prepare

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one for life and not merely to make a living.

The universal physical and psychological stresses resulting from the tremendous growth and shifts in world populations, accentuated and facilitated by a concomitant growth in science and technology have greatly caused modern man's sense of values to be warped. This condition is a common factor amongst all peoples today, unknown to pre-industrial man and "primitive" societies, when people lived in a state of relative ease, free from the multiple anxieties which are perhaps the greatest source of distress to the present age. In the general search for a solution to this most complex and urgent of man's ills, the writer believes that Huxley's views on education may throw light on some aspects of this vast problem.

It should be added that no systematic attempt has heretofore been made to gather together these views of Huxley which lie broadcast throughout his writings. This dissertation is such an attempt.

CHAPTER I

EARLY CHILDHOOD EDUCATION

Theories on Early Childhood Training and Behaviour
in Later Life.

Huxley says that early childhood training and education are important factors in the life of an individual; and that these early years of upbringing do have an influence upon one's future behaviour and character.¹ He disagrees, however, with those modern psychologists and educationalists who hold the view 'that all neuroses are due to some crucial experience in infancy'; and with the Freudians who 'attribute all men's spiritual ills to their experience during early childhood'. He is of the opinion that the foundations laid in early childhood could be modified in later life. This change, he claims, could be brought about by the individual's own willingness to deviate from earlier training or by environmental factors and education.² On the importance of education and environment as factors affecting one's behaviour Huxley writes:

1. Aldous Huxley, Ends and Means, Chatto & Windus, 1957, p. 177.

2. Id., Ibid., p. 177.

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...Good education will be fully effective only when there are good social conditions and among individuals, good beliefs and feelings; but social conditions, and the beliefs and feelings of individuals will not be altogether satisfactory until there is good education. The problem of reform is the problem of breaking out of a vicious circle and of building up a virtuous one in its place.³

Dr. John Bowlby's work (prepared under the auspices of the World Health Organization in 1951) showed the effects of maternal deprivation during the early months and years in the child's life upon its adolescent and maturer years. In other words, the results of his study justify Huxley's views that early childhood experiences do have an effect upon the later life of the individual. Dr. Bowlby has used the scientific method in the accumulation and evaluation of his data; thus giving us a greater degree of confidence in his conclusions.

It has been found that children up to five years suffered most from the lack of mother's love; as they grew older they became more and more independent and were affected to a lesser degree. All the evidence collected from various workers has shown that the majority of children who suffered from maternal deprivation showed symptoms ranging from dullness and lack of ability to keep up with their average classmates to emotional instability and delinquency. Dr. Bowlby concludes: 'There is a very strong case indeed for believing that prolonged separation of a child from his mother (or mother substitute) during the first five years of life stands foremost among the causes of delinquent character development.' It is essential

3. Ends and Means, p. 180.

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therefore to see that a child do have 'a warm, intimate, and continuous relationship with his mother (or permanent mother--substitute--one person who steadily 'mothers' him) in which both find satisfaction and enjoyment.'⁴

"In the first years and months of infancy, 'Huxley says,' education is mainly physiological; the child, to use the language of the kennel, is house-trained."⁵ This early education is important as far as the child itself is concerned and perhaps has emotional effects in later life. Huxley writes:

Messy children are a nuisance; but if, by allowing them to make their messes, we can guarantee that they shall grow up into gentle, unquarrelsome adults, free from what Suttie⁶ calls our 'taboo on tenderness,' the nuisance will be very bearable.⁷

Olive A. Wheeler, D.Sc., Professor of Education, University College, Cardiff, takes a more extreme position on the importance of early childhood training than Huxley when she says:

4. J. Bowlby, Child Care and the Growth of Love, Penguin Books Inc., Baltimore, 1953.

5. Ends and Means, p. 180.

6. Ian D. Suttie, The Origins of Love and Hate, Trubner & Co., London, 1935.

Dr. Suttie's book contains an interesting chapter, "Taboo on Tenderness", on the effects of early house-training upon the emotional life of human beings. In the same book, he also claims that love not sex is the greater driving force in man's social behaviour; the antithesis of Freud's theory.

7. Ends and Means, p. 180.

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The developmental significance of infancy is nowhere so clearly seen as in the changes which occur in the feeling aspect of experience. So far-reaching are some of the early emotional experiences of the individual and so significant are the early organizations of the emotions, that it is no exaggeration to say that the foundations of character are laid during this first period of life.⁸

It is worthy to note her views and findings on child psychology and education. They further uphold Huxley's ideas on the same subject.

Psychologists are generally agreed that mental health in the first two or three years is bound up primarily with the proper functioning of the appetites--hunger, thirst, elimination, sleep, and exercise. It is important for the child's future that wholesome controls and habits should be developed in connexion with these primitive impulses. It is a fundamental mistake to regard them as merely physical, for emotional situations arise out of them which need to be carefully handled if difficulties are to be avoided. For example, excessive destructiveness in later childhood has in some cases been traced back to emotional complications arising out of the process of weaning, improperly accomplished. The appetites also largely direct the powers of attention, and consequently of learning, during the first period of life.⁹

8. Olive Wheeler, Creative Education and the Future Life, University of London Press Ltd., London, 1936, p. 116.

9. Id., Ibid., p. 110.

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Theories on The Education of Infants' Senses,
Imagination, and Intellect.

It is now universally accepted that what used to be called "pre-school years", 1-5, form a very important part of the child's education. Formerly, lack of education during this period was due either to economic factors or ignorance or both. W.O. Lester Smith, Professor of the Sociology of Education in the University of London, writes: 'The old conception of Education as something that began when you first went to school ceased to be tenable; there can be few thoughtful people today who do not recognize the educative significance of the pre-school years'. Huxley, like Smith, believes that infant schools are adequate,¹⁰ and although there may be many kinds, they 'all are conducted on fundamentally the same principles. The aim of all of them is to teach the child to teach himself'.¹¹

10. W.O.L. Smith, Education an Introductory Survey, A Pelican Book, 1953, p. 26.

W.O.L. Smith, Professor of the Sociology of education in the University of London writes in his book, Education an Introductory Survey; Learning is made pleasant in many of the modern Infant and Junior Schools, 'where the medicine of knowledge is offered in a sugar plum so large and delicious that it is swallowed with delight'.

11. Aldous Huxley, Proper Studies, Chatto & Windus, 1928, p. 136.

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Like other educationalists and psychologists, Huxley thinks that training of the senses precedes the training of the imagination. He writes:

Playing, the child is given practice in seeing, hearing, touching, smelling. This training of the senses is of the highest importance. Sensuous impressions are the basis of all mental processes; the more things we have touched, seen, heard, the richer will be our imagination, the more we shall have to think about, and the greater number of ways in which we shall be able to think. Further, the process of exercising the senses stimulates the whole infantile mind, strengthens it and quickens its growth. Imbecile children given exercise in the handling of objects have developed and improved.¹²

It is the view of Huxley that, in the training of children's sensations, parents and teachers should direct their training to the acquisition of simple, useful, and practical knowledge.

Sensuous training is combined with handwork, which at this early age is necessarily of the simplest and most rudimentary kind. Much ingenious apparatus¹³ has been devised for the child to train his fingers on. But learning to dress is in itself an education--a better one, perhaps, than learning to do things with much more elaborate and far-fetched apparatus than laces and buttons.

12. Proper Studies, p. 136-137.

13. Maria Montessori has written about apparatus which she used in the study and measurement of children's responses to sense stimuli in her book, The Montessori Method, Frederick A. Stokes Co., New York, 1912.

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...For clothes are near and important to the child, and it is through that, which is immediately significant to the learner, that all education should begin.¹⁴

Huxley quotes Montessori whose principles he seems to accept generally.¹⁵ Montessori thinks that lessons on taste and smell can be derived from the laboratory of the home--the kitchen. In addition to several experiments on education of the senses, she has devised two ingenious experiments on the training of the sense of hearing and the sense of seeing. On the "Exercises For The Discrimination of Sounds" she wrote:

With the very young children linguistic education must occupy a most important place. Another aim of such exercises is to educate the ear of the child to noises so that he shall accustom himself to distinguish every slight noise and compare it with sounds, coming to resent harsh or disordered noises. Such sense education has a value in that it exercises aesthetic taste.¹⁶

Another interesting experiment of hers in the training of the sense of hearing is as follows:

I believe that after establishing silence it would be educational to ring well-toned bells, now calm and sweet, now clear and ringing, sending their vibrations through the child's whole body.

14. Proper Studies, p. 137.

15. For Huxley's approval of the Montessori Method in the education of children, see page 102, Proper Studies, also "Mr. Huxley's Testament: A Review of Ends and Means", The Spectator, November 12, 1937, page 852, by Honor Croome.

16. Maria Montessori, The Montessori Method, Frederick A. Stokes Co., New York, 1912, p. 203.

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...And when, besides the education of the ear, we have produced a vibratory education of the whole body, through these wisely selected sounds of the bells, giving a peace that pervades the very fibres of his being, then I believe these young bodies would be sensitive to crude noises, and the children would come to dislike, and to cease from making, disordered and ugly noises.¹⁷

Her experiment on vision trains the memory and perhaps the intellect at the same time.

Experiments in colour-memory may be made by showing the child a tint, allowing him to look at it as long as he will, and then asking him to go to a distant table upon which all of the colours are arranged and to select from among them the tint similar to the one at which he has looked. The children succeed in this game remarkably, committing only slight errors. Children of five years enjoy this immensely, taking great pleasure in comparing the two spools and judging as to whether they have chosen correctly.¹⁸

Fortunate children do get the benefit of well equipped modern schools and the experience of up-to-date teachers. Most parents¹⁹ are lacking in the proper education that infants do require; children brought up in such homes,

17. Id., Ibid., p. 206.

18. Id., Ibid., p. 202-203.

19. W.O.L. Smith, Education, an Introductory Survey, p. 60-90.

Good parents see that children have proper nourishment, comfortable and attractive clothes, give good habits of mind and character and above all provide love and tenderness which only can come from parents. Philosophies of the past which held that the home is a hindrance to full development of the individual and the state are shown to be unfounded. Even in the U.S.S.R. where state control on the home was quite marked, "in the light of experience it completely reversed this policy, recognizing the importance of the family as a foundation of society."

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'receive a most inadequate sensuous training, especially, if brought up in the drab and sordid environment of a city. The systematic training of the senses is of vital importance to every town-bred child.'²⁰

Training of the imagination and intellect follows sensuous training. It is a principle of Huxley that teachers should commence teaching a particular branch of study by starting with the simplest examples²¹ and continue to the more complex.²² Those examples should if possible have to do with the practical affairs of living.²³ On the training of the imagination, he writes:

Children are encouraged to make things for themselves, to act, to make believe, to tell stories. The powers of self-expression are strengthened by this practice; the child learns confidence in himself. Moreover, the teacher takes care to direct the children's play into educational channels. She sees

20. Proper Studies, p. 137.

21. Alfred N. Whitehead, The Aims of Education, The New American Library, New York, 1949.

It is not correct to say that the simple or easy problem should precede the more complex or more difficult ones. For example, at a very early age, a child learns to speak and to write, these are indeed very difficult undertakings. Again, the elements of algebra 'must precede the comparative simplicity of the differential calculus'...'The postponement of difficulty is no safe clue for the maze of educational practice.'

22. Proper Studies, p. 141.

23. Id., Ibid., p. 140.

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...to it that the children's games of make-believe take the form of pretending to be prehistoric men, Romans, ancient Britons--it is a history lesson. Playing with mud and sticks in the water, they make islands, lakes, mountains, rivers; they are learning geography. They are told and then re-tell, act over, stories from fable and history. Speaking and acting dissipate shyness, give control of the voice and gestures, and enable the children, by actually living their literature, to understand it to the full.²⁴

In addition to the teaching of history, geography or literature; the sciences, arithmetic and geometry can be studied--not in an abstract fashion, but in a real and meaningful way related to life. 'Higher education is so remote from ordinary life', Huxley writes, 'that it hardly affects the majority of learners'.

The sciences must blossom out of the local flowers, must be born with the familiar animals, spring from the neighbouring rocks and waters, be deduced from the practice of the local crafts and industries. Geometry must arise as it arose among the Egyptians--from the measurement for practical purposes of definite individual spaces. Arithmetic must solve the actual problems of daily life. And so on. Higher education is so remote from ordinary life that it hardly affects the majority of learners.²⁵

Huxley has made a sombre and serious moral remark on childhood education and on education in general:

In the best infant schools this synthesis of knowledge and practical life is an accomplished fact. An analogous synthesis of the vastly more complicated knowledge imparted in the course of higher education and the practical interests of adolescents and adults must be made. The need is urgent. If we go

24. Proper Studies, p. 140.

25. Id., Ibid., p. 138.

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...on as we are doing now, we shall not merely fail to profit by the immense accumulations of knowledge which a few eccentric historical researchers and men of science have piled up; we shall carry our civilization headlong to disaster.²⁶

In summarizing Huxley's views, then, on early childhood education, we see that while Huxley believes the first months and years of training do have an influence on later life, he does not believe that the early experiences of the child lay the foundations and have an indelible influence on the future character and behaviour as an adult. In the education of the senses, imagination and intellect, Huxley does in the main accept Montessori's Method.

26. Proper Studies, p. 139-140.

CHAPTER II

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Problems and Techniques in Teaching.

Huxley goes through a great deal of argument to show that there are varieties of intelligence.¹ He gives various factors which may cause the intelligence of human beings to vary widely in 'degree and kind'.² He also attempts to define intelligence, which he admits is not easy to define or measure. Now, one may rightly ask, why he devotes so much time to establish the almost obvious--that no two persons have the same kind of or degree of intelligence. If there are good reasons to believe his hypothesis is correct, then, such a premise could lead to new approaches to techniques in teaching and to the curriculum. In addition to new approaches in teaching and to the curriculum, such a premise (recognizing students as individuals) would also lead to differences in approach to the older views on discipline. The

1. Aldous Huxley, Proper Studies, Chatto & Windus, London, 1957, p. 31, 88.

2. Huxley does not go into a philosophic consideration of the meaning of intelligence. It would seem that by degree and kind of intelligence he means simply that human beings do have different inclinations. See Proper Studies, page 38, for examples and his use of the term intelligence.

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child would, under the new system, be studying the things he is naturally inclined to, that is, he would be treated as an individual and hence would not have to be driven to his tasks. On the other hand, if the student has no particular attraction for a subject there should be no reasons for expecting him to do as well in it as he would on those that he likes. The problem of discipline, would then be greatly reduced. The student would also be happier and be more "creative" depending upon his type or kind of mind. These and other points of interest, Huxley has developed from his theory on education. The principles of the Montessori Method and the Dalton Plan, which will be described in greater detail later, are accepted by Huxley.³ He has, however, put forward arguments for a rational acceptance of these new ideas in educational procedures and techniques.

Huxley argued that the Equalitarians held all individuals as possessing the same potentialities early in their lives, and it is up to the individual to develop them in the direction he desires;⁴ he does not accept this theory.

....intelligences differ to some extent in kind, as well as in amount and degree of excellence. Two minds may occupy the same position in the ordinarily accepted scale of values, but may be widely different in kind.⁵

3. Proper Studies, p. 116 and, Ends and Means, p. 181, 185.

4. Id., Ibid., p. 36-39.

5. Id., Ibid., p. 38.

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And again he considers the life and activity of the individual as unity.

In making practical judgments we never completely isolate the intelligence from the rest of the personality. Practical judgments deal with life, and, in life, the organism functions as a whole. A constituent part is seldom if ever found acting in complete isolation from the rest.⁶

Huxley believes that the search for sameness in human potential was due to changes in social and political philosophies in the development of the democratic ideal.

During what may be called the democratic period of European history, philosophers went to endless trouble in order to prove that men were equal, and that the faculties were uniformly distributed throughout the human species. Their arguments were rationalizations either of their wish to improve the existing form of government by participating in it, or else (in the later part of the epoch) of their desire to justify what had already been done in the way of democratizing social institutions.⁷

Earl C. Kelley and Marie I. Rasey, professors of education at Wayne University in Detroit wrote in their book, Education and the Nature of Man:

In the past, when we have made an approach to any problem, our first impulse has been to take it apart, so that we could see it better. We were able to see the parts better, but this did not enable us to see the whole. This is such a common practice that we are unskilled in synthesis, most skilled in analysis. We come to see now that we never find out what the whole is like by looking at its parts.

6. Proper Studies, p. 33.

7. Id., Ibid., p. 39.

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Part examination has led to abstraction, based on a sort of reconstruction which does not bring back the entity we started with. We need to come to learn that the whole is not the sum of its parts, but more, because it has an entity of its own. This entity is destroyed by analysis, revealed by synthesis. We need to be alert to the dangers of statistics, recognizing them for what they can teach, but alert to their fallacies and weaknesses.⁸

These ideas resemble Huxley's views and have a direct bearing on his notion that 'the organism functions as a whole'.⁹

There are several factors responsible for the wide 'varieties of intelligence'. There may be physical, genetic, physiological, emotional, psychological, educational or environmental factors to modify one's intelligence. Huxley writes:

The way in which intelligence is applied is determined to a very great extent by the state of the body, by the instincts, the emotions, and those composite sentiments organized in every individual by the influence of tradition and education acting on the native psychological material. The way in which intelligence is applied depends, in a word, on health and character.¹⁰

Besides such causes, the individual's own willingness or initiative could be considered a dominant factor influencing his intelligence.

8. Earl C. Kelley, and M.I. Rasey, Education and the Nature of Man, Harper & Brothers, New York, 1952, p. 13.

9. Proper Studies, p. 33.

10. Id., Ibid., p. 34.

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We are all familiar with the clever people who make no use of their talents, owing to some feebleness of impulse, some impotence of emotion, some defect in the will or fault in its training. In many cases a physiological defect accompanies and perhaps determines these spiritual weaknesses, which are often remedied when health is improved.¹¹

A rather self evident factor which also supports the view of the superiority of individual education to mass education is the matter of health or physical variability. In other words all individuals do not have the same physical stamina. A sick child (mentally or physically) should not be expected to do as well as the rest of the class. In this regard, Huxley writes:

Bodies have their idiosyncrasies. They vary, not only in size, shape, and strength, but also to some extent in chemical behaviour, in their capacity to absorb certain kinds of nourishment, in their reaction to stimuli. These physical variations, though considerable, are not so great as the variations in the accompanying mind.¹²

He again argues that we owe a great 'debt to the imbeciles',¹³ for it is due to recent systematic attempts at teaching them that we arrived at the conclusion: Knowledge cannot be poured into an individual, 'as one fills a jug with water'.¹⁴ He says that the 'old system of mechanical

11. Proper Studies, p. 34.

12. Id., Ibid., p. 97.

13. Id., Ibid., p. 99.

14. Id., Ibid., p. 99.

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repetitive teaching, tempered by flagellation' was used extensively in the past to teach the normal child. This procedure was used because it was thought that all children had the capacity to learn to the same degree; those who did not learn remained 'ignorant only through lack of good will', and deliberately closed their 'mental boxes to the knowledge which their teachers tried to pump into them.' The success achieved in teaching imbeciles and idiots has given us insight into a new procedure and has shed light on the view that individual minds are not receptacles and children do not voluntarily close their minds to learning and that flagellation has no direct relationship to learning. On the contrary, Huxley observed, children generally have an eagerness to learn.

Efforts were made to lift them out of their imbecility, to educate them up towards normality. As soon as this effort was seriously made, it became manifest that the current methods of educating normal children were entirely inadequate and unsuitable when applied to deficient. It was obvious that, if imbeciles could not learn, it was not through any malignant refusal to admit knowledge; it was through inability. They could not be flogged into opening the doors of their mental boxes, they could not be bullied into learning uninteresting things by rote; but they could, it was gradually found, be persuaded, be stimulated and amused into acquiring some kinds of knowledge. They remained deficient; but at least they were now deficient who had been educated up to the limits of their native capacity...Imbeciles are not different in kind from normal folk, only in degree....If the best way of teaching deficient is to interest them in what they have to learn, then that is also the best way of teaching the normally and abnormally intelligent...Imbeciles cannot learn, even

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after countless repetitions, the things which do not interest them. The same applies to more intelligent children. True, they are intelligent enough to learn something, even when the teaching is dull, mechanically repetitive, and brutal. But they would learn more if they were taught by the same methods as have proved successful in training of imbeciles.¹⁵

Recent investigations made on the mentally sub-normal (idiots and imbeciles) carried out by Dr. W.D. Wall, psychologist, and his colleague Miss U.M. Galluser under the auspices of the United Nations Educational Scientific Cultural Organization, 1952, have shown that persuasion not compulsion is a more successful procedure in educating the mentally retarded. These findings are in accord with Huxley's views that knowledge cannot be 'poured' or 'pumped' into the human mind. Wall writes in his report to UNESCO on Education and Mental Health:

Yet, there is evidence to show that many more (idiots and imbeciles) are trainable than at present are trained. It is regrettable that, in many institutions for such children and adults, medical care and physical supervision are still all that is provided and that little or no skill or time is devoted to the systematic training which could in many cases markedly improve their lives.¹⁶

It is not more than a decade or two that flogging as a procedure in teaching has been stopped. Children are not flogged but, like adults at Colleges and Universities, rewards and punishment take different forms. Students may be

15. Proper Studies, p. 100-102.

16. W.D. Wall, Education and Mental Health, UNESCO, Cedo Nulli, The Hague, Holland, 1955, p. 213.

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subjected to public commendations, given prizes or high marks for their scholastic achievements and so on. The desire to learn should primarily flow from within and one should not be goaded on by external forces. With some sarcasm, Huxley writes:

At school, when they taught us what was technically known as English, they used to tell us to "express in our own words" some passage from whatever play of Shakespeare was at the moment being rammed, with all its annotations--particularly the annotations--down our reluctant throats. So there we would sit, a row of inky urchins, laboriously translating "now silken dalliance in the wardrobe lies" into "now smart silk clothes lie in the wardrobe", or "To be or not to be" into "I wonder whether I ought to commit suicide or not". When we had finished, we would hand in our papers, and the presiding pedagogue would give us marks, more or less, according to the accuracy with which "our own words" had "expressed" the meaning of the Bard.¹⁷

The mind is the source of intelligence and unlike secretions of the physical body cannot be measured or easily understood. Huxley takes a sceptical or perhaps realistic view regarding the essential nature of the mind when he wrote:

We are unable to see the mind, and find it difficult in consequence to understand its nature. That is the main reason why our systems of mental education are so full of mistakes....It is different with the mind. Like music, mind is invisible; and when we talk about it, we find it convenient to use symbols, metaphors, and similes borrowed from the spatially extended world of things seen. But the mind is inaudible as well as invisible; we have no

17. Aldous Huxley, Collected Essays, Harper & Brothers, New York, 1958, p. 177.

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true notions about it to serve as correctives to our rhetoric.¹⁸

Apart from fallacies in educational theories, some psychologists and psychiatrists have fallen into the same trap when they consider the mind as a store-house. This latter group Huxley says take 'metaphors seriously'.

Men have talked in a loose metaphorical way about 'the contents of the mind', 'the store-house of memory', 'the threshold of consciousness'. Incidents, for them, are 'imprinted on the memory', and they have 'explored the recesses of their minds' in search of hidden motives or mislaid knowledge. Such phrases and many others as vividly picturesque and no less inaccurate are constantly repeated, until finally those who use them begin to take them seriously and come to regard the mind as though it really were a sort of house with rooms, or a box divided up into compartments into which things can be put.¹⁹

An extension of the idea that the mind is a receptacle leads scientists to elaborate 'extremely unsatisfactory hypotheses.' They 'think it peculiarly scientific to explain mind in terms of matter, to account for the association of ideas by neurone movements in the brain.'²⁰

There are, besides the pigeon-hole of the intellect, an affective compartment full of emotions, and a conative compartment in which the will resides. And of recent years the psycho-analysts have

18. Proper Studies, p. 91-93.

19. Id., Ibid., p. 93.

20. Id., Ibid., p. 94.

added a sort of basement, in whose almost unrelieved darkness the vermin of the unconscious crawl and pullulate. 'On the threshold', says Dr. Freud, 'there stands a personage with the office of doorkeeper, who examines the various mental excitations, censors them, and denies them admittance to the reception room (of consciousness) when he disapproves them.' The result of the combined activities of all these sensations, associating ideas, emotions, conations, censors, and the like is an individual--is you or I.²¹

From the foregoing evidence, it would appear likely that the mind is not a physical entity but rather a living organism dynamic in its functions and operations. The truth is, Huxley says: the mind is not matter; it is not measurable; nor are individuals born with the same quality or degree of intelligence.²² He defines the mind as follows:

Now the mind, whatever the language we may use to describe it, is obviously not a box with compartments. The mind, like the body, with which it is associated to form an individual whole, is a living organism, composed of interdependent parts, which we may for convenience of description name and classify as separate entities, but which have no separate existence in reality, apart from the whole to which they belong.²³

Neither does the mind function in a physical way--as particles made into solution will pass through a porous membrane. It is rather like the vital processes of digestion, absorption and assimilation of foodstuffs into living organisms.

21. Proper Studies, p. 94.

22. Id., Ibid., p. 95, 97.

23. Id., Ibid., p. 94.

Huxley observes that:

Ideas do not associate themselves inside the box which is called the mind; they are associated by a living organism, whose dominating intellectual passion is a passion for meaning and significance. Sensations, however frequently repeated, do not automatically imprint themselves on the memory; the living organism receives them only if they seem significant, and therefore worthy of attention. The mind is not a receptacle that can be mechanically filled. It is alive and must be nourished. Nourishment is best absorbed by the organism that feeds with appetite. If we treat the stomach as though it were a bucket and pump food into it, it will in all probability reject the nourishment in a paroxysm of nausea. So will the mind.²⁴

From the foregoing reasons, one may be inclined to agree with Huxley that human beings do have varieties of intelligence, and that intelligences differ in degree and in kind. Upon these principles, Huxley has based his views on education. We shall now consider his views on primary and secondary education--their successes, failures and recommendations.

The Official System Comes Into Action.

Education given to children in infant schools is today 'psychologically sound'. That is, up to the age of five or six, education is an active process free from fear or coercion. Children are encouraged to use their imaginations to the fullest; and their work and studies become a

24. Proper Studies, p. 97.

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pleasure, quite unlike that which was experienced a decade or two ago. From the infant school, the boy or girl is then prepared to go to primary schools (public or private) until the age of eleven or twelve. At this level as well as at the secondary which follows, education 'is founded on a psychological fallacy, and the child is too often regarded as existing for the System, not the System for the child.'²⁵ Huxley contrasts Kindergarten education with Primary and Secondary in the following way:

In the higher schools the child finds himself a member of a class--of a very large class in most schools, except those of the rich. (And even in these--I am thinking in particular of the English Public Schools--the classes are sometimes fantastically large.) There may be forty, fifty, even sixty children with him in the same room. His talents are expected to conform to the average standard of this assemblage. He may be exceptionally slow and dull. In either case he is a nuisance to his teacher and to his fellow pupils, and in either case his own education suffers. If he is clever, he is held back by the majority of ordinary boys. If he is stupid, he is dragged along so fast that it is impossible for him to learn anything completely and thoroughly. Passively, with his forty or fifty dissimilar and unique companions, he sits at his desk while the teacher pumps and mechanically re-pumps information into his mental receptacle.

Ram it in, ram it in!
Children's heads are hollow.
Ram it in, ram it in!
Still there's more to follow.²⁶

25. Proper Studies, p. 106-108.

26. Id., Ibid., p. 110-111.

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But generally children are happier with their school work to-day than they were in the past. No longer do children 'creep like a snail unwillingly to school.'²⁷

A Canadian, Arthur Sager, director of alumni affairs at the University of British Columbia visited the United Kingdom recently; with him were his children who attended primary schools during their stay in Britain. The following statement is part of a report which he gave to the "Ottawa Citizen":

My children aren't complaining about homework this year. Every night, right after supper, they go--almost eagerly--to their rooms to study. And nearly every night my wife scolds them from their books to bed.

When we came to England for a year we hoped the children would like their new schools, but we didn't expect this amount of enthusiasm. We're surprised and very pleased.

Their amazing fondness for homework is not based on fear of censure or punishment because there is neither at their school. Nor on the novelty of the experience; that has long since worn off. Generally they do more homework than is assigned.

It's just one aspect of a change in attitude brought about by the atmosphere of the school itself.

"The subjects are really interesting," the older ones say. And every day when they come home there's a babble of reports in the kitchen about geometry, algebra, biology, German--subjects they would probably not take for another year in a Canadian school.²⁸

Whether the educational standards of Primary and Secondary schools in the United Kingdom are higher than those in Canada or the United States is not the point in question.

27. W. Shakespeare, "The Seven Ages of Man".

28. Arthur Sager, "English Schools Are Better Than Ours", Ottawa Citizen, Jan. 31, 1959.

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But the habits of mind and pleasure that youths of the United Kingdom (and in all Western schools generally) have towards learning today are interesting developments. Huxley complains that when he was a boy the study of English was pure drudgery to him and his classmates to the extent that: 'I wonder whether I ought to commit suicide or not.'²⁹ 'In the Preface to Burns' book, A Vision of Education, (1928) Huxley writes:

Luckily, however, we can still afford to believe in liberty and the rights of the individual; we can still afford to let our children be happy and take a chance of growing into complete human beings. It is the merit of modern educationists to have organized the means of producing that happiness and that development a little more efficiently than their predecessors.³⁰

Huxley thinks that small classes should be encouraged and where possible individual attention from a tutor be given. Such a procedure would, he believes, be more fruitful and healthful to the student.³¹ This matter of individual education will be discussed in greater detail in his consideration of the Dalton Plan.

On the problem of exceptionally dull or bright students, or emotionally unbalanced ones, Wall has commented in his book, Education and Mental Health:

29. Collected Essays, p. 177.

30. J. H. Burns, A Vision of Education, Preface, Williams & Norgate Ltd., London, 1929.

31. Proper Studies, p. 109.

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Whatever the arrangement for exceptional children which has to be made on grounds of practical expediency, however, certain basic principles should never be lost of sight of nor should their fulfilment be needlessly interfered with. No matter what the nature of his difficulty, physical, mental, emotional or social, the handicapped child is first and foremost a child with psychological needs like those of any other. He needs affection and security, he needs emotional and intellectual stimulus, he needs to assert his independence, to learn, and to pass through the successive stages of physical and emotional growth. His handicap is an obstacle to smooth progress; it may set limits to his possibilities; but it does not make him essentially different from his more fortunate fellows. Thus whatever is done for him, medically, socially, or educationally, must be conceived and evaluated in the light both of his immediate need as a growing human being and of its ultimate bearing upon his adjustment and his happiness as an adult living as far as possible in the world of ordinary people.³²

One of the chief defects of large classes is that 'the idiosyncrasies of the individual child are sacrificed to the average of the class.' Huxley compares the curriculum of the large class to 'the bed of Procrustes in the myth; those who are too long for the bed are cut down until they fit; those who are too short are stretched.'³³ He says that:

The child who is quick and talented in one subject but not in others (and every human being has his special gifts) is compelled under the current system of mass education to sacrifice his talents to his deficiencies.³⁴

32. W.D. Wall, Education and Mental Health, p. 250.

33. Proper Studies, p. 114.

34. Id., Ibid., p. 114.

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There are other defects of mass education, notably: 'too much stress is laid on teaching and too little on active learning. The child is not encouraged to discover things on his own account.'³⁵ Huxley observes that such children when they grow into adults simply swallow up newspaper propaganda of the commercialists and demagogues. Such citizens, he claims, weaken a democracy. W.O. Lester Smith in his small book, Education An Introductory Survey, has diagnosed the malady very well when he says: 'The curriculum is to be thought of in terms of activity and experience rather than of knowledge to be acquired and facts to be stored.'³⁶

Huxley finds that good teachers are the exception rather than the rule. When they are found, they are 'charming, intelligent, and persuasive. They may put things well; they may speak in a way that will command attention and awake emotion and enthusiasm; they may have a power of making difficulties seem easy.'³⁷ When such a teacher becomes overly enthusiastic and makes things too easy for his students, unknowingly, the active process of learning is eliminated, then 'the clever teacher (deplorable paradox) does almost more harm than the stupid one.'³⁸ Regarding the uninspired tea-

35. Proper Studies, p. 109-115.

36. W.O. Lester Smith, Education An Introductory Survey, A Penguin Book, p. 23.

37. Proper Studies, p. 112.

38. J.H. Burns, A Vision of Education, Preface by A.

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cher Huxley says:

...The uninspired teacher working according to a good modern method stands in the same relation to the inspired teacher as a pianola stands to a first class virtuoso. Chopin could get more out of a poor instrument (the piano on which he played can still be strummed in Broadwood's showrooms) than I could get out of the most efficient and scientific of....pianolas. Using a bad system, a good teacher can educate a child better than a bad teacher who uses a good system.³⁹

The measurement of students' intelligence is a major problem to educationalists. Huxley has felt that it is a very difficult thing to measure one's intelligence especially in the study of the arts; and to a lesser degree in the biological and physical sciences.⁴⁰ Intelligence tests have only a limited usefulness, and are a most inaccurate method for measuring one's intelligence.⁴¹ Kelley and Rasey in their book, Education and the Nature of Man, have written the following which justifies Huxley's beliefs on the subject of intelligence tests:

The makers of these tests indulged in dubious practices. The tests were purported to test things which they could not test and were designed to measure things which do not exist. An example of this is the many intelligence tests. The intelligence quotient was the figment of the imagination of somebody; it was purported to be something an individual

39. A Vision of Education, Preface by A. Huxley.

40. The Olive Tree, p. 52.

41. Proper Studies, p. 64.

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had in some degree and to be permanent and immutable, in much the same way that a person has a blood type. We now know that all IQ tests are related to culture and that one's intelligence in large degree is a product of the life one has led. We know that rich environments tend to produce intelligent people and starved environments are likely to produce dull people. We know that life is growth and that, when conditions for this growth are good, people grow and become more adequate to cope with life's problems. If this were not true, there would be little justification for the school as an institution.⁴²

Another technique for measuring intelligence is the examination method. Huxley believes that the 'single crucial examination does not provide the best test of a person's ability.' He says that many educationalists have given up that procedure 'in favour of a series of periodical tests of knowledge and intelligence and the reports, over a span of years,...Supplemented by an expert grading in terms of psychophysical type,'....⁴³

Thus far, we have considered the limitations of the modern Primary and Secondary educational systems. It is only fair to ask whether we have made any progress, say within the last fifty years. Huxley and others,⁴⁴ have painted a dull picture of the United States of America's progress during the period. In his Collected Essays, he wrote:

42. Kelley and Rasey, Education and the Nature of Man, p. 133-134.

43. Ends and Means, p. 194.

44. A Bestor, "We are Less Educated Than 50 years Ago", U.S. News and World Report, 41:68-82, Nov. 30, 1956.

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During the past half century every other nation has made great efforts to impart more knowledge to more young people. In the United States professional educationists have chosen the opposite course. At the turn of the century fifty-six per cent of the pupils in American high schools studied algebra; today less than a quarter of them are so much as introduced to the subject. In 1955 eleven per cent of American boys and girls were studying geometry; fifty years ago the figure was twenty-seven per cent. Four per cent of them now take physics, as against nineteen per cent in 1900. Fifty per cent of American high schools offer no courses in chemistry, fifty-three per cent no course in physics.⁴⁵

Scott, Hill and Burns, all professors of American universities, have written in their recent book, The Great Debate, that the allegations made by such men as Huxley and others are quite incorrect; and that their 'figures are a beautiful illustration of how information, taken out of context, can be used to support a faulty argument.'⁴⁶ The above authors wrote:

These reports (recent records from the U.S. Department of Health, Education and Welfare)⁴⁷ show, in round numbers, that 400,000 children were taking science and mathematics courses at the turn of the century out of a total population of 75,603,000.

45. Collected Essays, p. 382.

46. C.W. Scott, C.M. Hill, H.W. Burns, The Great Debate, A Spectrum Book, Prentice-Hall, Inc., 1959, p. 136.

47. U.S. Department of Health, Education, and Welfare, Offerings and Enrollments in Science and Mathematics in Public High Schools, Washington, D.C.; U.S. Govt. Printing Office, 1956. Pp. 24. Supplementary population figures cited are from the Biennial Survey of Education (1950-52) also issued by the Govt. Printing Office.

Fifty years later, while our population increased by some 100 per cent, the number of high school students enrolled in science had increased 600 per cent and mathematics class enrollments have grown by 900 per cent.

Bear in mind that this tremendous gain was registered during a period in which nearly all our children had an opportunity to go into high school, not merely the children of the socially or economically privileged. The schools certainly have not "retreated" when today from six to nine times as many of our intellectually competent boys and girls are taking science and mathematics courses as were taking these courses at the century's turn.⁴⁸

Huxley further charged that children are pampered too much today in the anxiety to see that they are happy. This is done at the expense of a proper intellectual and moral training. He writes in the New Era, "On Making Things Too Easy":

Children should be happy--we are all agreed on that. But in their laudably humanitarian desire to see that they are happy many 'advanced' educationists seem to forget that they should also be intellectually efficient and well equipped with knowledge. The distinguishing mark of too many modern systems of education (not, of course, of all) is that they fail to teach the child as much as he might reasonably be expected to learn....In so far as modern educational theorists under-estimate the importance of purely intellectual attainments, I think that they are wrong. They have, it seems to me, carried their humanitarianism too far. In their anxiety not to induce hardship on the child, they have neglected a part of their duty as teachers. For it is not enough that children should be happy; it is not even enough they should grow up into virtuous citizens. Virtue without knowledge and intellectual efficiency is but a poor, inadequate possession. True, knowledge and intellectual

48. The Great Debate, p. 136.

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efficiency cannot be had without effort, and effort is painful; to have these goods, children must be made to sacrifice a certain amount of their happiness.⁴⁹

Such a charge by Huxley is denied by Scott and his associates who recently wrote:

Are elementary schools "too easy" on children? First let's look at the field of elementary education. Is our average 6 to 12 year old youngster doing much more than merely learning an "A" for digging in sandpiles, a pat on the back for neat paper cutting, or a gold star for being a "good relaxer" during rest period?

Despite widespread opinion to the contrary, elementary school age children are learning the fundamentals, the 3 R's, more thoroughly than in 1900. Studies of test scores extending back to 1844 show that each successive generation is learning more subject matter than did past generations. For instance, a top official in one of the largest companies publishing our public school reading and arithmetic tests recently reviewed the test scores made by 230,000 pupils. Even in so brief a period as the past decade there was indisputable evidence of the increased intellectual attainments of children. The average child's reading, mathematics and language usage scores on the same tests improved by 12 per cent over a 10 year period. And this despite the fact that a study just completed in New York proved that the average child in a given grade today is one full year younger than was the average child of 35 years ago.⁵⁰

Perhaps the picture is not as bad as Huxley makes or points it. But his criticism of education since the nineteen twenties could have had some good effects upon the older methods of teaching. Smith has observed in this connection:

49. Aldous Huxley, *New Era*, "On Making Things Too Easy", December, 1930, Pp. 173, 174.

50. The Great Debate, p. 133.

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...Huxley's scathing words had positive and constructive value, for they helped to breach ramparts still stubbornly resisting the advance of new knowledge about child development.⁵¹

Huxley's Interpretation Of The Dalton Plan.

What is the Dalton Plan? Writing on the subject of the "Genesis and Evolution of the Dalton Plan", C.W.Kimmins, M.A., D.Sc., in his book entitled, The Triumph of the Dalton Plan, wrote:

The genesis of the Dalton Plan may be said to have taken place in the consciousness of a young girl of sixteen, determined, in the face of all opposition, to become a teacher. Miss Helen Parkhurst relates how, on leaving school, she secretly secured an appointment to a little rural school in Wisconsin. Here she had to teach children of all ages, including boys bigger than herself. She planned out schemes of work for the pupils, and let some of them work by themselves, while she taught others in small groups as occasion required.⁵²...Subsequently, when Miss Parkhurst went to college and was trained as a teacher, she remembers telling one of her professors that, although she would, during her time of tutelage, prepare and give class lessons in the accepted way, she meant, as soon as her student days were over, to return to the old lines she had followed in her little country school, where, as a child herself, she had seen the children's difficulties and faced the whole problem of learning from the child's and not from the teacher's point of view.⁵³

51. Education, An Introductory Survey, p. 22.

52. C.W. Kimmins, The Triumph of the Dalton Plan, Ivor Nicholson and Watson Ltd., 44 Essex St., W.C. 2, London, p. 47.

53. Id., Ibid., p. 48.

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Huxley himself, intensely interested in individual education, writes that this new system; 'devised by Miss Parkhurst and named, after the American High School in which it was first applied, 'The Dalton Plan' has worked with great success during the nineteen twenties in a great number of elementary and secondary schools in England; 'has returned with increased prestige to the land of its origin, where it is beginning to be widely appreciated.' Huxley has also said that the Dalton Plan has had some success in India, China and Japan; and is engaging the attention of educators in most of the countries of continental Europe.⁵⁴ This remark was made about thirty years ago, during which period increased attention was paid to individual education in schools of the western hemisphere. True, the number of schools in which the Dalton Plan is being worked in its entirety is still very small.⁵⁵

There have been many modifications and additions to the original plan devised by Miss Parkhurst but the principles remain the same wherever her method is put to practice. She herself has written in the "Preface" to C.W. Kimmins' book, The Triumph of the Dalton Plan: 'Why should not the spirit of co-operation supersede that of competition in play

54. Proper Studies, p. 116-117.

55. Id., Ibid., p. 117.

as well as in work?⁵⁶ She also says:

The teacher as well as the pupil learns by doing. There is, in fact, no limit to the application of this principle which will, I confidently believe, transcend in course of time the frontiers of school life and bring about in the world of men and women a regeneration of human society that will be the triumph of the future--possibly of the far future.⁵⁷

While due credit must be given to modern educationalists who support the idea of individual education, it would be erroneous to say that these modern principles of co-operation and individual effort are recent findings in their entirety. Long before Montessori or Parkhurst offered their views, individual tutorial plans were in use at Oxford and Cambridge Universities. Furthermore, the very essence of these modern educational techniques is to be found in the ancient Christian teachings. Note the following contrasting views of the old system with the Christian's made by A.J. Lynch, headmaster of West Green School,⁵⁸ Tottenham, England and author of Individual Work And The Dalton Plan; he writes the Old Code teaches:

56. C.W. Kimmins, The Triumph of the Dalton Plan, p.8.

57. Id., Ibid., p. 8.

58. West Green School--It is here that Huxley got first hand knowledge of the working of the Dalton Plan.

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School Code:-

1. Obey.
2. Imitate.
3. Don't move without orders.
4. Don't speak without orders.
5. Don't laugh without orders.
6. Try to be top.
7. Try to beat the others.
8. Don't help your neighbour.
9. Don't get help from him.
10. Don't break any school rule.

Christian Code:-

1. Be interested.
2. Be yourself.
3. Be free: explore.
4. Discuss.
5. Delight in your work.
6. Try to do it excellently.
7. Try to help the whole class.
8. Help the weaker especially.
9. Get help from the stronger.
10. Do as much for the school as
you possibly can.⁵⁹

Observe the many similarities between the Modern Methods and those of Christianity.

Now, if, as Huxley says, most people today are agreed that individual education is superior to mass education⁶⁰ then, how are these methods to be put in action, and what are the principles involved? The following are Huxley's views on the subject. He says:

59. A.J. Lynch, Individual Work and the Dalton Plan, George Philip & Son, Limited, 32 Fleet Street, Liverpool, 1925, p. 7.

60. Proper Studies, p. 116.

The first step in the Daltonization of a school consists in the abolition of class rooms and the substitution of specialist rooms. School rooms, used under the old system for the accommodation of specified classes at specified hours, become subject laboratories to which the children go--more or less as the spirit moves them in the course of the school day--to do their work for themselves....

The whole object of the Dalton Plan being to permit each child to work in his own way and at his own speed. But it is advisable to give children an idea of the average time required for the work, so that they may have a standard by which to judge of their own performance and the relative importance of the subjects.⁶¹

This responsibility, however, should not be given to children under ten years of age; but to older ones who can learn to accept responsibility and to develop initiative in learning and planning their work. The criticism, however, is often made that boys are lazy and would keep putting off their work. Huxley thinks that:

A certain percentage of children, as of grown-ups, are naturally lazy and will not work. (These, when asked their opinion of the Dalton Plan, express an unqualified dislike for it. Daltonism, they complain, makes one work; under the old system one could doze away half one's time.) The majority of girls and boys, however, really enjoy doing work which is interesting in itself or which, even if it is not interesting in itself (as much work necessary for the attainment of proficiency in a difficult subject inevitably must be), belongs to an interesting class of studies, and is realized as important.⁶²

61. Proper Studies, p. 117.

62. Id., Ibid., p. 124.

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The student knowing what he is expected to do goes about doing his job as the spirit moves him.⁶³ A record of his progress in the various subjects is kept and graphed. After some time the master evaluates the child's progress, if he finds it satisfactory, then, on consultation with the pupil, more work is given or a new subject chosen. And, again the student goes off on his own. Huxley observes that in the Dalton Plan:

The teacher is careful, when the child appeals to him for advice, not to make things too easy for his pupil; he is not there to 'coach', to hand out lumps of ready-made knowledge to give recipes for the successful passing of examinations; he is there to show the child how and where he can find the information which will solve his difficulties. Every specialist room is provided with a small but efficient reference library of the subject in question. The children are encouraged to use this library, and are shown how to profit by indices and bibliographies. The result is, that they soon become adept research workers, knowing exactly how to set about finding whatever piece of information they require. To my mind, this is one of the most valuable secondary results of the Dalton Plan.⁶⁴

There are new problems to be encountered with the Dalton Plan. One is that teachers would have a heavy burden of correcting written work; but the pupils, Huxley claims, would be well exercised 'in the art of lucid and logical expression.'⁶⁵ Another objection brought up is that mass

63. Proper Studies, p. 117.

64. Id., Ibid., p. 119.

65. Id., Ibid., p. 119.

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education is cheaper than individual education. Huxley does not agree with this view, but simply disagrees without giving convincing evidence to support his stand. He writes:

Of recent years, however, these practical objections have been proved wrong. A working teacher has devised a system of individual education which can be applied to large numbers of even the poorest pupils, which costs no more than the old system of class teaching, and which has triumphantly stood the test of practice.⁶⁶

The Dalton Plan and individual studies have also been criticised by the public as well as by educationalists. The following was written by a parent to the "Yorkshire Post", February 3, 1923, in response to Mr. Eades' (headmaster at Leeds Secondary School) enthusiasm of the Dalton Plan.

"Sir,

...I think the new method is based on an entirely wrong principle, and that by according to each child of eight years of age and upwards his full need of so-called Dalton freedom, there is grave danger of his being turned into the world half-developed, unbalanced, neurotic, and lacking in self-control. Hence my refusal to join in the chorus of praise....

When boys are given their type-written assignments, and 'get on with their job,' they invariably set about it the wrong way. 'Quite so', say the Daltonists, 'and learn by their mistakes.' This is, of course, the Heuristic method, and fortunately life is too short for human beings to learn the right only after trying the wrong and finding it wrong. Fortunately, I say, because the errors tend to persist and by their secondary impression conflict the correct--they weaken the latter. Take the case of languages. Ideal teaching here is direct instruction in correct forms. It is fatal to allow the child

66. Proper Studies, p. 116.

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to wander in the wilderness of possible error, and to make for himself a hideous past of wrong spelling, crude phrasing, and loose expression.⁶⁷

The above criticisms and others like them are made against the Dalton Plan; they, however, do not affect the fundamental principles of the Plan. There is increasing evidence in favour of the Dalton Plan, but it is too early to give any final verdict; it has not stood the test of time. The Dalton Plan is not rigid. Huxley writes:

It must not be thought that Daltonians disapprove entirely and on principle of class teaching. Certain subjects, they have found (notably arithmetic), are best taught by a combination of class with individual work. They attach due importance to the inspirational teaching of masters or mistresses, who can use their prestige and personality to create in a whole class of pupils an enthusiasm which will serve to heighten the children's zeal for individual work. They appreciate the value of class teaching when it becomes necessary to sketch the outlines of a whole subject, or to explain a general principle to a number of children of about the same capacity. And they assemble classes--or perhaps it would be more accurate to call them 'conferences'--of boys and girls for the double purpose of thrashing out difficulties and exercising the powers of correct speech and rapid, impromptu reasoning. In practice, at most Dalton schools, the periods of individual work are alternated with briefer class periods, which serve to vary the tasks, prevent monotony, and relieve the fatigue which, it has been found experimentally with children, results from an uninterrupted process of self-education.⁶⁸

67. A.J. Lynch, Individual Work and the Dalton Plan, p. 118-121.

68. Proper Studies, p. 121.

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In summarizing some of the merits of the Dalton Plan, Huxley considers the emancipation of the individual from the older and more rigid system to one where there is greater opportunity for the expression and development of the 'individual idiosyncrasy' as a major benefit.⁶⁹ That is: the 'slow boy' as well as the 'peculiarly gifted' one have the opportunity of developing their potentialities to the fullest. Another important benefit is that the problem of discipline would be lessened.⁷⁰

Huxley relates his experience in visiting an Elementary School run on the Dalton Principles in one of the poorer districts of north London. Most of the boys he said: 'bore the obvious stigmata of poverty',...⁷¹ He relates his visit as follows:

...They (the students) behaved themselves--incredible as it may sound!--like rational human beings. Their manners are good; their attitude to strangers courteous and independent. They obeyed the masters, but entirely without servility or fear; it was evident that in this school the teachers had come to be regarded as friends and helpers, not as enemies. The good order and industry of the school rooms was not incompatible with quiet discussion among the boys and the occasional passing of pupils from one room to another. When the bell rang for the mid-morning recess, the boys went on behaving like rational human beings. They put away their books, they got up quietly, they walked

69. Proper Studies, p. 122.

70. Id., Ibid., p. 123.

71. Id., Ibid., p. 125.

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out without noise. Mentally I contrasted this behaviour with that of the severely drilled and repressed children of an ordinary school class.⁷²

Moral and Disciplinary Education.

Huxley claims that western educational systems only accept the Montessori method partially. Youths are not trained to be individualists, so that they can contribute to society in an atmosphere of freedom and self-government.

Consider, by way of example, The English Public Schools. Within a fixed framework, their pupils are in a measure self-governing. Unhappily the rules, customs and loyalties, which constitute the supporting framework are the rules, customs and loyalties of a hierarchical, competitive, imperialistic society. Such training in self-government and self-teaching as the young people receive serves merely to make them more efficient and enterprising members of this intrinsically undesirable society.⁷³

In other words old techniques are applied to new problems which Huxley compares to the old and new military disciplines.

...Something similar takes place in an army preparing for war in modern conditions. The old-fashioned drill, by means of which soldiers were conditioned to overcome fear, cultivate rage and blindly obey their superiors, is an inadequate training for men who are to fight with modern weapons. The mechanization of war has made necessary a new kind of training.⁷⁴

72. Proper Studies, p. 125.

73. Ends and Means, p. 202.

74. Id., Ibid., p. 202.

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Perhaps Huxley is not wrong when he says that the English schools educate the individual so that he is fitted to his society. That is, the individual is sacrificed for the system.⁷⁵ W.H.S. Jones, Litt. D.; professor at Cambridge Training College for Schoolmasters has views contrary to those held by Huxley or Montessori on the subject of discipline. In his book, Disciplina, Jones stresses that the individual should use his will to the fullest to develop the 'higher self'; that 'the teacher must be, in the fullest and deepest sense of the word, a master.' Huxley, while not disagreeing totally, believes that human beings differ in degree and in kind, and recognizing this, that they should be taught as individuals and not as classes or groups. It is the duty of a good teacher to discover the best inclinations in the child and give him the greatest opportunity for developing them. Nor does Huxley consider the teacher a master, as Jones does; instead he or she is considered a friend. Jones has written:

Discipline, then, is more than the training of the will. It is the merging of self-will in the social will, and the turning of a part of the self into a machine. In return for the sacrifice of his self-will the individual finds satisfaction for his social needs; and his becoming in part a machine frees his will from distractions and permits it to concentrate on the more important tasks of life.⁷⁶

75. Proper Studies, p. 110-111.

76. W.H.S. Jones, Disciplina, Cambridge University Press, London, 1926, p. 5-6.

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The discipline imposed in the majority of English Primary and Secondary Schools is not as strict as that found in dictatorships.⁷⁷ Nevertheless, they are both unhealthy educational systems and should be discouraged. They should be discouraged because the material and utilitarian ends which they seek do not justify the foregoing of human values. Admittedly, the Russians have made remarkable progress in physics and geo-physics in recent years which is in great part due to the financial support from the state and the unrestrained freedom in research. This, however, is not adequate evidence to conclude that their system of education is superior to most of the other systems of the world. In other words, they have (like other nations) gone a long way in the conquest of nature; but one should bear in mind that the conquest of the physical world deals only with one aspect of life and not the whole of life. Furthermore, freedom in intellectual pursuits should not be limited to one sector, but, instead, should be given to all academic discipline in the schools of the country. Huxley has remarked that:

Our aim, let us recall, is to train up human beings for freedom, for justice, for peace. How shall it be done? In his recent book, Which Way to Peace?, Bertrand Russell has written a significant paragraph on this subject. 'Schools', he says, 'have very greatly improved during the present century, at any rate in the countries which have remained democratic. In the countries which have military dictatorships, including Russia, there has been a

77. Ends and Means, p. 185-212.

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great retrogression during the last ten years, involving a revival of strict discipline, implicit obedience, a ridiculously subservient behaviour towards teachers and passive rather than active methods of acquiring knowledge.⁷⁸

There is experimental evidence to show that severe disciplinary methods which may include physical punishment in youth cause a distortion of personality and character in later years.⁷⁹ Huxley quotes the findings of Dr. Montessori who has worked extensively in this field.

...The child who has never learned to act alone, to direct his own actions, to govern his own will, grows into an adult who is easily led and must always lean upon others. The school child, being continually discouraged and scolded, ends by acquiring that mixture distrust of his own powers and of fear, which is called shyness and which later, in the grown man, takes the form of discouragement and submissiveness, of incapacity to put up the slightest moral resistance. The obedience which is expected of a child both in the home and in the school--an obedience admitting neither of reason nor of justice--prepares the man to be docile to blind forces. The punishment, so common in schools, which consists in subjecting the culprit to public reprimand and is almost tantamount to the torture of the pilory, fills the soul with a crazy, unreasoning fear of public opinion, even an opinion manifestly unjust and false. In the midst of these adaptations and many others which set up a permanent inferiority complex, is born the spirit of devotion--not to say of idolatry--to the condottieri, the leaders.' Dr. Montessori might have added that the inferiority complex often finds expression in compensatory brutality and cruelty.⁸⁰

78. Ends and Means, p. 181.

79. J. Bowlby, Child Care and the Growth of Love, Penguin Books Inc., Baltimore 11, Md.

80. Ends and Means, p. 181.

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During the early years of the child, the disciplinary and teaching methods are good. The child is happy. It learns and creates in an atmosphere free from fear. At the age of twenty or thereabout, the young adult then becomes aware of life's rough edges. This awareness and experience make the individual a victim of those sociological psychological and physiological factors which distort the character and personality of a great percentage of modern youths. Huxley has observed:

....In his Anatomy of Frustration, Mr. H.G. Wells makes his hero comment upon the distressing difference between 'the charm, the alert intelligence, the fearless freedom of the modern child of six or seven and the slouching mental futility of the ordinary youth in his later teens.' The first is the product of the nursery school; the second of the elementary and secondary, the preparatory and public school. We educate young children for freedom, intelligence, responsibility and voluntary co-operation; we educate older children for passive acceptance of tradition and for either dominance or subordination.⁸¹

Huxley takes a pessimistic look at this tragic situation (it may be on the other hand a realistic view). He asks:

...Even if we were to prolong the nursery-school type of training, that is to say, for self-government and responsible co-operation--if we were to continue it far into adolescence, would we, in the existing world, succeed in making any conspicuous change for the better in society or the individuals composing it? Practical life is the most efficient of all teachers. Take adolescents trained for self-government and co-operation and turn them loose into a hierarchical, competi-

81. Ends and Means, p. 178.

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tive, success--worshipping society: what will happen? Will the effects of the conditioning received in school survive?⁸²

He thinks that if the environment is conducive to proper behaviour then the good training in youth will be carried out in later years.⁸³ But, if the environment is incompatible with early training, then:

...Most likely, there will be a period of bewilderment and distress; then, in the majority of cases, readjustment to the circumstances of life. Which shows, yet once more, that life is a whole and that desirable changes in one department will not produce the results anticipated from them unless they are accompanied by desirable changes in all other departments.⁸⁴

The plight of the modern parent (and this is also true of the teacher) is to know what is right and what is wrong, what is good and what is bad for their children. The parents' bewilderment is heightened in seeing that education-
alists and moralists disagree widely on this important subject. Although society changes from age to age, yet one must never lose sight of the fact that human nature remains constant. If what is good or bad for the growing child were known, then the wisest position to take would be disciplinary measures which would call for a moderate position.

82. Ends and Means, p. 179.

83. Id., Ibid., p. 186.

84. Id., Ibid., p. 179.

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Huxley himself gives no comforting remarks on this subject but merely makes broad comments:

Here, in passing, it may be remarked that 'modern' schools may be too 'modern' by half. There is a danger that children may be given more freedom than they can profitably deal with, more responsibility than they desire or know how to take. To give children too much freedom and responsibility is to impose a strain which many of them find distressing and even exhausting. Exceptional cases apart, children like to have security, like to feel the support of a firm framework of moral laws and even of rules of polite conduct. Within such a firmly established framework there is plenty of room for a training in independence, responsibility and co-operation. The important thing is to avoid extremes--the extreme of too much liberty and responsibility on the one hand and, on the other, of too much restriction, above all too much restriction of the wrong sort. For the fixed framework may just as well be a bad code as a good one.⁸⁵

An important aspect of discipline comes from self discipline, a derivative of the Dalton Plan. The child does not react through external pressure but from the 'inner voice.'⁸⁶ From strict external discipline, the child 'learns to obey, not to control himself.' He loses moral as well as intellectual independence.'⁸⁷ A combination of moral and disciplinary education could be effectively given to the child from example. In his book, A Vision of Education (to which Huxley has written an Introduction), Burns wrote:

85. Ends and Means, p. 178-179.

86. Proper Studies, p. 115.

87. Id., Ibid., p. 115.

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'What the adult feels, thinks, and does has a very great influence upon the growth of a child and before even we think of training the latter we should look into and train ourselves.'⁸⁸

Propaganda and Youth.

Moral and intellectual education of youths is greatly influenced by propaganda. The distortion of facts is particularly widespread in the fields of politics and commercial advertisements. Huxley is keenly interested in this aspect of education as he writes:

The art of dissociating ideas should have a place in every curriculum. Young people must be trained to consider the problems of government, international politics, religion and the like in isolation from the pleasant images, with which a particular solution of these problems has been associated, more or less deliberately, by those whose interest it is to make the public think, feel and judge in a certain way.⁸⁹

His criticisms are directed primarily at governments ruled by dictators and at commercialists in western democracies. He observes that:

...each month the pulp magazines offer to million of readers their quota of true confessions, film fun, spicy detective stories, hot mysteries; all day long in the movie palaces millions of feet of imbecile and morally squalid film are unrolled before a succession of audiences; from a thousand transmitting stations streams of music (mostly bad) and political propaganda (mostly false and malevolent) are poured out, for

88. J.H. Burns, A Vision of Education, Williams & Norgate, Ltd., chapter IV, London, 1929.

89. Ends and Means, p. 217.

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eighteen hours out of the twenty four, into the contaminated ether. Instruments of marvellous ingenuity and power on the one hand; and, on the other, ways of using those instruments which are either idiotic, or criminal, or both together. Such are the moral and intellectual fruits of our system of education.⁹⁰

An article appeared in "The New Republic", March 14, 1928, entitled "Aldous Huxley" which contained a review of Huxley's book, Proper Studies and general observations on his social philosophy. The editor pointed out the relationship between youth and the commercial world in the following way:

"The modern apostles of commerce are trying to persuade people to accept business as a substitute for religion. Money-making, they assert, is a spiritual act; efficiency and common honesty are a service to humanity." Mr. Huxley, with good justice will have nothing to do with such blasphemies....He sees clearly that to a growing majority of young men the aim of life has become identified with the ambition to gain social prestige through acquired wealth. To a large extent education has been prostituted to aid and abet this singularly uninspired purpose. "An upbringing in commercial surroundings, coupled with the need to earn a living, will predispose a man to set up the making of money as the end of life, and to use all his intelligence to achieve that end." It never enters the heads of these unfortunates that knowledge, that disinterested higher learning, is alone able to enrich the experience of their days, and render their commonplace existences deep and exciting. Outside its diurnal activities the religion of business offers no coherent explanation of the universe; "in times of trouble it cannot console; it compensates no miseries; its ideals are too quickly realizable--they open the door to cynicism and indifference."⁹¹

90. Ends and Means, p. 191.

91. "The New Republic", March 14, 1928, "Aldous Huxley".

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It is this false sense of values which the propagandist feeds into the minds of youths that Huxley fights so bitterly against. Besides giving erroneous information, the propagandist warps the morals and character of both the youth and adult population. Certain enthusiasts who would like to convince the world that science is the cure-all for human ills put forward sugar-coated arguments which on close examination invariably prove to be fallacious. Huxley observes:

Recently, for example, I read a little book in which an eminent American biologist gives his view about the Future. Science, he prophesies, will enormously increase human happiness and intelligence will do so, among other ways, by providing people with micro-cinematographs which they can slip on like spectacles whenever they are bored. Science will also, no doubt, be able very soon to supply us with micro-pocket-flasks and micro-hypodermic-syringes, micro-alcohol, micro-cigarettes and micro-cocaine. Long live science.⁹²

Verbal propaganda is the simplest and most direct form of propaganda. Commercial propagandists, however, use a more subtle form which entails suggestion. Huxley explains the technique of suggestive propaganda. The following examples will illustrate:

This consists in arbitrarily associating the idea which is to be suggested with some object, some image, some sound, some literary description, that is either intrinsically delightful or in some way suggestive of pleasantness. For example, the advertiser of soap will show a picture of a young voluptuous female, about to take a bath among plumbing fixtures of pink

92. Ends and Means, p. 213.

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marble and chromium. The advertiser of cigarettes will show people dining in what the lady novelists describe as 'faultless evening dress', or reproduce the photograph of some well-known film star, millionairess, or titled lady. The advertiser of whisky will illustrate a group of handsome men lounging in luxurious upholstery and being waited upon by the most obsequious of family retainers. The aim in all cases is the same--to associate the idea of the goods offered for sale with ideas which the public already regards as delightful, such as the idea of erotic pleasure, the idea of personal charm, the idea of wealth and social superiority.⁹³

The same is true in the field of politics. Here the aesthetic and emotional values derived from parades, music and pageantry have a hypnotic effect on some people to the extent that their intellectual judgments on a particular political question or on 'the value of war as a political instrument' become biased.⁹⁴ Huxley suggests that youths should be so trained that they could be able to dissociate fact from fancy particularly in the fields of commercial and political propaganda.⁹⁵ On this subject, he wrote:

They would be taught to consider monarchy and dictatorship on their own political and ethical merits, not on the choreographical merits of processions and court ceremonials, not on the architectural merits of palaces, not on the rhetorical merits of speeches, not on the organizational merits of a certain kind of technical efficiency....That the art of dissociation will ever be taught in schools under direct state control is, of course, almost infinitely improbable. Those who use the power of the state always desire to preserve a certain given order of things. They therefore always try to persuade or compel their subjects to

93. Ends and Means, p. 216.

94. Id., Ibid., p. 217.

95. Id., Ibid., p. 218.

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accept, as right and reasonable, certain solutions (hardly ever the best) of the outstanding problems of politics and economics. Hence the insistence, on the part of governments, that the ideas embodying these solutions shall always be associated with intrinsically pleasing images.⁹⁶

The propagandists have taken over our most forceful means of communication and education. In addition to their work on the intellectual and psychological aspects of mind controls, they now probe into the fields of pharmacology and physiology using them as adjuncts in the control of man's total being. Huxley discusses at length how in the future both conscious and unconscious desires would be controlled and satisfied by the findings of the scientists.⁹⁷ The dictator would also take advantage of such discoveries to further his ambitions.

In the dictatorial countries the individual is subject to propaganda, as to military training, almost from infancy. All his education is propagandist and, when he leaves school, he is exposed to the influence of a controlled press, a controlled cinema, a controlled literature, a controlled radio. Within a few years controlled television and possibly a controlled teletype service functioning in every home will have to be added to this list of weapons in the dictator's armoury. Nor is this all; it is likely enough that pharmacology will be called in as an ally of applied psychology. There are drugs, such as a mixture of scopolamine and chloral, that enormously increase the individual's suggestibility. It is

96. Ends and Means, p. 218.

97. Aldous Huxley, Brave New World, and Brave New World Revisited.

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more than likely that dictators will soon be making use of such substances in order to heighten their subjects' loyalty and blind faith.⁹⁸

It is difficult to think of a world in which men would live and move like automatons. People no longer look for sustenance in a life of meditation and reflection but, as Huxley says, one relies for happiness 'on external stimulations',⁹⁹ thereby exposing oneself 'to the full force of whatever propaganda is being made in his neighbourhood'. His remarks on this contemporary malady are:

For a majority of people in the West, purposeless reading, purposeless listening-in, purposeless looking at films have become addictions, psychological equivalents of alcoholism and morphinism. Things have come to such a pitch that there are many millions of men and women who suffer real distress if they are cut off for a few days or even a few hours from newspapers, radio music, moving pictures. Like the addict to a drug, they have to indulge their vice, not because the indulgence gives them any active pleasure, but because, unless they indulge, they feel painfully subnormal and incomplete. Without papers, films and wireless they live a diminished existence; they are fully themselves only when bathing in sports news and murder trials, in radio music and talk, in the vicarious terrors, triumphs and eroticisms of the films. Even by the intelligent people, it is now taken for granted that such psychological addictions are inevitable and even desirable, that there is nothing to be alarmed at in the fact, that the majority of civilized men and women are now incapable of living on their own spiritual resources, but have become abjectly dependent on incessant stimulation from without.¹⁰⁰

98. Ends and Means, p. 211.

99. Id., Ibid., p. 211.

100. Id., Ibid., p. 212-213.

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All serious people are aware of and concerned with the havoc caused by propaganda in dictatorships or democracies. The question is, 'How can children be taught to rely upon their own spiritual resources and resist the temptation to become reading-addicts, hearing-addicts, seeing-addicts?'¹⁰¹

First of all, they can be taught how to entertain themselves by making things, by playing musical instruments, by purposeful study, by scientific observation, by the practice of some art, and so on. But such education of the hand and the intellect is not enough. Along with the necessary knowledge and skill must be given the will to use them, even under the pressure of incessant temptation to take the line of least resistance and become an addict to psychological drugs. Most people will not wish to resist these temptations unless they have a coherent philosophy of life, which makes in reasonable and right for them to do so, and unless they know some technique by means of which they can be sure of giving practical effect to their good intentions.¹⁰²

Educationalists should build up in the minds of children the art of resistance to suggestion and dissociation. Such a training should be included 'in every curriculum' for young people. Youths as well as adults should be on guard for fallacious arguments offered by all propagandists. Examples of recognizing erroneous statements from propagandists are offered by Huxley:

101. Ends and Means, p. 213.

102. Id., Ibid., p. 213.

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Children could be shown that there is no necessity and organic connection between the pretty girl in her expensive dressing-gown and the merits of the tooth-paste she is intended to advertise. This lesson might be brought home by practical demonstrations. Chocolates could be wrapped in a paper adorned with realistic pictures of scorpions, and castor-oil and quinine distributed from containers in the form of Sealyham terriers or Shirley Temple.¹⁰³

In a democracy youth may be taught the art of dissociation without any direct hindrance from official sources, and hence the problem of propaganda could be solved in time. The problem becomes much more difficult, however, in dictatorships where the media of communication and education are controlled by the governing parties.¹⁰⁴

Physical And Mental Health, And Sports.

Huxley's views on physical education seem to have come from three main sources. They are: F.M. Alexander's books, Man's Supreme Inheritance, Constructive Conscious

103. Ends and Means, p. 218.

104. Id., Ibid., p. 218-219.

Control, and The Use of the Self,¹⁰⁵ Dr. W. H. Bates' book, Perfect Sight Without Glasses, which Huxley claims assisted him in the improvement of his own vision;¹⁰⁶ and perhaps the most important of Huxley's sources of information about physical health comes from his own experimentation. He says that at sixteen he had 'a violent attack of keratitis punctata' and was able to read only with the aid of a magnifying glass or spectacles. This condition persisted until 1939, when he read of Dr. Bates' visual re-education, and 'decided to take the plunge' into this new theory on restoring vision without the use of spectacles. Huxley writes:

105. F.M. Alexander. Huxley writes of Alexander's principles and techniques on health in Ends and Means,...

...I am sure, as a matter of personal experience and observation, that it gives us all the things we have been looking for in a system of physical education: relief from strain due to maladjustment, and consequent improvement in physical and mental health; increased consciousness of the physical means employed to gain the ends proposed by the will and, along with this, a general heightening of consciousness on all levels; a technique of inhibition, working on the physical level to prevent the body from slipping back, under the influence of greedy 'end-gaining', into its old habits of mal-co-ordination, and working (by a kind of organic analogy) to inhibit undesirable impulses and irrelevance on the emotional and intellectual levels respectively.

106. Aldous Huxley, The Art of Seeing, The Macmillan Company of Canada Ltd., Toronto, 1943, preface.

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...there were definite signs that the opacity in the cornea, which had remained unchanged for upwards of twenty-five years, was beginning to clear up. At the present time, my vision, though very far from normal, is about twice as good as it used to be when I wore spectacles, and before I had learnt the art of seeing; and the opacity has cleared sufficiently to permit the worse eye, which for years could do no more than distinguish light from darkness, to recognize the ten-foot line on the chart at one foot.¹⁰⁷

Now, what are Huxley's views on the subject of physical education? He says that it is relatively easy to arrive at adequate and proper techniques of physical education, for the body unlike the mind is visible; and furthermore, if a particular exercise is harmful it causes pain and should be rejected. But some 'men and women', he claims, 'will bear the pains of mistaken bodily training if they can be persuaded that to do so is praiseworthy.' For in the West 'tight lacing, carriage exercise, high collars and stuffy clothes' had been the vogue while in other parts of the world it was: foot-crushing, skull-distortion, slitting and distending of lips and ears and confinement within doors of women.¹⁰⁸ Improper physical education is easily detectable through pain, but inadequate mental education goes on without any such symptoms and for these reasons the present physical educational systems are more readily remediable than mental ones.¹⁰⁹ One of Huxley's fundamental views on physical education

107. The Art of Seeing, Preface.

108. Ends and Means, p. 89-90.

109. Proper Studies, p. 90-91.

ation is that it should not be merely a physical mechanical process.

Education is applied to the mind and to the body. The body is visible, and our ideas about it are in consequence tolerably correct. Nobody imagines, for example, that the right way to nourish the body is to pump food under pressure into the stomach, or that the muscles can be best developed by subjecting them to prolonged, unintermitted, and exhausting strain. Many people, it is true, eat the wrong things in the wrong way, and take inadequate and improper exercise.¹¹⁰

One of the objects of exercise, he says, is to supply blood to the various organs of the body in adequate amounts to serve as nourishment. Sustained tension in a region inhibits blood flow in that part and in time may cause damage. Huxley holds that there is a direct correlation between the recovery in certain eye diseases and blood flow to them. He makes the following observation on the relationship between physiology and pathology of the eye:

In cases of failing sight, due to old age or other causes, and in certain pathological conditions of the eye, some doctors, particularly those of the Viennese school, make successful use of mechanical methods for increasing local circulation. Temporary hyperaemia of the regions round the eye is produced by dry cupping of the temples....Relaxation and proper breaking will bring about an equal improvement in circulation, more slowly indeed, but more safely and naturally, and by methods which are entirely under the control of the person employing them.... The mechanical methods are no better than the self-directed, psycho-physical methods here described. Indeed, in so far as they are mechanical, they are intrinsically less satisfactory. If I mention them

110. Proper Studies, p. 89.

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at all, it is merely in order to corroborate the assertion that vision and the organic health of the eyes depend upon adequate circulation.¹¹¹

Again, he found that by proper exercise and relaxation of the eye muscles his own vision improved markedly.

'My own case is in no way unique; thousands of other sufferers from defects of vision have benefited by following the simple rules of that Art of Seeing which we owe to Bates and his followers.'¹¹² This experiment has shown us that there is a right way and a wrong way of exercising an organ. This fact has been also verified by Alexander (Huxley has accepted his techniques outright)¹¹³ who corrected his voice defect by the proper control of the neck muscles in conjunction with 'the depressing of the larynx'¹¹⁴ The key to Huxley's views on physical and mental health is stated in the following paragraph:

In the world as we know it, mind and body form a single organic whole. What happens in the mind affects the body; what happens in the body affects the mind. Education must therefore be a process of physical as well as mental training.¹¹⁵

111. The Art of Seeing, p. 44-45.

112. Id., Ibid., Preface, p. viii.

113. Ends and Means, p. 221.

114. F. M. Alexander, The Use of the Self, Methuen & Co., London, 1931, p. 8-11.

115. Ends and Means, p. 221.

He agrees with the findings of modern medical science that negative emotions such as fear, anger, remorse and so on can cause pathological conditions.^{116&117} But he also points out that malfunction of the body due to either acute pain or 'chronic strains and stresses' does set up 'psychological disturbances'. 'Where the body is maladjusted and under strain, the mind's relations (sensory, emotional, intellectual, conative, with external reality) are likely to be unsatisfactory.'¹¹⁸ What is needed is the proper and harmonious integration on both the physical and mental planes for maximum well-being.

Mind and body are organically one; and it is therefore inherently likely that, if we can learn the art of conscious inhibition on the physical level, it will help us to acquire and practise the same art on the emotional and intellectual levels. What is needed is a practical morality working at every level from the bodily to the intellectual. A good physical education will be one which supplies the body with just such a practical morality. It will be a curative morality, a morality of inhibitions and conscious control, and at the same time, by promoting health and proper physical integration, it will be a system of what I have called preventive ethics, forestalling many kinds of trouble by never giving them the opportunity to arise.¹¹⁹

116. Hans Seleye, The Stress of Life, McGraw-Hill Book Co., Toronto, 1956.

117. Leon J. Saul, Bases of Human Behaviour, J.B. Lippincott Co., Montreal, 1951.

118. Ends and Means, p. 220.

119. Id., Ibid., p. 222.

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Huxley considers sports from the point of view of what may be called the philosophy of sports. In his treatment of this subject he dealt with the good and evil aspects of sports as they result from nationalistic ambitions. Character training is one of the greatest goods derived from sports. Huxley considers that:

Discipline is not the only instrument of character training. One of the major psychological discoveries of modern times was the discovery that the play, not only of small children, but (even more significantly) of adolescents and adults could be turned to educational purposes. Partly by accident, partly by subtle and profound design, English educators of the second half of the nineteenth century evolved the idea of organizing sport for the purpose of training the character of their pupils....A generation later, cricket and football were compulsory in every English Public School, and organized sport was being used more and more consciously as a means of shaping the character of the English gentleman.¹²⁰

Sports, when played properly and in the right spirit, teach endurance and courage, a sense of fair play and a respect for rules, co-ordinated effort and the subordination of personal interests to those of the group.¹²¹ But sports can be used for evil purposes also:

Used badly, it can encourage personal vanity and group vanity, greedy desire for victory and hatred for rivals, an intolerant esprit de corps and contempt for people who are beyond a certain arbitrarily selected pale.¹²²

120. Ends and Means, p. 187.

121. Id., Ibid., p. 187.

122. Id., Ibid., p. 187.

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On the national and international levels, sports wield a great and often dangerous influence. This evil aspect of sport goes unnoticed by the average person, who himself unconsciously takes active part in a subtle warfare. Huxley remarks that:

In the dictatorial countries the choice has been made, consciously and without compromise. Sport there is definitely a preparation for war--doubly a preparation. It is used, first of all, to prepare children for the term of military slavery which they will have to serve when they come of age--to train them in habits of endurance, courage, and co-ordinated effort, and to cultivate that esprit de corps, that group-vanity and group-pride which are the very foundations of the character of a good soldier. In the second place, it is used as an instrument of nationalistic propaganda.¹²³

An example of the evil effects of sports on an international basis could be found in the report by I. Norman Smith to the Ottawa Journal, April 15th., 1960. The occasion was the 1960 Olympics held in the U.S.A. It was attended by Arnold Heeney, Canadian Ambassador to the U.S.A. and by ambassadors and dignitaries of other countries. The Canadian Ambassador remarked that these representatives who saw the hockey game were shocked at the hostile performance and rude attitude of the Canadian players. Mr. Heeney also noted that their performance 'was the only lapse in sportmanship in all the games.*

123. Ends and Means, p. 189.

* Norman Smith, "Canada's Olympic Hockey Embarrasses Arnold Heeney", Ottawa Journal, April 5th., 1960.

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The following is a practical example of how sports are used in dictatorships as a means of nationalistic propaganda.

Football matches with teams belonging to foreign countries are treated as matters of national prestige; victory is hailed as a triumph over an enemy, a sign of racial or national superiority; a defeat is put down to foul play and treated almost as a casus belli.¹²⁴

But Huxley also finds that malicious aspects of sports do enter into some of the democracies, although this is the exception rather than the rule. He writes:

In the democratic countries we are, as usual, of two minds. The idea of using sport solely as a preparation for war seems to us shocking; at the same time we cannot bring ourselves to use it, consciously and consistently, as an instrument for training active peace-lovers. To some extent we still use sport as a training for militarists. 'The battle of Waterloo was won on the playing fields of Eton,' and it was on these and a score or two of other school playgrounds that the Indian Empire was conquered and held down....In the half-democracy of modern England, sport is not used solely as a preparation for war and the fostering of group-vanity and group-pride; it is also used for teaching boys to behave with genuine decency--in other words, as training in non-attachment.¹²⁵

In summing up, we see that Huxley has treated a variety of subjects on pre-adolescent and adolescent education. He argues in favour of individual education on the grounds that all persons are not alike in their inclinations towards learning and considers factors which may affect and retard

¹²⁴. Ends and Means, p. 188.

¹²⁵. Id., Ibid., p. 188, 189.

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the student in his studies. For example: heredity, physical and physiological, environmental and economic or psychological factors may affect him. Such conditions, Huxley believes, should be taken into account when planning the student's curriculum.

His views on disciplinary methods are modern. He is opposed to flogging, and says that if a child is not interested in a particular subject, he should be permitted to choose another with the guidance of his tutor. Good teachers, he claims, should inspire and guide not coerce or "spoonfeed" a student; and one should be allowed to discover for himself, that is, the principle of research should be encouraged. He continues his argument in favour of individual education by saying that an individual is not body plus soul (like a mechanical mixture); instead, he is a dynamic whole, a living organism (as a chemical compound). Ideas, then, should not be 'pumped' into the mind as though it is a box. Huxley, therefore, disagrees with the earlier schools which advocate corporal punishment as a technique in teaching. And, in the main agrees with the fundamentals of the Dalton Plan.

He also comments on the measurement of intelligence; and does not believe that the Intelligence Quotient Test can accurately measure one's intelligence. Nor is he in favour of a single crucial examination. A student's progress should be measured by a series of oral and written examinations, he

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claims. Progress, then, should depend upon the individual and not on the class as a whole.

Other subjects which he considered affecting the Primary and Secondary levels are--moral education, propaganda, health, and sports. Huxley thinks that the youth is not given proper and adequate moral and spiritual training to face up to the hardships and conflicts encountered in a modern laissez-faire industrial age. He also believes that children should be taught at school how to recognize fallacies in political and commercial propaganda for the want of correct information could affect one adversely in later life. On the subject of health, he says that the mind affects the body and the body affects the mind; and that this principle should be recognized by all who are interested in education. There is, he writes, good as well as evil to be derived from sports and he deals also with what may be called moral and philosophical aspects of sports.

CHAPTER III

HUXLEY'S VIEWS ON UNIVERSITY EDUCATION

Huxley's background, university training and experience in journalism are factors affecting his views on education and especially university education. Aldous Leonard Huxley was born in 1894, a son of Leonard Huxley, editor of the Cornhill Magazine, and grandson of T.H. Huxley. His mother was Julia Arnold, (niece of Matthew Arnold and sister of Mrs. Humphrey Ward). Julian Huxley, the biologist, is his brother. Thus we see that Huxley has descended from a family of distinguished intellectuals.^{1,2} The following is an account given by himself of his university education and a brief period following as a journalist:

"I was educated", he writes, "at Eton, which I left at seventeen owing to an affliction of the eyes which left me practically blind for two or three years, an event which prevented me from becoming a complete public-school English gentleman. Providence is sometimes kind even when it seems to be harsh. My temporary blindness also preserved me from becoming a doctor, for which I am also grateful. For seeing that I nearly died of overwork as a journalist, I should infallibly have killed myself in the much more strenuous profession of medicine. On the other hand, I very much regret the scientific training which my blindness made me miss. It is ludicrous to live in the twentieth century equipped with an elegant literary

1. J. Brooke, Aldous Huxley, Writers and Their Work, No. 55, Longmans, Green & Co., p. 9.

2. S.J. Kunitz, Living Authors, The H.W. Wilson Co., New York, 1931, p. 191.

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training eminently suitable to the seventeenth. As soon as I could see well enough to read through a magnifying glass, I went to Oxford where I took my degree in English Literature. Two years of my time at Oxford were years of the war. During the remainder of the war, I cut down trees, worked in a government office--as long as my sight would stand the strain--and taught at school."³

It is important to note that Huxley was educated at Oxford through the Dalton Plan. It would perhaps have been impossible for him to follow lectures and write examinations according to a fixed schedule since he had poor eyesight; he was fortunate, then, to have private tutoring, and to study as the spirit moved him. 'I myself', he said, 'never attended more than, at the outside, two lectures a week.'⁴ His own experience with individual education gave him many of the ideas which he uses in the criticism of education today. His experience as a journalist following his formal university education also added to his general store of knowledge, from which he was able to draw when he was writing on the subject of education. He wrote:

In 1919, I joined the editorial staff of the Athenaeum under J. Middleton Murry. I married (Maria Nys, 1919). I did a huge quantity of journalism, including dramatic, musical, and artistic criticism, articles on house decoration and architecture, reviews of novels and bibliographical notes; the experience, which I should not care to repeat, taught me self-confidence. It taught me that however little one may know about a subject, one can always

3. Living Authors, p. 191.

4. Proper Studies, p. 133.

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write an article about it, fully assured that half an hour's preliminary study will make one know ten times as much as almost anyone's readers....⁵

Huxley's vast, general knowledge, his wide experience and travels, his observant and sensitive mind and above all his deep interest in the welfare of humankind are all factors which influenced his views on education.

The Functions Of A University

In discussing Huxley's views on the ideal in university education, it is admitted that the man's underlying philosophy of education is approached and possibly even touched upon. This was eliminated as subject-matter in this study. Suffice it to say, that in his other works mentioned in the Introduction, Huxley does delve much deeper into the philosophical. It was this latter delving that lies beyond the scope of this dissertation, although in the following chapter some of his deeper thoughts on education may be superficially considered in passing.

The functions of the university he says are: 'to give advanced specialized training in such subjects as medicine, law, and engineering, for the practitioners of which a high degree of technical knowledge is indispensable'; in the second place, 'to encourage disinterested researches and to

5. Living Authors, p. 191.

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impart to those capable of receiving it advanced learning of a less obviously and immediately practical kind';⁶ and, finally, to offer 'a liberal or academic education.'⁷ Gasset in his book, The Mission of the University, distinguishes in the main the same three functions of the university, namely: 'the professions, science, and culture.'⁸ This latter category Huxley calls a liberal education.

But most educationalists⁹ including Gasset have not recognized the significance of Huxley's idea of an integrating principle in education which makes knowledge not only cognitive, but also conative and affective.¹⁰

6. Aldous Huxley, Proper Studies, "Universities", Chatto & Windus, London, 1927, p. 131.

7. Aldous Huxley, Ends and Means, Chatto & Windus, London, 1927, p. 195.

8. Ortega Y Gasset, José, Mission of the University, Princeton University Press, 1944, Chap. IV, V.

9. Ends and Means, p. 202, Huxley writes: 'A particularly hopeful attempt to enlarge the scope and humanize the character of academic education was made, in the years immediately following the War, by Dr. A.E. Morgan (subsequently director of the Tennessee Valley Authority) at Antioch College.'

10. Definitions: conatus--(conari, L, to attempt), striving, inclination, tendency; an inborn desire and endeavour. Conative--pertaining to conation. Conation--The power or act of striving, with or without a conscious goal. Some modern writers make the term include every state and degree of mental unrest. Affective--Tending to affect, of or pertaining, or exciting emotion; emotional. Psychol. pertaining to affection, or affect.--sacrificing physical life and affective life to mental life (Aldous Huxley).--designating the capacity to express or transmit the emotion state of the speaker or writer; said of language. (Webster's New International Dictionary C.&O. Merriam & Co. The Riverside Press, Cambridge, Mass., USA., 1950).

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Huxley's has not written a great deal about the professions: medicine, law, engineering, and so on, but has given us better accounts of his views on the two other functions of the university--science and liberal education. In his novel, Point Counter Point (1928) and he elsewhere, satirized the scientist for carrying out ridiculous experiments. In Antic Hay, one sees Mr. Shearwater's experiments in measuring hydrogen ion concentration in his own sweat (as he rides an artificial bicycle in his laboratory), are as ridiculous as Lord Tantamount's experiments of grafting a tail of an animal to its amputated leg.¹¹ He wrote in his book, Proper Studies:

To encourage research is, as I have said, one of the functions of a university. Contemporary universities have been taking this part of their duties too seriously. They have encouraged research, not only in those cases where research was worth making, but on all sorts of entirely unprofitable subjects as well.¹²

Huxley has a peculiar distrust for scientists and their motives. Already in Crome Yellow, Mr. Scogan predicts a scientific Utopia:

An impersonal generation will take the place of Nature's hideous system. In vast state incubators, rows upon rows of gravid bottles will supply the world with the population it requires. The family system will disappear; society, sapped at its very base, will have to find new foundations; and Eros, beautifully

11. Aldous Huxley, Point Counter Point, Random House, New York, 1928.

12. Proper Studies, p. 134.

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and irresponsibly free, will flit like a gay butterfly from flower to flower through a sunlit world.¹³

Modern specialization, and this specialization could be of the Arts or Sciences, could lead to an unbalanced personality. It is a common occurrence today to find eminent scientists who know very little about man as a social or moral being.

In the case of scientists and philosophers, this ineptitude outside their own line of business isn't surprising. Indeed, it's almost inevitable. For it's obvious that excessive development of the purely mental functions leads to atrophy of all the rest.... But in an artist, there's less specialization, less one-sided development; consequently, the artist ought to be sounder right through than the lop-sided man of science.¹⁴

Huxley's quarrel with the physiologists started as early as the nineteen twenties in Crome Yellow (1921) and was carried on in the Brave New World, (1932) and continued with the Brave New World Revisited (1958). In these latter novels demagogues and dictators, physicists and pharmacologists alike come in for a share of his biting satire:

Dictatorship by drugs is no longer a fantasy. The "soma" of Brave New World forecast the Miltown of today, the possible Iproniazid of tomorrow. These, with other inexpensive tranquilizers or stimulants still to be developed, will make ideal weapons for the state-operated "psychopharmacopeia". Other weapons for the dictator are subliminal projection, hypnopaedia (a method of "teaching" a person while he sleeps), and all the chillingly successful arts of brainwashing. With a combination of these forces at its command,

13. Aldous Huxley, Crome Yellow, Chatto & Windus, London, 1921.

14. Point Counter Point, p. 377.

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the state would have little difficulty blotting out even the memory of liberty in most of its subjects. Brave New World Revisited is not fiction. It is a shocking, yet calm, estimate of what has been done, what is being done and what may very soon be done to turn men into compliant robots. The enemies of freedom are subtle, often on observed, and far more numerous than we suppose. Mr. Huxley reveals them with the lucidity and scientific insight for which he is famous. With overpowering impact, the book is a challenge to complacency and a plea that mankind should educate itself in freedom before it is too late.¹⁵

No one should be of the opinion that Huxley longs for the fulfilment of the dream of the Noble Savage and the eventual destruction of our modern industrial society.¹⁶ In fact, he condemns the views of mystical romanticism.¹⁷ One may say he is a realist, but he never loses sight of the warmer and more positive emotions and human values.¹⁸ His satire on science is not with a negative intention but with the hope that mental and physical resources should be harnessed and directed towards the creating of a sane and healthy society. Scientific research, Huxley claims, is probably never completely valueless.¹⁹

15. Aldous Huxley, Brave New World Revisited, Harper & Brothers, 1958, see Fly Leaf.

16. Id., Ibid., "Over-Organisation", chap. (111).

17. Aldous Huxley, Do What You Will, "Wordsworth in the Tropics", Chatto & Windus, London, 1956, p. 113.

18. Aldous Huxley, Music at Night, "The New Romanticism", Chatto & Windus, p. 211-221.

19. Proper Studies, p. 134.

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The third branch of learning at the university is that which is concerned with liberal education. Huxley, himself a graduate in literature from Oxford writes with some degree of authority on the subject. This is what he says about a liberal education. Note his stress on the practical and moral as opposed to the merely theoretical and formal.

A liberal education prepares young people for life by training their intellects. A man who has received a Liberal education may be trusted to think well and quickly in any crisis. His mind has been strengthened by wrestling with philological and mathematical difficulties, just as his body might be strengthened by doing gymnastics. A liberally educated man, if he should ever find it necessary to learn some new and unfamiliar subject, will do so with ease, because his mind has been invigorated and trained to use its strength in the best and most economical way. In other words, ability acquired in academic studies is transferred to other activities. Such is the theory at the back of Liberal Education.²⁰

Huxley's definition of a liberal education reminds one of Newman's definition of the same subject written almost a century ago. Newman wrote then:

"(It is the education which gives a man a clear conscious view of his own opinions and judgments, a truth in developing them, an eloquence in expressing them, and a force in urging them. It teaches him to see things as they are, to go right to the point, to disentangle a skein of thought, to detect what is sophistical, and to discard what is irrelevant. It prepares him to fill any post with credit, and to master any subject with facility. It shows him how to accomodate himself to others, how to throw himself into their state of mind, how to bring before them his own, how to influence them, how to come to

20. Proper Studies, p. 162-163.

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an understanding with them, how to bear with them. He is at home in any society, he has common ground with every class; he knows when to speak and when to be silent; he is able to converse, he is able to listen; he can ask a question pertinently, and gain a lesson seasonably, when he has nothing to impart himself; he is every ready, yet never in the way; he is a pleasant companion, and a comrade you can depend upon; he knows when to be serious and when to trifle, and he has a sure tact which enables him to trifle with gracefulness and to be serious with effect. He has the response of a mind which lives in itself, while it lives in the world, and which has resources for its happiness at home when it cannot go abroad.)²¹

Ten years after his first definition of a liberal education (which he also calls academic) in his book, Proper Studies, Huxley re-defined it in his Ends and Means as follows:

Academic education is supposed to do two things for those who are subjected to it; it is supposed, first of all, to be a gymnastic, by means of which they will be able to develop all the faculties of their minds, from the power of logical analysis to that of aesthetic appreciation; and, in the second place, it is supposed to provide young people with a framework of historical, logical and physio-chemico-biological relationships, within which any particular piece of information acquired in later life may find its proper and significant place.²²

Note the use of the word gymnastic which he uses time and again in relation to liberal education. He may be thinking when he uses it of his own varied experience from cutting down trees during the war (First World War) to studying with a magnifying glass at university and his work at journalism.

21. H. Tristram, Newman's Idea of a Liberal Education, p. 104, George G. Harrap & Co., London, Toronto, 1952.

22. Ends and Means, p. 192.

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The above definition has some resemblance to his grandfather's on the same subject:

That man, I think, has had a liberal education who has been so trained in youth that his body is the ready servant of his will, and does with ease and pleasure all the work that, as a mechanism, it is capable of; whose intellect is a clear, cold, logic engine, with all its parts equal strength, and in smooth working order; ready like a steam engine, to be turned to any kind of work, and spin the gossamers as well as forge the anchors of the mind; whose mind is stored with a knowledge of the great and fundamental truths of Nature and of the laws of her operations; one who, no stunted ascetic, is full of life and fire, but whose passions are trained to come to heel by a vigorous will, the servant of a tender conscience; who has learned to love all beauty, whether of Nature or of art, to hate all vileness, and to respect others as himself.²³

'A liberal education', Huxley writes 'prepares young people for life'.²⁴ The characters of his 1920 novels all show the symptoms of emotional instability or intellectual immaturity. Huxley's young heroes are not heroes but fools. Denis, the poet; Theodore Gumbriel, Junior B.A. (Oxon.); Lypiat, the artist, are all ingeniously satirized. Commenting on Huxley's early novels, Brooke wrote that they:

...were mainly satirical and (like the historical studies of Lytton Strachey) were largely concerned with the 'debunking' of accepted ideas and standards. Like T.S. Eliot, James Joyce, Wyndham Lewis, and others of his own or a slightly earlier generation, he was profoundly affected by the progressive breakdown of nineteenth-century ideals which had culminated in the First World War; and his predicament is reflected in these early volumes, in which the surface

23. J.W. Bowyer, The Victorian Age, F.S. Crofts & Co., New York, 1938, p. 414.

24. Proper Studies, p. 127.

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gaiety serves only to emphasize his underlying pessimism. Religion, conventional morality, romantic love, all are subjected to a cynical and ruthless mockery.²⁵

On the same subject A.C. Ward has observed:

As Aldous Huxley looked out upon the nineteen-twenties, his attention was not engaged by the spectacle of social injustice, but by the flux of social relationships among supposedly cultured people. It is the interior life--the life of the mind, and that part of life in which moral principle operates--that interests Aldous Huxley more than the external life where class clashes with class.²⁶

Huxley's notion of a liberal education should help to correct these tragic failures of our modern civilization. Life should not be lived as a patch-work, but as one woven whole, a continuum. This wholeness and harmony, he says, the ancient Greeks possessed.²⁷

Having considered his general notions on the three main functions of the university, namely, the professions, science, and liberal education, we shall now consider his views on the shortcomings of universities.

The Shortcomings Of Our Universities.

The shortcomings of our universities today are many and varied. The curriculum is divided in the main into two

25. J. Brooke, Aldous Huxley, Writers & Their Work: No. 55, Longmans, Green & Co., Toronto, 1954, p. 9.

26. A.C. Ward, The Nineteen-Twenties, Methuen & Co., Ltd., London, 1930, p. 116.

27. Point Counter Point, p. 376.

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branches, namely, technical and academic or liberal; both of which are unsatisfactory. The problem before us is this:

... 'to amend them in such a way that technical education shall become more liberal, and academic education more adequate preparation for everyday life, in a society which is to be changed for the better'.²⁸

Huxley strikes at the heart of the problem when he remarks:

To the pupils of our technical schools, no principle of integration is given. Their teachers provide them with no frame of reference, no coherent system of relationships. They are taught a job and no more--equipped with a technique and just so much of the theory lying behind that particular technique as will make them efficient workers. They emerge into the world wholly unprepared to deal in an intelligent way with the facts of experience. The web of understanding which, in the mind of the accomplished intellectual, connects the atom with the spiral nebula and both with this morning's breakfast, the music of Bach, the pottery of neolithic China, what you will--this network of cognitive relationships is all but completely lacking. Bits of information exist for the technically educated man, not as parts of one vast continuum, but in isolation, like so many stars dotted about in a gulf of black incomprehension....The successful product of technical education is as unsatisfactory as the successful product of academic education.²⁹

Felix Frankfurter in his preface to Alfred North Whitehead's book, The Aims of Education, supports Huxley's views that there is the need for greater integration at the university level:

That our universities have grave shortcomings for the intellectual life of this nation is by now a commonplace. The chief source of their inadequacy is probably the curse of departmentalization....The

28. Ends and Means, p. 195.

29. Id., Ibid., p. 196-197.

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need for breaking down sterilizing departmentalization has been widely felt....Professor Whitehead distrusted closed systems because they imprison the creative possibilities of insight and experience.³⁰

The question may be asked, then, wherein lies the weakness in our liberal arts curriculum? On this problem Huxley writes:

The man who goes through a course of our academic education may come out a parrot. In this case we say that the education has failed of its purpose. Or he may come out as an efficient specialist. In this case we say that the education has been only partially successful. Or else (and when this happens we think that education has worked very successfully) he may emerge as an intellectual--that is to say, a person who has learned to establish relations between the different elements of his sum of knowledge, one who possesses a coherent system of relationships into which he can fit all such new items of information as he may pick up in the course of his life. We can define this system of relationships in terms of what is known and say (what has been said above) that it is predominantly scientific and historical, logical and factual. We can also define it in terms of the knower and say that it is predominantly cognitive, not affective or conative. The parrot repeats, but does not understand; the narrow specialist understands, but understands only his specialty; the accomplished intellectual understands the relations subsiding between many sectors of apprehended reality, but does so only theoretically. He knows, but is fired by no desire to act upon his knowledge and has received no training in such action. We see, then, that even the man whom we are accustomed to regard as the successful product of our academic education is an unsatisfactory person.³¹

'Not only do modern universities produce Parrots but also Babbits and Philistines'.³² These are the blunt observations of Huxley, a man who is generally regarded as one

³⁰. A.N. Whitehead, The Aims of Education, The New American Library, New York, 1949, Preface.

³¹. Ends and Means, p. 195, 196.

³². Proper Studies, p. 105.

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whose observations are objective and unemotional. He reminds one of Arnold's views on culture when he writes:

Higher education is so remote from ordinary life that it hardly affects the majority of learners. Most of our contemporary Babbitts have been to the university. A higher education that turns out such products must indeed be in need of reform. The interests, the intellectual outlook, of the educated Babbitt are exactly the same as those of the uneducated. This means only one thing: the various "subjects" taught at our educational establishments are so completely disconnected with life that it never even occurs to the learners to absorb them into the practical workaday part of their minds; it never even strikes them that knowledge may be used to enrich ordinary experience, to test prejudices and conventions of conduct. Philosophy, science, literature are so many "subjects", learned and forgotten. The essential Babbitt remains unmodified by them. He emerges from the university the unregenerate Philistine he was before he entered.³³

Other shortcomings of the modern university which could be "easily" remedied, but, nevertheless exist are that many students go to university for prestige, to be a member of a sorority or fraternity, or for athletic purposes.³⁴ While, yet others run away from the realities and problems of life by going to a university. This escape may be considered an intellectual opiate.

That's why (among other reasons) there's such a demand for higher education. The rush to books and universities is like the rush to the public house. People want to drown their realization of the difficulties of living properly in this grotesque contemporary world, they want to forget their own deplor-

33. Proper Studies, p. 104, 105.

34. Id., Ibid., p. 132.

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able inefficiency as artists in life.³⁵

The main defects of the university lie in its technique, its teachers and its students. These subjects have been discussed in the chapter, Primary and Secondary Education. Essentially they also apply to the university. Huxley claims that:

The chief defect of the curriculum of a Liberal Education is that the majority of children are not interested in academic subjects, and are unable to see that they have any significance whatsoever outside the classroom and examination hall...All teachers agree that the majority of pupils in secondary schools, and even in universities, belong to this class; they are simply not interested in the subjects they are taught, they are bored by the prevailing abstract method of teaching. A liberal education in the eyes of these students is merely a Liberal, even a prodigal, waste of time.³⁶

How then, are these basic deficiencies of our universities to be corrected? Huxley's recommendations that follow are not merely beliefs, but views based upon pragmatic and experimental results.

Literature And The Fine Arts.

Before we get to Huxley's recommendations, let us consider his criticism of literature and other fine arts, as it could throw some light on how he thinks these subjects should be taught. Literature, he holds is partly subjective and

35. Point Counter Point, p. 380.

36. Proper Studies, p. 129, 130.

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therefore cannot be treated or measured as the sciences. The views of Huxley on the subject, "Literature and Exams", in his essays, The Olive Tree, are controversial or perhaps they merely throw new light on an old subject. He claims that one's ability in literature or the other fine arts cannot be measured by a yardstick. So, too, Intelligence Quotient tests cannot accurately measure an individual's intelligence.³⁷ However, if degrees are to be offered, and they are, then, examinations are necessary. On this matter, Huxley comments as follows:

...literature and the fine arts should convert themselves, at any rate partially, into parodies of the exact sciences. Literature and art appeal as much to the affective and conative as to the merely cognitive side of man's being. But if you are going to give people marks for literature and art, you must ask them questions that can be answered correctly or incorrectly, you must set them tasks which can be performed only by dint of persevering industriousness.³⁸

The 'ultimate cause' of the desire for diplomas and degrees in the Fine Arts is economic, which is in Huxley's opinion one of the chief defects in the modern educational system.

Degrees have a definite cash value. The possession of a given diploma may make all the difference (as my correspondents so often point out in their appeals to my better feelings) between low wages and a low

37. Proper Studies, "Varieties of Intelligence", p. 64, 65.

38. Aldous Huxley, The Olive Tree, The Albatross, Leipzig, Paris, 1937, p. 51.

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social position in an elementary school and good wages, with considerable social prestige, in the hierarchy of secondary education.³⁹

Creative studies cannot be accomplished when the mind is bogged down by common events of everyday living. Huxley has often said that a happy atmosphere is conducive to successful studies and that a certain amount of leisure is a helpful factor.⁴⁰ Too often insignificant topics of research are undertaken by students, on which they waste several months or years of their lives.⁴¹ An unpleasant remark but nevertheless true of many lecturers in the arts, (and to a lesser extent in the biological sciences) is that:

Fashions in criticism change, and the candidate must be able to regurgitate the judgement in vogue in academic circles at the time of his ordeal. Success in literary examinations comes to those who know, among other things, what formulae happen, momentarily, to be correct.⁴²

There are other interesting and useful criticisms offered by Huxley on the arts. The function of the Fine Arts can be good or evil.⁴³ That is, Huxley does not support the art for art's sake school. In the Foreword to his book, Brave New World, he wrote:

39. Aldous Huxley, The Olive Tree, The Albatross, Leipzig, Paris, 1937, p. 51.

40. J.H. Burns, A Vision of Education, Introduction by A. Huxley, Williams & Norgate Ltd., London, 1929.

41. The Olive Tree, p. 50.

42. Id., Ibid., p. 50.

43. Ends and Means, p. 207.

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Art also has its morality, and many of the rules of this morality are the same as, or at least analogous to, the rules of ordinary ethics. Remorse, for example, is as undesirable in relation to our bad art as it is in relation to our bad behaviour. The badness should be hunted out, acknowledged and, if possible, avoided in the future.⁴⁴

Continuing on the subject of the Fine Arts, Huxley says that, the actors of plays themselves could 'derive good emotional training' from their acting, but on the other hand their minds could also become warped depending on the kind of play.

'All arts can be used as a form of self-abuse; ...nobody can make a habit of self-exhibition, nobody can exploit his personality for the sake of exercising a kind of hypnotic power over others, and remain untouched by the process'....To some extent, it may be, the watching of plays can serve the same purpose. We must, however, be on our guard against attributing to drama educative virtues which, at any rate in its present form, it certainly does not possess. In relation to the modern play or film, it is sheer nonsense to talk about the Aristotelian catharsis. A greek tragedy was much more than a play; it was also a cathedral service, it was also one of the ceremonies of the national religion. The performance was an illustration of the scriptures, an exposition of theology. Modern dramas, even the best of them, are none of these things. They are essentially, secular. People go to them, not in order to be reminded of their philosophy of life, not to establish some kind of communion with their gods, but merely to 'get a kick', merely to titillate their feelings.⁴⁵

Huxley has observed that music like the other arts can serve a useful function. One should also see his implication in the following annotation that music can be used for evil purposes.

44. Aldous Huxley, Brave New World, Foreword, A Penguin Book, 1932.

45. Ends and Means, p. 205-206.

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Music, for example, may be used to teach a number of valuable lessons. When they listen to a piece of good music, people of limited ability are given the opportunity of actually experiencing the thought-and-feeling-processes of a man of outstanding intellectual power and exceptional insight. (This applies, of course, to all the arts; but there is reason to believe that more people are able to participate, and participate more intensely, in the experience of the music-maker than in that of the painter, say, or the architect, or perhaps even the imaginative writer.) The finest works of art are precious, among other reasons, because they make it possible for us to know, if only imperfectly and for a little while, what it actually feels like to think subtly and feel nobly. Music also serves to teach a very valuable kind of emotional co-operation. Singing and playing instruments together, people learn, not only to perform complicated actions requiring great muscular skill and the mind's entire attention, but also to feel in harmony, to be united in a shared emotion.⁴⁶

Having considered Huxley's views on the functions of the university; the role that it should play and the role that it fails to play; the good and evil functions of the Fine Arts; we shall now consider his suggestions for correcting the basic failures.

Huxley's Recommendations For Correcting The Shortcomings Of Universities.

It is generally agreed that there is too much overspecialization in our universities. Huxley's analysis of the problem is as follows:

46. Ends and Means, p. 204, 205.

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We have seen that both the existing kinds of education, technical as well as academic or liberal, are unsatisfactory. The problem before us is this: to amend them in such a way that technical education shall become more liberal, and academic education a more adequate preparation for everyday life in a society which is to be changed for the better....What is needed is another principle of integration--a principle which the technicians and the unsuccessful academics will be congenitally capable of using; a principle that will co-ordinate the scattered fragments, the island universes of specialized or merely professional knowledge; a principle that will supplement the scientifico-historical frame of reference at present used by intellectuals, that will help, perhaps, to transform them from mere spectators of the human scene into intelligent participants. What should be the nature of this new principle of integration? The answer seems clear enough, at any rate in its main outlines: it should be psychological and ethical. Within the new frame of reference, co-ordination of knowledge and experience would be made in human terms; the network of significant relations would be, not material, but psychological; not indifferent to values, but moral; not merely cognitive, but also affective and conative.⁴⁷

There is no evidence to show that Wheeler influenced Huxley's views on education, but it is interesting to note the very close correlation between Huxley's views and her following observations:

But it must be admitted that over-specialization is not limited to Technical Colleges; it exists also in Universities, in the Faculty of Science, as well as of Applied Science, whenever the results of particular branches of Science are taught without due regard to the generality of scientific method. It may even be found in the Faculty of Arts, for example, in language studies, where the emphasis is laid on

47. Ends and Means, p. 199.

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grammar and technique rather than on literature and thought.⁴⁸

A concrete example will help to make this clear. To give to a technician or say a professional engineer added liberal arts subjects will not give him 'a principle by means of which he will be able to integrate his knowledge and experience.'⁴⁹

There would be no difficulty, however, in getting him to take an interest in human affairs. It is, therefore, in terms of human affairs that his technical education can best be liberalized. There would be no difficulty in integrating any technical subject into a comprehensive scheme of relations within our human, ethico-psychological framework. The technical course would be accompanied by a course explaining the effects, as measured in terms of good and evil, well-being and suffering, of the technique in question. Our hypothetical young man would learn, not only to be a mechanician, but also to understand the ways in which machinery affects, has affected and is likely to affect, the lives of men and women....The technician would integrate his experience and special knowledge in human terms only; the intellectual would integrate in terms of the non-human material universe as well as of the human world. Both educations would thus be made genuinely liberal--liberal in academic sense, because even the technical student would be given a wide range of knowledge and a principle of integration.⁵⁰

Huxley approves of the integrating principle of Dr. A. E. Morgan which makes knowledge not merely cognitive, but also affective and conative. Dr. Morgan's experiments were roughly as follows:

48. Olive A. Wheeler, Creative Education and the Future, University of London Press, 10 & 11 Warwick Lane, London, E.C. 4, p. 282.

49. Ends and Means, p. 199.

50. Id.; Ibid., p. 197-201.

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...periods of study are alternated with periods of labour in the factory, the office, and the farm--even the prison and the asylum. Three months of theory are supplemented and illustrated by three months of practice, the intellectual is taught to make use of a frame of human reference as well as a frame of natural--scientific and historical reference--and taught, what is more, in the most effective of all possible ways, in terms of physical contact with actual samples of human reality. His principle of integration is not merely cognitive; thanks to an educational system which compels him to take part in many different kinds of practical work, it is also conative and affective.⁵¹

Besides the principle of integration, Huxley stresses two other opinions. First, that human minds vary in kind and degree, and, secondly, that the Dalton Plan brings out the best from individuals. He suggests that:

The first step towards reform must be the recognition that all human minds are not the same, that intelligence differs not only in degree, but to some extent also in kind. From this it follows that no single curriculum is suitable for all pupils. The existing system of academic education may be preserved for the relatively few young people whose minds work abstractly and who are interested in knowledge and ideas for their own sakes. For the less intelligent students of the same type a simplified form of Liberal Education with some definitely vocational bias might be invented. Neither of these curricula would be suitable for the many practical-minded boys and girls, to whom theory is uninteresting and abstraction meaningless. For the more intelligent of these a Liberal Education might be supplied in terms, so to speak, of practice; they would learn something of science through applied science. The less intelligent of the practically minded would take a similar but less liberal course. Daltonized teaching would in all cases give scope to every pupil to display whatever peculiar

51. Ends and Means, p. 202, 203.

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talents he possessed.⁵²

From the foregoing consideration of Huxley's views on university education, we have seen that he suggests that the three functions of the university--the professions, the sciences and the liberal arts--are inadequate. To remedy them, the university curriculum, he says should be made vital and dynamic, in such a way, as to enrich the life of the individual, who should in turn contribute to the well-being of his community... 'that what is now abstract and remote should be wedded in some way to practical life, that it should be made to spring from the ordinary experiences of modern man, and so be enabled to modify his conduct.'⁵³

52. Proper Studies, p. 130.

53. Id., Ibid., p. 130.

CHAPTER IV

THE IDEAL SYSTEMS OF THE FUTURE

The ideal educational system of the future, Huxley claims, should be one which would aim at training an individual 'to perform those functions which he is naturally adapted to perform'; so that he or she will occupy a place 'in the social hierarchy without destroying his or her individuality.¹

The training of an individual should begin at infancy. This period is important for two reasons. Early childhood training, as has been shown earlier, does have an influence on the future behaviour and character of the individual. Also important is that the child's early life should be considered an end in itself, and that the child should be happy while receiving proper training. This notion although not agreed on formerly is today generally accepted. In the Preface to Burns' book, A Vision of Education, Huxley wrote the following on the subject of childhood education:

We demand that children shall be happy and that potentialities shall be actualized, their personalities developed to the highest possible degree. This is a task, as one of Mr. Burns' characters points out, which can be perfectly accomplished only

1. Proper Studies, p. 136.

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by a teacher endowed with understanding, love, and the genius of pedagogy.²

The ideal educational systems of the future should utilize all available means of communication, not merely the classrooms of formal institutions. Huxley has observed that the machine has given us many benefits--leisure, prosperity, and it has to a great extent done away with physical drudgery. 'Leisure and prosperity (at any rate in moderate quantities) are good in themselves; it is right that the animal in man should be well fed, comfortable, and not over-worked;' but these benefits of the machine should not be considered as final ends, they should be used as aids in the pursuit of culture and a life to be lived on the highest levels.³ In his book, Proper Studies, Huxley wrote that comfort should not be an end in itself but a means to other ends.

Though I personally enjoy comfort, I have lived very happily in houses devoid of almost everything that Anglo-Saxons deem indispensable. Orientals and even South Europeans, who know not comfort and live very much as our ancestors lived centuries ago, seem to get on very well without our elaborate and costly apparatus of padded luxury. I am old-fashioned enough to believe in higher and lower things, and can see no point in material progress except in so far as it sub-serves thought.⁴

2. J.H. Burns, A Vision of Education, Preface by Aldous Huxley, Williams & Norgate, Ltd., London, 1929.

3. Aldous Huxley, "The Outlook for American Culture" Some reflections in a Machine Age, Harper, Vol. 155, Aug. 1927, p. 265-272.

4. Proper Studies, p. 298.

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While machinery has given us the opportunity to awaken, nourish and satisfy the deeper life (for today the average person does have access to books, radio, television, and other means of communication hitherto unobtainable), yet the mass of humanity does go or is being led in the opposite direction. Our creative and reflective capacities are being blunted and misdirected. Huxley remarked that:

Recreation is provided ready-made by enormous joint-stock companies. The play-instinct, which found active expression in the past, is now passive. In the days before machinery, men and women who wanted to amuse themselves were compelled, in their humble way, to be artists. Now they sit still and permit professionals to entertain them by the aid of machinery. It is difficult to believe that general artistic culture can flourish in this atmosphere of passivity.⁵

American educators are becoming aware, more and more, that if education is failing today, it is due to the lack of recognition that there are 'higher and lower things' and that material progress essentially should be considered means not ends. In an article, "Education In Review", appearing in the New York Times, Loren B. Pope wrote the following which is compatible with Huxley's views:

In today's world, it is not merely desirable but obligatory on the colleges to produce men of principle. The future safety of society cannot be entrusted merely to men of skills....Colleges can do this by doing the best possible job of intellectual develop-

5. A. Huxley, "The Outlook for American Culture".

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ment. The conditions conducive to excellence in teaching and learning are largely those conducive to the development of character. Large or small, wealthy or poor, each college can become such a force if it wants to. But, while colleges make a great pretense of seeking excellence very few do.⁶

Again, the development of the individual's potentialities to the fullest should not be sacrificed for "mass culture". And culture should not be misunderstood to be some sort of standardization or some generally accepted norm of human behaviour. On the subject of "The Ideal Systems of the Future", Huxley writes:

Present-day education and present-day social arrangements put a premium on the citizen and immolate the man. In modern conditions human beings come to be identified with their socially valuable abilities. The existence of the rest of the personality is either ignored or, if admitted only to be deplored, repressed, or, if repression fails, surreptitiously pandered to.... When men are brought up to be citizens and nothing else, they become, first imperfect men and then unsatisfactory citizens. The insistence on the socially valuable qualities of the personality, to the exclusion of all the others, finally defeats its own ends. The contemporary restlessness, dissatisfaction, and uncertainty of purpose bear witness to the truth of this. We have tried to make men good citizens of highly organized industrial states: we have only succeeded in producing a crop of specialists, whose dissatisfaction at not being allowed to be complete men makes them extremely bad citizens.⁷

The future educational systems, then, summing up Huxley's views, would consider that education begins with birth and is continued to maturity uninterrupted; that life

6. Loren B. Pope, "Education in Review", Study finds Colleges Can Hold Students by Demanding Excellence, New York Times, March 15, 1959.

7. Proper Studies, p. 130.

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should be lived as a whole and not in patches; that formal educational institutions as well as mass media (afforded through machinery) should be utilized to help the individual in acquiring such material, intellectual and moral goods as would assist him to lead a full and harmonious life.

SUMMARY AND CONCLUSIONS

Huxley's views on education have been traced to four main sources. They are the writings of Montessori, Miss Parkhurst (the founder of the Dalton Plan), F.M. Alexander and Dr. A.E. Morgan. We have seen that Huxley's reference to the Montessori Method is chiefly in connection with the training of children of the Kindergarten or Nursery school age. The Dalton Plan he applied in his consideration of Primary and Secondary school levels. Alexander's ideas on health and exercise have led Huxley to claim that what happens in the mind affects the body and what happens in the body affects the mind. Alexander's three books on health, (Man's Supreme Inheritance, Constructive Conscious Control, and The Use of the Self), have also influenced Huxley to believe that the improper use of an organ or part of the body can lead to malfunction of that localized area. The fourth very important influence upon Huxley was Dr. Morgan's teaching, which Huxley used in his treatment of university education. Morgan's principles briefly are as follows: periods of study are alternated with periods of work in a factory, office, farm, hospital or asylum. This dynamic blending of theory with the actuality of every-day living would, they (Huxley and Morgan) claim, make learning not merely cognitive, but also affective and conative.

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The periods of training during infancy and early childhood are very important as they influence the later character and behaviour of the individual. Unlike the Freudians, Huxley does not believe that the future behaviour of a person is completely or almost completely laid down during the earliest months and years of life. The will of the individual, he claims, and environmental factors do have profound influences upon behaviour and can greatly modify patterns of thinking acquired early in life. For this reason Huxley holds that the good training received during early childhood should be continued in later years; and that 'good education will be fully effective only when there are good social conditions and, among individuals, good beliefs and feelings;'.¹ Since education in early childhood is important, the child should receive the best training during this fertile period. Education of the senses, imagination and elementary training of the intelligence are adequate at modern Kindergartens and Infant schools. There the child is happy and education is of an active type. Some parents, however, Huxley believes, do not have the knowledge that is required for adequate training of the child during the early and impressionable months and years.

Primary and Secondary education which follow the earlier period of active learning are mainly passive. At these

1. Ends and Means, p. 180.

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levels the teacher tries to 'ram' in or 'pour' information into the child's brain. Huxley writes:

Ram it in, ram it in!
Children's heads are hollow.
Ram it in, ram it in!
Still there's more to follow.²

He is opposed to large classes and to classroom and lecturing procedures. He thinks that education is more effective by coaching the individual. Assignments for a period of several weeks are given and the student goes about his study as 'the spirit moves him';³ classrooms are more in the form of laboratories equipped with a library of books for a particular branch of study. There the students may assist each other or discuss in groups. A master or mistress presides in that specialty and acts in the capacity of a friend and guide. The students' reports are corrected and the results tabulated. At intervals the teacher may make suggestions or modify the student's curriculum. A final assessment of the work is made and recommendations offered by the master. This method is in principle the same as the Dalton Plan of Miss Parkhurst which treats education from the point of view of the individual.

2. Proper Studies, p. 111.

3. Id., Ibid., p. 117.

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Upon the successful completion of education at the Secondary School level, if the student has the opportunity and inclination, he may then enter university. There, the procedures in teaching vary widely among universities. Huxley notes that 'it is possible at Oxford or Cambridge to obtain a degree without ever attending any lectures at all;' but that 'at most other universities, an entirely disproportionate importance is attached to lectures.'⁴ Huxley's criticism (like that of many educationalists) is of the modern university curriculum. It is, he says, too much concerned with vocational training, that is, the training to make a living. Another adverse criticism is over-specialization. What is needed, Huxley claims, is an integrating principle which would make all knowledge dynamic. Knowledge and experience should 'be made in human terms; the network of significant relations would be, not material, but psychological; not indifferent to values; but moral; not merely cognitive, but also affective and conative.' Such a principle in education, Huxley implies, could lay the foundation for vital 'living in our complex age.'⁵

4. Proper Studies, p. 133.

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ABSTRACT

ALDOUS HUXLEY'S VIEWS ON EDUCATION.¹

This dissertation is an attempt at an orderly presentation of the views of Aldous Huxley on education. His views are organized into the following arrangement: Early Childhood Education; Later Childhood and Adolescent Education; University Education and The Ideal Systems of the Future.

Huxley treats education as an organic whole--each sub-division as having a dynamic interdependence on the other. The future character and eventual well-being of the individual as an adult depends to a great extent upon adequate training and care during the early months and years of the child. The happiness of the child as a child, Huxley considers, is an end in itself; so it is with all other periods of life. The emotional, intellectual, aesthetic and moral character of the growing child is moulded and influenced by teachers, parents and the environment for good or for evil. Education of the youth continues when he or she is finished with his or her formal studies at school, for, Huxley holds that education is a continuous process in or

1. Mahabir R. Maharajh, master's thesis presented to the Faculty of Arts of the University of Ottawa, Ontario, 1960, vii-107 p.

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out of school. Higher education, he believes should prepare the individual to play his role in his community and in the larger community of the world. It should also give him that comprehensive view of life-seeing its various parts in relation to the whole.